# Village of Mount Prospect
## Village Board
## Special Meeting - AMENDED 10-27-2028
## Agenda
### 50 S. Emerson St. Mount Prospect, IL 60056

**October 28, 2025** | **Village Hall - 3rd Floor Board Room** | **7:00 PM**

**1. CALL TO ORDER**

**2. ROLL CALL**

2.1. Pledge of Allegiance - Trustee John Matuszak

**3. APPROVAL OF MINUTES**

3.1. Minutes of the regular meeting of the Village Board - October 7, 2025 and Minutes of the Committee of the Whole - October 14, 2025

**4. MAYORS REPORT**

4.1. Mayor's Comment

4.2. APPOINTMENT TO BOARDS AND COMMISSIONS
Planning & Zoning Commission - Fay Costa| Term to expire October 2030

**5. COMMUNICATIONS AND PETITIONS - CITIZENS TO BE HEARD**

5.1. Individuals wishing to address the Village Board in person regarding issues not on the agenda must register to participate in the Citizens to Be Heard process. You may sign in before the meeting in person or by emailing your intent to speak to publiccomment@mountprospect.org no later than 1:00 p.m. on the day of the meeting.

**6. CONSENT AGENDA**

6.1. List of Bills — October 1, 2025 to October 21, 2025 — $9,057,871.01

6.2. Approval of Closed Session minutes — October 7, 2025, and October 14, 2025

6.3. Motion to approve A RESOLUTION APPROVING A PLAT OF EASEMENT GRANT FOR THE PROPERTY LOCATED AT 500 WEST CENTRAL ROAD, MOUNT PROSPECT, IL 60056

6.4. Motion to approve A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE JOINT EMERGENCY MANAGEMENT SYSTEM (JEMS), THE VILLAGE OF MOUNT PROSPECT, AND PARTICIPATING MUNICIPALITIES

6.5. Motion to approve Fire Department voluntary cancer screenings for an amount not to exceed $85,000.

6.6. Motion to renew the Village's subscription with Envisio Solutions Inc for Strategic Planning and Performance Management Software for four years for a total amount of $100,000.

6.7. Waive the rule requiring two readings of an ordinance and adopt AN ORDINANCE MAKING CERTAIN AMENDMENTS TO THE ANNUAL BUDGET ADOPTED FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025. - MEMO AMENDED 10-27-2025

6.8. Motion to accept a proposal from IMEG Group to provide design and construction engineering services for the 2026 Water Main Replacement Project for a fee not to exceed $183,700.00.

6.9. Motion to accept Suburban Purchasing Cooperative joint purchasing agreement pricing for the purchase of one new 2026 Ford Transit 350 Cutaway in an amount not to exceed $74,886.

6.10. Motion to approve a supplement to the contract award for the Rand/Central/Mount Prospect Road Intersection Improvements Phase III Construction Engineering for a cost not to exceed $69,627.

6.11. Motion to approve a change order to the 2025 Crack Filling Contract in an amount not to exceed $75,000.

## 7. OLD BUSINESS - None

## 8. NEW BUSINESS

8.1. Motion to waive the rule requiring two readings of an ordinance and adopt an ORDINANCE AMENDING ORDINANCE NO. 6634 GRANTING A CONDITIONAL USE FOR A PLANNED UNIT DEVELOPMENT AND A FINAL PLAT OF SUBDIVISION FOR THE PROPERTY COMMONLY KNOWN AS THE MOUNT PROSPECT TECHNOLOGY CAMPUS LOCATED AT 1200 EAST ALGONQUIN ROAD AND 1200 DEMPSTER STREET, MOUNT PROSPECT, ILLINOIS (PZ-21-25)

8.2. First Reading of AN ORDINANCE ADOPTING AN ANNUAL BUDGET FOR THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2026, AND ENDING DECEMBER 31, 2026, IN LIEU OF PASSAGE OF AN APPROPRIATION ORDINANCE.

8.3. First Reading of AN ORDINANCE AUTHORIZING THE LEVY AND COLLECTION OF TAXES FOR THE CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025.

8.4. First Reading of AN ORDINANCE TO ABATE A PART OF THE TAXES LEVIED FOR CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT, ILLINOIS, FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025.

## 9. VILLAGE MANAGER'S REPORT

9.1. Motion to approve a traffic-calming project on William Street between Prospect Avenue and Golf Road.

9.2. Motion to accept lowest-cost, responsive bid for the 2025 Burning Bush Lane Street Lighting Improvements for a cost not to exceed $240,991.

9.3. As submitted

**10. ANY OTHER BUSINESS**

**11. ADJOURNMENT**

**ANY INDIVIDUAL WHO WOULD LIKE TO ATTEND THIS MEETING BUT BECAUSE OF A DISABILITY OR NEEDS SOME ACCOMMODATION TO PARTICIPATE, SHOULD CONTACT THE VILLAGE MANAGER'S OFFICE AT 847/392-6000, EXTENSION 5327**

DRAFT

**Village of Mount Prospect Regular Meeting of the Village Board Tuesday, October 7, 2025 / 7:00 PM**

## CALL TO ORDER

Mayor Hoefert called the Regular Meeting of the Village Board to order at 7:07 p.m. in the Board Room at Village Hall, 50 S. Emerson St.

## ROLL CALL

Members present upon roll call by the Village Clerk: Mayor Paul Hoefert, Trustee Beth DiPrima, Trustee Terri Gens, Trustee Bill Grossi, Trustee John Matuszak, and Trustee Colleen Saccotelli
Absent: Trustee Vincent Dante

2.1. The Mount Prospect Fire Department Honor Guard posted the Colors, followed by the Pledge of Allegiance led by Trustee Grossi.

2.2 Invocation - Police and Fire Chaplain Mark Bechtold delivered the invocation.

## APPROVAL OF MINUTES

3.1. Minutes of the regular meeting of the Village Board - September 16, 2025

Motion by Bill Grossii, second by Terri Gens to approve the regular meeting minutes of the September 16, 2025 Village Board meeting:

**Yea:** Beth DiPrima, Terri Gens, Bill Grossi, John Matuszak, Colleen Saccotelli
**Nay:** None
**Absent:** Vincent Dante

*Final Resolution: Motion Passed*

## MAYORS REPORT

4.1. Mayor's Comment

Mayor Hoefert welcomed everyone to the meeting.

4.2. Proclamation: Diwali – The Festival of Lights

Mayor Hoefert read a proclamation recognizing Diwali, the festival of lights, as an important holiday celebrated by millions of people worldwide. The proclamation acknowledged the five-day festival's celebration

Yash Desai accepted the proclamation on behalf of the community. She thanked the Village for

recognizing Diwali and introduced her group representing SEWA International. Ms. Desai closed with a prayer focused on peace at the individual, community, and global levels.

4.3 PROCLAMATION: Italian-American Heritage Month - October 2025

Mayor Hoefert read a proclamation recognizing October 2025 as Italian-American Heritage Month in the Village of Mount Prospect. Resident Debbie Geavaras accepted the proclamation on behalf of the Italian-American community.

4.4 PROCLAMATION: Fire Prevention Week - October 5 - 11, 2025

Mayor Hoefert read a proclamation designating October 5-11, 2025, as Fire Prevention Week in Mount Prospect. The 2025 theme is "Charging into Fire Safety, Lithium-Ion Batteries in Your Home."

Monika Korzun, Public Education Officer, accepted the proclamation and provided additional information about Fire Prevention Week.

4.5 PROMOTIONS: Mount Prospect Fire Department

Oath of Office | Promotion of Deputy Chief Thomas Wang to Fire Chief
Oath of Office | Promotion of Battalion Chief Joseph Vena to Deputy Chief
Oath of Office | Promotion of Lieutenant Bradley Bocox to Battalion Chief
Oath of Office | Firefighter/Paramedic Michael Hayes to Lieutenant

Village Manager Cassady addressed the audience, noting that this was a special moment for the Mount Prospect Fire Department with the promotion of four exceptional fire service professionals. He acknowledged the retirement of Fire Chief John Dolan on his 30 years of service to Mount Prospect. Manager Cassady commended Chief Dolan for his leadership and numerous career achievements.

Mayor Hoefert read a proclamation honoring Fire Chief John F. Dolan, recognizing his nearly 30-year career with the Village of Mount Prospect. The proclamation detailed Chief Dolan's progression through the ranks — from paid on-call firefighter in 1993 to Fire Chief in 2021 —and his many accomplishments in leadership and service.

Chief Dolan addressed the board, expressing gratitude and emphasizing that the department's accomplishments were the result of teamwork. He congratulated the incoming leadership team and expressed confidence in the department's future.

Village Clerk administered the oath of office to Fire Chief Thomas Wang. Chief Wang expressed gratitude to his family and to Village leadership.

Chief Wang introduced Battalion Chief Joseph Vena, highlighting his accomplishments since being hired in 2006.

Clerk Agoranos administered the oath of office to Deputy Chief Joseph Vena.

Chief Wang introduced Lieutenant Brad Bocox, noting his academic and career achievements.

Clerk Agoranos administered the oath of office to Battalion Chief Brad Bocox.

Chief Wang introduced Firefighter/Paramedic Michael Hayes and highlighted his key roles and accomplishments since he was hired in 2003.

Firefighter/Paramedic Hayes was sworn in as Lieutenant by Jim Powers, chairperson of the Board of Fire and Police Commission.

*Mayor Hoefert called for a brief recess at 8:03 pm.*
*Mayor Hoefert resumed the meeting at 8:08 pm.*

4.6 REAPPOINTMENTS TO BOARDS AND COMMISSIONS

Mayor Hoefert presented the following reappointments for ratification:

Finance Commission - Sam Cannizzaro: term to expire October 2029
Planning & Zoning Commission - Michael Fricano; term to expire August 2029

Motion by Beth DiPrima, second by Terri Gens to ratify the reappointment of Sam Cannizzaro to the Finance Commission and Michael Fricano to the Planning and Zoning Commission.

**Yea:** Beth DiPrima, Terri Gens, Bill Grossi, John Matuszak, Colleen Saccotelli
**Nay:** None
**Absent:** Vincent Dante

*Final Resolution: Motion Passed*

## COMMUNICATIONS AND PETITIONS - CITIZENS TO BE HEARD

Nancy Para
Resident, Burning Bush Lane

- Expressed concern about brown, sticky residue appearing on outdoor surfaces including cars
- Indicated that residents had never experienced this in previous decades and questioned whether it might be affecting air quality
- Requested that the Village consider conducting random air quality tests.

*Village Manager Cassady said the Village had received similar complaints and was looking into the issue. Mayor Hoefert added that they would update the community once they had more information.*

## CONSENT AGENDA

Motion by Bill Grossi, second by Terri Gens, to approve the consent agenda as presented:

Yea: Beth DiPrima, Terri Gens, Bill Grossi, John Matuszak, Colleen Saccotelli
Nay: None
Absent: Vincent Dante

*Final Resolution: Motion Passed*

6.1. List of Bills - September 10, 2025 to September 30, 2025 - $6,577,210.86

6.2. Approval of Closed Session Minutes - September 16, 2025

6.3. Motion to accept the lowest-cost, responsive bid for the Emerson Street Parking Deck Maintenance & Repair Project in an amount not to exceed $97, 652.50

6.4. Motion to waive the rule requiring two readings of an ordinance and ADOPT AN ORDINANCE AMENDING ORDINANCE NO. 6691 (AN ORDINANCE GRANTING A VARIATION FOR A PARKING LOT SETBACK FOR PROPERTY LOCATED AT 555 BUSINESS CENTER DRIVE). An ordinance extending the effective date of a variation to reduce the parking lot setback from ten feet (10'-0") to two feet (2'-0")

for the property located at 555 Business Center Drive for an additional two-year period.

*Ordinance No. 6806*

6.5. Motion to waive the rule requiring two readings of an ordinance and adopt "AN ORDINANCE AMENDING ARTICLE XX ENTITLED 'FIRE LANES' OF CHAPTER 18 (TRAFFIC CODE) OF THE VILLAGE OF MOUNT PROSPECT"

*Ordinance No. 6807*

6.6. Motion to waive the rule requiring two readings of an ordinance and adopt "AN ORDINANCE AMENDING ARTICLE XX ENTITLED 'FIRE LANES' OF CHAPTER 18 (TRAFFIC CODE) OF THE VILLAGE OF MOUNT PROSPECT"

*Ordinance No. 6808*

## OLD BUSINESS

7.1 2nd reading of AN ORDINANCE AMENDING CHAPTER 23, "OFFENSES AND MISCELLANEOUS REGULATIONS" WITH REGARD TO MICROMOBILITY DEVICES (ELECTRIC BIKES AND LOW SPEED ELECTRIC SCOOTERS) AND E-MOTOS"

Police Chief Mike Eterno presented the second reading of the micromobility devices ordinance, noting that it had been modified based on feedback from the September 16 Village Board meeting. Key changes and clarifications included:

1. E-Bikes (Class 1, 2, and 3):
   - Expanded definition of "reckless operation"
   - Added age restriction requiring operators of Class 2 or Class 3 e-bikes to be 16 years or older unless accompanied by a parent/guardian
   - Maintained that Class 1 and 2 e-bikes are permitted on roadways, bike lanes, and shared-use paths, but prohibited on sidewalks
   - Class 3 e-bikes are permitted only on roadways and bike lanes, not on shared-use paths or sidewalks

2. Low-Speed E-Scooters (maximum speed 10 mph):
   - Prohibited use while carrying items that prevent keeping at least one hand on handlebars
   - Prohibited operation while under the influence
   - No passengers allowed
   - Added prohibition of cell phone use while operating
   - Permitted on roadways, bike lanes, shared-use paths, and sidewalks except in the downtown "Walk Your Wheel Zone"
   - Prohibited on roadways with speed limits exceeding 30 mph

3. E-Scooters (10-20 mph):
- Added this new classification to accommodate residents who use faster e-scooters to commute
- Same regulations as low-speed e-scooters
- Still limited to roads with speed limits of 30 mph or less

4. E-Motos:
    - These devices (with engines larger than 750 watts) would be classified as motor vehicles or motorcycles
    - Would require licensing, registration, insurance, and proper equipment
    - Most e-motos currently in use would be prohibited as they cannot meet these requirements

5. "Walk Your Wheel Zone":
    - Defined two specific zones in downtown Mount Prospect
    - South of tracks: sidewalk on south side of Prospect from Pine to Emerson
    - North of tracks: triangular area bounded by Northwest Highway, Maple Street, Busse, and 20 West Northwest Highway

6. Enforcement and Penalties:
    - Increased minimum fine to $75
    - Parents who allow minors to violate the ordinance face a minimum fine of $200
    - Provisions for impoundment in cases of DUI, reckless operation, or repeated violations
    - $150 administrative fee plus towing costs to retrieve impounded devices
    - Focus on education for the remainder of 2025, with enforcement beginning in 2026
    - Police department to offer safety classes and free helmets

Chief Eterno answered questions from the Board.

Board Comments:

- Suggested expanding education efforts to include Police Beat meetings, school board meetings, and high schools; education and training will be important
- Expressed desire to include traditional bicycles in future "Walk Your Wheel Zone" regulations
- Supported mandatory helmet requirements for riders aged 16-18
- Questioned whether a helmet requirement would be enforceable
- Clarified that Class 2 and 3 e-bike operators need to be 16 but don't need a driver's license
- Expressed concern about enforcing regulations for gas-powered minibikes
- Expressed concerns about mandatory helmet requirements

Public Comment:
Louis Goodman
310 N. School St.

- Asked how the rules would be applied and who would be responsible for sharing the new rules with the community. *Chief Eterno responded*.

Steve Polit
601 N. Wilshire Drive

- Thanked the Police Chief for addressing bicycle and micromobility device regulations
- Suggested that the Village post signs indicating the "Walk Your Wheels" zone in the downtown area and other ways to educate residents
- Expressed support for the helmet requirement

Bill Collins
Resident and e-scooter user

- Expressed support for the walk zone but suggested that the Village should maintain consistency with state law regarding age restrictions for Class 2 bikes to avoid confusion

Dave Grant

- Suggested that first-time violators should be required to take the education course

Mayor Hoefert noted that there might be an inconsistency in requiring helmets for e-scooter riders aged 16-18, given that 16-year-olds can legally drive motorcycles without helmets under state law.

The Board ultimately decided not to include a mandatory helmet provision, though helmets remain strongly encouraged in the ordinance.

Motion by Terri Gens second by Bill Grossi, to approve the ordinance amending Chapter 23, "Offenses and Miscellaneous Regulations" with regard to micromobility devices (electric bikes and low speed electric scooters) and e-motos as presented:

**Yea:** Beth DiPrima, Terri Gens, Bill Grossi, John Matuszak, Colleen Saccotelli
**Nay:** None
**Absent:** Vincent Dante

*Final Resolution: Motion Passed*
*Ordinance No. 6809*

## NEW BUSINESS - None

## VILLAGE MANAGER'S REPORT

Village Manager Cassady reported that the Board would continue the review of the 2026 budget next week, beginning at 6:00 p.m. He proposed canceling the October 21st meeting and scheduling a special meeting on October 28th to review the CloudHQ zoning amendment proposal.

Trustee Matuszak recommended that the Board hold a Committee of the Whole meeting to discuss the formation of a traffic unit within the police department. The Board expressed consensus in support of this discussion.

## ANY OTHER BUSINESS

Mayor Hoefert announced that Coffee with Council would be held on Saturday at 9 a.m. on the first floor of the Village Hall.

## ADJOURNMENT

With no additional business to conduct, Mayor Hoefert asked for a motion to adjourn. Trustee Saccotelli, seconded by Trustee Gens, motioned to adjourn the meeting. By unanimous voice vote, the October 7, 2025, Regular Meeting of the Village Board of Trustees adjourned at 9:04 p.m.

Respectfully submitted,

Karen M. Agoranos
Village Clerk

DRAFT

DRAFT

**Village of Mount Prospect**
**Committee of the Whole**
**Tuesday, October 14, 2025 / 6:00 PM**

## CALL TO ORDER

Mayor Hoefert called the Committee of the Whole meeting to order at 6:08 p.m. in the Board Room at Village Hall, 50 S. Emerson St.

## ROLL CALL

Members present upon a roll call by the Village Clerk:
Mayor Paul Hoefert, Trustee Vincent Dante, Trustee Beth DiPrima, Trustee Terri Gens, Trustee Bill Grossi, Trustee John Matuszak, Trustee Colleen Saccotelli
Absent: None

## APPROVAL OF MINUTES

3.1. Minutes of the Committee of the Whole – August 12, 2025
Motion by Trustee Dante, second by Trustee Gens, to approve the minutes:

Yea: Vincent Dante, Beth DiPrima, Terri Gens, Bill Grossi, John Matuszak, Colleen Saccotelli
Nay: None

*Final Resolution: Motion Passed*

## MAYORS REPORT

4.1. Mayor's Comment
Mayor Hoefert said he had no further comments, except to look forward to the budget presentations, and noted that the 2026 budget is fiscally responsible.

## COMMUNICATIONS AND PETITIONS - CITIZENS TO BE HEARD

None.

## DISCUSSION ITEMS

6.1 2026 Annual Budget Workshop

Director of Finance Amit Thakkar presented the 2026 budget workshop to the Board.
Mr. Thakkar began with the budget highlights:

- The 2026 budget is balanced at $187.6 million in revenues and $192.4 million in expenditures, with a planned use of $4.8 million in cash from previously earned revenues
- The budget includes a 0% increase in the property tax levy, maintaining it at the same dollar amount as the 2024 levy (payable in 2025)
- The current levy is the lowest in 11 years, lower than in 2015
- Pension abatements total $2.9 million
- Debt service levy abatements total $3.1 million
- Pension costs are increasing by $581,275
- The Village is funding the actuarial amount to achieve 100% pension funding by 2040
- The Community Investment Plan (CIP) is greater than usual at $51.1 million due to grant-funded projects
- Starting January 1, 2026, the budget includes $925,000 in grocery tax revenue that was previously classified as sales tax
- The grocery tax revenue is earmarked for pension abatements

Mr. Thakkar highlighted that the budget includes three new firefighters/paramedics, which will provide opportunities to reduce overtime and allow more room for training and time-off coverage. He noted that employee health insurance costs are increasing by 7.1%, though the village's 5-year trend of 5.2% remains lower than the industry average of 7.3%.
He then outlined key budget challenges, including:

- Heavy reliance on State of Illinois intergovernmental revenues
- Increasing public safety pension costs
- Legislative challenges including the 1% grocery tax and pension updates
- Rising construction costs and aging infrastructure
- Increased vehicle replacement costs (up to 42% higher) with longer lead times
- Issues with the Cook County property tax system
- Shrinking federal and state grant programs

Mr. Thakkar presented the 2026 revenue budget of $187.6 million, with the largest components being:

- Intergovernmental revenue: $76.7 million (41%)
- Charges for services: $50 million (27%)
- Property taxes: $25.5 million (14%)
- Other locally levied taxes: $17.2 million (9%)

He explained that without abatements, the property tax levy would be $25.7 million, which would be 41% higher. Through various abatements totaling $7,347,483, including $5.1 million from the General Fund, the actual levy remains at $18,235,179 with no increase from the previous year.
For a $400,000 home, the abatements mean maintaining village property taxes at $1,003 instead of increasing to $1,415, saving the average household $412.

Mr. Thakkar presented major revenue sources, including:

- State sales tax: $39.9 million

- Home rule sales tax: $8.1 million
- State income tax: $9.9 million
- Use tax: $1,09 million
- Food and beverage tax: $2 million
- Real estate transfer tax: $1.1 million
- License and permit fees: $1.9 million
- Ambulance billing fees: $4.07 million
- Investment income: $3.26 million

Mr. Thakkar noted the water and sewer charges would increase by 6.75% per the approved rate study, resulting in an average monthly bill increase of $7.41. Refuse rates would increase by 3.5%. For expenditures, the 2026 budget totals $192.4 million:

- Operating budget: $102.6 million (53%)
- CIP: $51.1 million (27%)
- Debt service: $7.8 million (4%)
- Internal service funds: $15.2 million (8%)
- Special revenue: $2 million (1%)
- Special revenue TIF: $4.95 million (3%)
- Interfund transfers: $8.75 million (4%)

Personnel expenditures total $66.7 million, including the three new firefighter/paramedics, contractual wage increases, and a 3.5% increase for non-union employees. The total public safety pension cost is $11.8 million, with $2.9 million being abated.

Mr. Thakkar handed the presentation over to the department heads, who then presented their individual budgets.

Assistant Village Manager Alex Bertolutti presented the Public Representation budget:

- The budget totals $799,407 (2.5% increase) with 95% allocated to contractual services and commodities/supplies. About 67% support community events and seasonal downtown decorations, including the Block Party, Fridays on the  Green summer concerts, Shining Stars celebrations, the family bike ride, and holiday lights in the Pocket Park, and more.

Mr. Bertolucci presented the Village Administration budget:

- The department includes the Village Manager's Office, IT, HR, communications, marketing, PR, and Village Clerk's Office. The personnel budget shows a 6% increase due to wages and medical/dental insurance increases.

Deputy Director of Finance Jenny Fitzgerald presented the budget for the Finance Department:

- The department's budget totals $2,539,489 with a 2.1% increase. It includes a decrease in banking fees and plans for a new financial ERP system, continuing to work on the AAA credit rating strategy, and watching state legislative agenda items that could affect pensions.

Director of Community & Economic Development Jason Shallcross and Director of Building & Inspections Bill Schroeder presented their respective budgets:

- No change in headcount is planned for 2026. Economic development initiatives include the downtown parking study, comprehensive plan update, pilot valet parking and al fresco programs, gateway signage project, and high-profile redevelopment projects.

Human Services, presented by Deputy Director Esther Salutillo:

- The department's budget totals $1,741,760, a decrease of $42,005 (2.4%) due to the ending of American Rescue Plan funds. Personnel costs make up 81% of the budget. Initiatives include implementing transit study recommendations, launching a post-incident reunification plan with police and fire, expanding the Pathway Forward mentorship program, and continuing work on the aging and community action plan.

Police Department, presented by Chief Mike Eterno:

- The department's budget totals $28.3 million, a 5% increase. It maintains 90 budgeted officer positions and 20 civilian support staff. Major budget components include personnel costs (86%) and contractual services (13%). The department plans to implement Flock cameras, purchase three indoor drones, expand outdoor beat meetings, add a fourth officer to the Special Response Team, and possibly establish a traffic unit if staffing levels permit.

Trustee Matuszak inquired about reestablishing a traffic unit. Chief Eterno explained that they previously had such a unit (2006-2010) with a sergeant and four officers but would need to reach full staffing of 90 officers before implementing it. Chief Eterno suggested possibly starting with two officers in 2026 and evaluating the need for expansion later.

Fire Department, presented by Chief Tom Wang:

- The department's budget includes hiring three new firefighter/paramedics, increasing the total to 84 sworn personnel. The budget shows a $1.3 million increase in personnel costs, but the Chief explained that the new hires would actually help decrease overtime costs. The department faces challenges with rising vehicle costs and extended delivery times, with a new tower apparatus delayed until January/February 2026 and future engine replacements taking up to three years to receive.

Public Works Department, presented by Director Sean Dorsey:

- The department's budget totals approximately $33.5 million, with water and sewer being the largest component ($15.2 million). The budget includes expenditures for purchasing water from Chicago ($8.6 million), refuse collection, and street and building maintenance. Major initiatives for 2026 include updating the stormwater master plan, developing a new neighborhood flooding strategy, continuing the Fairview Gardens sewer project, and preparing for the Rand/Kensington/Elmhurst Road intersection project.

Mr. Thakkar concluded by reviewing debt service ($7.8 million), business district funds ($2.029 million), TIF districts, internal service funds, and general fund reserves. He noted that the general

fund balance is projected to be $44.9 million by the end of 2025, which is 52% of the annual budget and well above the 30-50% policy target.

Mayor Hoefert asked about the Local Government Distributive Fund (LGDF), and Mr. Thakkar explained that the state originally agreed to give municipalities 10% of state income tax collections but reduced this to 6.2% in recent years, significantly impacting local revenues.

The timeline for budget approval includes:

- Finance Commission meeting on October 23rd
- First reading of budget ordinances on October 28th
- Public hearings and final approval on November 18th

Mayor Hoefert provided brief closing remarks. No additional discussion.

## VILLAGE MANAGER'S REPORT

Village Manager Mike Cassady announced that the next Board meeting would be on October 28th. The October 28th meeting would include the first reading of the budget and review of the CloudHQ planned unit development ordinance amendment.

## ANY OTHER BUSINESS

No additional business.

## ADJOURNMENT

With no additional business to conduct, Mayor Hoefert asked for a motion to adjourn. Trustee Grossi, seconded by Trustee Dante, motioned to adjourn the meeting. By unanimous voice vote, the October 14, 2025, Committee of the Whole meeting adjourned at 8:37 p.m.

Respectfully submitted,

Karen M. Agoranos
Village Clerk

# Item Cover Page

| | |
|---|---|
| **Subject** | **Mayor's Comment** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | |
| Dollar Amount | |
| Budget Source | |
| Category | MAYORS REPORT |
| Type | Presentation |

**Information**

**Discussion**

**Alternatives**

**Staff Recommendation**

**Attachments**

None

# Item Cover Page

| | |
|---|---|
| **Subject** | **APPOINTMENT TO BOARDS AND COMMISSIONS<br>Planning & Zoning Commission - Fay Costa\| Term to expire October 2030** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | |
| Dollar Amount | |
| Budget Source | |
| Category | MAYORS REPORT |
| Type | Action Item |

## Information

**Planning & Zoning Commission**
*Appointment:*
Fay Costa - Associate Member - Term to Expire October 2030

## Discussion

## Alternatives

1. Motion to approve appointment.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Mayor Hoefert recommends the appointment of Ms. Costa to the Planning & Zoning Commission as an Associate Member and believes she will represent the Village fairly and objectively.

## Attachments

None

# Item Cover Page

| | |
|---|---|
| **Subject** | **List of Bills — October 1, 2025 to October 21, 2025 — $9,057,871.01** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | |
| Dollar Amount | |
| Budget Source | |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

Attached is the List of Bills for October 1, 2025, to October 21, 2025 — $9,057,871.01.

## Discussion

## Alternatives

1. Approve the attached List of Bills for October 1, 2025, to October 21, 2025 — $9,057,871.01.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends approval of the attached List of Bills for October 1, 2025, to October 21, 2025 — $9,057,871.01.

## Attachments

1. List of Bills - October 1, 2025 to October 21, 2025

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **001 General Fund** | | | |
| | ACS State & Local Government Solutions | Illinois State Disbursement Unit 10.09.25 | $ 3,614.31 |
| | Addison Building Material Co. | Concrete forming materials | 219.50 |
| | | PD cable ties | 103.89 |
| | | PD Floor machine repair parts | 6.28 |
| | | PD Floor machine repair parts | 8.14 |
| | | Concrete forming materials | 130.42 |
| | | Concrete supplies | 46.39 |
| | Advanced Landscaping LLC | Turf Mowing throughout the Village 9/1-9/29/25 | 5,874.30 |
| | Advanced Tree Care | Removal of Parkway Trees 9/15-9/24/25 | 6,444.00 |
| | Aero Removals-Trisons Inc | September 2025 Remains removal services | 1,275.00 |
| | Air One Equipment, Inc. | Gear name patch | 112.00 |
| | | Boots | 581.00 |
| | | Boots | 1,153.00 |
| | | Quarterly Air Quality Testing and Compressor Maintenance | 703.92 |
| | | Paratech nipple to repair air hose for air bag | 23.00 |
| | Amazon Capital Services | Halloween gift bags returned clerks office | (8.98) |
| | | 10/11/25 Equipment maintenance supplies | 113.95 |
| | | Credit Memo - returned screen protector | (21.01) |
| | | Supplies for Halloween DTM clerks event | 9.49 |
| | | 10x13 Envelopes, Post Its and screen protector | 36.48 |
| | | Items for DTM Trick or treat clerks office | 73.44 |
| | | Printers | 298.00 |
| | | iPhone case | 19.99 |
| | | Printer cables | 11.98 |
| | | Halloween supplies for DTM trick or treating clerks office | 37.93 |
| | | 6x9 Spiral Notebooks, Plastic Spoons | 36.03 |
| | | Dry erase board and large pumpkin | 329.98 |
| | | 09/25/25 Miscellaneous Dept supplies | 406.05 |
| | | Highlighters/Permanent Markers/Packing Tape/Paperclips/Post Its | 85.90 |
| | | Thermal Paper Credit Card Receipts, Post-it Notes | 28.93 |
| | | Raised planters | 415.98 |
| | | 09/30/25 Batteries for eLocker system | 41.97 |
| | American Legal Publishing | 09/23/25 Village Zoning Code Update | 40.00 |
| | Arbsession Inc | Part to repair saw scabbard | 121.51 |
| | Arlington Power Equipment | Stihl BR 800 X Back Pack Blower | 443.99 |
| | Emergency Assistance | Emergency Assistance | 142.50 |
| | | Emergency Assistance | 663.00 |
| | | Emergency Assistance | 240.00 |
| | | Emergency Assistance | 142.50 |
| | | Emergency Assistance | 142.50 |
| | | Emergency Assistance | 142.50 |
| | Avanti Cafe & Sandwich Bar, Inc. | Food for swear in 10/7/25 | 680.68 |
| | Axon Enterprise, Inc. | 10/07/25 Training registration | 2,685.00 |
| | Azavar Audit Solutions | LocalGov License Fee 2025-Q4 MOU/009 | 1,635.00 |
| | Banner Plumbing Supply Co LLC | St 14 Replacement drinking fountain | 1,705.60 |
| | Barnett, Lesley | Reimburse expenses Supervision of Police Personnel 7/21-8/1/25 | 120.00 |
| | Beary Landscape Management Inc | Hanging Basket Maintenance 9/6-9/30/25 | 2,600.00 |
| | Bedco Mechanical | St 12 RTU Heat Exchanger 9/20/25 | 5,559.05 |
| | | EOC Supply fan motor 10/2/25 | 2,379.40 |
| | Blue to Gold LLC | 10/06/25 On Demand training | 6,321.00 |
| | Bond Conway Law Firm | Administrative adjudication service - September 2025 | 552.00 |
| | | Administrative Adjudication billing for September 2025 | 744.00 |
| | Bonnell Industries Inc. | Carbide plow blades and hyd cylinders | 1,567.76 |
| | Bound Tree Medical, LLC. | CombiCarrier head immobilizers and one replacement block | 361.98 |
| | | 3 cases Mega Movers | 683.97 |
| | Builders Asphalt LLC | Patching material 9/19/25 | 256.08 |
| | | Patching material 9/24/25 | 304.92 |
| | | Patching material 9/26/25 | 205.92 |
| | | Patching material 9/30/25 | 128.70 |
| | Business Oriented Software Solutions, Inc. | IT Ticketing/Inventory Renewal 12/1/25-11/30/26 | 3,360.00 |
| | Campos, Katia | VMO OSFM Exam 10/9/25 | 59.00 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **001 General Fund (continued)** | | | |
| | Carioti, Francis | Edit MP Update 10/3/25 | 144.00 |
| | CBS Awards Inc | Quinquennial 10 year recognition award | 110.00 |
| | Checkpoint Press | 09/24/25 Recruitment ad | 397.00 |
| | Chem-Wise Pest Management | 1415 E Algonquin 9/23/25 pest control | 55.00 |
| | | 911 E Kensington 9/24/25 pest control | 40.00 |
| | | 2000 E Kensington 9/24/25 pest control | 30.00 |
| | | 111 E Rand 9/24/25 pest control | 40.00 |
| | | 1700 W Central 9/24/25 pest control | 215.00 |
| | Cinardi, Frank | Per Diems/Car/Baggage Fees IAFF Fallen Firefighters Ceremony | 116.00 |
| | CIT Bank, N.A. | KIP Lease Oct 2025 | 409.34 |
| | Clerk of the Circuit Court of McHenry County | Garnishment 10.9.25 | 547.85 |
| | Comcast | 21 S Emerson 10/1-10/31/2025 Internet | 372.30 |
| | | 9/18-10/17/25 1700 W Central cable | 69.78 |
| | | 10/04/25-11/03/25 Business services | 290.68 |
| | | 10/04/25-11/03/25 Business services | 138.27 |
| | | 10/12-11/11/25 50 S Emerson cable | 23.09 |
| | | October 25 Comcast Fiber Service | 2,771.98 |
| | Conrad Polygraph, Incorporated | Candidate Polygraph 9/12/25 and 9/15/25 | 450.00 |
| | | 9/30/25 Employment testing | 450.00 |
| | Constellation NewEnergy, Inc. | 8/5-9/17/25 Electricity pump st | 1,064.86 |
| | | 8/14-9/15/25 1901 1/2 E Seminole electricity | 62.55 |
| | | 8/5-9/16/25 Traffic light electricity | 20,079.02 |
| | | 9/3-10/3/25 755 S Meier electricity | 68.13 |
| | Costar Realty Information, Inc. | Monthly Real Estate Publication October 2025 | 1,026.90 |
| | Crystal Court Shopping Center | Rent for CCC December 2025 | 7,955.39 |
| | de Wolfe Music USA Inc. | Music Library Annual Subscription 10/1/25-9/30/26 | 1,300.00 |
| | Dell Marketing LP | Laptop, monitor, docking station | 2,172.80 |
| | Dinges Partners Group LLC | Replacement TIC charger clip to hold camera in charger | 26.09 |
| | DJ's Scuba Locker | Repair to suite | 49.00 |
| | Dupage Topsoil Inc. | Truck loads of Pulverized Topsoil 9/25/25 | 711.00 |
| | | Truck loads of Pulverized Topsoil 10/9-10/10/25 | 711.00 |
| | EAS Group Inc | 09/22/25 Envelopes and mailing labels | 816.98 |
| | Endeavor Health Medical Group | 10/02/25 Medical services | 107.00 |
| | | 09/18/25 Medical services | 31.00 |
| | | 09/30/25 Medical services | 107.00 |
| | | 09/25/25 Medical services | 107.00 |
| | | 08/01/25 Medical services | 78.00 |
| | | 09/29/25 Medical services | 31.00 |
| | Equipment Management Company | Tele Ram for E14 | 140.00 |
| | Experian | Background checks 8/30/25 - 9/26/25 | 100.00 |
| | Fahrenbacher, Matthew | Refund Permit Fee #RB25-000969 (805 Emerson) | 100.00 |
| | Farr Associates Architecture & Urban Design | Monument Sign Development 9/01/25-9/30/25 | 9,750.00 |
| | Federal Express Corp | Shipping charges 9/20/25 | 429.34 |
| | | Shipping late charge | 8.62 |
| | Fehr-Graham & Associates LLC | OSHA Required Safety Training Assist Industrial Hygiene 9/26/25 | 3,202.44 |
| | Fiedler, Kevin | Airfare/Per Diems to attend IAFF Fallen Firefighters Ceremony | 116.00 |
| | Filipek, Scott | DJ for Celebration of Cultures 2025 | 600.00 |
| | Fire Pension Fund | Fire Pension 10.9.25 | 34,993.81 |
| | Fire Safety USA | 10/14/25 Squad emergency supplies | 13,681.89 |
| | Fulton Technologies, Inc. | Annual Siren PMs 2025 | 2,748.34 |
| | G & J Associates, Inc. | Banner Decals for Fire Prevention Week | 570.52 |
| | Gordon Flesch Company, Inc. | Leasing Contract M204292 10/22/25-11/21/25 | 3,186.49 |
| | Groot Industries, Inc. | Refuse disposal 9/29/25 | 117.60 |
| | Health Endeavors | Medical Evaluation for off duty injury 9/3/25 | 125.00 |
| | | Medical Evaluation follow up for off duty injury 10/01/25 | 65.00 |
| | Heroin Epidemic Relief Organization | Donation for HERO trailer at 3 events | 600.00 |
| | Holiday Radiance Lights | Warm White 50L LED mini light strands with plugs | 15,360.00 |
| | Home Depot USA Inc | Fire Dept Supplies 8/22/25 - 9/21/25 | 165.69 |
| | ICMA | ICMA Membership 7/1/25-6/30/26 | 200.00 |
| | ICMA Retirement Trust - 457 | MissionSquare 10.9.25 | 53,090.01 |
| | Illinois American Water Company | Water Service - 1415 E Algonquin 9/3-10/2/25 | 115.37 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **001 General Fund (continued)** | | | |
| | Illinois American Water Company (continued) | Water Service - 2000 E Kensington 10/2-10/31/25 | 56.13 |
| | | Water Service - 2000 E Kensington 9/10-10/9/25 | 618.66 |
| | Illinois Department of Revenue | IL State Withholding 10.9.25 | 57,964.52 |
| | | State of Illinois Levy 10.9.25 | 561.71 |
| | Illinois State Toll Hwy Authority | Tolls 7/1/25-9/30/25 | 26.18 |
| | Imaging Essentials Inc | 9/1-9/30/25 KIP Maintenance | 66.00 |
| | IMRF | IMRF Sept 2025 | 165,287.97 |
| | Intergovernmental Per.ben.coop | IPBC - October 2025 | 501.25 |
| | Internal Revenue Service | Federal Tax Liability 10.9.25 | 260,555.96 |
| | International Union of Operating Engineers | IUOE PW Membership Dues 10.9.25 | 1,995.61 |
| | IT Supplies Inc | Avery paper | 549.12 |
| | J.G. Uniforms, Inc. | 10/01/25 Uniform supplies | 200.00 |
| | Jones and Bartlett Publishers Inc. | 5 BOF workbooks | 187.31 |
| | Klein, Thorpe and Jenkins, LTD | KTJ Legal Services through 7/31/25 | 51,793.27 |
| | KnowBe4 Inc | Security Awareness Training 11/03/25-11/02/26 | 8,622.38 |
| | Lands' End Business Outfitters | Office clothing for VMO | 181.63 |
| | | Logo Setup Fee | 29.00 |
| | Langton Snow Solutions Inc | Stump removal throughout the Village 9/26/25 | 4,478.00 |
| | Language Line Services, Inc. | Phone Interpretation - September 2025 | 13.65 |
| | | Over the phone interpretation September 2025 | 149.69 |
| | Law Enforcement Records Managers of Illinois | 10/03/25 Holiday meeting registration | 50.00 |
| | Lee Jensen Sales Co Inc | Generator for Octoberfest 9/19-9/20/25 | 465.00 |
| | Lindco Equipment Sales, Inc. | Kueper Tuca SX Underbody Blades/Kueper curb guards | 5,743.20 |
| | Lps Pavement Co. | Belden Material for Central Nicor repairs | 3,866.52 |
| | Lyons & Pinner Electric Companies | Traffic signal maintenance 9/30/25 | 942.00 |
| | Mac Strategies Group Inc | Consulting Services legislative and lobbying October 2025 | 5,000.00 |
| | Madoov Supplies Inc | Custodial Supplies | 634.71 |
| | | Custodial Supplies | 1,356.99 |
| | | Shipping cost for cleaning supplies | 102.87 |
| | Maxx Contractors Corp | Debris Hauling and Aggregate Material Delivery 9/24-9/29/25 | 86.72 |
| | | Debris Hauling and Aggregate Material Delivery 10/3/25 | 413.52 |
| | | Debris Hauling and Aggregate Material Delivery 10/6/25 | 209.30 |
| | | Debris Hauling and Aggregate Material Delivery 10/10/25 | 104.20 |
| | | Debris Hauling and Aggregate Material Delivery 9/8-9/9/25 | 842.58 |
| | Meltzer, Purtill, & Stelle LLC | Legal Services for Prestige period ending 9/30/25 | 5,626.00 |
| | Menards Inc | 09/29/25 Range supplies | 51.52 |
| | | PW Drain form | 67.50 |
| | | Marking paint for planting/tree removal | 159.96 |
| | Metro Federal Credit Union | MP Fire Local 4119 Dues 10.9.25 | 3,116.90 |
| | Metropolitan Alliance - Police | MAP Dues 10.9.25 | 1,833.00 |
| | Michigan West Shore Nursery LLC | Mums for Village buildings | 550.00 |
| | Midd America Contracting | Refund Permit Fee #CB25-000161 (1080 Elmhurst) | 1,112.70 |
| | Mount Prospect Historical Society | 2025 Budget Allocation - October 2025 | 4,166.66 |
| | Mount Prospect Lions Club, Inc. | Lions Corn Beef & Cabbage Dinner 11/7/25 | 500.00 |
| | Mount Prospect Paint, Inc. | 83/Weller Guard rail paint | 153.98 |
| | | Material for guard rail painting | 162.95 |
| | | Paint for Guard Rail See Gwun/Weller | 76.99 |
| | Mount Prospect Park District | 09/29/25 Supplies for Fishing Derby | 576.70 |
| | Multisystem Management Company | Custodial Services for all buildings Sept 2025 | 15,757.76 |
| | Murnane Paper Company | Copy Paper 8.5x11 White | 878.00 |
| | Murray, Brenton | Reimburse training expenses 09/24-26/25 | 169.35 |
| | National Hose Testing Specialties, Inc. | 2025 Annual Fire Hose Testing 20,855 ft | 10,844.60 |
| | Nationwide Mutual Insurance Company | Nationwide 10.9.25 | 51,576.40 |
| | Nationwide Power Solutions, Inc. | UPS preventative maintenance St 13 10/1/25 | 567.88 |
| | | UPS preventative maintenance PD 10/1/25 | 567.88 |
| | Nedco LLC | Parkway Tree Trimming 9/22-9/30/25 | 12,060.00 |
| | Neopost USA Inc. | Credit for postage due for meter replacement 9/29/25 | (905.36) |
| | Northern Illinois Police Alarm System | Language line translation service - September 2025 | 139.50 |
| | Northwest Central Dispatch System | Member Assessment - November 2025 | 32,935.22 |
| | Northwest Police Academy | 10/03/25 Seminar registration | 50.00 |
| | Nova Fire Protection, Inc. | State/Local Annual Fire Pump Test PW 10/3/25 | 1,760.00 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **001 General Fund (continued)** | | | |
| | Nova Fire Protection, Inc. (continued) | State/Local Annual Fire Pump Test VH 10/3/25 | 1,500.00 |
| | ODP Business Solutions LLC | Clerk office supplies binders and folders | 99.16 |
| | O'Reilly Auto Parts | Refund Operating License BL25-77 (1480 S Elmhurst) | 375.00 |
| | Ozinga Materials, Inc. | Concrete delivery 9/25/25 | 1,626.00 |
| | | Concrete delivery 10/6/25 | 1,157.88 |
| | Pacific Biomedical Inc | Peds/Sm Adult BP cuffs & Disp SpO2 Sensors | 520.14 |
| | | 2 boxes disposable Central SpO2 Sensors | 648.00 |
| | Paddock Publications, Inc. | Newsprint Subscription 10/5/25-10/4/26- Finance | 235.00 |
| | Patriot Acres LLC | Hauling log debris 9/30/25 | 189.00 |
| | Paymerang LLC | Monthly Service Fee - September 2025 | 400.00 |
| | Peerless Network Inc | Phone Service 10/15/25 - 11/14/25 | 1,830.39 |
| | Petty Cash | PW petty cash 1/15-9/8/25 | 169.41 |
| | | Petty Cash - Fire Dept - July - Sept 2025 | 160.53 |
| | | Petty Cash VMO August-October 2025 | 235.51 |
| | Pizzo & Associates Ltd | Weed control at various native planting sites 7/31/25 | 1,811.33 |
| | | Weed control at various native planting sites 9/12/25 | 878.97 |
| | Police Pension Fund | Police Pension 10.9.25 | 41,026.02 |
| | Police Records & Information Management Group | Webinar registration 03/12/26 | 453.60 |
| | | Training registration 12/10/25 | 717.60 |
| | | Training registration 10/15/25 | 195.00 |
| | PowerDMS Inc | 11/29/25-11/28/26 ILEAP standards | 650.00 |
| | Promos 911, Inc. | Memo Books for General Public Education Giveaway | 597.63 |
| | Purple Rose Florist Inc. | Corsages for swear in 10/7/25 | 116.00 |
| | | 10/13/25 Flowers for memorial service | 84.99 |
| | Quadient Leasing USA Inc | Folder/Inserter Lease N21061836 11/4/25-2/3/26 | 996.09 |
| | Ralph Helm Inc | Chainsaw chaps | 320.02 |
| | Raus, Frank | Reimburse training expenses 10/06-10/25 | 60.00 |
| | Rentokil North America, Inc. | Pest control for the CCC - October 2025 | 58.85 |
| | Republic Services, Inc. | Refuse Disposal 9/1-9/30/25 | 1,472.37 |
| | | Refuse disposal 9/30/25 | 1,752.65 |
| | RHP Risk Management Inc | Consulting Services Prestige Air Sampling thru 6/30/25 | 37,702.50 |
| | | Consulting Services Prestige Air Sampling 8/6/25 | 15,000.00 |
| | | Consulting Services Prestige Air Sampling thru 9/30/25 | 4,070.00 |
| | RHW Customized Graphics & Promotions | Office clothing | 304.14 |
| | Rusk, Eric | CDL reimbursement | 30.00 |
| | | 2/26-2/27/25 Conference Lunch Reimbursement | 23.75 |
| | Russo Hardware, Inc. | Seed and starter mulch | 183.92 |
| | | Pole pruner | 144.99 |
| | Ryan, Paul | Refund Ambulance Services 10/10/24 | 231.40 |
| | Savage Training Group LLC | Online Training 10/06/25 | 3,203.90 |
| | Selective Fence LLC | Refund Contractor License CL25-569 | 200.00 |
| | Skora, Miroslaw | Refund Permit Fee #RB25-001618 (207 Orchard) | 500.00 |
| | St Mark Lutheran Church | Lease 40 parking spaces at 200 S Will October 2025 | 2,000.00 |
| | Staples Contract & Commercial, Inc. | Office supplies 07/25/25 | 134.65 |
| | | Office supplies 07/25/25 | 20.89 |
| | | Toner cartridges | 1,337.20 |
| | Steiner Electric Company | St 14 LED Lamps Stairwell /Elevator | 570.13 |
| | Stickels, Matthew R. | Safety Shoe Reimbursement | 170.50 |
| | Stryker Sales Corporation | Lucas power supply with cord | 344.89 |
| | Stucker, Samuel | Per Diems to attend IAFF Fallen Firefighters Ceremony | 116.00 |
| | Terrace Supply Company | Oxygen | 33.50 |
| | The Chicago Embroidery Company | 08/13/25 Uniform patches | 716.00 |
| | | 10/02/25 Uniform patches | 695.00 |
| | The Prospect Restaurant LLC | Quinquennial Luncheon 10/23/25 | 1,904.00 |
| | The Sign Palace Inc | Moehling Park Sign Replacement | 1,250.00 |
| | The Stevens Group LLC | Canvas for retirement gift | 86.99 |
| | | 09/25/25 Arrest jackets | 2,653.45 |
| | | Business cards | 60.00 |
| | | Newsletter printing - October 2025 | 8,930.00 |
| | | Special Event Kindness Day canvas tote bags | 1,800.34 |
| | TJ Conevera's, Inc. | 09/30/25 Ammunition | 8,920.00 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **001 General Fund (continued)** | | | |
| | T-Mobile USA Inc | 08/21/25-09/20/25 Charges for increased data lines | 547.55 |
| | Todays Uniforms Inc | Uniform initial issue | 105.90 |
| | | Uniform initial issue | 44.85 |
| | | Uniform initial issue | 75.95 |
| | | Uniform initial issue | 25.95 |
| | | Uniform Promotion Initial Issue | 197.85 |
| | | Uniform Promotion Initial Issue | 109.90 |
| | | Uniform Promotion Initial Issue | 109.90 |
| | | Uniform initial issue | 14.95 |
| | | Uniform Promotion Initial Issue | 75.95 |
| | | Uniform Promotion Initial Issue | 75.95 |
| | | Uniform initial issue | 220.80 |
| | | Uniform Promotion Initial Issue | 57.95 |
| | | Uniform initial issue | 125.95 |
| | | Uniform initial issue | 145.95 |
| | | Uniform initial issue | 99.95 |
| | | Uniform Promotion Initial Issue | 29.90 |
| | | Uniform Promotion Initial Issue | 29.90 |
| | | Uniform Promotion Initial Issue | 221.90 |
| | | Uniform Promotion Initial Issue | 89.40 |
| | | Uniform initial issue | 159.95 |
| | | Uniform Promotion Initial Issue | 119.90 |
| | | Uniform Promotion Initial Issue | 67.95 |
| | | Uniform initial issue | 69.05 |
| | TransUnion Risk and Alternative Data Solutions Inc | September 2025 Background checks | 328.80 |
| | Turnout Rental LLC | Rental gear for fire academy | 2,040.00 |
| | Uline Inc. | Jersey gloves and safety goggles | 489.23 |
| | United States Postal Service | EPS Postage - September 2025 | 11,063.00 |
| | UniFirst Corporation | Uniform Rental Services 9/24/25 | 262.45 |
| | | Uniform Rental Services 10/1/25 | 281.96 |
| | | Uniform Rental Services 10/8/25 | 282.59 |
| | Vantagepoint Transfer Agents | RHS Contributions from Sick Balance 10.9.25 | 66,247.99 |
| | | RHS Contribution Retirement 10.9.25 | 61,516.98 |
| | Village of Mount Prospect | Flex Sec 125 Deds 10.9.25 | 12,196.17 |
| | | Fringe Benefit Auto 10.9.25 | 410.45 |
| | | Water Service - 9/7-10/1/25 11 E NWH meter 40215 | 71.72 |
| | | Water Service - 9/9-10/8/25 101 S Maple Meter 40928 | 33.98 |
| | | Water Service - 9/9-10/7/25 101 S Maple Meter 21758 | 15.11 |
| | Vision Marketing Passport System, LTD. | Passports for special teams and new hires | 383.81 |
| | W. W. Grainger, Inc. | Electrical gloves hard hat | 640.85 |
| | | Motor controller | 36.36 |
| | W.S. Darley & Co. | Hoods, gloves and boots | 586.40 |
| | | Hoods, gloves and boots | 230.00 |
| | Walter, Gina | Sidewalk/Curb Reimbursement - 255 S Michael | 1,170.00 |
| | Wisconsin Department of Revenue | Wisconsin Income Tax Withholding - September 2025 | 1,085.94 |
| | Wolf, Lisa | On camera for MP Update 10/3/25 | 200.00 |
| | Zarnoth Brush Works, Inc. | Sweeper brooms leaf machines and sweepers | 259.88 |
| **001 General Fund Total** | | | **$ 1,273,384.89** |
| **020 Capital Improvement Fund** | | | |
| | AVI Systems Inc | Video Projectors and Installation for Board Room | $ 26,975.75 |
| | Christopher B. Burke Engineering Ltd | Algonquin Rd Path & Lighting Ph II Eng 8/31-9/27/25 | 23,867.77 |
| | Ciorba Group Inc | Melas-Meadows Pedestrian Bridge Phase II Eng 8/30-9/26/25 | 87,476.00 |
| | Menards Inc | PW fence materials | 2,700.23 |
| | National Decorating Service Inc | St 14 Butler Ext Painting of Building 9/23/25 | 15,975.00 |
| | Union Pacific Railroad | Meadows Pedestrian Bridge Engineering 5/2025-8/2025 | 636.68 |
| **020 Capital Improvement Fund Total** | | | **$ 157,631.43** |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **023 Street Improvement Construction Fund** | | | |
| | Chastain & Associates | Construction Inspection Services 7/27-8/30/25 | $ 14,340.85 |
| | Preform Traffic Control Systems, LTD. | IDOT intersections stop bars & crosswalks | 6,867.60 |
| | Rubino Engineering Inc | Material Testing Services 9/8-9/25/25 | 2,679.50 |
| | Thomas Engineering Group LLC | Schoenbeck Rd Resurfacing Proj Const Eng 8/1-8/31/25 | 2,561.86 |
| **023 Street Improvement Construction Fund Total** | | | **$ 26,449.81** |
| **024 Flood Control Construction Fund** | | | |
| | Baxter & Woodman, Inc. | Storm Sewer Lining Engineering Services 8/11-9/12/25 | $ 23,910.46 |
| | Core & Main LP | Pipe for Prospect Manor ditch project | 4,014.30 |
| | Hoerr Construction, Inc. | Storm Sewer Lining 9/26/25 | 689,362.20 |
| | Maxx Contractors Corp | Materials to Re-grade ditch 1520 Blackhawk | 3,870.00 |
| | Pizzo & Associates Ltd | Weed control at various native planting sites 7/31/25 | 2,126.34 |
| | | Weed control at various native planting sites 9/12/25 | 1,031.83 |
| **024 Flood Control Construction Fund Total** | | | **$ 724,315.13** |
| **040 Refuse Disposal Fund** | | | |
| | ICMA Retirement Trust - 457 | MissionSquare 10.9.25 | $ 128.40 |
| | Illinois Department of Revenue | IL State Withholding 10.9.25 | 692.98 |
| | IMRF | IMRF Sept 2025 | 4,444.56 |
| | Internal Revenue Service | Federal Tax Liability 10.9.25 | 4,343.63 |
| | International Union of Operating Engineers | IUOE PW Membership Dues 10.9.25 | 156.92 |
| | Nationwide Mutual Insurance Company | Nationwide 10.9.25 | 694.30 |
| | Republic Services, Inc. | Municipal Refuse Disposal 9/1-9/30/25 | 15,306.27 |
| | | Refuse Disposal 9/1-9/30/25 | 269,301.18 |
| | Scott M Lee | Utility Refund - 1813 Maya Ln | 11.33 |
| | Service Sanitation Inc | Porta Potty & Hand Wash Station HHW Events 9/27/25 | 250.00 |
| | Third Millennium Associates Inc | E-Bill Server & Transaction Fees September 2025 | 71.02 |
| | United States Postal Service | EPS Postage - September 2025 | 2,061.32 |
| | Village of Mount Prospect | Flex Sec 125 Deds 10.9.25 | 199.08 |
| | Zarnoth Brush Works, Inc. | Sweeper brooms leaf machines and sweepers | 6,237.12 |
| **040 Refuse Disposal Fund Total** | | | **$ 303,898.11** |
| **046 Foreign Fire Tax Board Fund** | | | |
| | Banner Plumbing Supply Co LLC | Water bottle filler retro fits for St 14 | $ 3,668.43 |
| | Cinardi, Frank | Per Diems/Car/Baggage Fees IAFF Fallen Firefighters Ceremony | 305.25 |
| | Comcast | 10/16/25 - 11/15/25 Cable 111 E Rand Rd | 438.11 |
| | | 10/11/25 - 11/10/25 Cable 1601 Golf Rd | 224.42 |
| | Dick Pond Athletics Inc | Department Athletic Shoes 2025 | 12,633.46 |
| | Equipment Management Company | Tele Ram for E14 | 13,650.00 |
| | Fiedler, Kevin | Airfare/Per Diems to attend IAFF Fallen Firefighters Ceremony | 1,419.10 |
| | Michael Wagner & Sons, Inc. | Water bottle filler St 13 workout room | 2,478.56 |
| **046 Foreign Fire Tax Board Fund Total** | | | **$ 34,817.33** |
| **049 Prospect and Main TIF District** | | | |
| | Ciorba Group Inc | Clock Tower review 8/1-9/26/25 | $ 3,489.00 |
| | Civiltech Engineering Inc | Prospect Avenue Alternative Analysis Study 8/30-9/26/25 | 16,015.30 |
| | Green Soils Management LLC | TACO Topsoil for Central Gateway Plaza | 5,687.66 |
| | | TACO Topsoil for Central Gateway Plaza 10/1/25 | 2,167.44 |
| | Klein, Thorpe and Jenkins, LTD | KTJ Legal Services through 7/31/25 | 4,490.70 |
| | Lps Pavement Co. | Belden Material for Central Nicor repairs | 12,372.54 |
| | MP2 Holdings Inc | HQ Residence TIF Reimbursement per Agreement | 3,700,000.00 |
| | Route 12 Rental Co., Inc. | Equipment rental for Gateway Plaza 9/15/25 | 300.68 |
| | | Rental equipment for Gateway Plaza 9/23/25 | 228.94 |
| **049 Prospect and Main TIF District Total** | | | **$ 3,744,752.26** |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **050 Water and Sewer Fund** | | | |
| | ACS State & Local Government Solutions | Illinois State Disbursement Unit 10.09.25 | $ 11.54 |
| | Addison Building Material Co. | PVC Adapter couplings | 171.40 |
| | | Building outlet tester | 50.29 |
| | | Magnet hook | 16.17 |
| | | Screw remover | 77.90 |
| | | Masonry drill bit | 128.39 |
| | | Conduit clamp for rigid strut | 28.88 |
| | | Electrical repair at BPS 5 | 187.42 |
| | | PVC Coupling for electrical conduit | 211.92 |
| | | Enamel paint for marking tools | 16.78 |
| | | Cement | 281.64 |
| | | Shovel and hand scraper | 117.60 |
| | Alexander Chemical | 8/27-9/28/25 Chlorine cylinder rental fee | 25.61 |
| | Amazon Capital Services | LED flashlights | 236.88 |
| | Badger Meter Inc | Monthly endpoints charges/Beacon hosting 9/30/25 | 2,101.40 |
| | Bonnell Industries Inc. | Carbide plow blades and hyd cylinders | 1,916.15 |
| | Bracher, Tonya | Safety Shoe Reimbursement | 219.89 |
| | Constellation NewEnergy, Inc. | 8/5-9/17/25 Electricity pump st | 10,756.08 |
| | Core & Main LP | Repair clamps for stock | 1,112.00 |
| | Dupage Topsoil Inc. | Truck loads of Pulverized Topsoil 9/25/25 | 474.00 |
| | | Truck loads of Pulverized Topsoil 10/9-10/10/25 | 474.00 |
| | Gomez, Jay | Safety Shoe Reimbursement | 225.00 |
| | Gordon Flesch Company, Inc. | Leasing Contract M204292 10/22/25-11/21/25 | 159.83 |
| | Graybar Electric Co. | Underground electric handhole lids | 341.94 |
| | Guardian Safety and Supply LLC | Peltor litecom headsets | 2,280.00 |
| | HBK Water Meter Service | Building inspection/meter replacement 9/11-9/22/25 | 1,894.00 |
| | | Building inspection/meter replacement 9/25-10/7/25 | 4,199.00 |
| | HD Supply Facilities Maintenance LTD | Hydrant flow meter | 658.88 |
| | Hoerr Construction, Inc. | Combined Sanitary Sewer Rehabilitation 7/31/25 | 906,926.00 |
| | | Combine Sanitary Sewer Rehabilitation 7/31/25 | 589,819.90 |
| | ICMA Retirement Trust - 457 | MissionSquare 10.9.25 | 2,084.25 |
| | Illinois Department of Revenue | IL State Withholding 10.9.25 | 4,673.03 |
| | Illinois State Toll Hwy Authority | Tolls 7/1/25-9/30/25 | 75.10 |
| | IMRF | IMRF Sept 2025 | 29,906.53 |
| | Internal Revenue Service | Federal Tax Liability 10.9.25 | 27,982.61 |
| | International Union of Operating Engineers | IUOE PW Membership Dues 10.9.25 | 1,659.90 |
| | Joseph G. Pollard Co., Inc. | Valve vault hooks | 240.16 |
| | Laila Diab | Utility Refund - 704 Russel St | 39.35 |
| | Lampignano, Giuseppina | Utility Refund - 1518 N Elmhurst Rd | 419.52 |
| | Lindco Equipment Sales, Inc. | Kueper Tuca SX Underbody Blades/Kueper curb guards | 1,715.50 |
| | LRM Plumbing Corp | Fairview Gardens drain tile project 119 Horner 9/24/25 | 16,200.00 |
| | Maxx Contractors Corp | Debris Hauling and Aggregate Material Delivery 9/24-9/29/25 | 444.35 |
| | | Debris Hauling and Aggregate Material Delivery 10/3/25 | 2,118.74 |
| | | Debris Hauling and Aggregate Material Delivery 10/6/25 | 1,072.42 |
| | | Debris Hauling and Aggregate Material Delivery 10/10/25 | 533.95 |
| | | Debris Hauling and Aggregate Material Delivery 9/8-9/9/25 | 4,317.17 |
| | Menards Inc | Electrical repair material | 40.43 |
| | | Electrical repair material | 26.81 |
| | | Measuring wheel | 62.99 |
| | | Drill bits | 48.26 |
| | | Electrical screw extractor kit | 88.51 |
| | | Electrical repair material | 123.57 |
| | | Electrical plugs | 45.09 |
| | Merchants Credit Guide Co | Utility Collection Services 9/30/25 | 53.88 |
| | Midwest Well Service, Inc. | Well 16 rehabilitation project 7/31/25 | 72,270.00 |
| | Nationwide Mutual Insurance Company | Nationwide 10.9.25 | 1,668.03 |
| | Paddock Publications, Inc. | Newsprint Surcharge 10/16-12/11/25 | 193.80 |
| | Rick's Sewer and Drainage | Sanitary sewer pipe replacement 407 S See Gwun 9/25/25 | 15,150.00 |
| | State Industrial Products Corporation | 10/1/25 Wastewater FOG treatment program | 895.55 |
| | Suburban Laboratories, Inc. | Water Sample Testing 8/29-9/29/25 | 1,239.00 |
| | Tank Industry Consultants, Inc. | Tank 16 Evaluation and report 9/26/25 | 8,090.00 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **050 Water and Sewer Fund (continued)** | | | |
| | Tank Industry Consultants, Inc. (continued) | Tank 17 Evaluation and report 10/1/25 | 8,090.00 |
| | | Booster Pump St 4 Rehab design/constr/eng 9/21-9/27/25 | 9,094.69 |
| | | Booster Pump St 4 Rehab design/constr/eng 9/28-10/4/25 | 8,686.31 |
| | Third Millennium Associates Inc | E-Bill Server & Transaction Fees September 2025 | 583.60 |
| | Thomas M. Kane | Utility Refund - 914 S School St | 58.25 |
| | UniFirst Corporation | Uniform Rental Services 9/24/25 | 91.88 |
| | | Uniform Rental Services 10/1/25 | 98.71 |
| | | Uniform Rental Services 10/8/25 | 98.93 |
| | United States Postal Service | EPS Postage - September 2025 | 6,576.42 |
| | Vantagepoint Transfer Agents | RHS Contributions from Sick Balance 10.9.25 | 809.95 |
| | Village of Mount Prospect | Flex Sec 125 Deds 10.9.25 | 573.43 |
| | Village Sewer & Plumbing | Fairview Gardens drain tile project 122 Stratton 9/18/25 | 19,500.00 |
| | W. W. Grainger, Inc. | VFD Filters for pump houses | 530.22 |
| | | Spray bottles for rubbing alcohol | 54.72 |
| | Wal-Mart Community | Rubbing alcohol for water samples | 50.16 |
| | Ziebell Water Service Products | Hydrant aux box extension | 320.00 |
| | | Stainless repair clamps | 2,076.83 |
| | | Service valve lids and plugs | 341.60 |
| | | Flashlight | 334.75 |
| **050 Water and Sewer Fund Total** | | | **$ 1,776,569.44** |
| **051 Village Parking System Fund** | | | |
| | AT & T Corp. | Phone Maple Deck 8/20-9/19/25 | $ 700.77 |
| | Comcast | Internet Services 301 S Maple from 10/4-11/3/25 | 234.17 |
| | Multisystem Management Company | Custodial Services for all buildings Sept 2025 | 1,027.68 |
| | TK Elevator Corporation | Maple Garage elevator maintenance 10/1-12/31/25 | 1,070.01 |
| **051 Village Parking System Fund Total** | | | **$ 3,032.63** |
| **052 Parking System Revenue Fund** | | | |
| | Multisystem Management Company | Custodial Services for all buildings Sept 2025 | $ 342.56 |
| **052 Parking System Revenue Fund Total** | | | **$ 342.56** |
| **060 Vehicle Maintenance Fund** | | | |
| | Abbott Rubber Company | Pressure washer hose for washbay | $ 382.47 |
| | Advance Stores Company, Inc. | Leaf machine fuel filters | 101.08 |
| | Al Warren Oil Co Inc | Diesel fuel September 2025 | 23,407.50 |
| | | 87 Octane fuel for Sept 2025 | 20,746.06 |
| | Amazon Capital Services | Trailer tires 2752 Arrow board/saw blades | 276.50 |
| | Arlington Heights Ford | 606 back up camera | 42.35 |
| | | 315 Hub cap | 71.20 |
| | Bonnell Industries Inc. | Plow arms for new trucks | 1,279.94 |
| | | Plow arms for new trucks - Credit | (1,279.94) |
| | Bristol Hose & Fitting Inc | Hydraulic fittings for stock | 279.36 |
| | | Stock new truck build fittings | 687.03 |
| | | New truck build fittings | 375.58 |
| | | Hydraulic fittings for stock | 506.58 |
| | Busse Automotive Inc | Detail 9/29/25 | 290.00 |
| | Chicago Parts & Sound LLC | Credit return | (210.00) |
| | | Warranty Batteries for arrow board | (492.40) |
| | | Stock air filters | 62.24 |
| | | 324 heater valve | 110.31 |
| | | 324 wipers | 74.32 |
| | | Batteries for arrow board and core | 476.44 |
| | | Wipers for stock | 79.90 |
| | | Brakes for 2715 | 247.17 |
| | | 2715 Front hub seals | 21.14 |
| | | 4554 Rotors | 185.38 |
| | | 4554 Rear axle seals | 41.14 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **060 Vehicle Maintenance Fund (continued)** | | | |
| | Chicago Parts & Sound LLC (continued) | Stock wipers | 79.90 |
| | | 506 Rear shocks | 317.60 |
| | | Credit return | (65.00) |
| | | Credit return | (420.00) |
| | | 2757 and 4532 Batteries | 550.49 |
| | | 606 Aux battery | 90.64 |
| | Elliott Auto Supply Co, Inc. | 4532 Fuel pump | 144.04 |
| | | 1634 Hub bearing | 182.00 |
| | | Stock police brakes | 456.58 |
| | | 1634 Rear brakes | 360.94 |
| | | Gloves for stock | 256.40 |
| | | 505 Front brakes | 237.67 |
| | Everclean Group LLC | Car washes September 2025 | 504.00 |
| | Genuine Parts Company Inc | Radiator hoses for 516 | 392.94 |
| | | 516 coolant hose | 160.71 |
| | | 516 clamps | 12.82 |
| | | Calipers for 316 | 322.44 |
| | | New 4557 Plate lamp | 37.50 |
| | | Shop supplies | 172.23 |
| | | 4551 Trailer brake cable | 22.18 |
| | | Core credits | (132.00) |
| | | Shop supplies | 418.19 |
| | | 516 radiator hose | 106.87 |
| | | 516 radiator hose | 213.74 |
| | | 516 radiator hose | 111.33 |
| | | Credit warranty mufflers | (234.07) |
| | | Credit return wrong part | (392.94) |
| | | 626 Rear brakes | 221.83 |
| | | 518 Epoxy for lights | 16.08 |
| | ICMA Retirement Trust - 457 | MissionSquare 10.9.25 | 2,635.83 |
| | Illinois Department of Revenue | IL State Withholding 10.9.25 | 1,716.67 |
| | IMRF | IMRF Sept 2025 | 7,695.61 |
| | Internal Revenue Service | Federal Tax Liability 10.9.25 | 10,295.42 |
| | International Union of Operating Engineers | IUOE PW Membership Dues 10.9.25 | 652.65 |
| | James Drive Safety Lane LLC | Safety lane inspection 9/26/25 | 41.00 |
| | | Safety lane inspections October 2025 | 512.00 |
| | Leach Enterprises, Inc. | Stock extinguisher brackets | 357.75 |
| | Nationwide Mutual Insurance Company | Nationwide 10.9.25 | 22.50 |
| | Northwest Trucks, Inc. | Ambulance Fuel tank for stock | 666.99 |
| | | 525 DEF Header | 699.29 |
| | | 523 AC switch and pigtail | 50.31 |
| | Pomp's Tire Service, Inc. | Tires for 308 | 620.80 |
| | Ralph Helm Inc | P2-66 Pump O-rings | 43.66 |
| | | P2-66 Pump seal | 137.99 |
| | Ronco Industrial Supply | Shop supplies | 378.14 |
| | | Shop supplies | 93.64 |
| | | Shop supplies | 27.50 |
| | | Grinding disc for shop stock | 192.64 |
| | Rush Truck Centers of Illinois, Inc. | Credit brake shoe core | (95.76) |
| | | 4509 Turbo clamps | 96.06 |
| | | 4528 Rear brake chambers | 274.00 |
| | | 4528 Hub cover | 28.36 |
| | Sherrick Tools Inc. | Shop tool exhaust pipe expander kit | 337.79 |
| | Sid Tool Co., Inc. | Hardware for stock | 347.21 |
| | Single Source, Inc. | Paint supply for shop | 486.72 |
| | Terrace Supply Company | Gas tank rental September 2025 | 31.50 |
| | | Welding gas 9/26/25 | 209.66 |
| | Triton Signal USA | Led Mars light | 101.03 |
| | Valvoline Inc | Antifreeze for stock | 324.36 |
| | Vantagepoint Transfer Agents | RHS Contributions from Sick Balance 10.9.25 | 809.95 |
| | Village of Mount Prospect | Flex Sec 125 Deds 10.9.25 | 208.14 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **060 Vehicle Maintenance Fund (continued)** | | | |
| | Wentworth Tire Service | Tires for 2757 | 1,528.50 |
| | | 505 Tires | 636.04 |
| | | 506 Tires | 608.72 |
| | WIPECO Inc | Shop rags | 496.06 |
| **060 Vehicle Maintenance Fund Total** | | | **$ 85,175.19** |
| **061 Vehicle Replacement Fund** | | | |
| | Bedliners of Bartlett | Undercoating for new flusher truck 9/28/25 | $ 1,000.00 |
| | Currie Motors | New P-39 Explorer | 50,038.00 |
| | Redistrip Company | Sand blasting of new 4557 leaf box 9/30/25 | 1,350.00 |
| | Sid Tool Co., Inc. | Hydraulic Hose 400ft Roll | 2,621.91 |
| **061 Vehicle Replacement Fund Total** | | | **$ 55,009.91** |
| **062 Computer Replacement Fund** | | | |
| | Axon Enterprise, Inc. | Equipment for body cameras 09/17/25 | $ 16,499.60 |
| | Dell Marketing LP | 15 Desktops and 10 Monitors | 22,640.95 |
| **062 Computer Replacement Fund Total** | | | **$ 39,140.55** |
| **063 Risk Management Fund** | | | |
| | Assurance Heating & Air Conditioning Inc | VH Gym HVAC modifications final 6/24/25 | $ 11,412.00 |
| | Banner Plumbing Supply Co LLC | Workout room sink faucets | 492.90 |
| | Favia, Joseph | PSEBA Reimbursement - October 2025 | 1,249.12 |
| | Intergovernmental Per.ben.coop | IPBC - October 2025 | 796,692.27 |
| | Intergovernmental Risk Management Agency | Deductible - October 2025 | 10,586.48 |
| | | Deductible - October 2025 | (117.06) |
| **063 Risk Management Fund Total** | | | **$ 820,315.71** |
| **073 Escrow Deposit Fund** | | | |
| | 4Ever Remodeling | Refund Escrow Permit #RB250687 (22 Louis) | $ 150.00 |
| | | Refund Escrow Permit #RB250931 (302 Wa Pella) | 150.00 |
| | ABC Plumbing Heating Cooling | Refund Escrow Permit #RB251457 (2006 Seneca) | 100.00 |
| | | Refund Escrow Permit #RB251665 (1829 Boulder) | 100.00 |
| | ACCMG Inc | Refund Escrow Permit CB240064 (1725 Algonquin) Reissue 857692 | 300.00 |
| | Alexander, Robert | Refund Escrow Permit #RB251481 (9 Albert) | 100.00 |
| | Atlas Remodeling of Illinois | Refund Escrow Permit #RB251525 (107 Waverly) | 100.00 |
| | ATMA Construction | Refund Escrow Permit #CB250153 (916 Elmhurst) | 200.00 |
| | Baldwin, Kevin | Refund Escrow Permit #RB241312 (907 Sumac) | 100.00 |
| | Bishop Plumbing | Refund Escrow Permit #RB251548 (1410 Lincoln) | 100.00 |
| | Blue Construction Corp | Refund Escrow Permit #RB251529 (1808 Magnolia Ln) | 100.00 |
| | Boone, Henri | Refund Escrow Permit #RB241514 (1309 Lama) | 250.00 |
| | Brick and Ponds Inc | Refund Escrow Permit #RB250700 (11 Hatlen) | 100.00 |
| | Bright Planet Solar | Refund Escrow Permit #RB251521 (710 Russel) | 100.00 |
| | Capps Plumbing | Refund Escrow Permit #RB251717 (1994 Algonquin) | 100.00 |
| | Carmen & Sons Concrete | Refund Escrow Permit #RB251398 (106 Louis) | 100.00 |
| | Certasun LLC | Refund Escrow Permit #RB250613 (1717 Aralia) | 100.00 |
| | Citrano, Phil | Refund Escrow Permit #RB251634 (1400 Elmhurst) | 250.00 |
| | Complete Lawn and Snow Services | Refund Escrow Permit #RB250912 (1306 Fern) | 100.00 |
| | Condor Transportation | Refund escrow permit #CB240268 (501 Algonquin) reissue 859122 | 100.00 |
| | Construction Management Corporation | Refund Escrow Permit #CB250163 (1856 Elmhurst) | 1,000.00 |
| | Cordova Concrete Pumping | Refund Escrow Permit #RB251244 (1000 Lincoln) | 100.00 |
| | Current Electrical Contractors | Refund Escrow Permit #RB251381 (814 Butternut) | 100.00 |
| | Danleys Garages | Refund Escrow Permit #RB250457 (11 Wa Pella) | 150.00 |
| | Fahrenbacher, Matthew | Refund Escrow Permit #RB250969 (805 Emerson) | 100.00 |
| | Flush Sewer & Drain | Refund Escrow Permit #RB251654 (1928 Yuma) | 100.00 |
| | Fortis Ground Werks | Refund Escrow Permit #RB251304 (1818 Buckthorn) | 100.00 |
| | GA Johnson & Son | Refund Escrow Permit #CB240245 (1480 Elmhurst) | 500.00 |
| | Green Garden Group | Refund Escrow Permit #RB251290 (1307 Lama) | 100.00 |

# VILLAGE OF MOUNT PROSPECT
## List of Bills
## October 1, 2025 - October 21, 2025

| Fund | Vendor Name | Invoice Description | Amount |
|---|---|---|---|
| **073 Escrow Deposit Fund (continued)** | | | |
| | Hamburg, Jason | Refund Escrow Permit #RB241297 (312 Marcella) | 100.00 |
| | Hetman, Bernie | Refund Escrow Permit #RB251140 (111 Horner) | 100.00 |
| | Hunt, Helen | Refund Escrow Permit #RB251167 (1106 Busse) | 100.00 |
| | Illinois Sewer & Drain | Refund Escrow Permit #RB251655 (1113 Fern) | 100.00 |
| | JRC Contracting LLC | Refund Escrow Permit #RB241792 (900 Country) | 100.00 |
| | Juris Company | Refund Escrow Permit #RB251133 (320 Wille) | 100.00 |
| | Kaczor, Slawomir | Refund Escrow Permit #RB251123 (106 Stevenson) | 100.00 |
| | Kerr Mechanical Corp | Refund Escrow Permit #RB251669 (419 Fairview) | 100.00 |
| | Kopper, Margaret | Refund Escrow Permit #RB251057 (610 Wille) | 100.00 |
| | Legacy Home Services | Refund Escrow Permit #RB251558 (1215 Robin) | 100.00 |
| | Libra Construction | Refund Escrow Permit #CB240263 (105 Weiler Rd) | 850.00 |
| | Lictman, Michael | Refund Escrow Permit #RB250971 (620 Kensington) | 100.00 |
| | Lutheran Church of Martha & Mary | Refund Escrow Permit #CB250029 (915 Can Dota) | 125.00 |
| | M&E Construction & Renovations | Refund Escrow Permit #RB251306 (1915 Camp McD) | 100.00 |
| | Maloy Concrete LLC | Refund Escrow Permit #RB250348 (807 Edward) | 100.00 |
| | Martinez, Mary | Refund Escrow Permit #RB250769 (2813 Briarwood) | 100.00 |
| | Material Systems Inc | Refund Escrow Permit #CB250228 (2200 Busse) | 100.00 |
| | MPower Generators Inc | Refund Escrow Permit #RB251407 (402 Council) | 100.00 |
| | Newline Kitchen & Bath | Refund Escrow Permit #RB250472 (803 I Oka) | 150.00 |
| | Norb & Sons Electric | Refund Escrow Permit #RB251325 (1102 Wedgewood) | 100.00 |
| | North Coast Sewer and Drainage | Refund Escrow Permit #RB251693 (811 We Go) | 100.00 |
| | NV Ventures | Refund Escrow Permit #RB251096 (1501 Barberry) | 100.00 |
| | Ohi Jim Thomas | Refund Escrow Permit #RB250879 (1305 Ironwood) | 150.00 |
| | Olan, Daniel | Refund Escrow #RB224952 Reissue check 842887 | 100.00 |
| | Olivera Best Construction | Refund Escrow Permit #RB251441 (801 Hi Lusi) | 100.00 |
| | One Hour Heating & AC | Refund Escrow Permit #RB251607 (511 Deborah) | 100.00 |
| | Pharaohs Building | Refund Escrow Permit #CB250167 (1719 Chariot) | 1,000.00 |
| | Precision Today Plumbing | Refund Escrow Permit #RB251676 (118 Lancaster) | 100.00 |
| | Ricks Sewer & Drain | Refund Escrow Permit #RB251587 (304 We Go) | 100.00 |
| | Riley Construction Company | Refund Escrow Permit #CB240301 (1804 Central) | 500.00 |
| | RJ Concrete Inc | Refund Escrow Permit #RB251104 (718 Eastman Dr) | 100.00 |
| | | Refund Escrow Permit #RB251119 (1716 Laurel) | 100.00 |
| | Salgado, Lenin | Refund Escrow Permit #RB250726 (925 Country) | 100.00 |
| | Sebert Landscaping | Refund Hydrant Deposit #25PW07 | 44.70 |
| | Sila Services LLC | Refund Escrow Permit #RB251475 (312 Emerson) | 100.00 |
| | Skor Construction Inc | Refund Escrow Permit #RB251081 (2100 Jody) | 150.00 |
| | Skora, Miroslaw | Refund Escrow Permit #RB251618 (207 Orchard Pl) | 250.00 |
| | Smith, George | Refund Escrow Permit #RB251432 (406 Forest) | 100.00 |
| | Sunrun Installation Services | Refund Escrow Permit #RB241843 (2101 Prendergast Ln) | 100.00 |
| | | Refund Escrow Permit #RB251014 (1810 Burning Bush) | 100.00 |
| | | Refund Escrow Permit #RB251213 (2107 Jody) | 100.00 |
| | Terrazon Group | Refund Hydrant Deposit #25PW02 | 116.36 |
| | Unique Concrete Construction Inc | Refund Escrow Permit #RB250295 (1002 Greenfield) | 100.00 |
| | US Waterproofing Inc | Refund Escrow Permit #RB251105 (111 Can Dota) | 100.00 |
| | | Refund Escrow Permit #RB251507 (162 Fairmont) | 100.00 |
| | Vazquez Brick & Cement Inc | Refund Escrow Permit #RB251485 (715 Eastwood) | 100.00 |
| | Village Sewer & Plumbing | Refund Escrow Permit #RB251478 (1403 Dogwood) | 500.00 |
| | | Refund Escrow Permit #RB251643 (1115 Greenwood Dr) | 100.00 |
| | Wendell, Sarah | Refund Escrow Permit #RB250407 (403 Albert) | 250.00 |
| | Xclusive Concrete & Brick | Refund Escrow Permit #RB250445 (1400 Indigo Dr) | 100.00 |
| | Xclusive Concrete & Brick Paving | Refund Escrow Permit #RB250328 (5 Elm) | 100.00 |
| | X-Pert Landscaping | Refund Escrow Permit #RB251327 (2813 Briarwood Dr W) | 100.00 |
| **073 Escrow Deposit Fund Total** | | | **$ 13,036.06** |
| **Grand Total** | | | **$ 9,057,871.01** |

# Item Cover Page

| | |
|---|---|
| **Subject** | **Approval of Closed Session minutes — October 7, 2025, and October 14, 2025** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | |
| Dollar Amount | |
| Budget Source | |
| Category | CONSENT AGENDA |
| Type | Action Item |

**Information**

**Discussion**

**Alternatives**

**Staff Recommendation**

**Attachments**

None

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to approve A RESOLUTION APPROVING A PLAT OF EASEMENT GRANT FOR THE PROPERTY LOCATED AT 500 WEST CENTRAL ROAD, MOUNT PROSPECT, IL 60056** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | N |
| Dollar Amount | |
| Budget Source | |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

On December 20, 2022, the Village Board approved a zoning map amendment (from I-1 to B-5) and a variation from the Zoning Code to allow increased density for the conversion of the existing office building at 500 West Central Road into a 20-unit multifamily residential building (Ordinance No. 6656) and subsequently granted two extensions (Ordinance Nos. 6699 and 6767). Staff requests Village Board approval of a Plat of Easement for 500 West Central Road. The plat confirms and grants access easements over public utilities (water and storm). Consistent with Ordinance No. 6656, the plat must be recorded prior to issuance of any certificate of occupancy. Staff has reviewed the plat and finds it compliant with all applicable Village codes and requirements.

## Discussion

## Alternatives

1. Approve the resolution approving a plat of easement grant for the property located at 500 West Central Road.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Approve the resolution approving a plat of easement grant for the property located at 500 West Central Road.

## Attachments

1. PZ-06-25 Plat of Easement
2. R-06-25 Resolution 500 West Central Rd (Plat of Easement)

# PLAT OF EASEMENT

Lot " A " in Owner's Resubdivision of Lot 3 (except the west 282.52 feet thereof) of Charles's Behlendorf's Division of the Southwest Quarter of the Northwest Quarter and the West 10.58 chains of the Southwest Quarter of Section 34, Township 42 North, Range 11, East of the Third Principal Meridian, except the right of way of the Chicago and Northwestern Railroad Company according to the plat thereof of said Owner's Resubdivision registered in the Office of the Registrar of Titles of Cook County, Illinois on December 21, 1970 as Document number 2535801, in Cook County, Illinois.

Commonly known as: **500 W CENTRAL ROAD, MOUNT PROSPECT, ILLINOIS.**

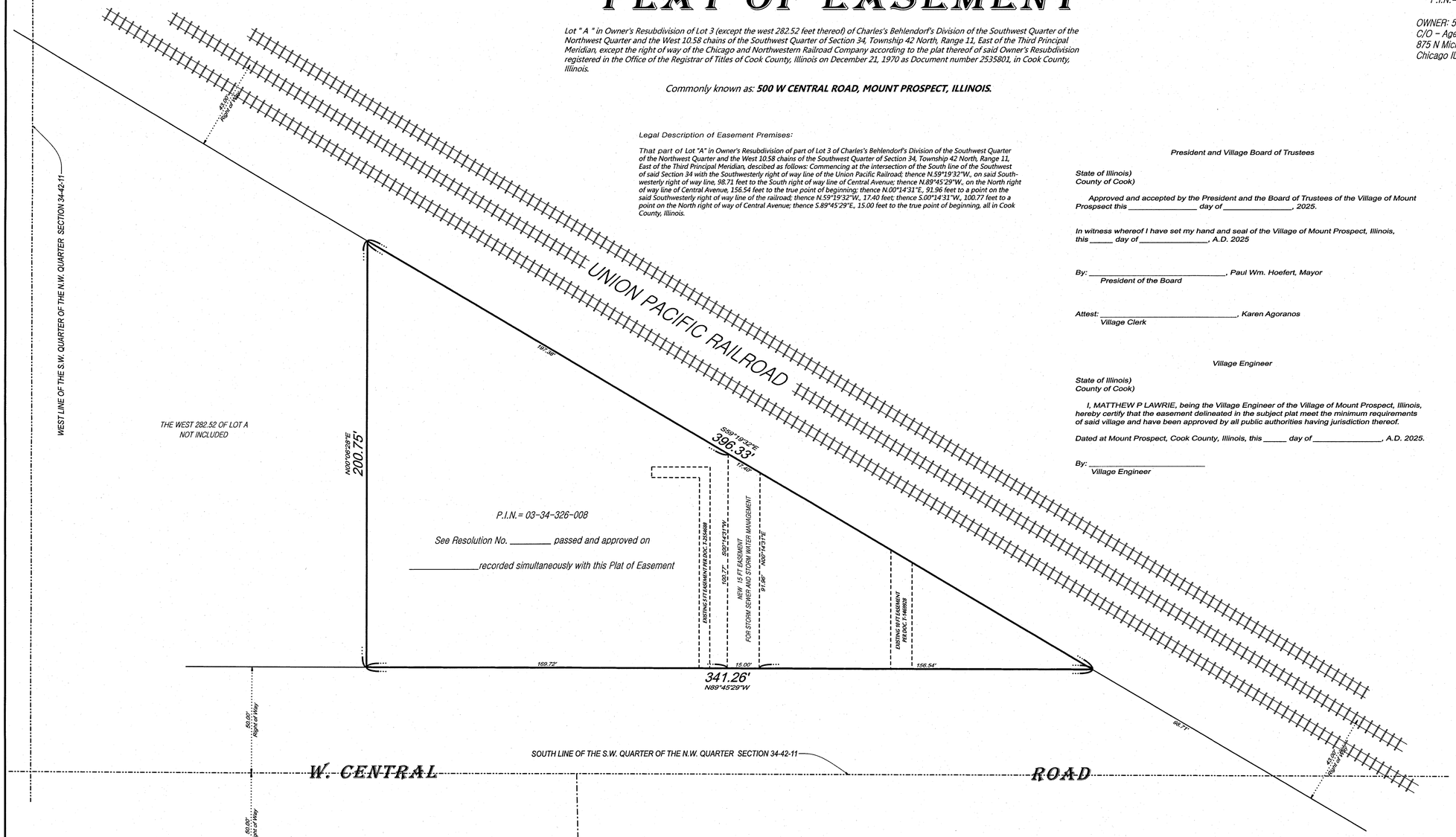
P.I.N.= 03-34-326-008

OWNER: 500 CENTRAL RD LLC
C/O - Agent: Ognjen Isak
875 N Michigan Ave Suite 3100
Chicago IL 60611-1962

Space Reserved for Recorder

Legal Description of Easement Premises:

That part of Lot "A" in Owner's Resubdivision of part of Lot 3 of Charles's Behlendorf's Division of the Southwest Quarter of the Northwest Quarter and the West 10.58 chains of the Southwest Quarter of Section 34, Township 42 North, Range 11, East of the Third Principal Meridian, descibed as follows: Commencing at the intersection of the South line of the Southwest of said Section 34 with the Southwesterly right of way line of the Union Pacific Railroad; thence N.59°19'32"W., on said South-westerly right of way line, 98.71 feet to the South right of way line of Central Avenue; thence N.89°45'29"W., on the North right of way line of Central Avenue, 156.54 feet to the true point of beginning; thence N.00°14'31"E., 91.96 feet to a point on the said Southwesterly right of way line of the railroad; thence N.59°19'32"W., 17.40 feet; thence S.00°14'31"W., 100.77 feet to a point on the North right of way of Central Avenue; thence S.89°45'29"E., 15.00 feet to the true point of beginning, all in Cook County, Illinois.




P.I.N.= 03-34-326-008

See Resolution No. _____ passed and approved on

_____ recorded simultaneously with this Plat of Easement

President and Village Board of Trustees

State of Illinois)
County of Cook)

Approved and accepted by the President and the Board of Trustees of the Village of Mount Prospsect this _____ day of _____, 2025.

In witness whereof I have set my hand and seal of the Village of Mount Prospect, Illinois, this _____ day of _____, A.D. 2025

By: _____, Paul Wm. Hoefert, Mayor
President of the Board

Attest: _____, Karen Agoranos
Village Clerk

Village Engineer

State of Illinois)
County of Cook)

I, MATTHEW P LAWRIE, being the Village Engineer of the Village of Mount Prospect, Illinois, hereby certify that the easement delineated in the subject plat meet the minimum requirements of said village and have been approved by all public authorities having jurisdiction thereof.

Dated at Mount Prospect, Cook County, Illinois, this _____ day of _____, A.D. 2025.

By: _____
Village Engineer

N
W E
S

The Meridian is assumed but reflects the record Subdivision or Deed, except when noted.

Scale 1"= 25 ft

Easement Provisions:

A non-exclusive Easement for Storm Water Management is hereby reserved for and granted to the Village of Mount Prospect, its successors and assigns, to install, operate, maintain and remove, from time to time, facilities used in connection with Storm Water Management in and under that part of the property marked on this plat and marked "New 15 Foot Easement", together with the right to cut, trim or remove trees, bushes and roots as may be reasonably required incident to the rights hereon given, and the right to enter upon the property for all such purposes if deemed appropriate by the Village.

Obstructions shall not be placed over the grantees facilities or in, upon or over the property within the dashed lines marked "New 15 Foot Easement" without the prior written consent of grantees. After installation of any such facilities, the grade of the property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

Owner & Notary Certificates

State of Illinois)
County of Cook)

This certifies that Gold Coast Group Holdings LLC & Servitude Holdings LLC are the managers of 500 Central Rd LLC, the owner of the land described in the subject plat, and has caused the same to be surveyed for the uses and purposes therein set forth.

The undersigned hereby reserves for the public or applicable governmental body, as the case may be, all new easements, to the extent indicated on this plat.

Dated this 26 day of Sep, A.D. 2025.

Signed: _____, Gold Coast Group Holdings LLC
Name: OJ ISAK

Signed: _____, Servitude Holdings LLC
Name: Goran Balesevic

State of Illinois)
County of Cook)

I, LILLIAN ZILBAN, a Notary Public in and for said County in the State aforesaid, do hereby certify that the managers listed above, are personally know to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed and delivered said instrument as their own free and voluntary for the uses and purposes therein set forth.

Given under my hand and Notarial Seal this 26 day of September A.D. 2025.

Signed: _____
Notary Public

OFFICIAL SEAL
LILLIAN ZILBAN
Notary Public, State of Illinois
Commission No. 857616
My Commission Expires August 06, 2029

State of Illinois)
County of Lake)

This is to certify that I, Richard G Pavletic, Illinois Professional Land Surveyor, No. 3261, have surveyed the above described property and have prepared the annexed Plat of Easement. All distances are shown in feet and decimal parts thereof.

Given under my hand and seal at Libertyville, Illinois this 26th day of September, A.D. 2025.

By: _____
Professional Land Surveyor No. 3261

PROFESSIONAL LAND SURVEYOR R.G. PAVLETIC 035-3261 Libertyville, Illinois STATE OF ILLINOIS
expires 11-30-26

Submitted for recording by and after recording return to:

The Village of Mount Prospect
50 S. EMERSON ST.,
MOUNT PROSPSECT IL 60056

Prepared for:

Ognjen Isak, agent for
500 Central Rd LLC
875 N Michigan Ave Suite 3100
Chicago IL 60611

Order Number: 25-009 E
Field Work Completed on: 1-13-25
Date: 3-5-25
Revisions:
~~4-24-25 Certificate per Village Attorney~~
~~5-08-25 Certificates per Public Works & Planning~~
9-03-25 Village Board Certificate per Planning

R E DECKER
PROFESSIONAL LAND SURVEYORS PC
114 E. COOK AVENUE
LIBERTYVILLE, IL 60048
TEL. 847-362-0091
DECKERSURVEY@GMAIL.COM

PROFESSIONAL DESIGN FIRM R.E. DECKER, P.C. 184-3086 Libertyville, IL STATE OF ILLINOIS
expires 4-30-27

RESOLUTION NO. _____

A RESOLUTION APPROVING A PLAT OF EASEMENT GRANT FOR PROPERTY LOCATED AT 500 WEST CENTRAL ROAD, MOUNT PROSPECT, IL 60056

WHEREAS, the Petitioner, 500 Central Road LLC, has requested approval of a Plat of Easement Grant bearing the latest revision date of 09-03-2025 for property located at 500 West Central Road ("Subject Property") and legally described as the following:

LOT "A" IN OWNER'S RESUBDIVISION OF LOT 3 (EXCEPT THE WEST 282.52 FEET THEREOF) OF CHARLES'S BEHLENDORF'S DIVISION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE WEST 10.58 CHAINS OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 42 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, EXCEPT THE RIGHT OF WAY OF THE CHICAGO AND NORTHWESTERN RAILROAD COMPANY ACCORDING TO THE PLAT THEREOF OF SAID OWNER'S RESUBDIVISION REGISTERED IN THE OFFICE OF THE REGISTRAR OF TITLES OF COOK COUNTY, ILLINOIS ON DECEMBER 21, 1970 AS DOCUMENT NUMBER 2535801, IN COOK COUNTY, ILLINOIS.

Property Index Number: 03-34-326-008-0000

WHEREAS, the Petitioner is seeking to dedicate new access that will grant access easements to the Village of Mount Prospect over the public utilities (water and storm) that cross the east side of the Subject Property.

WHEREAS, the Corporate Authorities of the Village of Mount Prospect ("Village"), after due consideration, have determined it is in its best interests to approve a plat dedicating new access that will grant access easements to the Village of Mount Prospect over the public utilities (water and storm) that cross the east side of the Subject Property as reflected on the Plat of Easement Grant.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, A HOME RULE MUNICIPALITY:

SECTION ONE: That the Plat of Easement Grant for the property located at 500 West Central Road is hereby approved for appropriate execution and simultaneous recording together with this Resolution.

SECTION TWO: That this Resolution shall be in full force and effect from and after its passage and approval in the manner provided by law.

AYES:

NAYS:

ABSENT:

PASSED and APPROVED this 28th day of October, 2025.

_____

Paul Wm. Hoefert
Village Mayor

ATTEST:

_____

Karen Agoranos
Village Clerk

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to approve A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE JOINT EMERGENCY MANAGEMENT SYSTEM (JEMS), THE VILLAGE OF MOUNT PROSPECT, AND PARTICIPATING MUNICIPALITIES** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | N |
| Dollar Amount | 0 |
| Budget Source | N/A |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

Mount Prospect has been a member of the Joint Emergency Management System (JEMS) since 2016. The original intergovernmental agreement (IGA) closely aligned JEMS operations with the Northwest Central Dispatch System (NWCDS), leading to overlapping administrative structures and limited independence for JEMS.

JEMS is now purposing to separate from NWCDS to form its own intergovernmental agency. The new agreement establishes JEMS with its own Board of Directors, composed of representatives from each participating municipality. This enhances flexibility and creates a stronger foundation for regional emergency management collaboration amongst municipalities without requiring structural changes to NWCDS or creating interdependency issues.

The revised IGA would establish JEMS as a separate intergovernmental agency under the Illinois Intergovernmental Cooperation Act and the Illinois Emergency Management Agency Act. Governance rests directly with the participating municipalities, ensuring clearer oversight and accountability.

## Agreement Update

- **Independent Governance:** A Board of Directors, composed of appointed officials from each member municipality will oversee JEMS. Municipalities will have defined voting rights in the bylaws.
- **Operational Flexibility:** JEMS will have the authority to enter into agreements, contracts, hire staff, and manage its own budget and services.
- **Streamlined Decision-Making:** Separating JEMS from NWCDS removes administrative overlap and allows emergency management functions to operate independently from 9-1-1 dispatch services.
- **Future Growth:** The new structure supports potential inter-agency partnerships, grant

opportunities, and program expansion without requiring structural changes to NWCDS.

## Discussion

## Alternatives

1. Approve a resolution authorizing an intergovernmental agreement between the Joint Emergency Management System (JEMS), the Village of Mount Prospect, and participating municipalities.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommend adopting changes to the Joint Emergency Management System (JEMS) IGA, establishing JEMS as a separate intergovernmental agency under the Illinois Intergovernmental Cooperation Act and the Illinois Emergency Management Agency Act.

## Attachments

1. Memo Cover for IGA
2. 2025 JEMS IGA
3. JEMS Agreement Mount Prospect - 2017
4. Resolution IGA JEMS

**Northwest Central Joint Emergency Management System**

Arlington Heights, Barrington, Buffalo Grove, Elk Grove Village, Hoffman Estates, Inverness, Mount Prospect, Palatine, Rolling Meadows, Schaumburg, Streamwood, Wheeling

*1975 East Davis Street, Arlington Heights IL 60005*

*(847) 590-3459, Fax (847) 398-2498*

Date:2025-04-09

To: JEMS Board of Directors

Memo: Updated JEMS IGA

Attached please find the updated Joint Emergency Management System (JEMS) Intergovernmental Agreement (IGA). The purpose of this update is to amend the governance structure and provide greater organizational flexibility. The original agreement aligned the JEMS membership framework with Northwest Central Dispatch System (NWCDS) operations. The structure commingled administrative oversight, finances, and did not clearly distinguish the organizational identity of JEMS from NWCDS. The revised IGA clarifies and formalizes JEMS as intergovernmental agency, formed under the authority of Illinois Intergovernmental Cooperation Act and the Illinois Emergency Management Agency Act, which will be directly governed by the participating municipalities.

One of the differences between the two agreements is the shift in governance and autonomy. Under the original Subscription Agreement, JEMS was treated as a program of NWCDS, subject to NWCDS Board decisions and administrative structure. In contrast, the updated IGA establishes JEMS with its own Board of Directors, composed of appointed officials from each participating municipality, with voting rights and authority defined by collectively adopted bylaws. This structure ensures that the participating municipalities have direct oversight over the program, decision-making is streamlined, and the emergency management functions are distinct from 9-1-1 dispatch or communications systems.

Additionally, the new agreement enhances flexibility and long-term sustainability by explicitly granting JEMS the authority to enter into agreement, contracts, hire staff, and manage its own budget and services. This provides a simplified and clearer foundation for the entity to perform the regional preparedness, planning, and response efforts. It also opens the door for future interagency partnerships, grants, or expansion without requiring structural changes to NWCDS or creating interdependency issues.

The revised agreement strengthens the financial processes, foundation, function, and accountability of JEMS while preserving the benefits of regional collaboration established in the original subscriber agreement. It reflects the best practices in intergovernmental cooperation and leaves JEMS open for growth in emergency management across the participating communities.

**JOINT EMERGENCY MANAGEMENT SYSTEM (JEMS)**
**INTERGOVERNMENTAL AGREEMENT**

The undersigned Participating Municipalities agree, pursuant to the Constitution of the State of Illinois, 1970, Article VII, Section 10, the Intergovernmental Cooperation Act (5 ILCS 220/1 et seq.), and the Emergency Management Act (20 ILCS 3305/1 et seq.) as follows:

**Recitals**

WHEREAS, the Participating Municipalities, as defined herein, each have emergency management responsibilities, including preparedness, mitigation, response, and recovery efforts and programs, which can be enhanced through regional collaboration; and

WHEREAS, the Participating Municipalities seek to enhance regional emergency management capabilities by establishing a Joint Emergency Management System (JEMS) that will serve as a collaborative entity to coordinate emergency preparedness, mitigation, response, and recovery efforts and programs.

WHEREAS, JEMS will provide coordinated emergency management planning, training, resource and response support for the Participating Municipalities in accordance with federal, state, and local laws and guidelines.

**Agreement**

**1. Participating Municipalities**

The Participating Municipalities of this IGA are: Arlington Heights, Barrington, Buffalo Grove, Elk Grove Village, Hoffman Estates, Inverness, Mount Prospect, Palatine, Prospect Heights, Rolling Meadows, Schaumburg, Streamwood, and Wheeling. Additional municipalities may join JEMS if invited by the JEMS Board of Directors pursuant to the procedures outlined in the JEMS Bylaws, by adopting this Agreement.

**2. Formation and Purpose**

The Participating Municipalities share a common interest in combining resources for regional emergency management, building community-wide emergency management capabilities, and providing emergency management training, and hereby form the Joint Emergency Management System ("JEMS"), an intergovernmental agency, to coordinate their common interests and share costs and expenses related to those common interests.

**3. Effective Date**

This IGA will go into effect on January 1, 2026.

**4. Governance and JEMS Bylaws**

A. JEMS shall be governed by a Board of Directors ("JEMS Board"), whose powers

and responsibilities will be enumerated in JEMS Bylaws.

B. Each Participating Municipality expressly agrees to appoint its chief appointed official to the JEMS Board.

C. The Participating Municipalities agree that, within sixty (60) days of the Effective Date of this IGA, the JEMS Board will adopt Bylaws governing JEMS and its Board ("JEMS Bylaws").

D. Each Participating Municipality will have one vote on the JEMS Board, subject to revision by the JEMS Bylaws.

E. The Participating Municipalities agree that the JEMS Bylaws will create JEMS Board Officers, including a Chair, Vice Chair, Secretary and Treasurer.

F. The Participating Municipalities agree to abide by the JEMS Bylaws for the duration of this IGA.

G. It is the intention of the Participating Municipalities that the JEMS Board has the authority to enter into contracts and hire, supervise, discipline, and otherwise control employees of JEMS.

**5. Invoicing and Payment**

A. Each Participating Municipality agrees to pay all fees and other costs as may be assessed by the JEMS Board. All payments shall be made on or before the due date set by the JEMS Board.

B. Each Participating Municipality understands and agrees that non-payment of fees and other costs is a material breach of this IGA and is grounds for withholding the services provided by JEMS.

**6. Duty to Cooperate**

The Parties understand that this IGA is an intergovernmental agreement. Accordingly, all Participating Municipalities agree to cooperate in all respects in the provision and receipt of services hereunder, including but not limited to the management of JEMS, the record keeping requirements of JEMS, the staffing of JEMS, and the costs and payment obligations of JEMS.

**7. Notices**

All notices required to be given under this IGA shall be given by hand delivery, First Class U.S. Mail or national overnight courier to the addresses below:

If to the JEMS Board: Director
Northwest Central Joint Emergency Management System
1975 East Davis Street

Arlington Heights IL 60005

If to a Participating Municipality: *Addresses listed below.*

**8. Governing Law and Venue**

This Agreement shall be governed by the laws of the State of Illinois. Jurisdiction over the parties and the venue for all disputes under this IGA or the JEMS Bylaws shall be in the Circuit Court of Cook County, Illinois.

**9. Amendments and Waivers**

Except for a duly adopted amendment to the JEMS Bylaws, this IGA may not be amended, modified or waived in any respect except by written agreement duly and validly authorized, executed and delivered by all of the Parties hereto.

**10. Authority of Signatories**

The individual signing on behalf of the Participating Municipality warrants that he/she/they have all due authority to execute this IGA and that Participating Municipality's governing board has taken all necessary steps to so authorize this IGA.

**11. Severability**

The many terms and provisions of this IGA are severable. Should any court of competent jurisdiction for any reason declare any portion of this IGA unenforceable, those provisions remaining shall continue in full force and effect for the full term as provided herein.

**12. Counterparts**

This IGA may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same IGA. Executed facsimile and electronic copies shall have the same force and effect as the original.

[SIGNATURE PAGE FOLLOWS]

**IN WITNESS WHEREOF**, the Participating Municipalities have each caused this Agreement to be executed by duly authorized officers thereof as of the date and year written below.

Village of Arlington Heights

_____

By Its:

_____

Date:

_____

Address:

_____

_____

Village of Elk Grove Village

_____

By Its:

_____

Date:

_____

Address:

_____

_____

Village of Barrington

_____

By Its:

_____

Date:

_____

Address:

_____

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Village of Hoffman Estates

_____

By Its:

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Date:

_____

Address:

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Village of Buffalo Grove

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By Its:

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Date:

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Address:

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Village of Inverness

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By Its:

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Date:

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Address:

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Village of Mount Prospect

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By Its:

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Date:

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Address:

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Village of Schaumburg

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By Its:

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Date:

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Village of Palatine

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By Its:

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Address:

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Village of Streamwood

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By Its:

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Date:

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Address:

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City of Prospect Heights

_____

By Its:

_____

Date:

_____

Address:

_____

_____

Village of Wheeling

_____

By Its:

_____

Date:

_____

Address:

_____

_____

City of Rolling Meadows

_____

By Its:

_____

Date:

_____

Address:

_____

_____

**JEMS SUBSCRIPTION AGREEMENT—**
**NWCDS Members**

**THIS AGREEMENT** ("Subscription Agreement") is made, entered into, and effective on this 27th day of January, 2017 ("Effective Date"), by and between the Northwest Central Dispatch System, an intergovernmental cooperative, ("NWCDS"), and the Village of Mount Prospect, ("Subscriber").

**WITNESSETH**

**WHEREAS,** the Subscriber wishes to participate in the JOINT EMERGENCY MANAGEMENT SERVICE PROGRAM of the NWCDS ("JEMS Program") and expressly desires to adhere to the JEMS Program Bylaws adopted January 12, 2016 and as amended from time to time by the NWCDS Board of Directors,

**NOW THEREFORE,** the parties agree as follows:

1. **Incorporation of JEMS Bylaws.**

A. The JEMS Program Bylaws adopted January 12, 2016, and as may be amended from time to time by the NWCDS Board of Directors ("JEMS Bylaws"), are hereby expressly incorporated into this Agreement. Any such amendments to the JEMS Bylaws once adopted shall be in full force and effect in this Subscription Agreement without further action by the parties.

B. Those terms defined in the JEMS Bylaws shall have the same meaning in this Subscription Agreement as set forth in the JEMS Bylaws.

C. In the event of a conflict between this Subscription Agreement and the JEMS Bylaws, the JEMS Bylaws shall control.

2. **Participation in Program**

Subscriber agrees to abide by the JEMS Bylaws for the duration of this Subscription Agreement. Subscriber expressly agrees to designate members to the JEMS Board and any committees or subcommittees thereof all in accordance with the JEMS Bylaws.

3. **Invoicing and Payment.**

A. The Subscriber hereby agrees to pay all subscription fees and other subscriber costs as may be assessed by the JEMS Board. All payment shall be made on or before the due date set by the JEMS Board.

B. Subscriber understands and agrees that non-payment of subscription fees and other subscriber costs is a material breach of this Subscription Agreement and is grounds for

withholding the services provided under the JEMS program in addition to any other relief the NWCDS may have available to it.

4. **Duty to Cooperate**

The Parties understand that this Subscription Agreement is an intergovernmental agreement. Accordingly, both parties agree to cooperate in all respects in the provision and receipt of services hereunder, including but not limited to the management of the JEMS Program, the record keeping requirements of the JEMS Program, the staffing of the JEMS Program and the costs and payment obligations of the JEMS Program.

5. **Notices.**

A. All notices required to be given under these bylaws shall be given by hand delivery, First Class U.S. Mail or national overnight courier addressed as follows:

If to the JEMS Board:

Executive Director
Northwest Central Dispatch System
1975 East Davis Street
Arlington Heights IL 60005

If to Subscriber:

Village Manager
Village of Mount Prospect
50 S. Emerson Street
Mount Prospect, IL 60056

B. Notices shall be deemed given as set forth in the JEMS Bylaws.

6. **Governing Law and Venue**

This Agreement shall be governed by the laws of the State of Illinois. Jurisdiction over the parties and the venue for all disputes under this Subscription Agreement or the JEMS Bylaws shall be in the Circuit Court of Cook County, Illinois.

7. **Amendments & Waivers.**

Except for a duly adopted amendment to the JEMS Bylaws, this Agreement may not be amended, modified or waived in any respect except by written agreement duly and validly authorized, executed and delivered by all of the Parties hereto.

8. **Authority of Signatories**

The individual signing on behalf of Subscriber warrants that he/she has all due authority to execute this Subscription Agreement and that Subscriber's governing board has taken all necessary steps to so authorize this Subscription Agreement.

**IN WITNESS WHEREOF**, the parties have set their hands and affixed their seals on the date first written above.

| NORTHWEST CENTRAL DISPATCH SYSTEM | [SUBSCRIBER] |
|---|---|
| By: _____ | _____ |
| John Ferraro, Executive Director | Michael J. Cassady, Village Manager |

RESOLUTION NO.

**A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE JOINT EMERGENCY MANAGEMENT SYSTEM (JEMS), THE VILLAGE OF MOUNT PROSPECT AND PARTICIPATING MUNICIPALITIES**

**WHEREAS**, The Village of Mount Prospect, Arlington Heights, Barrington, Buffalo Grove, Elk Grove Village, Hoffman Estates, Inverness, Palatine, Prospect Heights, Rolling Meadows, Schaumburg, Streamwood, and Wheeling (the "Participating Municipalities") agree, pursuant to the Constitution of the State of Illinois, 1970, Article VII, Section 10, the Intergovernmental Cooperation Act (5 ILCS 220/1 et seq.), and the Emergency Management Act (20 ILCS 3305/1 et seq.); and

**WHEREAS,** the "Participating Municipalities" each have emergency management responsibilities, including preparedness, mitigation, response, and recovery efforts and programs, which can be enhanced through regional collaboration; and

**WHEREAS,** the Participating Municipalities seek to enhance regional emergency management capabilities by establishing a Joint Emergency Management System (JEMS) that will serve as a collaborative entity to coordinate emergency preparedness, mitigation, response, and recovery efforts and programs; and

**WHEREAS,** JEMS will provide coordinated emergency management planning, training, resource and response support for the "Participating Municipalities" in accordance with federal, state, and local laws and guidelines.

NOW THEREFORE BE IT ORDAINED/RESOLVED BY THE MAYOR AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS:

**SECTION ONE:** The Board of Trustees do hereby authorize the Village of Mount Prospect to enter into an Intergovernmental Agreement with the Joint Emergency Management System (JEMS) and the "Participating Municipalities", a copy of which is attached hereto and made part of this Resolution as Exhibit A.

**SECTION TWO:** That the Mayor is authorized to sign the agreement and the Village Clerk to attest.

**SECTION THREE**: That this Resolution shall be in full force and effect from and after its passage and approval in the manner provided by law.

AYES:

NAYS:

ABSENT:

PASSED and APPROVED on this 28th day of October 2025.

_____
Paul Wm. Hoefert Mayor

ATTEST:

_____
Karen M. Agoranos, Village Clerk

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to approve Fire Department voluntary cancer screenings for an amount not to exceed $85,000.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $85,000 |
| Budget Source | Foreign Fire Tax |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

The Mount Prospect Foreign Fire Tax Board (FFTB) has approved a proactive health initiative to offer voluntary cancer screenings for all active fire department personnel, including Admin, Fire Prevention, Emergency Management, and Paid on Call members, with 100% of the cost covered by the Foreign Fire Tax Fund (FFTF). Retirees would also be eligible for these screenings, with the FFTF covering 50% of their screening costs.

Foreign Fire Tax Board Overview

The purpose of the FFTB is to receive and expend foreign fire tax funds for the maintenance, use and benefit of the Fire Department, in accordance with the Illinois Statutes. FFT revenue is generated through a tax imposed on insurance companies. In accordance with Illinois Public Act 95-0807, insurance companies domiciled outside of Illinois are subject to a 2% tax/fee on premiums from policies that include fire coverage within the Village of Mount Prospect and its annexed areas. The FFT board manages the funds following Village purchasing policies, and the Village acts as a custodian of the funds.

This is accomplished through submitted proposals the board reviews and votes on during scheduled meetings. Only proposals that meet the criteria noted above are approved after thorough review and discussion by board members. The FFTB includes seven elected members comprised a Battalion Chief or higher rank, one Lieutenant, two firefighters, one non-sworn personnel, one department “at large” member and the Fire Chief. Any board approved proposals of $10,000 or more are presented to the general membership for a vote before approval. All sworn and non-sworn members of the department are included in the general membership.

Cancer Screening Proposal

The table below outlines the current cancer screening practices of neighboring towns. Arlington Heights was the first municipality to implement cancer screenings, in 2023. While

Mount Prospect is not the first department in the area to offer screenings, the FFTB proposal is offering the most comprehensive approach.

Of the eight towns listed, five are either currently funding or will fully fund the screenings through their respective FFTFs.

| | Testing | | | Staff | | | Funding | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Department (Year Screening Started) | USD Ultrasound $350 | Grail Blood Test $649 | Prenuvo MRI $1,899 | FF | Admin | Retirees | Village | Foreign Fire Tax | Union | |
| Arlington Heights (2023) | X | | | X | X | X | 50% Active Members | 100% Admin Officers 25% Active Members | 100% Retirees 25% Active Members | |
| Buffalo Grove (2025) | X | | | | | | | 100% | | |
| Carpentersville (2024) | X | | | X | X | | 100% | | | |
| Des Plaines (2025) | X | | | X | | | | 100% | | |
| Elk Grove Village (2026) | X | | | X | | | | 100% | | |
| Rolling Meadows (2024) | X | | | X | X | | 50% | | 50% | |
| Streamwood (2024) | | | X | | | | | 100% | | 10 each |
| Wheeling (2024) | X | | | X | | | | 100% | | |

All area towns that conduct screenings use the companies below for screenings. They can be considered a sole source as proactive (elective) cancer screening for firefighters is relatively new. While there are other companies that offer blood tests, ultrasounds and MRI scans, they do not offer these tests directly to the public, or do not offer tests as comprehensive.

Screening Tests Offered:
<u>Grail (Galleri) Blood Test (screens for 55 cancer types)</u>
There are two industry leaders in Multi Cancer Detection (MCD) tests, Galleri and Cancerguard. Only Galleri is currently available directly to consumers.

<u>United Diagnostic Services (UDS) Ultrasound (screens 9 organs)</u>
UDS is focused on the health of firefighters and other first responders, tailoring their scans for cancers based on the profession. The Galleri test and UDS ultrasound are scheduled together and administered at the fire station making the screening process easier for on shift personnel.

<u>Prenuvo Full Body MRI (only for those 55 and over)</u>
Prenuvo and Ezra are the only two companies in the Greater Chicagoland area that offer a preventative full body MRI, Ezra is less expensive. Ezra testing is not as comprehensive as Prenuvo which includes the head, neck, chest, abdomen, pelvis, spine and legs. (Ezra does not include the chest or legs).

Participation in this program is entirely voluntary, and total costs will vary based on member participation. The maximum cost for 2025 is not to exceed $85,000. The maximum cost is based on the 45 eligible employees and 12 retirees interested in screening.

Staff discussed the cancer screening program with the Intergovernmental Risk Management Agency (IRMA). The Village's representative confirmed IRMA is in full support of these screenings.

## Discussion

## Alternatives

1. Approval of the proposed cancer screening program for fire department personnel and retirees, at a cost not to exceed $85,000, to be funded entirely through the Foreign Fire Tax Fund.
2. Action at the discretion of the board.

## Staff Recommendation

Staff recommends that the Board approve the proposed cancer screening program for fire department personnel and retirees, at a cost not to exceed $85,000, to be funded entirely through the Foreign Fire Tax Fund.

## Attachments

1. Test Descriptions and Plan
2. Cancer Screening_Area Departments

- **UDS** is an ultrasound test of 9 solid organs and 4 body systems. (United Diagnostic Services)
    - $335 per test
    - They come to your department to do the scans
    - Rolling Meadows FD did this and had good things to say
    - Covers 37% of the 19 cancers
    - Work well with GRAIL (blood test) to provide both ultrasound and blood tests.
- **GRAIL** is a blood test. They test for 50+ types of cancers.
    - $649 per test
    - Blood test is the Galleri test. It's been around for 10 years
    - Greenwood FD in IN did this test with good things to say about it
    - 99% accurate…none are 100%
    - Covers 79% of the 19 cancers
    - Come to your department in coordination with UDS for a combination ultrasound and blood analysis
- **Prenuvo** is a full body MRI. They test for 500+ cancers and diseases.
    - $1,899 per test
    - One location in Chicago, 16 locations nationwide and 6 more locations in the works. (Not in Chicago area)
    - Streamwood FD had good success with this
    - Evanston FD provides this scan for retirees on their way out the door
    - Covers 63% of the 19 cancers

- **UDS** and **GRAIL** combined cover 84% of the 19 cancers
- **UDS, GRAIL** and **Prenuvo** cover 89% of the 19 cancers

***Each test provides additional screening benefits well beyond the 19 cancers that were focused on in the chart. They also all have their blind spots***

**Our plan on how to implement the cancer testing:**

- <44 years old you get the UDS and GRAIL tests on your quinquennial year
- 45 - 54 years old you get the UDS and GRAIL tests every 2 years
- 55 you get UDS, GRAIL and Prenuvo
- >55 you alternate between ultrasound and blood one year and then MRI the next year. You then stay on this alternating schedule.

| | Testing | | | Staff | | |
|---|---|---|---|---|---|---|
| Department (Year Screening Started) | Ultrasound $325-$350 | Blood Test $650 | Prenuvo MRI $1000 | FF | Admin | Retirees |
| Arlington Heights (2023) | X | | | X | X | X |
| Buffalo Grove (2025) | X | | | | | |
| Carpentersville (2024) | X | | | X | X | |
| Des Plaines (2025) | X | | | X | | |
| Elk Grove Village (2026) | X | | | X | | |
| Rolling Meadows (2024) | X | | | X | X | |
| Streamwood (2024) | | | X | | | |
| Wheeling (2024) | X | | | X | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Funding | | | |
|---|---|---|---|
| Village | Foreign Fire Tax | Union | Frequency |
| 50% Active Members | 100% Admin Officers 25% Active Members | 100% Retirees 25% Active Members | Every 3 years |
| | 100% | | Every 2 years |
| 100% | | | 3-5 years |
| | 100% | | |
| | 100% | | |
| 50% | | 50% | Every 3 years |
| | 100% | | 10 each year (oldest to youngest) |
| | 100% | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | Testing | | | Staff | |
|---|---|---|---|---|---|
| District (Year Screening Started) | Ultrasound $325-$350 | Blood Test $650 | Prenuvo MRI $1000 | FF | Admin |
| Bartlett (2023) | | X | | X | |
| Deerfield Bannockburn (2025) | X | | | | X |
| North Aurora | X | | | X | X |

| | Funding | | | |
|---|---|---|---|---|
| Retirees | District | FFT | Union | Frequency |
| X | | 100% | | Every 3 years? |
| | | X | X | 3-5 years |
| | 100% | | | Bi-annually |

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to renew the Village's subscription with Envisio Solutions Inc for Strategic Planning and Performance Management Software for four years for a total amount of $100,000.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | |
| Dollar Amount | |
| Budget Source | |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

The Village entered into an agreement with Envisio Solutions Inc. (Enivisio) in October 2018 for their software to manage the creation, tracking, and reporting of the Village's strategic plan and key performance measures. On October 3, 2023, the Village Board approved renewing the Village's subscription with Envisio, which included Envisio Plans, Analytics and Public Dashboards with three active plans from October 2023 to October 2026.

The Analytics module is used by staff to create key performance indicators (KPI) to track and report quantifiable data related to goals within the Village's strategic plan. The Plans module is where staff reports progress on the actions that are part of the annual strategic plan. There is also a public Strategic Plan Dashboard component that shows progress on the Strategic Plan throughout the year as well as analytics associated with each goal in the plan.

The three active plans were the current Village Strategic Plan, the Village's prior year Strategic Plan, and the Public Works Strategic Plan. The Public Works Strategic Plan in Envisio was used as a project management tool to track progress and upcoming tasks of their many projects.

Envisio approached the Village in 2024 about their Projects module software designed to manage projects with tasks, timelines, and dependencies. The Project module is not new; Envisio has made significant improvements to it in the past few years. The Village paid $7,842.47 in January 2025 for the annual subscription to the Projects Module and related professional services. This software is now available for Vilalge wide use.

## Discussion

Public Works switched from using the Plan module to the Projects module as their project management software and no longer need an active plan within the Plans module. The Village received the annual Envisio invoice in October. Staff asked Envisio if it was possible to reduce the Plans module subscription to two active plans.  Envisio generally does not make changes

to agreements mid-contract (10/2023 to 10/2026); however, they are providing the opportunity to renew and extend the contract for three years (10/2026 to 10/2029). The renewal would lock in a $25,000 rate, billed annually, with no increases and apply the same rate to year three of the current term (10/2025-10/2026). The proposed renewal is for 35 users with two active Plans, Analytics, Public Dashboard and Projects.

The Village paid Envisio a total of $26,416.40 for 10/2024 - 10/2025 and would pay a total of $26,763.28 for 10/25 - 10/20262026 under the existing contract. Extending the contract and locking in the $25,000 rate, would save the Village $1,763.28 for 10/2025 - 10/2026 and about $9,611.99 over the following three years for a total saving of $11,375.27.

| | Existing Price Structure | | | Proposed Price Structure | |
|---|---|---|---|---|---|
| **Subscription Year** | **Plans & Analytics Price *** | **Projects Price **** | **Total** | **Plans, Analytics & Projects Price** | **Proposed Savings** |
| 10/2023 - 10/2024 | $18,120.90 | n/a | $18,120.90 | n/a | n/a |
| 10/2024 - 10/2025 | $18,573.93 | 7,842.47*** (pro-rated 260 days) | $26,416.40 | n/a | n/a |
| 10/2025 - 10/2026 | $19,038.28 | $7,725.00 | $26,763.28 | $25,000 | $1,763.28 |
| 10/2026 - 10/2027 | $19,514.24 | $7,956.75 | $27,470.99 | $25,000 | $2,470.99 |
| 10/2027 - 10/2028 | $20,002.09 | $8,195.45 | $28,197.55 | $25,000 | $3,197.55 |
| 10/2028 - 10/2029 | $20,502.15 | $8,441.32 | $28,943.46 | $25,000 | $3,943.46 |

* Plans & Analytics Price has a 2.5% annual increase per the contract
** Projects Price has a 3.0% annual increase per the contract
*** Subscription was pro-rated 260 days and included one-time professional services to launch the module.

## Alternatives

1. Accepting the subscription renewal quote from Envisio Solutions Inc. for four years for a total amount of $100,000.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends the Village Board accepting the subscription renewal quote from Envisio Solution Inc. for four years for a total amount of $100,000.

## Attachments

1. Village of Mount Prospect Plans Analytics and Projects Proposed Renewal October 2025 - 2029

2. Mount Prospect 3 Yr Renewal October 2023 - October 2026
3. Village of Mount Prospect, IL - Projects Quote - 2025

# Appendix A - Quote

| | | | |
|---|---|---|---|
| Bill To Name | Village of Mount Prospect, IL | Quote Number | 1701447 |
| Bill To | Village Hall, 50 S Emerson Street<br>Mount Prospect, Illinois 60056<br>United States | Created Date | 13/10/2025 |
| | | Expiration Date | 31/10/2025 |
| | | Prepared By | Eleanor Schoeffel |
| Contact Name | Alexander Bertolucci | Email | eschoeffel@envisio.com |
| Email | abertolucci@mountprospect.org | | |

| Product Description | Quantity | Sales Price | Total Price |
|---|---|---|---|
| Envisio Plans, Projects, and Analytics: 1 year subscription from 10/22/2025-10/21/2026 for 35 users with 2 active Plans, Analytics, Public Dashboard and Projects. Includes software licensing , unlimited online and phone support with dedicated CSM assigned. Billed annually. | 1.00 | USD 25,000.00 | USD 25,000.00 |
| Envisio Plans, Projects, and Analytics: 1 year subscription from 10/22/2026-10/21/2027 for 35 users with 2 active Plans, Analytics, Public Dashboard and Projects. Includes software licensing , unlimited online and phone support with dedicated CSM assigned. Billed annually. | 1.00 | USD 25,000.00 | USD 25,000.00 |
| Envisio Plans, Projects, and Analytics: 1 year subscription from 10/22/2027-10/21/2028 for 35 users with 2 active Plans, Analytics, Public Dashboard and Projects. Includes software licensing , unlimited online and phone support with dedicated CSM assigned. Billed annually. | 1.00 | USD 25,000.00 | USD 25,000.00 |
| Envisio Plans, Projects, and Analytics: 1 year subscription from 10/22/2028-10/21/2029 for 35 users with 2 active Plans, Analytics, Public Dashboard and Projects. Includes software licensing , unlimited online and phone support with dedicated CSM assigned. Billed annually. | 1.00 | USD 25,000.00 | USD 25,000.00 |

| | |
|---|---|
| Subtotal | USD 100,000.00 |
| Total Price | USD 100,000.00 |

## Quote Accepted By:

Name: _____ Date: _____

Signature: _____

## Terms and Conditions

1. Prices set forth in this quote are valid for the period stated. All prices are quoted in US Dollars and are not inclusive of any applicable taxes. An invoice for the agreed amount will be issued upon acceptance of this quote.
2. Acceptance of this quote is acceptance of the accompanying Master Services Agreement (MSA) or a previously signed MSA in the event of renewal/upsell.

Payment methods: ACH, Wire or Check
Remit to email: finance@envisio.com

ACH/Wire Payment To
Account Name: Envisio Solutions Inc. | Bank: Silicon Valley Bank | Bank Address: 3003 Tasman Dr. Santa Clara, CA 95054
ABA/ACH Routing #: 121140399 | Account #: 3303262267 | Account Type: Checking

ENVISIO

300 – 15300 Croydon Drive, Surrey, BC, V3Z 0Z5 Canada

| | | | |
|---|---|---|---|
| Bill To Name | Village of Mount Prospect, IL | Quote Number | 1700887 |
| Bill To | Village Hall, 50 S Emerson Street<br>Mount Prospect, Illinois 60056<br>United States | Created Date | 13/09/2023 |
| | | Expiration Date | 22/10/2023 |
| | | Prepared By | Rob Hines |
| Contact Name | Nellie Beckner | Email | rhines@envisio.com |
| Email | nbeckner@mountprospect.org | | |

| Product Description | Quantity | Sales Price | Total Price |
|---|---|---|---|
| 1 year subscription for 35 users to Envisio Plans, Analytics and Public Dashboard with 3 active plans from 22/10/2023 to 21/10/2024. Includes software licensing and online support. | 1.00 | USD 18,120.90 | USD 18,120.90 |
| 1 year subscription for 35 users to Envisio Plans, Analytics and Public Dashboard with 3 active plans from 22/10/2024 to 21/10/2025. Includes software licensing and online support. | 1.00 | USD 18,573.93 | USD 18,573.93 |
| 1 year subscription for 35 users to Envisio Plans, Analytics and Public Dashboard with 3 active plans from 22/10/2025 to 21/10/2026. Includes software licensing and online support. | 1.00 | USD 19,038.28 | USD 19,038.28 |

| | |
|---|---|
| Subtotal | USD 55,733.11 |
| Total Price | USD 55,733.11 |

## Quote Accepted By:

Name: _____ Date: _____

Signature: _____

## Terms and Conditions

1. Prices set forth in this quote are valid for the period stated. All prices are quoted in US Dollars and are not inclusive of any applicable taxes. An invoice for the agreed amount will be issued upon acceptance of this quote.
2. Acceptance of this quote is acceptance of the accompanying Master Services Agreement (MSA) or a previously signed MSA in the event of renewal/upsell.

Payment methods: ACH, Wire or Check
Remit to email: finance@envisio.com

ACH/Wire Payment To
Account Name: Envisio Solutions Inc. | Bank: Silicon Valley Bank | Bank Address: 3003 Tasman Dr. Santa Clara, CA 95054
ABA/ACH Routing #: 121140399 | Account #: 3303262267 | Account Type: Checking

# Appendix A - Quote

| | | | |
|---|---|---|---|
| Bill To Name | Village of Mount Prospect, IL | Quote Number | 1701267 |
| Bill To | Village Hall, 50 S Emerson Street<br>Mount Prospect, Illinois 60056<br>United States | Created Date | 14/01/2025 |
| | | Expiration Date | 31/01/2025 |
| | | Prepared By | Richard Millward |
| Contact Name | Patricia Ham | Email | rmillward@envisio.com |
| Email | pham@mountprospect.org | | |

| Product Description | Quantity | Sales Price | Total Price |
|---|---|---|---|
| Professional Services: A one-time hourly fee which includes the phases in the attached document entitled “Appendix B - Scope of Work (SOW)" - ENV-PS-01 | 1.00 | USD 2,500.00 | USD 2,500.00 |
| Enterprise Software Subscription: Envisio Projects - Annual Subscription with Unlimited Licenses - ENV-PROJ-50-99M | 1.00 | USD 5,342.47 | USD 5,342.47 |

| | |
|---|---|
| Subtotal | USD 7,842.47 |
| Total Price | USD 7,842.47 |

## Quote Accepted By:

Name: _____ Date: _____

Signature: _____

## Terms and Conditions

1. Prices set forth in this quote are valid for the period stated. All prices are quoted in US Dollars and are not inclusive of any applicable taxes. An invoice for the agreed amount will be issued upon acceptance of this quote.
2. Acceptance of this quote is acceptance of the accompanying Master Services Agreement (MSA) or a previously signed MSA in the event of renewal/upsell.

Payment methods: ACH, Wire or Check
Remit to email: finance@envisio.com

ACH/Wire Payment To
Account Name: Envisio Solutions Inc. | Bank: Silicon Valley Bank | Bank Address: 3003 Tasman Dr. Santa Clara, CA 95054
ABA/ACH Routing #: 121140399 | Account #: 3303262267 | Account Type: Checking

**Pricing Term for Quote Number 1701267**

- Year one pro-rated annual Envisio Projects subscription over 260 days from February 3, 2025, to October 21, 2025, based on an annual rate of $7,500 USD
- Envisio will apply a 3% annual increase beginning in Year 2

| | |
|---|---|
| Year 1 Price<br>*One-time Professional Services + Annual Software Subscription (pro-rated 260 Days) ending October 21, 2025* | $7,842.47 USD |
| Year 2 Price<br>*Annual Software Subscription ending October 21, 2026 (includes 3% annual increase)* | $7,725.00 USD |

**Terms of Payment**

Software:

- Year 1 is due 100% upon the Contract Effective Date (Net 30)
- Year 2 is due from October 21, 2025, the Contract Renewal Date

Professional Services:

- Due 100% upon Contract Effective Date (Net 30)

# Appendix B - Scope of Work (SOW)

**Submitted by:**
**Envisio Solutions, Inc.**



# Overview of Services Proposed

## Our Unique Process - *Strategy Meets Execution*

### Implementation and Training Services

Envisio values ease of onboarding and comprehensive training, and we are dedicated to high-quality service and customer satisfaction. Our Professional Services and Implementation teams will work together to ensure you receive the proper support and training at the right time. Our customer engagements are led by a team of in-house planning, performance management, and local government experts who consult on the best ways to configure Envisio to your unique plans and performance measures. We follow best practices in technology deployment that have been refined over hundreds of successful implementations. We design with the result in mind, ensuring your configuration and training in Envisio meet all of your communication and tracking goals.

### Consulting Services

Our professional services are designed for customers who do not have the time and capacity to design and/or build their plan details and performance measures in Envisio. You see the value in communicating planning and performance measure data and are keen to adopt this practice in your organization, but have steps to complete before you can effectively get started. Envisio's Planning and Performance Coaches fill these gaps with our professional services offerings and build that capacity on your team. We know Envisio inside and out; let us take the heavy load off your organization's shoulders to help you design and gather the information you need to use the Envisio platform to its full value.

### Continued Support

Your partnership with Envisio is an ongoing one. We will be with you every step of the way on your customer journey as you continue to achieve your goals. Your dedicated Customer Success Manager will guide you through the required business process change, successful rollout, and full solution adoption in Envisio. Once you've achieved your current goals, we will work with you to define new goals, always pushing your organization to expand your sophistication and become a star performer in the planning and performance management space.

# Envisio Training Services

**Get started on the right foot, every time, for all of your plans and performance measures.**

Continue your journey with Envisio on a strong path to building your planning, performance, and project management toolkit. Our implementation consultants guide you through a prescriptive, proven process to learn about the software and empower your organization for long-term success. We work directly with your team to configure new plans and performance measures, share best practices to enable the organization through change management, and automate reporting to ensure consistent communication on your plan's progress and performance.

Our implementation services enable you to build your plan and performance measures in Envisio, to ensure your team can easily provide ongoing updates and share progress with both internal and external stakeholders. We host collaborative weekly consultation sessions as you build and configure the software, and equip you with best practices along the way to ensure your planning and performance remain in focus throughout the organization as time goes on. We develop a reporting framework and automate the delivery of both reminder notifications and results reporting, and set up templates to give your team the guidance they need to input meaningful updates.

# Scope of Work

## Projects Administrator Training

Expand your Envisio Projects administrative team and build more capacity within the Envisio platform! Projects Administrator training is available to teach up to ten attendees how to add new projects, manage tasks and sub-tasks, develop project templates, create reports, and publish a projects dashboard.

### Training Kick-Off and Prep

During this phase of work, we introduce key team players, define a training delivery plan and timelines, and take stock of existing configuration details to inform training efforts.

During this phase, **Envisio** will:

- Host a kick-off meeting with key stakeholders to get to know your team and define timelines and communication channels.
- Document and define a training plan outlining the sessions and timelines for delivery.
- Review your organization's existing configuration of Envisio Projects and prepare recommendations surrounding the training structure, as needed.

During this phase, **You** will:

- Identify and share training attendees for one department, or up to ten (10) individuals
- Confirm your organization's goals and timeline expectations and provide available dates/times for your team to attend training
- Select up to three projects for training and share with Envisio

**Key Deliverables**

- Detailed training plan with timelines defined

## Training Delivery

During this phase of work, we train your team of Projects administrators to use Envisio, from inputting projects and customizing project templates, to building project reports and a project dashboard to share progress.

During this phase, **Envisio** will:

- Host three (3) weekly, one-hour sessions to train and provide support and guidance as you learn to use your Envisio instance and input your projects into the system.
    - System configuration and project structure setup
    - Project and Task consultation and build session
    - Project Reporting and Dashboard consultation and build session
- Host one (1) one-hour support and guidance session as you build your projects following best practices and tailored to your organization’s needs.

During this phase, **You** will:

- Actively participate in project admin training sessions: Your active participation in training sessions is vital for aligning Envisio's configuration with your organization's specific requirements.
- Dedicate time to building your project(s): It will be important that you dedicate time to building your project(s) and completing assigned "homework" assignments after each session with your Envisio trainer.
- Draft Project Dashboard: Your team will draft a project dashboard that showcases the status and progress of your projects.

**Key Deliverables**

- Envisio administrative training for project admins within one (1) department, or up to ten (10) individual staff
- Your projects entered into the Envisio platform, ready to receive updates

- Configured project templates
- Draft project dashboard built, ready to be socialized internally

## Timeline

Envisio and The Customer agree that the work outlined in this SOW is a shared responsibility. Neither Envisio nor The Customer is expected to have resources available to mitigate timeframe slippage caused by the other party. Delays on the part of The Customer, including putting the project on temporary hold or changes in project personnel, may result in a Change Order to cover the cost of restart, rework, rescheduling, and retraining.

| Timeline | W1 | W2 | W3 | W4 | W5 |
|---|---|---|---|---|---|
| **Phase 1: Training Kick-Off and Prep** | | | | | |
| Task 1.1 - Host kickoff meeting | | | | | |
| Task 1.2 - Document and define a detailed implementation plan | | | | | |
| Task 1.3 - Review existing configuration in Envisio and prepare recommendations | | | | | |
| **Phase 2: Training Delivery** | | | | | |
| Task 2.1 - Host three (3) weekly, one-hour implementation consultation sessions | | | | | |
| Task 2.2 - Host one (1) additional support session | | | | | |

# Item Cover Page

| | |
|---|---|
| **Subject** | **Waive the rule requiring two readings of an ordinance and adopt AN ORDINANCE MAKING CERTAIN AMENDMENTS TO THE ANNUAL BUDGET ADOPTED FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025. - MEMO AMENDED 10-27-2025** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact | |
| Dollar Amount | |
| Budget Source | |
| Category | CONSENT AGENDA |
| Type | Ordinance |

## Information

The Village amends its annual budget from time to time, as needed. Village staff propose the following amendments to the adopted annual budget for the fiscal year 2025. The amendment includes revenue amendments totaling $3.7 Million and expenditure amendments totaling $7,401,700.

## Discussion

**General Fund**

The Village executed a redevelopment agreement with HQ Residence LLC in July 2022. This redevelopment agreement authorized the sale of the old police and fire HQ property for $2.0 million. This project is supported through tax increment financing assistance. Under the agreement, the Village agreed to reimburse the developer for certain TIF-eligible expenditures up to $5.475 million. Of this amount, $3.7 million is payable once the certificate of occupancy is issued for the residential and commercial portion of the project.

Based on the agreement terms and current progress, the Developer has successfully met all requirements necessary to qualify for the $3.7 million payout. The HQ Residences project has been completed, all occupancy permits have been issued, and the Village has received the initial increment of property tax revenue from the property. Accordingly, under Section VII(A)(2)(a) of the agreement, the Village is obligated to issue the $3.7 million reimbursement to the developer, consistent with the approved TIF financing structure and timing outlined in the agreement.

As planned and approved, this amount initially comes from the General Fund. The General Fund has reported this amount as a restricted fund balance starting in 2022. Now, the staff is proposing an amendment to finally transfer $3.7 million from the General Fund to the Prospect & Main TIF Fund. This item is not going to impact the General Fund Reserves (unrestricted), as

the amounts are transferred from the restricted reserves.

Besides the above, the staff is also proposing a small amendment of $1,700 for the Human Services Department for a Substance Abuse Prevention Event. This item is funded by the opioid settlement funds, as it is an eligible item that can be funded from such funds.

**Prospect & Main Fund**
The Prospect & Main Fund will receive the above-discussed transfers from the General Fund and will use these funds to meet its obligations of $3.7 million in payments to the developers of HQ Residence.

The above-discussed $3.7 million transfer is a funding arrangement, and the Prospect & Main TIF Fund will repay this amount from the increments generated by the project with 2.25% interest.

## Alternatives

1. Waive the rules requiring two readings of an ordinance and adopt the attached ordinance for budget amendment number 4.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends waiving the rules requiring two readings of an ordinance and adopting the attached ordinance for budget amendment number 4.

## Attachments

1. 2025 Budget Amendment 4

ORDINANCE NO. _____

AN ORDINANCE MAKING CERTAIN AMENDMENTS TO THE ANNUAL BUDGET ADOPTED FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2025 AND ENDING DECEMBER 31, 2025

---

PASSED AND APPROVED BY

THE PRESIDENT AND BOARD OF TRUSTEES

the ____ day of _____, 2025

Published in pamphlet form by
authority of the corporate authorities
of the Village of Mount Prospect, Illinois
the ___ day of _____, 2025.

**ORDINANCE NO. _____**

AN ORDINANCE MAKING CERTAIN AMENDMENTS TO THE ANNUAL BUDGET ADOPTED FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2025 AND ENDING DECEMBER 31, 2025

---

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect have passed and approved Ordinance No. 2342, which sets the finances of the Village under the "Budget Officer System"; and

WHEREAS, pursuant to the aforesaid Ordinance and the Statutes of the State of Illinois, an annual budget for the fiscal year commencing January 1, 2025, and ending December 31, 2025, was adopted through the passage of Ordinance No. 6762 approved by the Corporate Authorities of the Village of Mount Prospect on November 6, 2024; and

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect have passed and approved Ordinance No. 6782 on March 18, 2025 amending the annual budget for the fiscal year commencing January 1, 2025 and ending December 31, 2025; and

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect have passed and approved Ordinance No. 6789 on April 15, 2025 amending the annual budget for the fiscal year commencing January 1, 2025 and ending December 31, 2025; and

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect have passed and approved Ordinance No. 6794 on July 8, 2025 amending the annual budget for the fiscal year commencing January 1, 2025 and ending December 31, 2025; and

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect have further reviewed certain additions and changes to the aforesaid budget for the fiscal year beginning January 1, 2025, and ending December 31, 2025, and

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect believe the changes, as specified on the attached January 1, 2025, through December 31, 2025, Budget Amendment No. 4 to be in the best interest of the Village of Mount Prospect; and

WHEREAS, the Village has now revised the revenue projections or has reserves in each of the Funds in which the budget is being increased adequate in amount to cover the budget changes reflected in Budget Amendment Number Four, attached hereto.

NOW, THEREFORE BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS:

SECTION ONE: That the fiscal year budget for January 1, 2025, through December 31, 2025, for the Village of Mount Prospect is hereby amended, as detailed on Budget Amendment No. 4 attached hereto.

SECTION TWO: That this ordinance shall be in full force and effect from and after its passage, approval and publication in pamphlet form as provided by law.

AYES:_____

NAYES: _____

ABSENT:_____

PASSED and APPROVED this _____ day of _____, 2025.

_____
Paul Wm. Hoefert
Mayor

ATTEST

_____
Karen Agoranos
Village Clerk

**Village of Mount Prospect**
**Budget Amendment No. 4**
**Fiscal Year January 1, 2025 to December 31, 2025**
**Revenues**

| Fund/Account Number | Current Budget | Increase / (Decrease) | Amended Budget |
|---|---|---|---|
| **Amended Funds** | | | |
| **049 - Prospect and Main TIF District** | | | |
| **Amended Accounts** | | | |
| 049.487.001 - Transfer In | 5,000,000 | 3,700,000 | 8,700,000 |
| **Amended Accounts Total** | **5,000,000** | **3,700,000** | **8,700,000** |
| **Other** | | | |
| Other Budgeted Accounts for the Fund | 5,042,500 | - | 5,042,500 |
| **Other Total** | **5,042,500** | **-** | **5,042,500** |
| **049 - Prospect and Main TIF District Total** | **10,042,500** | **3,700,000** | **13,742,500** |
| **Amended Funds Total** | **10,042,500** | **3,700,000** | **13,742,500** |
| **Other Funds** | | | |
| **Other Funds** | | | |
| **Other** | | | |
| Other Budgeted Accounts for the Fund | 155,901,365 | - | 155,901,365 |
| **Other Total** | **155,901,365** | **-** | **155,901,365** |
| **Other Funds Total** | **155,901,365** | **-** | **155,901,365** |
| **Other Funds Total** | **155,901,365** | **-** | **155,901,365** |
| **Total All Funds** | **165,943,865** | **3,700,000** | **169,643,865** |

**Village of Mount Prospect**
**Budget Amendment No. 4**
**Fiscal Year January 1, 2025 to December 31, 2025**
**Expenditures**

| Fund/Account Number | Current Budget | Increase / (Decrease) | Amended Budget |
|---|---|---|---|
| **Amended Funds** | | | |
| **001 - General Fund** | | | |
| **Amended Accounts** | | | |
| 001.00.00.00.0.000.697.001 - Transfer Out | 11,749,433 | 3,700,000 | 15,449,433 |
| 001.50.51.00.0.000.573.012 - Opioid Funds | - | 1,700 | 1,700 |
| **Amended Accounts Total** | **11,749,433** | **3,701,700** | **15,451,133** |
| **Other** | | | |
| Other Budgeted Accounts for the Fund | 79,046,464 | - | 79,046,464 |
| **Other Total** | **79,046,464** | **-** | **79,046,464** |
| **001 - General Fund Total** | **90,795,897** | **3,701,700** | **94,497,597** |
| **049 - Prospect and Main TIF District** | | | |
| **Amended Accounts** | | | |
| 049.40.45.00.0.000.636.019 - Developer Incentives | 1,480,000 | 3,700,000 | 5,180,000 |
| **Amended Accounts Total** | **1,480,000** | **3,700,000** | **5,180,000** |
| **Other** | | | |
| Other Budgeted Accounts for the Fund | 9,617,738 | - | 9,617,738 |
| **Other Total** | **9,617,738** | **-** | **9,617,738** |
| **049 - Prospect and Main TIF District Total** | **11,097,738** | **3,700,000** | **14,797,738** |
| **Amended Funds Total** | **101,893,635** | **7,401,700** | **109,295,335** |
| **Other Funds** | | | |
| **Other Funds** | | | |
| **Other** | | | |
| Other Budgeted Accounts for the Fund | 87,286,292 | - | 87,286,292 |
| **Other Total** | **87,286,292** | **-** | **87,286,292** |
| **Other Funds Total** | **87,286,292** | **-** | **87,286,292** |
| **Other Funds Total** | **87,286,292** | **-** | **87,286,292** |
| **Total All Funds** | **189,179,927** | **7,401,700** | **196,581,627** |

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to accept a proposal from IMEG Group to provide design and construction engineering services for the 2026 Water Main Replacement Project for a fee not to exceed $183,700.00.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $183,700.00 |
| Budget Source | Water and Sewer Enterprise Fund |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

As part of the 2017 and 2023 water and sewer rate studies, renewal and replacement of the Village water mains, fire hydrants, valves, and other distribution system appurtenances were identified as a high priority. One outcome of this study was an increase in funding for water main replacement projects.

A primary goal of accelerating the pace of water main replacements is to reduce the life cycle of water mains from an unsustainable 600 years to a more pragmatic 130 years. 2018 was the first year of an accelerated water main replacement schedule supported by new water and sewer rates. In the first six years of this accelerated program, the Village has replaced 68,844 feet of water main and rehabilitated an additional 7,882 feet of water main through the cured-in-place pipelining process.

Staff seeks to replace 13,800 linear feet of existing water main in 2026. Locations include Willow Lane, Tamarack Dr., Catalpa Lane, Wa Pella Avenue, School Street, Pine Street, Tower Lane and Maple Street.

These pipe sections are scheduled for replacement due to multiple water main breaks within the last 10 years. Plans are to abandon the existing water main in place and install a new water main adjacent to the old one. Associated main line valves, fire hydrants and residential buffalo boxes will be replaced. The water main size will also be increased from 6” to 8” and from 10” to 12” on Pine Street. Planned changes will improve water flow and pressure. The attached location map depicts the proposed project area.

## RFP Results

On September 23, 2025, eight technical proposals and eight cost proposals were received. Each proposal was evaluated based on the background of the firm, related project experience,

proposed services and scope of work, schedule of work effort and proposal content. Each firm received a point ranking (total points = 100) for each criterion. Table 1 below summarizes this analysis.

Table1: Technical Proposal Evaluation

| Category | Max. Points | IMEG | Thomas Engineering | Burns & McDonnell | Baxter & Woodman | Mackie Consultants | Chastain Consulting | Robinson Engineering | GSG Consultants |
|---|---|---|---|---|---|---|---|---|---|
| Background | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 18 |
| Experience | 20 | 19 | 19 | 19 | 19 | 18 | 17 | 17 | 17 |
| Scope | 25 | 23 | 23 | 21 | 21 | 21 | 21 | 21 | 21 |
| Schedule | 15 | 14 | 14 | 14 | 14 | 14 | 15 | 14 | 14 |
| Work Effort | 10 | 9 | 8 | 8 | 7 | 8 | 8 | 7 | 6 |
| Content | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 |
| Totals: | 100 | 93 | 92 | 90 | 88 | 87 | 87 | 85 | 84 |

The highest rated firm was IMEG Group of Gurnee, Illinois.

Each firm was asked to submit a cost proposal as well. Table 2 below summarizes staff's analysis of costs.

Table2: Cost Analysis

| Firm | Hours | Total Cost | Cost / Hour |
|---|---|---|---|
| IMEG | 1,498 | $167,000.00 | $111 |
| Thomas Engineering | 1,312 | $168,472.00 | $128 |
| Mackie Consultants | 1,323 | $170,875.00 | $129 |
| Chastain Consulting | 1,335 | $217,189.00 | $162 |
| Burns & McDonnell | 1,189 | $281,208.00 | $236 |
| Baxter & Woodman | 3,134 | $400,280.00 | $128 |
| GSG Consultants | 5,065 | $591,395.00 | $117 |
| Robinson Engineering | 3,764 | $593,396.00 | $157 |

The lowest cost proposal was submitted by IMEG Group of Gurnee, Illinois.

## Discussion

IMEG Group's proposal provided numerous examples of successful water main replacement and rehabilitation projects similar in scale and scope to the proposed work. Examples provided include water main replacement in the Village of Arlington Heights, Village of Stone Park, Village of Fox Lake, Village of Wilmette and several surrounding municipalities. A copy of IMEG'S technical proposal is enclosed.

IMEG Group provided civil, survey and construction engineering services for the Village's 2021, 2023, 2024 and 2025 water main replacement and rehabilitation project. These projects included the design and inspection of 50,000 linear feet of water main replacement and rehabilitation in various parts of the Village. These projects also included the replacement of all associated main line valves, hydrants, buffalo boxes, and the full replacement of 124 lead water service lines. This work required rehabilitation of roadways, sidewalks, curbs and parkways.

IMEG Group also provided construction inspection, measurements, computations and documentation of quantities for the rehabilitation of the water main at 4 railroad crossings and 9 creek crossings using cured-in-place pipe lining within the Village in 2021.

They provided design and inspection services for the rehabilitation of 1,728 linear feet of a 16" water main that cuts through the Mount Prospect Golf course in 2024.

IMEG is also proposing to utilize the same project team that has worked on previous water main replacement projects for the Village. This team has demonstrated the ability to execute full lead service line replacements, coordinating with the Village's Public Works Department Engineering Division on road resurfacing program and communicating with residents.

Staff also contacted references from municipalities that have contracted with IMEG Group on similar projects and received positive feedback. Staff believes that IMEG Group can successfully complete this project for the fee requested.

Finally, staff concludes that IMEG has attributed a reasonable work effort (1,498 hours) to this project and requested a competitive fee ($167,000 or approximately $111 / hour). Staff is requesting a 10% contingency ($16,700.00) to address any unforeseen issues, should they arise. A 10% contingency would bring the project award total to $183,700.00 (the $167,000.00 base bid plus the 10% contingency of $16,700.00).

## Alternatives

1. Accept the proposal from IMEG Group of Gurnee, Illinois for design and construction engineering for 2026 Water Main Replacement Project.
2. Action at the discretion of the Village Board.

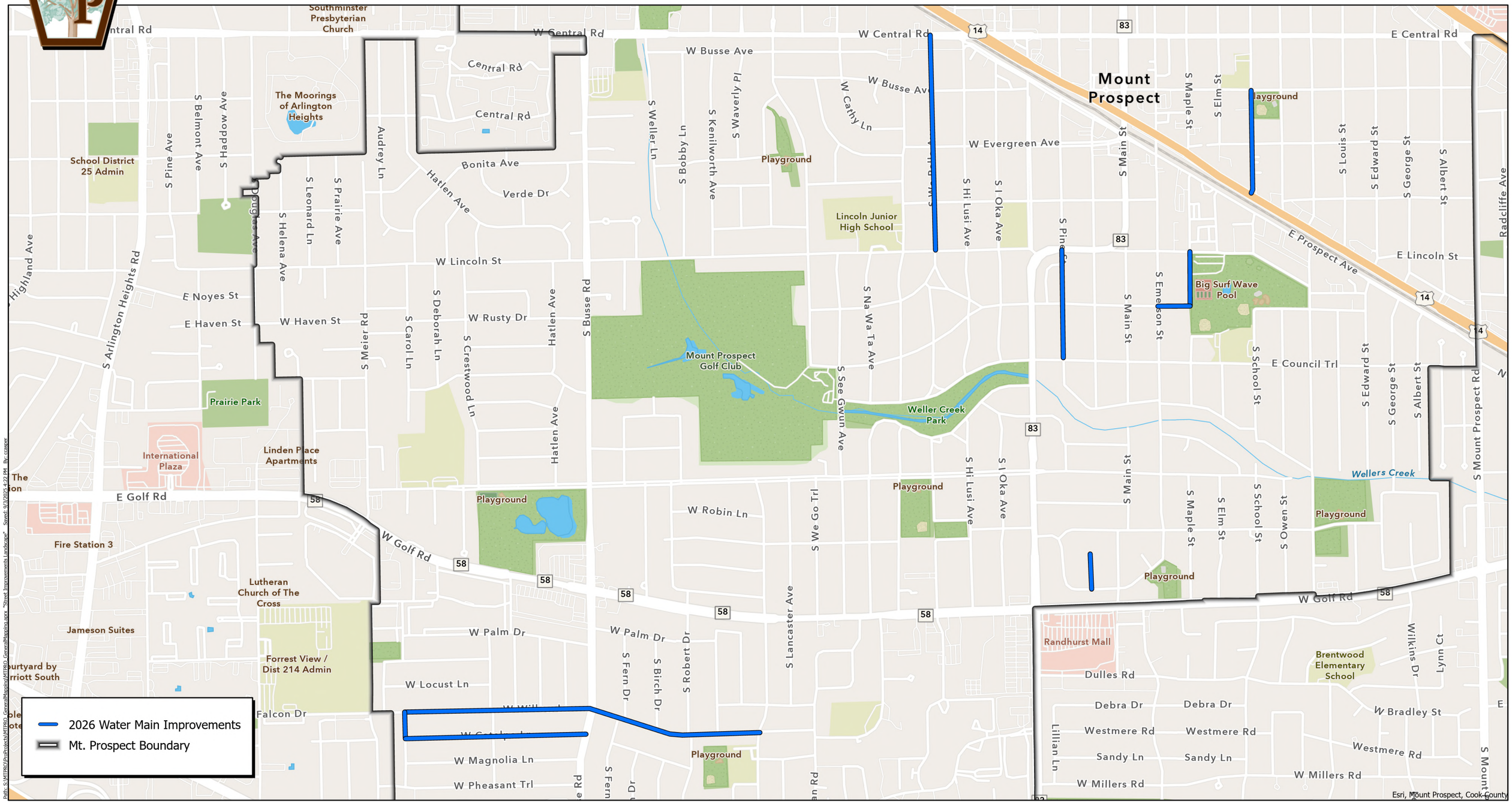
## Staff Recommendation

Staff recommends that the Village Board accept the proposal from IMEG Group of Gurnee, Illinois to provide design and construction engineering services for the 2026 Water Main Replacement for a fee not to exceed $183,700.00.

## Attachments

1. 2026 Water Improvements
2. imeg_cost proposal_2026 water main replacement_village of mt prospect
3. imeg_technical proposal_2026 water main replacement_village of mt prospect

# 2026 Water Main Improvements




Path: S:\MTPRO\UrbaProjects\MTPRO_General\Mapping\MTPRO_GeneralMapping.aprx "Street Improvements landscape" Saved: 9/3/2025 4:22 PM By: corapoe

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Mount Prospect
MP

# Request for Proposals for Professional Services
# 2026 Water Main Replacement and Rehabilitation Project
# - Design and Inspection Services

September 23, 2025

# Cost Proposal

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## VILLAGE OF MOUNT PROSPECT PROFESSIONAL SERVICES
## 2025 WATER MAIN REPLACEMENT AND INSPECTION COST PROPOSAL

| # | TASK | ROLE | PROJECTED MAN-HOURS | ESTIMATED FEE |
|---|---|---|---|---|
| 1. | **Project Administration:** | Client Executive | | |
| | Project Coordination and Review with Village Staff | Project Manager | 16 | $3,000.00 |
| 2. | **Route Survey** | Land Surveyor | 10 | |
| | Verify Existing ROW/Easements | Senior Field Technician | 70 | |
| | Topographic Survey | Field Technician | 70 | |
| | Compile Existing Site Utility Information | Civil Designer IV | 40 | $23,750.00 |
| 3. | **Pavement Cores / LPS-663** | Sub-Consultant | LS | $5,000.00 |
| 4. | **Project Design:** | | | |
| | Preliminary Design | Senior Civil Engineer III | 24 | |
| | Coordination with Utility Companies to Access | Civil Field Technician | 140 | |
| | Possible Conflicts with Projected Water Main Install | Civil Designer IV | 140 | $35,030.00 |
| | Access Alternates for Water Main Location & Material Types with Associated Costs | | | |
| | Determine Extent of Roadway Rehabilitation | | | |
| | Review with Village Staff | | | |
| | **Final Design:** | | | |
| | Construction Drawings and Documents to Include Plan and Profiles with Existing and Proposed Water Main | Senior Civil Engineer III | 24 | |
| | | Sr. Civil Technician Specialist | 140 | |
| | | Civil Designer IV | 140 | |
| | Specifications | Administration | 16 | $36,005.00 |
| | Quantiles | | | |
| | Estimate of Probable Cost | | | |
| | Bidding Documents | | | |
| 5. | **Permits** | Civil Designer III | 16 | |
| | Coordination with Regulatory Agencies (IDOT, IEPA) | Civil Designer | 24 | |
| | Process Permit Applications | Administration | 16 | $6,440.00 |
| 6. | **Bidding Assistance:** | | | |
| | Contract Prospective Bidders | Civil Designer III | 8 | |
| | Distribute Plans and Specifications | Civil Designer | 8 | |
| | Attend Pre-Bid Conference | Administration | 8 | $2,520.00 |
| | Attend Bid Opening | | | |
| | Bid Review and Recommendation | | | |
| 7. | **Full Time Construction Inspection:** | | | |
| | Weekly Site Meetings with Project Manager, Village, and Contractor | Senior Civil Engineer III | 16 | |
| | | Field Technician IV | 500 | |
| | Pre-construction Photo Survey | Senior Civil Tech Specialist | 20 | |
| | Full Time Resident Inspector | Senior Field Technician | 20 | |
| | Construction Layout | Civil Designer IV | 16 | |
| | Site Verification to Pay Estimate Quantities | Administration | 16 | $55,255.00 |
| | Process Pay Request | | | |
| | Prepare Punch List | | | |
| | Verify Final Restoration | | | |
| | Provide As-Built CADD Files | | | |
| | TOTAL: | | 1,498 | $167,000.00 |

**Section 5** | Cost Proposal

# Hourly Rates

| IMEG STANDARD HOURLY RATES | |
|---|---|
| **Discipline/Service:** Civil, Land Survey, Landscape Architecture | |
| **Role** | **Rate** |
| Senior Client Exec/Senior Market Director/VP | $260 |
| Client Executive/Market Director | $245 |
| Project Executive | $205 |
| Senior Project Manager 2 | $200 |
| Senior Project Manager I | $185 |
| Engineer of Distinction/Landscape Architect of Distinction/ Planner of Distinction | $210 |
| Senior (Engineer/Landscape Architect/Planner) 3 | $195 |
| Senior (Engineer/Landscape Architect/Planner) 2 | $175 |
| Senior (Engineer/Landscape Architect/Planner) 1 | $165 |
| Project (Engineer/Landscape Architect/Planner) 2 | $155 |
| Project (Engineer/Landscape Architect/Planner) 1 | $145 |
| Graduate (Designer/Survey) 2 | $125 |
| Graduate (Designer/Survey) 1 | $115 |
| Senior Land Surveyor 3 | $165 |
| Senior Land Surveyor 2 | $150 |
| Senior Land Surveyor 1 | $140 |
| Project Surveyor 2 | $135 |
| Project Surveyor 1 | $130 |
| Designer of Distinction | $175 |
| Senior (Designer/Crew Chief) 3 | $160 |
| Senior (Designer/Coordinator/ Crew Chief) 2 | $150 |
| Senior (Designer/Coordinator/ Crew Chief) 1 | $140 |
| Project (Designer/Senior Technical Crew Chief )2 | $130 |
| Project (Designer/Senior Technical Crew Chief) 1 | $125 |
| Designer 2/Planner 2/Technician 4 | $115 |
| Designer 1/Planner 1/Technician 3 | $105 |
| Design Technician 2/Technician 2 | $95 |
| Design Technician 1/Technician 1/Intern | $85 |
| Senior Construction Administrator | $145 |
| Construction Administrator | $135 |
| GIS System Architect | $135 |
| GIS Analyst | $125 |
| Graduate (GIS Analyst) 2 | $120 |
| Graduate (GIS Analyst) 1 | $110 |
| Administrative Assistant | $85 |

**Note:**

1. These rates are for staff located in the office providing the service. Staff based in one of IMEG's other offices may have different billing rates. These rates can be provided as requested

2. Rates are adjusted annually.

**Reimbursables:**

- Postage and delivery charges
- Travel Expense: Automobile mileage will be invoiced at the IRS rate in effect at the time of travel. Travel expenses include mileage, tolls, parking fees, taxi, train, airfare, rental car, fuel, and other out of pocket travel related expenses
- Meals and lodging, when required to travel overnight
- Project-specific insurance coverage riders or amendments necessary to comply with required insurance requirements above current IMEG limits and conditions
- Reproduction costs for existing facility documents, and for one record set of contract document deliverables at each project phase/milestone when not provided to IMEG by the Client
- Reproduction and distribution costs associated with issuing contract documents
- Payment of plan review fees or other imposed governmental agency fees
- State filing and/or permit fees
- Necessary consultants as approved by Client

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Mount Prospect

# Request for Proposals for Professional Services
# 2026 Water Main Replacement and Rehabilitation Project
# - Design and Inspection Services

September 23, 2025

# Letter of Interest

**September 23, 2025**

**Village of Mount Prospect**
**Attn: Casey Botterman, Water and Sewer Superintendent**
**1700 West Central Road**
**Mount Prospect, IL 60056**

**RE: Request for Proposal Water Main Replacement Design and Inspection Services**

Dear Mr. Botterman,

Since 2018, IMEG has been honored to serve as a trusted engineering partner to the Village of Mount Prospect, delivering reliable solutions for your critical water infrastructure. From the successful completion of water main replacement projects in 2021, 2023, 2024, and 2025, our team has built a strong record of performance—providing responsive service, technical expertise, and a commitment to minimizing disruption for residents. It is with this proven foundation that we are pleased to submit our proposal for the **2026 Water Main Replacement Project**.

**Top 5 Engineering Firm in the U.S.** (BD+C 2023)

**115 Years of History in the making**

**100+ Locations**

**3,000 Employees**

**100% Employee-Owned**

As a licensed Professional Engineer and Professional Land Surveyor, I have personally overseen each of these efforts, ensuring consistency, quality, and adherence to Village standards. Our familiarity with Mount Prospect's water distribution system, regulatory requirements, and construction practices uniquely positions us to deliver a seamless continuation of your water main replacement program.

Key strengths we bring to this project include:

- **Proven Partnership** – Eight years of direct collaboration with the Village on water main design, inspection, and construction management.
- **Experience with Similar Projects** – Completion of multiple large-scale water main replacement projects, including the integration of lead service line replacements, system upgrades, and roadway coordination.
- **Regulatory Expertise** – Success in navigating permitting with IDOT, IEPA, and county agencies, ensuring timely approvals and compliance.
- **Full-Service Capabilities** – From survey and design through bidding, resident engineering, and daily inspection, our team provides continuity and accountability across the entire project lifecycle.

We understand the importance of this project in advancing the Village's long-term infrastructure strategy—replacing more than 13,000 linear feet of aging main, upgrading capacity, and addressing lead service lines in residential neighborhoods. Just as with past projects, our approach will emphasize proactive communication, effective coordination with residents and contractors, and vigilant oversight to safeguard quality, budget, and schedule.

We deeply value our ongoing relationship with the Village of Mount Prospect and welcome the opportunity to continue serving as your engineering partner for the 2026 Water Main Replacement Project. Please feel free to contact me directly by phone or email with any questions.

Thank you for your continued trust and consideration of IMEG.

Sincerely,

Harlan D. Doland, PE, PLS
Civil Client Executive

**4850 Grand Avenue**
**Gurnee, IL 60031**
**P: 847.306.3912**
**E:harlan.m.doland@imegcorp.com**

# Table of Contents


- Firm Information
- Organizational Chart and Key Personnel
- Related Experience
- Project Understanding and Approach
- Project Schedule




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SECTION 1

# Firm Information

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**Section 1** | Firm Information

# About IMEG









**We are employee-owned and results driven with a passion for transforming environments and communities through high-performance design and infrastructure.**

## AT-A-GLANCE

- Top 5 Engineering Firm in U.S. (BD+C)
- 100% Employee-Owned
- Full-service Engineering & Consulting
- 100+ Locations
- 3,000 Team Members
- 650+ Licensed Engineers
- $427M in Annual Revenue
- #48 / Top 500 Design Firm List (ENR)

## WATER & WASTEWATER TREATMENT:

- Lift Station and Collection Design
- Collection and Distribution Design
- Water Treatment and Distribution
- Raw and Treated Water Supply Design
- Water Reclamation
- Treatment and Distribution
- Finished Water Storage
- Facilities Planning
- Wastewater Treatment Plant Design
- Wastewater Reclamation
- Sludge Handling

IMEG is the leading U.S.-based engineering design firm that delivers a rare combination — the broad expertise of a national leader with the personal relationships and deep collaboration of a local firm.

IMEG's civil water and wastewater engineering team has provided professional engineering design services across the United States and into the Virgin Islands. Our team's strength is found in our **deep bench of 400 professional civil engineers and land surveyors** dedicated to building strong regional connections and reaching beyond the status quo. Our expanded resources allow us to tap into the expertise of our entire corporation and involve in-house experts from various fields to assist in the design process with our local project partners.

**IMEG has extensive experience providing civil engineering services for municipalities and publicly-owned water and wastewater utilities.**

Firm Headquarters
623 26th Avenue
Rock Island, IL 61201
309.788.0673

Local Offices
4850 Grand Avenue
Gurnee, IL 60031
847.336.7100

263 Shuman Blvd, Suite 550
Naperville, IL 60563
630.5753.8500

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Section 1 | Firm Information

# Services & Specialties
## engineering, planning, consulting



**Building Design: Engineering & Planning**
Structural Engineering
MEP Engineering
Fire Protection Engineering
Technology Design
Security Design & Engineering
Acoustics & Noise Control
Architectural Lighting
Medical Equipment Planning
Parking Design & Planning

**Sustainability & Energy Solutions**
Daylighting
Decarbonization Planning
CFD
Energy Modeling
Embodied Carbon Services
LEED, WELL, PHIUS Certification
Net Zero Consulting
Rapid Performance Modeling
Renewable Energy Assessments
Total Carbon Analysis

**Building Performance**
Commissioning
Retro-Commissioning
Monitored-based Commissioning
Building Performance Optimization

**Process Engineering**
Automation & Controls
Chemical Process
Silo Inspection & Design
Bulk Processing

**Infrastructure: Design & Planning**
Civil / Municipal Engineering
Land Surveying & Development
Transportation Engineering
Bridge Design & Inspection
Water / Wastewater Engineering
Environmental Services
Wetland Delineation & Mitigation
Materials Testing & Inspection
Construction Observation
Bathymetric Surveys
GIS Planning & Implementation
Subsurface Utility Engineering
Reality Capture Services

**Urban Design, Planning, & Engagement**
Transportation Planning
Urban Design
Landscape Architecture
Site Planning
Environmental Planning
Environmental Permitting & Design Support
Community Planning
Engagement
Strategic Advisory Services

**Consulting & Advisory Services**
Building Intelligence & Integration
Technology Advisory Services
Healthcare Information Technology
Security Design Consulting & CPTED
Lighting Procurement

**Our work prioritizes performance and efficiency, and our team is equipped to handle full-service engineering, planning and consulting projects of all sizes and complexities.**

### KEY MARKET SECTORS

Aviation
Commercial
Corporate
Data Centers
Education
Federal
Gaming & Entertainment
Government
Healthcare
Hospitality
Housing
Industrial / Manufacturing
Science & Technology
Sports & Recreation
Transportation
Water / Wastewater

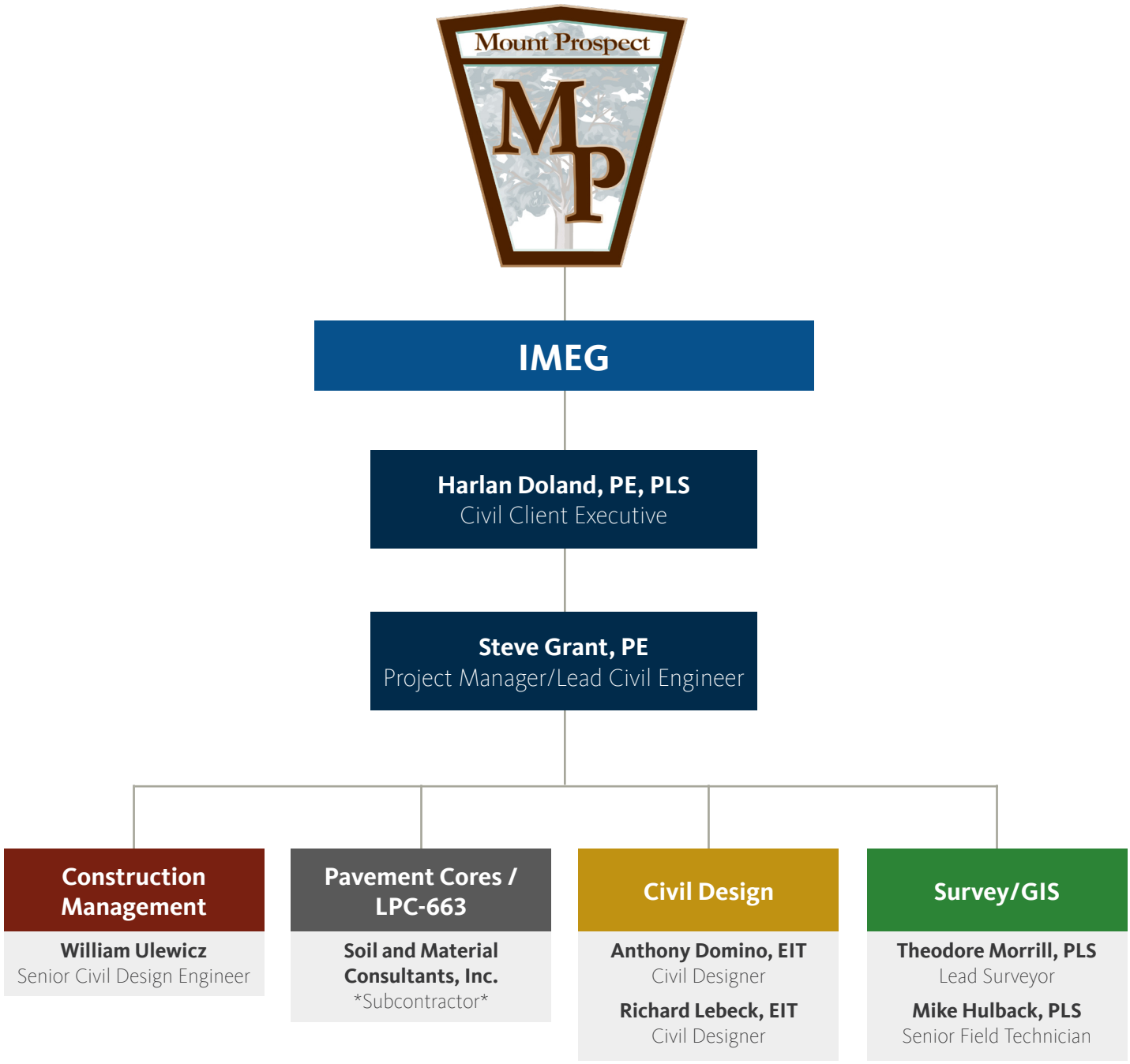
SECTION 2

# Organizational Chart & Key Personnel

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**Section 2** | Organization Chart and Key Personnel

# Organizational Chart



**Section 2** | Organization Chart and Key Personnel



# Harlan Doland, PE, PLS

Civil Client Executive

Harlan is a Senior Principal and Client Executive with IMEG. He is responsible for complete management of the Naperville civil engineering team including principal design, quality control, proposal preparation, client management, marketing, establishing and maintaining schedules, establishing manpower needs, and contract negotiations and administration. He is also experienced in boundary and topographic surveys, preparation of plats and legal descriptions, and construction management/inspection/layout.

## Project Highlights

- **Village of Mount Prospect**, IL, Water Main Replacement Projects 2021, 2023, 2024, 2025. IMEG provided project administration, survey, testing, project and final design, permitting, bidding and construction inspection for the water main replacement and rehabilitation projects.
- **Village of Mount Prospect**, IL, Public Works Fiber Connection Design, Provide data collection, topographical survey, alignment design, preliminary design, soil borings, document phase and construction administration.
- **Village of Mount Prospect**, Fiber Inventory Project Documentation and Map Locates
- **Village of Stone Park**, IL, Water Main and Street Improvements 2020
- **Village of Stone Park**, IL, On-Call Engineering Services (1995 - Present) including Utility Map Update, Water Atlas Update, Addison Creek Lift Station, Italian Cultural Center, Police Station Permit and Flood Plain Development, Avenue Infrastructure Improvements., Inflow Control Program, Pebbles Car Wash Remodel, Stone Park Grading Plan.
- **Village of Arlington Heights**, IL, Water Main Project 2020
- **Village of Arlington Heights**, IL, CIPP Water Mains Replacement 2020
- **Village of Arlington Heights**, IL, Water Main Replacement Projects, 2011, 2012 and 2013
- **Village of Wilmette**, IL, Water Main Improvements
- **Village of Buda**, IL, Water Main Project
- **Village of Addison**, IL, Park & Withrop Water Main Replacement
- **Village of Grand Ridge**, IL, Water Main Extension
- **Village of Third Lake**, IL, Water Main
- **Village of Third-Lake**, IL, Grant Avenue Drainage Improvements
- **Village of Third Lake**, IL, On-Call Engineering Services (1996-Present) including Lake Avenue Rehabilitation Construction Services, Serbian Storm Sewer Realignment Survey, Mainsail Drainage Study, FEMA Map Update, Retention Pond Outlet, Sunshine Avenue Easement Survey, Backup Generator Replacement.

**Experience**
43 Total, 34 with IMEG

**Education**
University of Illinois, BS Civil Engineer

**Registrations**
**Professional Engineer**
Illinois (062-048891)
Indiana (11900224)
Michigan (6201068645)
Wisconsin (30390-6)

**Professional Land Surveyor**
Illinois (035-003121)

**Affiliations**
NSPE
ISPE
IPLSA
ASCE
APWA
ACEC

**Section 2** | Organization Chart and Key Personnel



# Steve Grant, PE

Project Manager / Lead Civil Engineer

Steve is responsible for assisting in design, quality control, proposal preparation, client management, and project management for civil engineering projects. His experience includes all phases of civil engineering, environmental engineering, survey, and construction layout/guidance. Steve has experience in infrastructure planning and feasibility studies, commercial and residential subdivision design, site design, stormwater management, sanitary sewer, water main, storm sewer design, transportation engineering, project permitting and coordination with regulatory agencies.

## Project Highlights

- **Village of Arlington Heights**, IL, Water Main Project, Project Manager for surveying and engineering assistance on the 13,395-lf of water main replacement
- **Village of Arlington Heights**, IL, Water Main, Project Manager for survey and engineering assistance to prepare construction drawings, specifications, bidding documents and bidding assistance for 5,000-lf of water main replacement.
- **Village of Arlington Heights**, IL, Water System Improvements Projects (2).
- **Village of Arlington Heights**, IL, Storm Sewer, Project Manager for construction observation and civil engineering for the storm sewer repair at north point.
- **Naperville Park District**, Naperville, IL, Springbrook Golf Course New Water Main.
- **Medline**, Mundelein, IL, Engineering services to prepare plans for the reconstruction of the existing parking lot and new fire loop.
- **Lets Play Two**, LLC, Kenosha, WI, Civil Engineering services for the construction of a new turf baseball field for the Kenosha Kingfish.
- **Zion Benton Township High School**, IL, High School Auditorium. Design and permitting of auditorium addition including potable and fire loop extension.
- **JAS Environmental**, East Hazel Crest, IL, EHC/ASC/Slug Calculation. Conducted a limited Phase II investigation for historical PCE contamination, including oversight of well construction, well development, Slug analysis for quantitative and qualitative groundwater analysis. Designed Soil Vapor Extraction system for remediation of shallow soils contamination.
- **Anne Jeans Drainage**, Burr Ridge, IL. Provided a detention design for rehabilitating an existing wetland bottom detention basin and relocation an additional detention pond within the Floodplain meeting Dupage County and Illinois DNR requirements.
- **Waukegan Park District**, Waukegan, IL, Project Manager for the new sanitary sewer, to include connection in Grandville Ave and restoration of roadway and onsite pedestrian path, prepare watershed development permit app, IEPA permit application.
- **Village of Third Lake**, IL, Mainsail Drainage Study, Provided a Drainage Study for Mariners Cove/Mainsail Drive to determine existing storm sewer capacities and causes of existing flooding.

**Experience**
19 Total, 10 with IMEG

**Education**
Southern Illinois University, BS Civil Engineering

**Registrations**
Professional Engineer
Illinois (062-062539)
Wisconsin (46259)
Michigan (6201067064)
Indiana (PE11800276)

**Section 2** | Organization Chart and Key Personnel



# William Ulewicz

Senior Civil Design Engineer

William brings more than 15 years of experience providing construction oversite and quality assurance on multiple construction projects. This vast experience includes watermain installation, road paving, landfill, and concrete placement projects.

**Experience**
15 Total, 4 with IMEG

**Education**
Morrison Institute of Technology, AS Degree

## Project Highlights

- **Village of Mount Prospect**, IL, Water Main Replacement Projects 2021, 2023, 2024, 2025. IMEG provided project administration, survey, testing, project and final design, permitting, bidding and construction inspection for the water main replacement and rehabilitation projects.
- **Village of Mount Prospect**, IL, Fiber Inventory Project Documentation and Map Locates
- **Village of Arlington Heights**, IL, Surveying and Engineering Assistance for a 13,395-lf Water Main Replacement
- **Village of Arlington Heights**, IL, IDOT Watermain Construction Services
- **Village of Arlington Heights**, IL, Water System Improvements Projects (2)
- **Village of Arlington Heights**, IL, Verify Existing Right-of-Way and Easements, Topographic Survey and Compile Existing Utility Information
- **Village of Stone Park**, IL, Survey and Design Work for Alley Improvements
- **Village of Stone Park**, IL, Stone Park 2021 CDBG Application
- **Village of Stone Park**, IL, Construction Services to Frontage Road
- **Village of Stone Park**, IL, Construction on 40th Avenue
- **Village of Addison**, IL, Park & Withrop Water Main Replacement
- **Village of Wilmette**, IL, Water Main Improvements
- **Illinois American Water**, Woodridge, IL, Water Main Relocation
- **School District Unit 46**, Elgin, IL, Coleman Elementary Water Main Replacement
- **Burbank School District 111**, IL, Liberty Jr High School Forensic Analysis. Storwater Detention evaluation for system failure reasoning.
- **Oak Street Health**, Aurora, IL, Aurora Commons Structural Analysis for New RTUs on Existing Framing, Details for Slab on Grade Infill and Ceiling Hung Partitions, and Exterior Walls New Lintels Design

**Section 2** | Organization Chart and Key Personnel



# Anthony Domino

Civil Designer

Anthony is responsible for civil engineering design and production of construction documents for a wide variety of clients and projects. His experience includes the design of water mains, sewer, drainage, parking improvements, utility replacements, and more. Anthony also performs quality control, shop drawing review, project permitting, and construction observation.

**Experience**
6 Total, 5 with IMEG

**Education**
University of Illinois at Urbana-Champaign, BS Civil Engineering

**Registrations**
Licensed Engineer in Training (IL)

## Project Highlights

- **Village of Arlington Height**s, IL, Arlington Heights, IL, Construction drawings, specifications, permits, bidding documents and bidding assistance for the water main and sewer installation projects and sewer spot repair projects.
- **Village of Third Lake**, Third Lake, IL, Topographic Survey, design-prepare plans, site drawing, erosion control plans, construction administration.
- **R.S. Service Systems, Inc**., Cook County, IL, Permits for the City of Rolling Meadows, Village of Palatine, Village of Schaumburg, Village of Inverness, Village of Hoffman Estates, Village of South Barrington and IDOT.
- **Burbank School District 111**, Burbank, IL, Liberty Jr High School New Storm Water Detention System Design.
- **Camosy Construction**, Mount Prospect, IL, Topographic survey, preliminary geometric plan, coordinate the right-of-way with IDOT, prepare final roadway plan, modify onsite plans.
- **Comcast Cable - Addison**, Lisle, IL, Topographic survey and prepare documents required for the approval of the installation of approximately 560 feet of underground and 233 feet of aerial CATV fiber.
- **Community Consolidated School District 15**, Palatine, IL, Survey, design, bidding, construction and engineering services for parking improvements at multiple facilities: Carl Sandburg Virgina Lake School, Carl Sandburg Jr. High School, Lake Louise School, Plum Grove School, and Pleasant Hill Elementary.
- **Community Consolidated School District 15**, Palatine and Hoffman Estates, IL, Civil Engineering Design for Multiple Building Additions / Expansions: Frank Whiteley Elementary, Lincoln Elementary, Pleasant Hill Elementary, Kimball Hill Elementary, Willow Bend Elementary, Gray Sandborn Elementary, and Hunting Ridge Elementary.
- **Waukegan Community Unit School District 60**, Waukegan, IL, Parking Lot Improvements for multiple facilities: North Elementary, Clark Elementary, Andrew Cooke Elementary, Jack Benny Middle School, Glenwood Elementary, and Robert Abbott Middle School.

**Section 2** | Organization Chart and Key Personnel



# Richard LeBeck, EIT

Civil Designer

Richard is responsible for performing as a resident engineer and quality control on a variety of design and construction projects. He is also responsible for overseeing construction inspection, surveying, documentation, paving, appurtenance work and performing constructability reviews.

**Experience**
4 Total, 3 with IMEG

**Education**
University of Wyoming, BS Civil Engineering

**Certificate**
Engineer in Training (EIT)
Wyoming (EI 6520)

## Project Highlights

- **Village of Mount Prospect**, IL, Water Main Replacement Projects 2021, 2023, 2024, 2025. IMEG provided project administration, survey, testing, project and final design, permitting, bidding and construction inspection for the water main replacement and rehabilitation projects.
- **Village of Stone Park**, IL, On-Call Engineering Services (1995 - Present). Richard worked on the 1800 Block and Alley Infrastructure Improvements, Water Main and Road Rehabilitation, Frontage Road Median Enhancements.
- **Village of Arlington Heights**, IL, Water System Improvements Projects 2022, 2023, 2024. Construction drawings, specifications, permits, bidding documents and bidding assistance for the water main and sewer installation projects and sewer spot repair projects
- **Village of Arlington Heights**, IL, 2021 Water Main. Verify existing right-of-way and easements, topographic survey and compile existing utility information.
- **Village of Cedar Point**, IL, Water Main Design. Approximately 18,000-lf of 6" water main, fire hydrants, air release valves and one booster pump station, building and standby generator. Along North 23rd Road to the existing 8" water main on Cedar Street.
- **Illinois American Water**, Wheeling, IL, Airport Water Main Relocation. IMEG provided civil engineering design, survey, geotechnical and bidding services.
- **Village of Third Lake**, IL, Topographic Survey, design-prepare plans, site drawing, erosion control plans, construction administration
- **Village of Lelan**, IL, Preliminary Engineering Report. Prepare a reprot in accordance with USDA requirements for a new water treatement facility.
- **Waukegan Community Unit School District 60**, Waukegan, IL, Park Lot Rehabilitation Projects. Andrew Cooke Elementary School, North Elementary School, Clark Elementary School, Jack Benny Middle School, and Robert Abbott Middle School. IMEG provided engineering design, survey, bidding and construction services.
- **College of Lake County**, Grayslake, IL, Loading Dock and A/B Wing Drainage. IMEG provided topographic survey, drainage evaluation, lift station modifications /installation, preliminary estimate of cost, final plans and construction services.
- **College of Lake County**, Grayslake, IL, Sun Pivot Circle Reconstruction. IMEG provided civil design, survey and construction administration services.

**Section 2** | Organization Chart and Key Personnel



# Theodore Morrill, PLS

Lead Surveyor

Theodore is responsible for land and route surveys. He schedules and oversees the survey crews, providing boundary, topographic, and construction staking surveys to a wide range of private and governmental clients. He currently heads Gurnee Survey Department. He has experience in performing and directing field crews in the accomplishment of ALTA surveys, topographic surveys and construction staking. He has experience in writing legal descriptions and preparing plats. Ted currently using AutoCAD/Civil 3D 2016. Set up control networks with traditional and GPS equipment.

## Project Highlights

- **Village of Mount Prospect**, IL, Water Main Replacement Projects. IMEG provided civil engineering, surveying and construction administration for (4) water main replacements within the Village's potable water distribution system.
- **Village of Wilmette**, IL, Water Main Improvements Project.
- **Village of Wilmette**, IL, Relief Sewer, Verified and established control. Performed staking and grading services for approximately 50 storm structures.
- **Village of Wilmette**, IL, Relief Sewer, Verified and established control, stake and grade approximately 20 storm structures and staking of approximately 2100-ft. curb and gutter with offsets and grades.
- **Village of Wilmette**, IL, Prepare easement plats for new underground fiber located within the ComEd Right-of-Way.
- **City of Ottawa**, IL, Constructed two new water treatment plants a new well, new transmission mains, updated three other wells and made other associated water system improvements. In conjunction with this we prepared a comprehensive evaluation of the system, proposed a new rate structure and a system of user charges.
- **Village of Third Lake**, IL, Mainsail Drainage Study, Provided a Drainage Study for Mariners Cove/Mainsail Drive to determine existing storm sewer capacities and causes of existing flooding.
- **Village of Third Lake**, IL, Lake Avenue Rehabilitation Construction Services.
- **Village of Third Lake**, IL, Serbian Storm Sewer Realignment Survey.
- **Village of Third Lake**, IL, Sunshine Avenue Easement Survey.
- **Village of Downers Grove**, IL. Resurfacing Survey Services ST-063
- **PTB 168/14 Various Various Surveys**, Various Locations, IL - This project consisted of performing a full hydraulic topographic survey and creation of a DTM south of Hanover, IL for Box Culvert #SN 043-1024 over an unnamed tributary to the Apple River, 0.9-miles +/- NW off Whitton Rd. The survey included topographic data from R.O.W. to R.O.W. Centerline data for IL Route 84 was provided by the Department.

**Experience**
35 Total, 34 with IMEG

**Education**
College of Lake County, AA Science
Santa Barbara City College, AS

California Polytechnic State University, Construction Management

University of Wisconsin, Extension
Introduction to MicroStation

**Registrations**
**Professional Land Surveyor**

Illinois (035-003395)

Wisconsin (2396-8)

Member of IPLSA

**Section 2** | Organization Chart and Key Personnel



# Mike Hulback

Senior Field Technician

Mike brings more than 35 years of practical experience in construction survey, site management and construction inspection. He is responsible for the observation of construction procedures as they relate to acceptable practice, the testing of construction materials for conformance with design plans and specifications, and the tracking of project quantities and costs. Mike is highly experienced in resident engineering and quality control functions on a variety of interstate, highway, local roadway, building, site preparation, and utilities projects. His experience includes construction inspection and layout for large scale roadway projects for the Village of Third Lake, IL; Village of Stone Park, IL; Village of Gurnee, IL; and Abbott Labs, North Chicago, IL along with other large scale projects including several roller coasters at Six Flags in Gurnee, IL. Mike's years of knowledge and expertise have continued to build on his effective problem solving skills and ability to build strong relationships with co-workers, clients and contractors.

**Experience**
36 Total, 31 with IMEG

**Certifications**
Hazardous Waste Site Worker Training (HAZWOPER) Certified

## Project Highlights

- **Village of Mount Prospect**, IL, Construction Administrative Services for survey, testing, project and final design, permitting, bidding and construction inspection for the water main replacement and rehabilitation project.
- **Village of Stone Park**, IL, On-Call Engineering Services. Construction Administrative services for surveying and engineering services to prepare construction drawings and bid documents.
- **Village of Arlington Heights**, IL, Construction Administrative Services for IDOT watermain construction services
- **Village of Lakemoor**, IL, Construction Administrative Services for Route 120 Westerly Watermain Construction Services. Coordination with IDOT and IEPA, construction layout, review shop drawings, process RFI, pay requests.
- **Village of Wilmette**, IL, Water Main Improvements
- **Village of Third Lake**, IL, On-Call Engineering Services. Design and prepare bid documents, construction administration and coordination with IDOT.
- **Leo J Fox Trucking & Excavating, Inc.**, Mount Prospect, IL, Construction Administration services for the police including Storm Sewer and Sanitary Sewer.
- **Fremont School District 79**, Mundelein, IL, Prepared master site for district property along N. Fremont Center Road along with concept plan for modified parking and access to existing elementary and intermediate school. IMEG provided design, topographical survey, final value engineering services.
- **Gurnee Park District**, IL, Construction Admin Services for South Park ADA.
- **Abbott Laboratories**, Abbott Park, IL, Prepared ALTA/ACSM land title surveys for Abbott Park and Abbott Park East.

SECTION 3

# Related Experience

IMEG
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**Section 3** | Related Experience

# Village of Mount Prospect
## Trusted Business Partner

**Mount Prospect, IL**



### COMPREHENSIVE CIVIL ENGINEERING SERVICES

Since 2018, IMEG has served as a trusted engineering partner to the Village of Mount Prospect, providing civil engineering, surveying, and construction administration services for a variety of improvements. In 2022, IMEG led the **design and oversight of a $2.8 million CIPP water main rehabilitation project,** which included 8,000 linear feet of new PVC water main across several areas of the Village. The project also encompassed roadway rehabilitation, sidewalk and curb replacement, and landscape restoration.

IMEG's responsibilities included design, inspection, surveying, quantity documentation, and full construction oversight. We also managed permitting with **IDOT** and IEPA, demonstrating strong coordination with regulatory agencies.

Additional services provided have included data collection, topographic survey, alignment planning, preliminary design, soil borings, and full construction-phase administration.

**Other representative projects:**

- Water Main Replacement Projects (2021, 2023, 2024, 2025)
- Water Distribution System Replacement and Rehabilitation
- Public Works Fiber Connection Design, Survey and Admin
- Fiber Inventory Project Documentation and Map Locates

| | |
|---|---|
| **Cost** | Ongoing, Various |
| **Business Alliance** | 2018 - Present |
| **Services** | Civil, Survey, Construction Administration |

**Section 3** | Related Experience

# Village of Stone Park
## On-Call Engineering Services

**Stone Park, IL**



### 40+ YEARS OF EXPERIENCE

For over four decades, IMEG has provided responsive, high-quality civil, surveying, and construction administration services to the Village of Stone Park, IL. Our longstanding partnership reflects a deep understanding of municipal infrastructure needs and a proven ability to consistently deliver effective solutions.

A key example includes the **2020 $3.9 million project involving the design and inspection of 1.7 miles of new PVC water mains**, along with roadway rehabilitation, sidewalk and curb replacement, and landscape restoration. IMEG's on-call services have also included construction inspection, surveying and staking, quantity verification, and detailed project documentation.

**Other representative projects:**

- Addison Creek Lift Station
- Stone Park Grading Plan
- Police Station Permitting & Floodplain Development
- Italian Cultural Center
- USEPA Safe Drinking Water Updates
- Utility Map Update
- Water Atlas Update
- Inflow Control Program
- Avenue Infrastructure Improvements
- Pebbles Car Wash Remodel

| | |
|---|---|
| **Cost** | Ongoing, Various |
| **Contract** | 1980 - Present |
| **Services** | Civil, Survey, Construction Administration, Subsurface Utility Engineering (SUE) |

**Section 3** | Related Experience

# Village of Arlington Heights
## Trusted Business Partner

**Arlington Heights, IL**



### 15+ YEARS OF SUSTAINED SUPPORT

IMEG has served as a trusted engineering partner to the Village of Arlington Heights for over 15 years, providing civil, surveying, and construction administration services across a range of Village infrastructure projects.

Over the most recent five-year period, IMEG delivered design and construction support for a **$7.9 million water main replacement project involving 6.5 miles of new ductile iron pipe throughout the Village.** The scope also included roadway patching and overlays, sidewalk and curb replacement, and landscape restoration.

That same year, IMEG supported a **$1.33 million CIPP lining project involving seven segments of aging or abandoned water mains**—many located beneath railroad crossings or in high-traffic intersections. IMEG's role extended beyond engineering design and inspection to include coordination and permitting with the **IDOT**, Union Pacific Railroad, and the Illinois Environmental Protection Agency (IEPA), underscoring our expertise in multi-agency collaboration.

**Other representative projects:**

- Construction observation for street rehabilitation
- Water System Improvements
- Water Main Replacement Projects (2011, 2012, 2013)

| | |
|---|---|
| **Cost** | Ongoing, Various |
| **Business Alliance** | 2010 - Present |
| **Services** | Civil, Survey, Construction Administration |

**Section 3** | Related Experience

# Village of Fox Lake
## Water Main Improvements

**Fox Lake, IL**



### ENGINEERING FOR LAKEFRONT PARK REDEVELOPMENT

IMEG has proudly partnered with the Village of Fox Lake for the past 3 years, delivering full-service engineering support for the redevelopment of Lakefront Park. IMEG collaborated with the Village through all phases of the Lakefront Park redevelopment project, providing engineering, construction oversight and contract management services. Acting as the Village's lead consultant, IMEG managed coordination with **IDOT** and other regulatory agencies, secured approvals, and oversaw both technical execution and administrative compliance.

Our scope included drainage and environmental analysis, traffic review, civil design, utility planning, and permitting, followed by documentation and contractor coordination. IMEG maintained close communication with Village staff throughout the project, offering progress updates and ensuring alignment with objectives and funding requirements.

IMEG also completed the as-built survey and record drawings at project completion and previously contributed to the Lakefront Park Access Road Layout as a subconsultant to Copenhaver Construction. IMEG continues to support the Village through **IDOT-prequalified** bid opportunities for upcoming roadway and subdivision projects within the park and surrounding areas.

| | |
|---|---|
| **Cost** | Various, Ongoing |
| **Business Alliance** | 2022 - Present |
| **Services** | Civil, Survey, Construction Administration |

**Section 3** | Related Experience

# Village of Wilmette
## Water Main Improvements

**Wilmette, IL**

### CENTURY-OLD WATER MAIN REHABILITATION

**The project:** The Village of Wilmette undertook the rehabilitation of a 12-inch water main located in the alleys north of Greenleaf Avenue, stretching from Wilmette Avenue to Sheridan Road. This 5,900-ft water main, originally constructed over 100 years ago, had once served as a transmission main when the Village received its water supply from the City of Evanston.

**The goal:** The primary goal was to extend the service life of the aging infrastructure, improve system reliability, and reduce the risk of costly failures while minimizing disruption to residents and businesses.

**Design approach:** IMEG performed topographic surveys, inspections, and geotechnical and environmental investigations to support the development of complete engineering plans and specifications. Rehabilitation methods included cured-in-place pipe lining and targeted abandonment, supplemented with valve and vault repairs, pavement patching, and other collateral work. The team also prepared and coordinated permit submissions with IEPA, IDOT, Cook County, and other agencies. Rigorous QC/QA reviews and constructability evaluations ensured the plans were reliable, cost-effective, and ready for bidding.

**Challenge:** The primary challenge involved designing a cost-effective rehab strategy for a century-old water main in narrow alleys with active residential access. Careful planning was required to balance constructability, long-term performance, and minimal disruption to surrounding properties.

**Project outcome:** The Village received a complete, bid-ready design package that addressed both regulatory requirements and community needs. The improvements provided a durable, constructible solution that extended the life of the water main and supported the continued delivery of safe, dependable water service.

| | |
|---|---|
| **Cost** | $400,000 |
| **Completion** | 2024 |
| **Services** | Civil, Survey, Construction Administration and Inspection |









**Section 3** | Related Experience

# Water Main Experience Illinois



## ILLINOIS

### City of Hamilton
- CDBG Water Main Bidding and Construction Inspection

### City of Macomb
- Engineering Services to Update the Plans for Water Main Replacement In the NE and SW Parts of the City
- Bidding, Construction Inspection and Guidance for the NW Phase 2 Water Main Replacement
- CDBG Water Main Phase 3 Project, Bidding and Construction Engineering Services
- Plans, Specifications and Permit Applications for the Replacement of Existing Transite Water Main

### City of Northlake
- Water Main Replacement and 43rd Ave. Resurfacing

### City of Rock Island
- Water Main Replacement on 35th St. from 6th to 7th Ave.

### Naperville Park District
- New Water Main at Springbrook Golf Course

### Village of Arlington Heights
- Water Main Lining Improvement Construction Administration Services
- 13,395-lf of Water Main Replacement
- 5,000 lf of Water Main Replacement
- Water System Improvements for 3-year period

### Village of Coal Valley
- Water Main, Water Tower, Booster Station Design Along Niabi Zoo Road and East 3rd Avenue
- Water Main Replacement at 22nd Ave
- Water Main Replacement at E & W 21st Avenue

### Village of Grand Ridge
- Water Main Extension Project

### Village of London Mills
- London Mills Additional Water Main Design
- Water Main Bidding and Construction Services for Phase 3 Water Main Replacement

### Village of Mount Prospect
- 8,000-lf CIPP Water Main Rehabilitation
- 14,600-lf of Water Main Replacement
- (4) Water Main Replacement Projects

### Village of Stone Park
- 13,395-Lf of Water Main Replacement
- On-call engineering services 1980 - Present

### Village of Wilmette
- Water Main Improvements Project

### Village of Smithfield
- Water Main Extension Project from Smithfield to Bernadotte, an unincorporated village located in Fulton County on the Spoon River.
- Permit applications to IEPA, County Highway and US Army Corps of Engineers.

### Village of Woodhull, IL
- Water Main Replacement Including Topographic Survey and Design

SECTION 4

# Project Understanding & Approach

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Section 4 | Project Understanding & Approach

# Project Approach

IMEG understands the Village is requiring the service of a consulting engineer to provide design and construction administration for 13,800 linear feet of water main rehabilitation within the Village-owned potable water distribution system. Our team has extensive experience with these types of projects. We have outlined a brief design and construction phasing outline.

### DATA COLLECTION:
Immediately upon selection, we will request copies of available data including, but not limited to, existing city utility/street maps, previous site improvements plans, and any other information regarding the existing conditions for the site.

### TOPOGRAPHIC SURVEYS:
After review of available information, we will schedule the field surveys of the project site. This information will provide the base necessary to develop plans sheets and identify any issues that need to be addressed in the design phase.

### SOILS AND SUBSURFACE INVESTIGATIONS:
Depending on the availability and relevance of existing geotechnical information, soil borings and/or pavement cores may be ordered to determine thickness of the existing pavement, as well as physical composition of the soils to provide to contractor for soil disposal.

### PRELIMINARY DESIGN:
IMEG will coordinate with utility companies to obtain all possible utility information to determine points of possible conflict. Access alternatives for proposed water main location determine locations for proposed valves and fire hydrants. Determine appropriate street rehabilitation.

### DESIGN:
Once the preliminary plans are approved, we will begin preparation of the plans and bidding documents. Upon completion, these plans will be provided to the team along with the estimate of cost at this time, we will also begin meeting and coordinating with the regulatory agencies.

### COMMUNICATION:
IMEG believes communication with the client, design team and regulatory agency is essential to a successful project. The project manager will be in constant contact with the city, design team and regulatory agency to ensure all aspects of design and costs are addressed to the satisfaction of the city and in accordance with the requirements of the regulatory agencies. All work will be coordinated with and in accordance with Village requirements.

### PERMIT ACQUISITION:
We will obtain all necessary permit acquisitions from the IDOT, County, IEPA and/or MWRDGC and any other agencies with jurisdiction, as necessary.



### CONSTRUCTION ADMINISTRATION PHASE
We will respond to all RFI's and questions the contractor may have, review material submittals and pay application/pay order requests. We will provide full time construction observation of the proposed improvements, so they are constructed in substantial accordance with the documents. We will, also, perform construction staking of the proposed improvements. IMEG will prepare as-builts and incorporate them along with all RFI's and ASI's into the drawings. The drawings will be submitted electronically to the team and will assist in updating the GIS.

All work will be coordinated with and in accordance with city requirements.

Our proposed team consists of staff from our local offices to utilize local knowledge and experience –with a deep bench of additional resources.

### APPROACH TO PROJECT MANAGEMENT:
During all phases of the project the project manager will provide the appropriate manpower necessary is available. The project manager will be involved in all decision making and ensure that QA/QC is performed on each phase of the project.

### STAFFING COMMITMENT:
IMEG has a culture of can do and we exhibit that commitment to all of our clients by doing what ever is necessary to exceed exception. That includes involving senior staff in all projects.

We are committing the staff whose resumes are included in our submittal, these are senior leaders who will remain involved in the project from beginning to end. While we will involve younger engineers in a production capacity they will work under constant senior leadership and guidance.

### COMMUNITY COMMUNICATION:
We keep an open line of communication with the residents and business in the project area. We will provide a weekly schedule updating to all residents and business, along with direct contacts address any concerns or field issues.

## Section 4 | Project Understanding & Approach

| PROJECTED NUMBER OF HOURS TO COMPLETE THE PROJECT BROKEN DOWN BY TASK AND PERSONNEL | | | |
|---|---|---|---|
| # | TASK | ROLE | PROJECTED MAN-HOURS |
| 1. | **Project Administration:** | Client Executive | |
| | Project Coordination and Review with Village Staff | Project Manager | 16 |
| 2. | **Route Survey** | Land Surveyor | 10 |
| | Verify Existing R.O.W./Easements | Senior Field Technician | 70 |
| | Topographic Survey | Field Technician | 70 |
| | Compile Existing Site Utility Information | Civil Designer IV | 40 |
| 3. | **Pavement Cores / LPS-663** | Sub Consultant | LS |
| 4. | **Project Design:** | | |
| | Preliminary Design | Senior Civil Engineer III | 24 |
| | Coordination with Utility Companies to Access | Civil Field Technician | 140 |
| | Possible Conflicts with Projected Water Main Install | Civil Designer IV | 140 |
| | Access Alternates for Water Main Location & Material Types with Associated Costs | | |
| | Determine Extent of Roadway Rehabilitation | | |
| | Review with Village Staff | | |
| | **Final Design:** | | |
| | Construction Drawings and Documents to Include Plan and Profiles with Existing and Proposed Water Main | | |
| | Specifications | Senior Civil Engineer III | 24 |
| | Quantiles | Sr. Civil Technician Specialist | 140 |
| | Estimate of Probable Cost | Civil Designer IV | 140 |
| | Bidding Documents | Administration | 16 |
| 5. | **Permits** | Civil Designer III | 16 |
| | Coordination with Regulatory Agencies (IDOT, IEPA) | Civil Designer | 24 |
| | Process Permit Applications | Administration | 16 |
| 6. | **Bidding Assistance:** | | |
| | Contract Prospective Bidders | Civil Designer III | 8 |
| | Distribute Plans and Specifications | Civil Designer | 8 |
| | Attend Pre-Bid Conference | Administration | 8 |
| | Attend Bid Opening | | |
| | Bid Review and Recommendation | | |
| 7. | **Full Time Construction Inspection:** | | |
| | Weekly Site Meetings with Project Manager, Village, and Contractor | Senior Civil Engineer III | 16 |
| | Preconstruction Photo Survey | Field Technician IV | 500 |
| | Full Time Resident Inspector | Senior Civil Tech Specialist | 20 |
| | Construction Layout | Senior Field Technician | 20 |
| | Site Verification to Pay Estimate Quantities | Civil Designer IV | 16 |
| | Process Pay Request | Administration | 16 |
| | Prepare Punch List | | |
| | Verify Final Restoration | | |
| | Provide As-Built CADD Files | | |
| | Total Hours | | 1,498 |

SECTION 5

# Project Schedule

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**Section 5** | Proposed Schedule

# Project Schedule

| VILLAGE OF MOUNT PROSPECT PROFESSIONAL SERVICES<br>2026 WATER MAIN REPLACEMENT AND INSPECTION PROJECT SCHEDULE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TASK | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT |
| Project Administration | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Route Survey | ■ | | | | | | | | | | | |
| Preliminary Design | ■ | ■ | ■ | | | | | | | | | |
| Final Design | | | ■ | ■ | | | | | | | | |
| Permits | | ■ | ■ | ■ | | | | | | | | |
| Bidding Assistance | | | | ■ | ■ | | | | | | | |
| Construction Inspection | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |



**With industry leading experience and local leadership to successfully deliver your project, we are the committed and trusted partner to provide the necessary resources to meet your technical and schedule requirements.**

## Building Design: Engineering & Planning

Civil Engineering
Structural Engineering
MEP / FP Engineering
Technology Design
Security Design & Engineering
Acoustics & Noise Control
Architectural Lighting
Medical Equipment Planning
Parking Planning & Design

## Sustainability & Energy Solutions

Daylighting
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## Building Performance

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Land Surveying
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Environmental & Arborist
Materials Testing
Transportation (Roads, Highways, Bridges)
Parking Planning & Design
Subsurface Utility Engineering
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Security Design Consulting
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# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to accept Suburban Purchasing Cooperative joint purchasing agreement pricing for the purchase of one new 2026 Ford Transit 350 Cutaway in an amount not to exceed $74,886.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $74,886.00 |
| Budget Source | Vehicle Replacement Fund |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

There are sufficient funds available to replace Public Works vehicle ID# 4539 in the current budget. The vehicle to be replaced is a 2012 Ford F-250 with a utility body. Vehicle 4539 is utilized by the Streets and Buildings division primarily for facility maintenance. The vehicle was designed to transport facility maintenance tools and materials utilized in the maintenance of Village-owned facilities.

A replacement van is available through a Suburban Purchasing Cooperative (SPC) joint purchasing contract. The proposed replacement unit is a 2026 Ford Transit 350 cutaway purchased through SPC contract #207 from Currie Motors of Frankfort, IL.

The existing vehicle, a pickup truck with utility body (photo attached), is being replaced with a van-style cutaway with an enclosed utility body (photo attached). This option will provide a better platform for an organized work van with the ability to access tools or supplies from both inside the van and the outside compartments. The van has been specified to maintain a low roof design to be able to access both Village-owned parking decks.

## Replacement Policy

This vehicle has been evaluated utilizing our detailed comprehensive replacement policy. This policy used point-based criteria that rates each vehicle on four major factors including age, mileage, repair & maintenance (R&M) cost, and condition of the body/mechanical components. A point total equaling or exceeding eleven out of sixteen indicates that the vehicle should be replaced.

This vehicle scored fifteen points, indicating that it should be replaced. The vehicle condition evaluation form and summary report for this vehicle are attached.

Other Factors:

- If the service life is extended, this vehicle could require an expenditure of $5,100. These costs are delineated on the attached vehicle evaluation form. The current resale value of this F-250 with utility body is $9,000.
- The Village is eligible to purchase this vehicle through a Suburban Purchasing Cooperative purchasing agreement. This contract is publicly bid and satisfies the requirements of the Village of Mount Prospect Purchasing Policy.
- Delivery of the new Ford Transit is tentatively to be within six months of the purchase order.
- The 2012 Ford F-250 with utility body being replaced will be sold on Gov-Deals online auction site once removed from service.

## Discussion

## Alternatives

1. Accept Suburban Purchasing Cooperative pricing for the purchase of one (1) new Ford Transit 350 Cutaway Van.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends that the Village Board accept Suburban Purchasing Cooperative Contract #207 and authorize the purchase of one new 2026 Ford Transit 350 with utility body from Currie Motors for the total sum not to exceed $74,886.

## Attachments

1. 2026 Ford Transit Cutaway with Utility Body Pic
2. 4539-2025 Vehicle_Equipment Condition Evaluation Form
3. Current 4539 Vehicle Pic
4. Ford Transit Cutaway with Utility Body Quote



# Village of Mount Prospect
# Vehicle/Equipment Condition Evaluation Form

Unit # 4539 Assigned Dept./Div. MPPW

Year: 2012 Make: Ford Model: F-250 Mileage: 65,224

Hours: 6667 Date of Evaluation: 9-15-25 Performed By: Kevin DeLuca

| System | Diagnosis | Estimated Repair Cost |
|---|---|---|
| Engine | Fair Dry rotted seals/gaskets | 1,200 |
| Transmission | Fair | |
| Differential | Good | |
| Exhaust System | Fair | 1,000 |
| Cooling System | Fair | |
| Brakes | Fair | 1,500 |
| Tires | Poor | 1,400 |
| Steering | Fair | |
| Suspension | Good | |
| HVAC | Good | |
| Electrical | Good | |
| Body/Frame | Fair rust | |
| Interior | Fair | |
| Other- describe | | |
| **Total Estimated Repair Cost** | | $5,100 |

| Diagnosis Code | Code Description |
|---|---|
| Good | Systems are functioning well and no major repairs are expected. |
| Fair | Some major repairs are needed, but unit can remain in service a little longer in current condition. |
| Poor | Major repairs are required as soon as possible to ensure unit safety and reliability. |

Appendix - B

# Village of Mount Prospect
# Vehicle/Equipment Evaluation Summary Report

Unit # 4539 Assigned Dept./Div. MPPW

Year: 2012 Make: Ford Model: F-250 Mileage: 65,224

Date of Evaluation: 9-15-25 Performed By: K DeLuca

## Ratings:

**Unit age:** 13 Base Policy Age: 12 Points: 3

**Mileage/Hrs:** 65,224/6667 Base Policy Mileage/Hrs: 50,000/5,000 Points: 4

**Maintenance Cost:**

Repair and Maintenance Cost: $23,240 ÷ Purchase Price: $32,000

Repair and Maintenance Percentage of Purchase Price: 72 % Points: 4

**Condition Evaluation:** ***(attach Vehicle Condition Evaluation Form)***

Estimated Repair Cost: $5,100 ÷ Current Book Value: $9,000

Repair Cost Percentage of Current Book Value: 56 % Points: 4

Total Ownership Cost Per Mile:

(Lifetime Fuel + R&M + Purchase Price) $73,839

Less Salvage Value $9,000

Net Lifetime Costs $64,839.00

Divided by Mileage/Hours 65,224/6,667

Operating Cost Per Mile/Hour $.99Mi/9.72hr

**Total Points:** 15

**Comments and other considerations:**

Superintendent's recommendation:

~~This equipment has exceeded its life expectancy replacement is recommended~~

**Total Point Evaluation:** A point total equaling or exceeding eleven (11) indicates that the vehicle should be recommended for replacement. The point total is used to rank its replacement priority. The larger the number the higher the replacement priority will be.


S39
F250
VILLAGE OF
Mount Prospect
PUBLIC WORKS
www.mountprospect.org

**Prepared for: , Village of Mt Prospect**

## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625

### Client Proposal

Prepared by:
THOMAS SULLIVAN
Office: 815-464-9200
Quote ID: mtpcut
Date: 09/18/2025

**Prepared for:**
Village of Mt Prospect
Prepared by: THOMAS SULLIVAN
09/18/2025

Currie Commercial Center | 10125 W. Laraway Frankfort Illinois | 60423

## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

### *Major Equipment*

(Based on selected options, shown at right)

10-speed automatic

Exterior: School Bus Yellow

Interior: Dark Palazzo Gray w/Vinyl Front Bucket Seats

* 16 x 6.5-inch front and rear steel wheels
* Front tires LT load rating: C
* Lock-up transmission
* Alternator Amps: 250A
* Lead acid battery
* Fuel tank capacity: 25.10 gal.
* Steering wheel mounted audio controls
* AM/FM stereo radio
* Seek scan
* SYNC 4 external memory control
* Wheelbase: 138.0"
* Axle to end of frame: 45.1"
* Power door mirrors
* LED brake lights
* Variable intermittent front windshield wipers
* Driver front impact airbag
* Cancellable front passenger air bag
* Airbag occupancy sensor
* LT235/65RR16 AS BSW front and rear tires
* Overdrive transmission
* Transmission electronic control
* Stainless steel single exhaust
* Battery run down protection
* Integrated navigation system with voice activation
* 12 inch primary display
* AM/FM
* Auxiliary input jack
* Vehicle body length: 223.3"
* Cab to axle: 82.6"
* Standard ride suspension
* Manual folding door mirrors
* Light tinted windows
* Manual climate control
* Seat mounted side impact driver airbag
* Seat mounted side impact front passenger airbag
* 6 airbags

### *As Configured Vehicle*

| | MSRP |
|---|---|
| STANDARD VEHICLE PRICE | $45,690.00 |
| Order Code 501A | N/C |
| Engine: 3.5L PFDi V6 (FFV) | Included |
| Transmission: 10-Spd Automatic w/OD & SelectShift | Included |
| 4.10 Limited Slip Axle Ratio | Included |
| GVWR: 9,500 lb | Included |
| Tires: 235/65R16C 121/119 R AS BSW | Included |
| Vinyl Front Bucket Seats | Included |
| Dark Palazzo Gray Vinyl Bucket Seats | Included |
| Monotone Paint Application | STD |
| 138" Wheelbase | STD |
| Radio: AM/FM Stereo | Included |
| Fleet Customer Powertrain Limited Warranty | N/C |
| 50-State Emissions System | STD |
| SYNC 4 Communication & Entertainment System | Included |
| School Bus Yellow | N/C |
| Dark Palazzo Gray w/Vinyl Front Bucket Seats | N/C |
| Front Black Wheel Well Liners | $295.00 |
| Back Up Alarm | $190.00 |

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.

**Prepared for:**
Village of Mt Prospect
Prepared by: THOMAS SULLIVAN
09/18/2025

Currie Commercial Center | 10125 W. Laraway Frankfort Illinois | 60423

## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

### *Major Equipment*

* Ford Co-Pilot360 w/Side Wind Stabilization electronic stability control system with anti-rollover
* Bucket front seats
* Front passenger seat with 4-way directional controls
* Manual front seat head restraint control
* Manual reclining driver seat
* Manual reclining passenger seat
* Vinyl front seat upholstery
* 4-wheel disc brakes
* Electronic parking brake
* Hill start assist
* Immobilizer
* Driver seat with 4-way directional controls
* Height adjustable front seat head restraints
* Driver seat armrest
* Manual driver seat fore/aft control
* Manual passenger seat fore/aft control
* Vinyl front seatback upholstery
* 4-wheel antilock (ABS) brakes
* Brake assist system

### *As Configured Vehicle*

| | MSRP |
|---|---|
| Spare Tire & Wheel | $300.00 |
| Short-Arm Manual-Folding Power Adjusting Mirrors | $290.00 |
| Wheels: 16" Steel w/Full Silver Wheel Covers | $35.00 |
| SUBTOTAL | $46,800.00 |
| Destination Charge | $2,095.00 |
| **TOTAL** | **$48,895.00** |

### *Fuel Economy*

**City**
N/A




**Hwy**
N/A

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**Prepared for:**
Village of Mt Prospect
Prepared by: THOMAS SULLIVAN
09/18/2025

Currie Commercial Center | 10125 W. Laraway Frankfort Illinois | 60423

## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

# As Configured Vehicle

| Code | Description | MSRP |
|---|---|---|
| **Base Vehicle** | | |
| W5P | Base Vehicle Price (W5P) | $45,690.00 |
| **Packages** | | |
| 501A | Order Code 501A<br>*Includes:*<br>*- Engine: 3.5L PFDi V6 (FFV)*<br>*Includes port injection and E-85 flex-fuel capable capability.*<br>*- Transmission: 10-Spd Automatic w/OD & SelectShift*<br>*Includes auxiliary transmission oil cooler.*<br>*- 4.10 Limited Slip Axle Ratio*<br>*- GVWR: 9,500 lb*<br>*- Tires: 235/65R16C 121/119 R AS BSW*<br>*- Vinyl Front Bucket Seats*<br>*- Dark Palazzo Gray Vinyl Bucket Seats*<br>*Includes 2-way manual driver seat, 2-way manual passenger seat, driver seat armrest and 2-way adjustable headrest.*<br>*- Radio: AM/FM Stereo*<br>*- SYNC 4 Communication & Entertainment System*<br>*Includes 12" center display, Bluetooth, dual USB ports, enhanced voice recognition and connectivity packages including information on demand panel, wireless Apple CarPlay and Android Auto compatibility, cloud connection, 911 Assist, digital owner's manual and conversational voice command recognition.* | N/C |
| **Powertrain** | | |
| 998 | Engine: 3.5L PFDi V6 (FFV)<br>*Includes port injection and E-85 flex-fuel capable capability.* | Included |
| 44U | Transmission: 10-Spd Automatic w/OD & SelectShift<br>*Includes auxiliary transmission oil cooler.* | Included |
| X4L | 4.10 Limited Slip Axle Ratio | Included |
| STDGV | GVWR: 9,500 lb | Included |
| **Wheels & Tires** | | |
| STDTR | Tires: 235/65R16C 121/119 R AS BSW | Included |
| 64H | Wheels: 16" Steel w/Full Silver Wheel Covers | $35.00 |
| 51D | Spare Tire & Wheel<br>Removes tire inflator and sealant kit.<br>*Includes 3 ton jack, tool kit and full-size matching tire.* | $300.00 |

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## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

# As Configured Vehicle (cont'd)

| Code | Description | MSRP |
|---|---|---|
| **Seats & Seat Trim** | | |
| V | Vinyl Front Bucket Seats | Included |
| 21G | Dark Palazzo Gray Vinyl Bucket Seats<br>*Includes 2-way manual driver seat, 2-way manual passenger seat, driver seat armrest and 2-way adjustable headrest.* | Included |
| **Other Options** | | |
| PAINT | Monotone Paint Application | STD |
| 138WB | 138" Wheelbase | STD |
| STDRD | Radio: AM/FM Stereo<br>*Includes:*<br>*- SYNC 4 Communication & Entertainment System*<br>*Includes 12" center display, Bluetooth, dual USB ports, enhanced voice recognition and connectivity packages including information on demand panel, wireless Apple CarPlay and Android Auto compatibility, cloud connection, 911 Assist, digital owner's manual and conversational voice command recognition.* | Included |
| 541 | Short-Arm Manual-Folding Power Adjusting Mirrors<br>*Non-turn signal and non-heated mirror.* | $290.00 |
| 43B | Back Up Alarm<br>Ford accessory, pre-installed.<br>*Includes 97 dB(A) warning capability.* | $190.00 |
| 15C | Front Black Wheel Well Liners<br>Ford accessory, pre-installed. | $295.00 |
| **Fleet Options** | | |
| WARANT | Fleet Customer Powertrain Limited Warranty<br>Requires valid FIN code.<br>*Ford is increasing the 5-year 60,000-mile limited powertrain warranty to 5-years, 100,000 miles. Only Fleet purchasers with a valid Fleet Identification Number (FIN code) will receive the extended warranty. When the sale is entered into the sales reporting system with a sales type fleet along with a valid FIN code, the warranty extension will automatically be added to the vehicle. The extension will stay with the vehicle even if it is subsequently sold to a non-fleet customer before the expiration. This extension applies to both gas and diesel powertrains. Dealers can check for the warranty extension on eligible fleet vehicles in OASIS. Please refer to the Warranty and Policy Manual section 3.13.00 Gas Engine Commercial Warranty. This change will also be reflected in the printed Warranty Guided distributed with the purchase of every new vehicle.* | N/C |
| BY_02 | School Bus Yellow | N/C |

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.

**Prepared for:**
Village of Mt Prospect
Prepared by: THOMAS SULLIVAN
09/18/2025

Currie Commercial Center | 10125 W. Laraway Frankfort Illinois | 60423

## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

# As Configured Vehicle (cont'd)

| Code | Description | MSRP |
|---|---|---|
| **Emissions** | | |
| 425 | 50-State Emissions System | STD |
| **Interior Color** | | |
| VK_01 | Dark Palazzo Gray w/Vinyl Front Bucket Seats | N/C |
| **Upfit Options** | | |
| 2023-008 | License and Title Fees<br>*Doc Fee*<br>*Title Fee*<br>*License Plates* | $203.00 |

| | |
|---|---|
| SUBTOTAL | $47,003.00 |
| Destination Charge | $2,095.00 |
| TOTAL | $49,098.00 |

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.

2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

# Warranty

## Standard Warranty

### *Basic Warranty*

| | |
|---|---|
| Basic warranty | 36 months/36,000 miles |

### *Powertrain Warranty*

| | |
|---|---|
| Powertrain warranty | 60 months/60,000 miles |

### *Corrosion Perforation*

| | |
|---|---|
| Corrosion perforation warranty | 60 months/unlimited |

### *Roadside Assistance Warranty*

| | |
|---|---|
| Roadside warranty | 60 months/60,000 miles |

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.

**Prepared for:**
Village of Mt Prospect
Prepared by: THOMAS SULLIVAN
09/18/2025

Currie Commercial Center | 10125 W. Laraway Frankfort Illinois | 60423

## 2026 Transit-350 Cutaway 4x2 Chassis 138" WB SRW Base (W5P)

Price Level: 625 | Quote ID: mtpcut

# Pricing Summary - Single Vehicle

| | MSRP |
|---|---|
| *Vehicle Pricing* | |
| Base Vehicle Price | $45,690.00 |
| Options | $1,110.00 |
| Colors | $0.00 |
| Upfitting | $203.00 |
| Fleet Discount | $0.00 |
| Fuel Charge | $0.00 |
| Destination Charge | $2,095.00 |
| **Subtotal** | $49,098.00 |
| *Discount Adjustments* | |
| Discount Adjustments | -$1,750.00 |
| **Total** | $47,348.00 |

Customer Signature

Acceptance Date

Prices and content availability as shown are subject to change and should be treated as estimates only. Actual base vehicle, package and option pricing may vary from this estimate because of special local pricing, availability or pricing adjustments not reflected in the dealer's computer system. See salesperson for the most current information.

KNAPHEIDE
SINCE 1848

Seller: Knapheide Truck Equipment Center Chicago
2600 W IL ROUTE 120
MCHENRY, IL 60051-4563
1 (815) 385-2600
www.knapheide.com

# QUOTE: QU-79-934490-6

**Quote Expiration: 11/01/2025**

**Contact(s):**

**Brett Wise (Outside Sales)**
bwise58@knapheide.com

**Chris Schmidt (Inside Sales)**
cschmidt@knapheide.com
2175925427

**Chris Schmidt**
cschmidt@knapheide.com

## Customer: Village Of Mount Prospect

**ID:** 87537
**Address:** 1700 W CENTRAL RD
MOUNT PROSPECT, IL 60056-2229
**Description:** KUV129SL-FT SCHOOL BUS YELLOW

**Phone:** 8478705640
**Contact:** Kevin DeLuca
**Email:** kdeluca@mountprospect.org

**Terms:** Due Upon Receipt
**Bid Spec:**

## Quote Information:

**Customer Request Date:**
**Quote Completed Date:** 10/02/2025
**Date:** 10/02/2025 14:42 PM CDT
**# of Units:** 1

## Delivery Information:

**Total Price Includes F.O.B.:**
**Ship Via:** Drive Away
**Ship To:** Village Of Mount Prospect
1700 W CENTRAL RD
MOUNT PROSPECT, IL 60056-2229

## Vehicle Information:

**Make:** Ford
**Chassis Type:** Cutaway
**Rear Axle Type:** SRW
**Fuel Type:** Gas
**GVWR:** 9500

**Model:** Transit
**Cab Type:** Regular
**Drivetrain:** AWD
**Transmission Type:** Auto

**Year:** 2025
**Cab to Axle:** 82
**Engine Size:** 3.5
**Wheelbase:** 138

| Seq. | Description | Item | Quantity | Total |
|---|---|---|---|---|
| 1 | KUV129SU-FT UltraLow Roof School Bus Yellow<br>Paint Exterior of Body School Bus Yellow ILO Single Stage White<br>Rear Doors with Glass<br>LED Compartment Lights<br>AE 7 Drawer Unit<br>4-3" High Drawers<br>2-5" High Drawers<br>1-7" High Drawer<br>(4) dividers per drawer<br>250lb Capacity per Drawer<br>Installed in Curbside Front Vertical Compartment<br>Receiver Hitch<br>7 Way Trailer Plug - Flat<br>2" Reducer Sleeve<br>Install OEM camera when provided on chassis (standard)<br>Power Lock System for Compartment Doors (standard)<br>Delivery to dealership | PACKAGE | | |
| | Custom Quote, P, C, or L-Quote Usage | 35234615 | 1.00 | 27,038.00 |
| 2 | Fee for Delivery of Chassis | 34988672 | 1.00 | 500.00 |
| **Total does not include any applicable taxes or transportation charges unless specifically noted herein:** | | | **Subtotal:** | **$27,538.00** |
| | | | **Total:** | **$27,538.00** |

Customer PO

Total Price

**Credit Card Policy:** We accept MasterCard, American Express, Visa, and Discover cards for payment.

**Cancellation Policy:** All cancellation requests must be made in writing. Upon any request for cancellation, any costs incurred by Knapheide during the fulfillment of Orders placed pursuant to this Quote shall be paid at 100%. Payments for cancellation are due in full at time of cancellation and/or upon cancellation of installation. Quoted prices are only guaranteed for orders placed as of the date specified on the Quote unless otherwise stated herein.

**Payment Policy:** Payment Terms are due upon receipt of signed quote unless prior credit agreement has been established at the time of order. Payment terms for customers with an established credit account will be Net 30 from date of invoice. Seller has right to assess late charges at 1.5% per month on all invoices that are 60 days or more past due.

**Pricing Policy:** All prices reflect the latest price in U.S. Dollars. Any order placed pursuant to this Quote shall be subject to these Terms and Conditions contained herein. These Conditions shall serve to exclude all other terms or conditions of purchase or other conflicting terms or conditions which may be issued, provided or referred to by Customer, all of which are hereby disclaimed or rejected, except insofar as any terms are expressly accepted in writing with an Authorized Knapheide Representative's written signature. Pricing quoted applies to chassis make/model originally provided and quantity quoted. Any deviation therefrom may result in price change. In addition, additional costs may be incurred in the process of fulfilling orders placed pursuant to this Quote and Knapheide reserves the right to adjust costs accordingly, including but not limited to, reprogramming fees, etc. Orders are subject to all applicable state, local and federal excise taxes. Applicable taxes will be applied on final billing to customer upon completion of order. Seller must be in possession of the vehicle for this order within 90 days of quote acceptance or the order can be subject to price adjustments due to cost increases for materials, labor, and shop supplies.

**Return Policy:** All sales are final. Purchased parts or products are non-returnable.

---

By signing and accepting this quotation, Customer agrees to accept Knapheide Truck Equipment Center Chicago terms and conditions as stated above.

| Customer Signature | Print Name | Title | Date |
|---|---|---|---|

| Dealer Code | Dealership | Location |
|---|---|---|

VIN

If the chassis is customer supplied, Knapheide may require a chassis spec sheet

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to approve a supplement to the contract award for the Rand/Central/Mount Prospect Road Intersection Improvements Phase III Construction Engineering for a cost not to exceed $69,627.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $69,627.00 |
| Budget Source | Capital Improvements Fund |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

Christopher B. Burke Engineering, Ltd. (CBBEL) is requesting additional money for Phase III Construction Engineering services as part of the Rand/Central/Mount Prospect Intersection Improvements. The total amount requested is $69,627.00. Federal funds from the Congestion Mitigation & Air Quality (CMAQ) Program will cover $55,701.60 (80%) with the Village responsible for $13,925.40 (20%). The Village will pay CBBEL the full amount and seek reimbursement from the Illinois Department of Transportation (IDOT). As federal funding is obligated for the project, staff does not anticipate an issue with receiving payment.

The Village Board initially awarded CBBEL a contract for Phase III Construction Engineering services in an amount of $697,170.00. CMAQ funds have covered $557,736.00 (80%) with the Village responsible for $139,434.00 (20%). CBBEL's contract included 3,905 work hours, including coordinating relocation work by utility companies, coordinating preconstruction documentation with the contractor, performing full-time construction inspection, monitoring the schedule and contractor payments, coordinating with business owners, and completing project closeout documentation.

The project experienced significant delays with utility companies relocating their facilities at the start of construction. ComEd, Nicor, AT&T, Comcast and WOW/Astound all needed to relocate both underground and overhead utilities. The contractor began work while the utility companies were still working, but initial progress was slowed until the work area was fully cleared. The contractor worked beyond the anticipated completion date as a result. This required additional time by CBBEL to complete construction inspection services. Contractor change orders also increased the construction engineering cost. There were a number of unanticipated work items that were added to the project that required significant documentation effort to get approved by IDOT.

Table 1 below summarizes the additional compensation request for the Rand-Central-Mount

Prospect Intersection Improvements – Phase III Engineering:

Table 1 – Supplement Summary

| Item | Cost |
|---|---|
| Construction Observation Due to Utility Relocation Delays | $46,979.00 |
| Construction Documentation Due to Contractor Change Orders | $22,648.00 |
| **Total** | **$69,627.00** |

## Discussion

The original contract amount ($697,170.00) and supplement amount ($69,627.00) total $766,797.00. This represents approximately 10.0% of the final construction cost of $7,665,587.90. The industry average for construction engineering services with similar complexity is typically 10–12% of the construction cost. Overall, the cost for Phase III Construction Engineering, including the supplement, is reasonable for the project scope and complexity.

Construction was completed in the summer of 2024 with final quantities agreed to and final documentation completed earlier this year.

The final construction cost ($7,665,587.90) is $598,543.20 less than the award amount of $8,264,131.10. CMAQ funds have covered $6,132,470.32 (80%) with the Village responsible for $1,533,117.58 (20%) of the final construction cost ($7,665,587.90). The village's share of construction costs is approximately $120,000 less than the anticipated amount.

Unused CMAQ funds have been transferred from Construction to Construction Engineering to cover the requested supplement. The transfer of funds has been approved by both IDOT and the Chicago Metropolitan Agency for Planning (CMAP), the agency that oversees programming of federal and state funds in the region.

## Alternatives

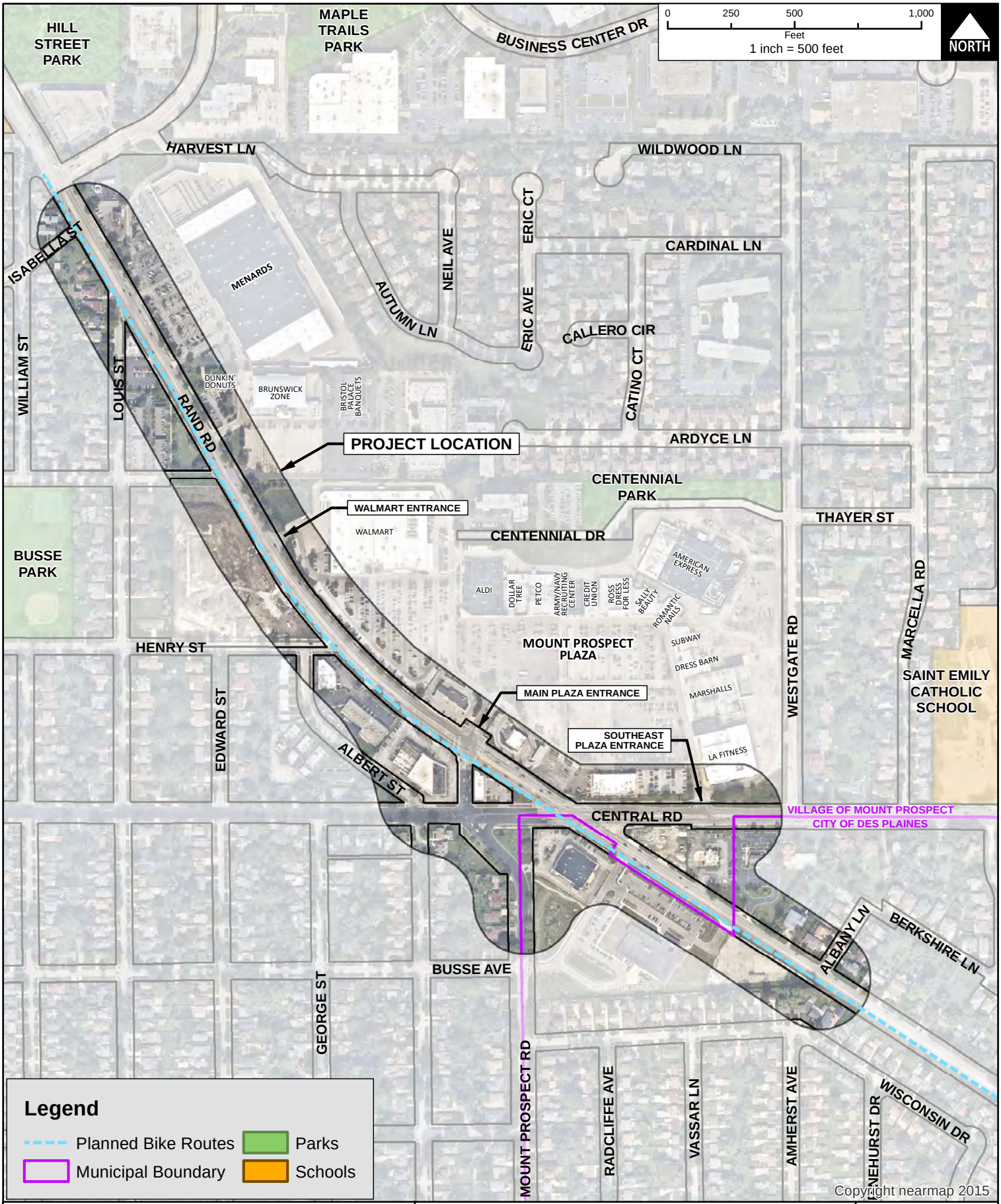
1. Approve the supplement for Rand-Central-Mount Prospect Intersection Improvements – Phase III Construction Engineering.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends that the Village Board approve the supplement from Christopher B. Burke Engineering, Ltd. of Rosemont, Illinois for Phase III Construction Engineering as part of the Rand-Central-Mount Prospect Intersection Improvements in an amount of $69,627.00.

## Attachments

1. Location Map
2. CBBEL Supplement Memo
3. LPA Supplement 1
4. LPA Amendment 2




CLIENT: VILLAGE OF MOUNT PROSPECT

TITLE: RAND-CENTRAL-MOUNT PROSPECT ROAD INTERSECTIONS PHASE I ENGINEERING STUDY

| | |
|---|---|
| PROJ. NO. | 170133 |
| DATE: | 02/12/2019 |
| SHEET | 1 OF 1 |
| DRAWING NO. | EXH |

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

| | | | | |
|---|---|---|---|---|
| DSGN. | | | SCALE: | 1:6,000 |
| DWN. | DRW | | AUTHOR: | DWALTERS |
| CHKD. | | | PLOT DATE: | 12/19/2019 |
| FILE: | General Location Map | | | |

Path: N:\MOUNTPROSPECT\170133\GIS\Exhibits\General Location Map.mxd

# MEMORANDUM

November 21, 2024

TO: Matt Lawrie, PE – Village Engineer
IDOT BLRS
FILE

FROM: Kevin Wilson, PE
Assistant Department Head, Construction Engineering

SUBJECT: Rand/Central/Mt.Prospect Intersection Improvements (IDOT Contract 61H44)
Construction Services Supplement #1

Section: 17-00166-00-CH
Project: 0UBY-034
Job: C-91-383-20

Christopher B. Burke Engineering Ltd. (CBBEL) is requesting approval of a supplement to our original professional construction engineering agreement, approved by the Department on May 6, 2022.

**Funding and Budget Impact**
The funding for this supplement is supported by a reallocation of CMAQ funds from Construction to Construction Engineering. Importantly, there will be no net change to the overall programmed amount, as the project construction costs are projected to remain under the current funded budget.

**Reason for the Supplement**
This supplement reflects additional hours required for construction observation and documentation due to project delays that extended the completion timeline beyond the originally estimated 150 working days.

The delay was primarily caused by utility relocations, which impacted the start of the controlling item work. While the original contract estimated construction activities from November 1, 2022, to December 1, 2023, actual construction activities occurred over an extended period. Key milestones include:

- **Project start:** March 8, 2023
- **Substantial Completion:** July 19, 2024
- **Final Inspection:** September 26, 2024

In total, construction activities were performed on-site for 264 days between March 8, 2023, and August 16, 2024, compared to the 150 working days initially anticipated.

A secondary reason for additional construction engineering was due to change orders. The project included approximately $200,000 in unanticipated work requiring documentation and coordination for authorization, including winterization ($77K), non-special waste adjustments ($40K), utility potholing ($30K), extended resurfacing limits ($10K), right-turn modifications ($10K), and other miscellaneous overages. While these changes were accommodated within the project budget, they required significant additional effort to process and manage.

**Utility Relocation Delays**
Delays were primarily caused by the relocation of overhead and underground utilities. Major utility coordination efforts included:

- **ComEd**: Pole relocations to accommodate new signals and a multi-use path (starting in 2022, completed August 2023).
- **WOW/ASTOUND and TELEPORT**: Conduit boring for relocating overhead utilities under Mt. Prospect Road (completed April 2023).
- **AT&T**: Overhead utility relocations and pole removals on Rand Rd (completed August 2023).
- **Comcast**: Fiber underground relocations along Rand Rd (completed August 2023).
- **Nicor**: 8” gas main relocation along Central and Mt. Prospect Road (identified March 2023, completed July 2023).

As utility conflict areas were resolved, the general contractor commenced work; however, efficiency was hindered throughout the project until the entire work area was fully cleared. Throughout these delays, CBBEL worked to coordinate and document activities to reduce overall project impact.

**Supplement Details**
To complete construction observation and documentation, we request additional hours for the following classifications:

**Construction Observation:**
- **Engineer VI:** 38 hours
- **Engineer V:** 60 hours
- **Engineer IV:** 7 hours
- **Engineer III:** 185 hours

**Construction Documentation:**
- **Engineer III:** 142 hours

Additionally, 45 vehicle days at $65/day are included as reimbursable expenses for on-site observation and documentation.

**Closeout Support**
The contractor has filed a claim for compensable delays, citing increased material costs, labor costs, administrative expenses, and extended traffic control. To support the Village in reviewing this claim and minimizing non-reimbursable costs, we are requesting an additional 40 hours for project closeout.

In addition to the information provided above, we have attached the following:

1. IDOT Engineering agreement form BLR 05530
2. IDOT Cost Estimate Consultant Services form BLR 05514
3. IDOT Local Public Agency Agreement form BLR 5311
4. IDOT Project Program Information form DI PI00004
5. Location Map

N:\PROPOSALS\ADMIN\2021\Mount Prospect Rand_Central_Mount Prospect Rd Phase III Services P210462\Phase III Agreement\Supplement 1 Nov 2024\M1.RandCentral_Supplement1_Description_112124b.docx

Illinois Department of Transportation

# Local Public Agency
# Engineering Services Agreement

Using Federal Funds? ☒ Yes ☐ No

Agreement For: Federal CE

Agreement Type: Supplement

Number: 1

## LOCAL PUBLIC AGENCY

| Local Public Agency | County | Section Number | Job Number |
|---|---|---|---|
| Mount Prospect | Cook | 17-00166-00-CH | C-91-383-20 |

| Project Number | Contact Name | Phone Number | Email |
|---|---|---|---|
| OUBY(034) | Matthew Lawrie | (847) 870-5640 | mlawrie@mountprospect.org |

## SECTION PROVISIONS

| Local Street/Road Name | Key Route | Length | Structure Number |
|---|---|---|---|
| Rand Road | FAP 0334 | 0.80 miles | NA |

Location Termini: E. Isabella Street (Station 8.05) to Albany Lane (Station 8.85)

Add Location / Remove Location

## SECTION PROVISIONS

| Local Street/Road Name | Key Route | Length | Structure Number |
|---|---|---|---|
| Central Road | FAU 1300 | 0.26 miles | NA |

Location Termini: Mount Prospect Road (Station 5.42) to N. Westgate Road (Station 5.68)

Add Location / Remove Location

## SECTION PROVISIONS

| Local Street/Road Name | Key Route | Length | Structure Number |
|---|---|---|---|
| Mount Prospect Road | FAU 2686 | 0.08 miles | NA |

Location Termini: Rand Road (Station 0.00) to Central Road (Station 0.08)

Add Location / Remove Location

Project Description: PCC pavement widening, HMA surface removal and replacement, median and island removal and replacement, sidewalk and multi-use path construction, complete modernization of three traffic signals, partial modernization of one traffic signal, one new traffic signal installation, roadway lighting, drainage improvements, pavement markings, and combination concrete curb & gutter removal and replacement.

Engineering Funding: ☒ Federal ☐ MFT/TBP ☐ State ☐ Other — 80% CMAQ/20% Local

Anticipated Construction Funding: ☒ Federal ☐ MFT/TBP ☐ State ☐ Other — 80% CMAQ/20% Local

## AGREEMENT FOR

☒ Phase III - Construction Engineering

## CONSULTANT

| Prime Consultant (Firm) Name | Contact Name | Phone Number | Email |
|---|---|---|---|
| Christopher B. Burke Eng, Ltd | Kevin Wilson | (847) 833-0274 | kwilson@cbbel.com |

| Address | City | State | Zip Code |
|---|---|---|---|
| 9575 W. Higgins Rd, Suite 600 | Rosemont | IL | 60018 |

THIS AGREEMENT IS MADE between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Project funding allotted to the LPA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT," will be

used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Since the services contemplated under the AGREEMENT are professional in nature, it is understood that the ENGINEER, acting as an individual, partnership, firm or legal entity, qualifies for professional status and will be governed by professional ethics in its relationship to the LPA and the DEPARTMENT. The LPA acknowledges the professional and ethical status of the ENGINEER by entering into an AGREEMENT on the basis of its qualifications and experience and determining its compensation by mutually satisfactory negotiations.

WHEREVER IN THIS AGREEMENT or attached exhibits the following terms are used, they shall be interpreted to mean:

| | |
|---|---|
| Regional Engineer | Deputy Director, Office of Highways Project Implementation, Regional Engineer, Department of Transportation |
| Resident Construction Supervisor | Authorized representative of the LPA in immediate charge of the engineering details of the construction PROJECT |
| In Responsible Charge | A full time LPA employee authorized to administer inherently governmental PROJECT activities |
| Contractor | Company or Companies to which the construction contract was awarded |

## AGREEMENT EXHIBITS

The following EXHIBITS are attached hereto and made a part of hereof this AGREEMENT:

- ☒ EXHIBIT A: Scope of Services
- ☒ EXHIBIT B: Project Schedule
- ☒ EXHIBIT C: Qualification Based Selection (QBS) Checklist
- ☒ EXHIBIT D: Cost Estimate of Consultant Services (CECS) Worksheet (BLR 05513 or BLR 05514 )
- ☐ _____
- ☐ _____
- ☐ _____

## I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA for Preliminary and/or Design Engineering: The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.
7. To submit a completed BLR 05613, Engineering Payment Report, to the DEPARTMENT within three months of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement. The form shall be submitted with the final invoice.
8. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of US Department of Transportation (US DOT) assisted contract. Failure by the Engineer to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LPA deems appropriate.
9. That none of the services to be furnished by the ENGINEER shall be sublet assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
10. For Construction Engineering Contracts:
    (a) The ENGINEER shall be prequalified with the STATE in Construction Inspection. All employees of the ENGINEER serving as the onsite resident construction supervisor or providing construction inspection shall have a valid Documentation of Contract Quantities certification.
    (b) For all projects where testing is required, the ENGINEER shall obtain samples according to the STATE Bureau of Materials. "Manual of Test Procedures for Materials," submit STATE Bureau of Materials inspection reports; and

verify compliance with contract specifications.

11. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COST tab in BLR 05513 or BLR 05514).

## II. THE LPA AGREES,

1. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the following:
   (a) Professional Services Selection Act (50 ILCS 510), The Brooks Act (40 USC 11), and the Procurement, Management, and Administration of Engineering, and Design Related Services (23 CFR part 172). Exhibit C is required to be completed with this AGREEMENT.
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.
3. For Construction Engineering Contracts:
   (a) To furnish a full time LPA employee to be In Responsible Charge authorized to administer inherently governmental PROJECT activities.
   (b) To submit approved forms BC 775 and BC 776 to the DEPARTMENT when federal funds are utilized.
4. To pay the ENGINEER:
   (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
   (b) Final Payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by LPA and DEPARTMENT, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.
5. To pay the ENGINEER as compensation for all services rendered in accordance with the AGREEMENT on the basis of the following compensation method as discussed in 5-5.10 of the BLR Manual.

   Method of Compensation:

   ☐ Lump Sum

   ☐ Specific Rate

   ☒ Cost plus Fixed Fee: Fixed

   Total Compensation = DL + DC + OH + FF

   Where:

   DL is the total Direct Labor,
   DC is the total Direct Cost,
   OH is the firm's overhead rate applied to their DL and
   FF is the Fixed Fee.

   Where FF = (0.33 + R) DL + %SubDL, where R is the advertised Complexity Factor and %SubDL is 10% profit allowed on the direct labor of the subconsultants.

   The Fixed Fee cannot exceed 15% of the DL + OH.

   **Field Office Overhead Rates:** Field rates must be used for construction engineering projects expected to exceed one year in duration or if the construction engineering contract exceeds $1,000,000 for any project duration.
6. The recipient shall not discriminate on the basis of race, color, national original or sex in the award and performance of any US DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this AGREEMENT. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C 3801 et seq.).

## III. IT IS MUTUALLY AGREED,

1. No work shall be commenced by the ENGINEER prior to issuance by the IDOT of a written Notice to Proceed.
2. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amount, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General, and the DEPARTMENT, the Federal Highways Administration (FHWA) or any authorized representative of the federal government, and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the DEPARTMENT for the recovery of any funds paid by the DEPARTMENT under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
3. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the DEPARMTENT,

and their officers, agents, and employees from all suits, claims, actions or damage liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.

4. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.

5. In the event that the DEPARMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred as a result of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.

6. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.

7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

8. The ENGINEER and LPA certify that their respective firm or agency:

   (a) has not employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for the LPA or the ENGINEER) to solicit or secure this AGREEMENT,
   (b) has not agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
   (c) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
   (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
   (e) has not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
   (f) are not presently indicated for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
   (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State or local) terminated for cause or default.

   Where the ENGINEER or LPA is unable to certify to any of the above statements in this certification, an explanation shall be attached to this AGREEMENT.

9. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the ENGINEER no claim for damages shall be made by either party. Termination of the AGREEMENT or adjustment of the fee for the remaining services may be requested by either party if the overall delay from the unforeseen causes prevents completion of the work within six months after the specified completion date. Examples of unforeseen causes include but are not limited to: acts of God or a public enemy; act of the LPA, DEPARTMENT, or other approving party not resulting from the ENGINEER's unacceptable services; fire; strikes; and floods.

   If delays occur due to any cause preventing compliance with the PROJECT SCHEDULE, the ENGINEER shall apply in writing to the LPA for an extension of time. If approved, the PROJECT SCHEDULE shall be revised accordingly.

10. This certification is required by the Drug Free Workplace Act (30 ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the DEPARTMENT unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited or suspension of contract on grant

payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

For the purpose of this certification, "grantee" or "Contractor" means a corporation, partnership or an entity with twenty-five (25) or more employees at the time of issuing the grant or a department, division or other unit thereof, directly responsible for the specific performance under contract or grant of $5,000 or more from the DEPARTMENT, as defined the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

(a) Publishing a statement:

(1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.

(2) Specifying actions that will be taken against employees for violations of such prohibition.

(3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:

(a) abide by the terms of the statement; and
(b) notify the employer of any criminal drug statue conviction for a violation occurring in the workplace no later than (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;
(2) The grantee's or contractor's policy to maintain a drug free workplace;
(3) Any available drug counseling, rehabilitation and employee assistance program; and
(4) The penalties that may be imposed upon an employee for drug violations.

(c) Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(d) Notifying the contracting, or granting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) above from an employee or otherwise, receiving actual notice of such conviction.

(e) Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act, the ENGINEER, LPA and the Department agree to meet the PROJECT SCHEDULE outlined in EXHIBIT B. Time is of the essence on this project and the ENGINEER's ability to meet the PROJECT SCHEDULE will be a factor in the LPA selecting the ENGINEER for future project. The ENGINEER will submit progress reports with each invoice showing work that was completed during the last reporting period and work they expect to accomplish during the following period.

11. Due to the physical location of the project, certain work classifications may be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.).

12. For Construction Engineering Contracts:

(a) That all services are to be furnished as required by construction progress and as determined by the LPA employee In Responsible Charge. The ENGINEER shall complete all services herein within a time considered reasonable to the LPA, after the CONTRACTOR has completed the construction contract.

(b) That all field notes, test records and reports shall be turned over to and become the property of the LPA and that during the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.

(c) That any difference between the ENGINEER and the LPA concerning the interpretation of the provisions of this AGREEMENT shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LPA, and a third member appointed by the two other members for disposition and that the committee's decision shall be final.

(d) That in the event that engineering and inspection services to be furnished and performed by the LPA (including personnel furnished by the ENGINEER) shall, in the opinion of the STATE be incompetent employed on such work at the expense of the LPA.

(e) Inspection of all materials when inspection is not provided by the sources by the STATE Central Bureau of Materials, and submit inspection reports to the LPA and STATE in accordance with the STATE Central Bureau of Materials "Project Procedures Guide" and the policies of the STATE.

**AGREEMENT SUMMARY**

| Prime Consultant (Firm) Name | TIN/FEIN/SS Number | Agreement Amount |
|---|---|---|
| Christopher B. Burke Eng, Ltd | 36-3468939 | $69,627.00 |

| Subconsultants | TIN/FEIN/SS Number | Agreement Amount |
|---|---|---|
| Material Solutions Laboratory | 20-5755513 | |

| | |
|---|---|
| Subconsultant Total | |
| Prime Consultant Total | $69,627.00 |
| Total for all work | $69,627.00 |

## AGREEMENT SIGNATURES

Attest: The Local Public Agency Type: Village of Local Public Agency: Mount Prospect

By (Signature & Date)

By (Signature & Date)

Local Public Agency: Mount Prospect

Local Public Agency Type: Village Clerk

Title: Mayor

(SEAL)

Executed by the ENGINEER:

Attest: Prime Consultant (Firm) Name: Christopher B. Burke Eng, Ltd

By (Signature & Date)

By (Signature & Date)

Title: Vice President

Title: President

| Local Public Agency | Prime Consultant (Firm) Name | County | Section Number |
|---|---|---|---|
| Mount Prospect | Christopher B. Burke Eng, Ltd | Cook | 17-00166-00-CH |

**EXHIBIT A**
**SCOPE OF SERVICES**

To perform or be responsible for the performance of the engineering services for the LPA, in connection with the PROJECT herein before described and enumerated below

The original agreement allocated 2,778 hours for Construction Observation and 430 hours for Construction Documentation, covering the period from November 1, 2022 through December 1, 2023. This estimate was based on an IDOT (61H44) contract duration of 150 working days. The project's actual start date was March 8, 2023, with Substantial Completion achieved on July 19, 2024, and Final Inspection completed on September 26, 2024.

The contract duration was extended due to factors beyond the contractor's control, including utility relocations, material procurement challenges, and other unforeseen delays. As a result, CBBEL was required to provide additional observation and documentation services. Additionally, CBBEL anticipates further Closeout hours will be necessary to review and document the contractor's request for compensable delay costs.

Supplement #1 outlines the additional hours and associated fees required to support these tasks, as detailed below:
Construction Observation: 290 additional staff hours
Construction Documentation: 142 additional staff hours
Closeout: 40 additional staff hours
Direct Costs: 45 additional days at $65/day

| Local Public Agency | Prime Consultant (Firm) Name | County | Section Number |
|---|---|---|---|
| Mount Prospect | Christopher B. Burke Eng, Ltd | Cook | 17-00166-00-CH |

**EXHIBIT B**
**PROJECT SCHEDULE**

Construction Observation and Construction Documentation - March 8, 2023 and September 26, 2024
Closeout - additional hours in 2024-2025 for review and documentation of the contractor's claim for Compensable Delay Costs

| Local Public Agency | Prime Consultant (Firm) Name | County | Section Number |
|---|---|---|---|
| Mount Prospect | Christopher B. Burke Eng, Ltd | Cook | 17-00166-00-CH |

**Exhibit C**
**Qualification Based Selection (QBS) Checklist**

The LPA must complete Exhibit D. If the value meets or will exceed the threshold in 50 ILCS 510, QBS requirements must be followed. Under the threshold, QBS requirements do not apply. The threshold is adjusted annually. If the value is under the threshold with federal funds being used, federal small purchase guidelines must be followed.

☐ Form Not Applicable (engineering services less than the threshold)

**Items 1-13 are required when using federal funds and QBS process is applicable. Items 14-16 are required when using State funds and the QBS process is applicable.**

| | | No | Yes |
|---|---|---|---|
| 1 | Do the written QBS policies and procedures discuss the initial administration (procurement, management and administration) concerning engineering and design related consultant services? | ☐ | ☒ |
| 2 | Do the written QBS policies and procedures follow the requirements as outlined in Section 5-5 and specifically Section 5-5.06 (e) of the BLRS Manual? | ☐ | ☒ |
| 3 | Was the scope of services for this project clearly defined? | ☒ | ☐ |
| 4 | Was public notice given for this project? | ☐ | ☒ |

If yes Due date of submittal 10/01/21

Method(s) used for advertisement and dates of advertisement

Village website, Demandstar on September 10, 2021

| | | | |
|---|---|---|---|
| 5 | Do the written QBS policies and procedures cover conflicts of interest? | ☐ | ☒ |
| 6 | Do the written QBS policies and procedures use covered methods of verification for suspension and debarment? | ☐ | ☒ |
| 7 | Do the written QBS policies and procedures discuss the methods of evaluation? | ☐ | ☒ |

| Project Criteria | Weighting |
|---|---|
| Project Understanding and Technical Approach | 30% |
| Similar Project Experience | 25% |
| Project Team Capabilities | 25% |
| IDOT Prequalification Status | 10% |
| Overall Completeness of Submittal | 10% |

| | | | |
|---|---|---|---|
| 8 | Do the written QBS policies and procedures discuss the method of selection? | ☐ | ☒ |

Selection committee (titles) for this project

Director of Public Works, Assistant Director of Public Works, Traffic Engineer

| | Top three consultants ranked for this project in order |
|---|---|
| 1 | Christopher B. Burke Engineering, Ltd |
| 2 | ESI Consultants |
| 3 | Thomas Engineering Group |

| | | | |
|---|---|---|---|
| 9 | Was an estimated cost of engineering for this project developed in-house prior to contract negotiation? | ☐ | ☒ |
| 10 | Were negotiations for this project performed in accordance with federal requirements. | ☐ | ☒ |
| 11 | Were acceptable costs for this project verified? | ☐ | ☒ |
| 12 | Do the written QBS policies and procedures cover review and approving for payment, before forwarding the request for reimbursement to IDOT for further review and approval? | ☐ | ☒ |
| 13 | Do the written QBS policies and procedures cover ongoing and finalizing administration of the project (monitoring, evaluation, closing-out a contract, records retention, responsibility, remedies to violations or breaches to a contract, and resolution of disputes)? | ☐ | ☒ |
| 14 | QBS according to State requirements used? | ☐ | ☒ |
| 15 | Existing relationship used in lieu of QBS process? | ☒ | ☐ |

| Local Public Agency | Prime Consultant (Firm) Name | County | Section Number |
|---|---|---|---|
| Mount Prospect | Christopher B. Burke Eng, Ltd | Cook | 17-00166-00-CH |

| | | | |
|---|---|---|---|
| 16 | LPA is a home rule community (Exempt from QBS). | ☒ | ☐ |

Illinois Department of Transportation

**EXHIBIT D**

**COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET**

**FIXED RAISE**

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| Prime Consultant (Firm) Name | Prepared By | Date |
|---|---|---|
| Christopher B. Burke Engineering, Ltd. | Kevin Wilson | 11/7/2024 |

| Consultant / Subconsultant Name | Job Number |
|---|---|
| Christopher B. Burke Engineering, Ltd. | C-91-383-20 |

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

**Remarks**

## PAYROLL ESCALATION TABLE

| | | | | |
|---|---|---|---|---|
| CONTRACT TERM | 6 | MONTHS | OVERHEAD RATE | 132.88% |
| START DATE | 5/1/2024 | | COMPLEXITY FACTOR | 0 |
| RAISE DATE | 1/1/2025 | | % OF RAISE | 3.00% |
| END DATE | 10/31/2024 | | | |

## ESCALATION PER YEAR

| Year | First Date | Last Date | Months | % of Contract |
|---|---|---|---|---|
| 0 | 5/1/2024 | 10/31/2024 | 6 | 100.00% |

**The total escalation =** 0.00%

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| Consultant / Subconsultant Name | Job Number |
|---|---|
| Christopher B. Burke Engineering, Ltd. | C-91-383-20 |

# PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

| | |
|---|---|
| **MAXIMUM PAYROLL RATE** | **90.00** |
| **ESCALATION FACTOR** | **0.00%** |

| CLASSIFICATION | IDOT PAYROLL RATES ON FILE | CALCULATED RATE |
|---|---|---|
| Engineer VI | $82.63 | $82.63 |
| Engineer V | $72.59 | $72.59 |
| Engineer IV | $59.41 | $59.41 |
| Engineer III | $46.80 | $46.80 |
| Engineer I/II | $36.22 | $36.22 |
| Survey V | $85.04 | $85.04 |
| Survey IV | $76.25 | $76.25 |
| Survey III | $66.63 | $66.63 |
| Survey II | $54.50 | $54.50 |
| Survey I | $38.75 | $38.75 |
| Engineering Technician V | $68.90 | $68.90 |
| Engineering Technician IV | $64.03 | $64.03 |
| Engineering Technician III | $42.86 | $42.86 |
| Engineering Technician I/II | $30.00 | $30.00 |
| CAD Manager | $70.83 | $70.83 |
| CAD Technician II | $53.29 | $53.29 |
| GIS Speciailist III | $58.00 | $58.00 |
| Landscape Architect | $65.00 | $65.00 |
| Landscape Designer III | $40.50 | $40.50 |
| Environmental Resource Specialist V | $76.01 | $76.01 |
| Environmental Resource Specialist IV | $60.78 | $60.78 |
| Environmental Resource Specialist III | $52.75 | $52.75 |
| Environmental Resource Specialist I/II | $30.92 | $30.92 |
| Environmental Resource Technician | $45.30 | $45.30 |
| Engineering Intern | $18.88 | $18.88 |
| Business Operations Department | $57.69 | $57.69 |
| | | |

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| Consultant / Subconsultant Name | Job Number |
|---|---|
| Christopher B. Burke Engineering, Ltd. | C-91-383-20 |

## SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

| NAME | Direct Labor Total | Contribution to Prime Consultant |
|---|---|---|
| | | |
| | | |
| | | |

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| Consultant / Subconsultant Name | Job Number |
|---|---|
| Christopher B. Burke Engineering, Ltd. | C-91-383-20 |

# DIRECT COSTS WORKSHEET

**List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.**

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

| ITEM | ALLOWABLE | QUANTITY | CONTRACT RATE | TOTAL |
|---|---|---|---|---|
| Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD) | Actual Cost (Up to state rate maximum) | | | $0.00 |
| Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD) | Actual Cost | | | $0.00 |
| Air Fare | Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval | | | $0.00 |
| Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD) | Up to state rate maximum | | | $0.00 |
| Vehicle Owned or Leased | $32.50/half day (4 hours or less) or $65/full day | 45 | $65.00 | $2,925.00 |
| Vehicle Rental | Actual Cost (Up to $55/day) | | | $0.00 |
| Tolls | Actual Cost | | | $0.00 |
| Parking | Actual Cost | | | $0.00 |
| Overtime | Premium portion (Submit supporting documentation) | | | $0.00 |
| Shift Differential | Actual Cost (Based on firm's policy) | | | $0.00 |
| Overnight Delivery/Postage/Courier Service | Actual Cost (Submit supporting documentation) | | | $0.00 |
| Copies of Deliverables/Mylars (In-house) | Actual Cost (Submit supporting documentation) | | $0.12 | $0.00 |
| Copies of Deliverables/Mylars (Outside) | Actual Cost (Submit supporting documentation) | | | $0.00 |
| Project Specific Insurance | Actual Cost | | | $0.00 |
| Monuments (Permanent) | Actual Cost | | | $0.00 |
| Photo Processing | Actual Cost | | | $0.00 |
| 2-Way Radio (Survey or Phase III Only) | Actual Cost | | | $0.00 |
| Telephone Usage (Traffic System Monitoring Only) | Actual Cost | | | $0.00 |
| CADD | Actual Cost (Max $15/hour) | | | $0.00 |
| Web Site | Actual Cost (Submit supporting documentation) | | | $0.00 |
| Advertisements | Actual Cost (Submit supporting documentation) | | | $0.00 |
| Public Meeting Facility Rental | Actual Cost (Submit supporting documentation) | | | $0.00 |
| Public Meeting Exhibits/Renderings & Equipment | Actual Cost (Submit supporting documentation) | | | $0.00 |
| Recording Fees | Actual Cost | | | $0.00 |
| Transcriptions (specific to project) | Actual Cost | | | $0.00 |
| Courthouse Fees | Actual Cost | | | $0.00 |
| Storm Sewer Cleaning and Televising | Actual Cost (Requires 2-3 quotes with IDOT approval) | | | $0.00 |
| Traffic Control and Protection | Actual Cost (Requires 2-3 quotes with IDOT approval) | | | $0.00 |
| Aerial Photography and Mapping | Actual Cost (Requires 2-3 quotes with IDOT approval) | | | $0.00 |
| Utliity Exploratory Trenching | Actual Cost (Requires 2-3 quotes with IDOT approval) | | | $0.00 |
| Testing of Soil Samples | Actual Cost | | | $0.00 |
| Lab Services | Actual Cost (Provide breakdown of each cost) | | | $0.00 |
| Equipment and/or Specialized Equipment Rental | Actual Cost (Requires 2-3 quotes with IDOT approval) | | | $0.00 |
| | | | | $0.00 |
| | | | | $0.00 |
| | | | | $0.00 |
| | | | | $0.00 |
| | | | **TOTAL DIRECT COSTS:** | **$2,925.00** |

**Local Public Agency**
Village of Mount Prospect

**County**
Cook

**Section Number**
17-00166-00-CH

**Consultant / Subconsultant Name**
Christopher B. Burke Engineering, Ltd.

**Job Number**
C-91-383-20

# COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

**OVERHEAD RATE** 132.88%

**COMPLEXITY FACTOR** 0

| TASK | DIRECT COSTS (not included in row totals) | STAFF HOURS | PAYROLL | OVERHEAD & FRINGE BENEFITS | FIXED FEE | SERVICES BY OTHERS | TOTAL | % OF GRAND TOTAL |
|---|---|---|---|---|---|---|---|---|
| Preconstruction Services | | | - | - | - | | - | 0.00% |
| Shop Drawing / Submittal Review | | | - | - | - | | - | 0.00% |
| Construction Observation | 2,925 | 290 | 16,569 | 22,017 | 5,468 | | 44,054 | 63.27% |
| Construction Documentation | | 142 | 6,646 | 8,831 | 2,193 | | 17,670 | 25.38% |
| Winter Shudown | | | - | - | - | | - | 0.00% |
| Public Outreach | | | - | - | - | | - | 0.00% |
| Closeout | | 40 | 1,872 | 2,488 | 618 | | 4,978 | 7.15% |
| Direct Costs Total | | | - | - | - | | - | 0.00% |
| QA Testing | | | - | - | - | | - | 0.00% |
| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
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| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
| | | | - | - | - | | - | |
| **Subconsultant DL** | | | | | | | $0.00 | |
| **Direct Costs Total ===>** | $2,925.00 | | | | | | **$2,925.00** | 4.20% |
| **TOTALS** | | 472 | 25,087 | 33,336 | 8,279 | - | 69,627 | 100.00% |

58,423

BLR 05514 (Rev. 02/06/25)
COST EST

**Local Public Agency**: Village of Mount Prospect

**County**: Cook

**Section Number**: 17-00166-00-CH

**Consultant / Subconsultant Name**: Christopher B. Burke Engineering, Ltd.

**Job Number**: C-91-383-20

## AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

**SHEET** 1 OF 1

| PAYROLL CLASSIFICATION | AVG HOURLY RATES | TOTAL PROJ. RATES | | | Preconstruction Services | | | Shop Drawing / Submittal Review | | | Construction Observation | | | Construction Documentation | | | Winter Shudown | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg |
| Engineer VI | 82.63 | 38.0 | 8.05% | 6.65 | | | | | | | 38 | 13.10% | 10.83 | | | | | | |
| Engineer V | 72.59 | 60.0 | 12.71% | 9.23 | | | | | | | 60 | 20.69% | 15.02 | | | | | | |
| Engineer IV | 59.41 | 7.0 | 1.48% | 0.88 | | | | | | | 7 | 2.41% | 1.43 | | | | | | |
| Engineer III | 46.80 | 367.0 | 77.75% | 36.39 | | | | | | | 185 | 63.79% | 29.86 | 142 | 100.00% | 46.80 | | | |
| Engineer I/II | 36.22 | 0.0 | | | | | | | | | | | | | | | | | |
| Survey V | 85.04 | 0.0 | | | | | | | | | | | | | | | | | |
| Survey IV | 76.25 | 0.0 | | | | | | | | | | | | | | | | | |
| Survey III | 66.63 | 0.0 | | | | | | | | | | | | | | | | | |
| Survey II | 54.50 | 0.0 | | | | | | | | | | | | | | | | | |
| Survey I | 38.75 | 0.0 | | | | | | | | | | | | | | | | | |
| Engineering Technician V | 68.90 | 0.0 | | | | | | | | | | | | | | | | | |
| Engineering Technician IV | 64.03 | 0.0 | | | | | | | | | | | | | | | | | |
| Engineering Technician III | 42.86 | 0.0 | | | | | | | | | | | | | | | | | |
| Engineering Technician I/II | 30.00 | 0.0 | | | | | | | | | | | | | | | | | |
| CAD Manager | 70.83 | 0.0 | | | | | | | | | | | | | | | | | |
| CAD Technician II | 53.29 | 0.0 | | | | | | | | | | | | | | | | | |
| GIS Speciailist III | 58.00 | 0.0 | | | | | | | | | | | | | | | | | |
| Landscape Architect | 65.00 | 0.0 | | | | | | | | | | | | | | | | | |
| Landscape Designer III | 40.50 | 0.0 | | | | | | | | | | | | | | | | | |
| Environmental Resource S | 76.01 | 0.0 | | | | | | | | | | | | | | | | | |
| Environmental Resource S | 60.78 | 0.0 | | | | | | | | | | | | | | | | | |
| Environmental Resource S | 52.75 | 0.0 | | | | | | | | | | | | | | | | | |
| Environmental Resource S | 30.92 | 0.0 | | | | | | | | | | | | | | | | | |
| Environmental Resource T | 45.30 | 0.0 | | | | | | | | | | | | | | | | | |
| Engineering Intern | 18.88 | 0.0 | | | | | | | | | | | | | | | | | |
| Business Operations Depa | 57.69 | 0.0 | | | | | | | | | | | | | | | | | |
| | | 0.0 | | | | | | | | | | | | | | | | | |
| **TOTALS** | | 472.0 | 100% | $53.15 | 0.0 | 0.00% | $0.00 | 0.0 | 0% | $0.00 | 290.0 | 100% | $57.14 | 142.0 | 100% | $46.80 | 0.0 | 0% | $0.00 |

**Local Public Agency**
Village of Mount Prospect

**County**
Cook

**Section Number**
17-00166-00-CH

**Consultant / Subconsultant Name**
Christopher B. Burke Engineering, Ltd.

**Job Number**
C-91-383-20

## AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

**SHEET** 2 **OF** 1

| PAYROLL CLASSIFICATION | AVG HOURLY RATES | Public Outreach | | | Closeout | | | Direct Costs Total | | | QA Testing | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg |
| Engineer VI | 82.63 | | | | | | | | | | | | | | | | | | |
| Engineer V | 72.59 | | | | | | | | | | | | | | | | | | |
| Engineer IV | 59.41 | | | | | | | | | | | | | | | | | | |
| Engineer III | 46.80 | | | | 40 | 100.00% | 46.80 | | | | | | | | | | | | |
| Engineer I/II | 36.22 | | | | | | | | | | | | | | | | | | |
| Survey V | 85.04 | | | | | | | | | | | | | | | | | | |
| Survey IV | 76.25 | | | | | | | | | | | | | | | | | | |
| Survey III | 66.63 | | | | | | | | | | | | | | | | | | |
| Survey II | 54.50 | | | | | | | | | | | | | | | | | | |
| Survey I | 38.75 | | | | | | | | | | | | | | | | | | |
| Engineering Technician V | 68.90 | | | | | | | | | | | | | | | | | | |
| Engineering Technician IV | 64.03 | | | | | | | | | | | | | | | | | | |
| Engineering Technician III | 42.86 | | | | | | | | | | | | | | | | | | |
| Engineering Technician I/II | 30.00 | | | | | | | | | | | | | | | | | | |
| CAD Manager | 70.83 | | | | | | | | | | | | | | | | | | |
| CAD Technician II | 53.29 | | | | | | | | | | | | | | | | | | |
| GIS Speciailist III | 58.00 | | | | | | | | | | | | | | | | | | |
| Landscape Architect | 65.00 | | | | | | | | | | | | | | | | | | |
| Landscape Designer III | 40.50 | | | | | | | | | | | | | | | | | | |
| Environmental Resource Spe | 76.01 | | | | | | | | | | | | | | | | | | |
| Environmental Resource Spe | 60.78 | | | | | | | | | | | | | | | | | | |
| Environmental Resource Spe | 52.75 | | | | | | | | | | | | | | | | | | |
| Environmental Resource Spe | 30.92 | | | | | | | | | | | | | | | | | | |
| Environmental Resource Tec | 45.30 | | | | | | | | | | | | | | | | | | |
| Engineering Intern | 18.88 | | | | | | | | | | | | | | | | | | |
| Business Operations Departm | 57.69 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **TOTALS** | | 0.0 | 0% | $0.00 | 40.0 | 100% | $46.80 | 0.0 | 0% | $0.00 | 0.0 | 0% | $0.00 | 0.0 | 0% | $0.00 | 0.0 | 0% | $0.00 |

Illinois Department of Transportation

## Local Public Agency Amendment # 2

### LOCAL PUBLIC AGENCY

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| Fund Type | ITEP, SRTS, HSIP Number(s) | MPO Name | MPO TIP Number |
|---|---|---|---|
| CMAQ | N/A | CMAP | 03-19-0011 |

☒ Construction on State Letting ☐ Construction Local Letting ☐ Day Labor ☐ Local Administered Engineering ☐ Right-of-Way

| Construction | | Engineering | | Right of Way | |
|---|---|---|---|---|---|
| Job Number | Project Number | Job Number | Project Number | Job Number | Project Number |
| C-91-383-20 | OUBY(034) | | | | |

Reason for modification of original Agreement

Start of construction was delayed - additional Construction Observation and Documentation required due to prolonged completion

This amended Agreement, hereinafter referred to as "**Amendment**" is made and entered to in between the above local public agency, hereinafter referred to as the "**LPA**" and the State of Illinois, acting by and through its Department of Transportation, hereinafter referred to as "**STATE**". The **LPA** and **STATE** agree to revise the original Agreement by execution of this **Amendment**.

### LOCATION

| Local Street/Road Name | Key Route | Length | Stationing From | Stationing To |
|---|---|---|---|---|
| Rand Road | FAP 0334 | 0.80 Mi. | 08.05 | 08.85 |

Location Termini: Isabella Street to Albany Lane

| Current Jurisdiction | Existing Structure Number(s) | |
|---|---|---|
| IDOT | N/A | Add Location / Remove |

### LOCATION

| Local Street/Road Name | Key Route | Length | Stationing From | Stationing To |
|---|---|---|---|---|
| Central Road | FAU 1300 | 0.26 Mi. | 05.42 | 05.68 |

Location Termini: Mount Prospect Road to Westgate Road

| Current Jurisdiction | Existing Structure Number(s) | |
|---|---|---|
| IDOT (west of Rand Road) & Mount Prospect (east of Rand Road) | N/A | Add Location / Remove |

### LOCATION

| Local Street/Road Name | Key Route | Length | Stationing From | Stationing To |
|---|---|---|---|---|
| Mount Prospect Road | FAU 2686 | 0.08 Mi. | 00.00 | 00.08 |

Location Termini: Rand Road to Central Road

| Current Jurisdiction | Existing Structure Number(s) | |
|---|---|---|
| Village of Mount Prospect | N/A | Add Location / Remove |

### LOCAL PUBLIC AGENCY APPROPRIATION

**For Amendments Increasing the LPA share:** By execution of this **Amendment**, the LPA attests that additional moneys have been appropriated or reserved by resolution or ordinance to fund the additional share of **LPA** project costs. A copy of the resolution or ordinance is attached as an addendum (**required for increases to state-let contracts only**).

## SCHEDULE

Additional information and/or stipulations are hereby attached and identified below as being a part of this **Amendment**.

| | | |
|---|---|---|
| X | 1. | Location Map |
| X | 2. | Division of Cost |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

BE IT MUTUALLY AGREED that all remaining provisions of the original agreement not altered by the **Amendment** shall remain in full force and effect and the **Amendment** shall be binding upon the inure to the benefit of the parties hereto, their successor and assigns.

The **LPA** further agrees as a condition of payment, that it accepts and will comply with the application provisions set forth in this **Amendment** and all addenda indicated above.

## APPROVED

Local Public Agency

Name of Official (Print or Type Name)

Title of Official

Mayor

Signature & Date

The above signature certifies the agency's TIN number is

366006011 conducting business as a Governmental Entity.

DUNS Number 069507697 UEI D5HGKASDDZ14

**APPROVED**

State of Illinois
Department of Transportation

Omer Osman, P.E., Secretary of Transportation Signature & Date

By:

George A. Tapas, P.E., S.E., Engineer of Local Roads & Streets Signature & Date

Stephen M. Travia, P.E., Director of Highways PI/Chief Engineer Signature & Date

Michael Prater, Chief Counsel Signature & Date

Vicki Wilson, Chief Fiscal Officer Signature & Date

**NOTE: if the LPA signature is by an APPOINTED official, a resolution authorizing said appointed official to execute this agreement is required.**

## SCHEDULE NUMBER 2

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| Construction | | Engineering | | Right of Way | |
|---|---|---|---|---|---|
| Job Number | Project Number | Job Number | Project Number | Job Number | Project Number |
| C-91-383-20 | OUBY(034) | | | | |

## ORIGINAL DIVISION OF COST (ODC)

| | Federal Funds | | | State Funds | | | Local Public Agency Funds | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type of Work | Fund Type | Amount | % | Fund Type | Amount | % | Fund Type | Amount | % | Totals |
| Participating Construction | CMAQ | $5,600,000.00 | * | | | | Local | $1,400,000.00 | BAL | $7,000,000.00 |
| Construction Engineering | CMAQ | $560,000.00 | * | | | | Local | $140,000.00 | BAL | $700,000.00 |
| ODC Federal Funds | | $6,160,000.00 | | ODC State Funds | | | ODC LPA Funds | $1,540,000.00 | Total | $7,700,000.00 |

## AMENDMENT # 1

| | Federal Funds | | | State Funds | | | Local Public Agency Funds | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type of Work | Fund Type | Amount | % | Fund Type | Amount | % | Fund Type | Amount | % | Work Totals |
| Participating Construction | CMAQ | $1,011,282.00 | * | | | | Local | $252,821.00 | BAL | $1,264,103.00 |
| Federal Funds Amendment # 1 | | $1,011,282.00 | | State Funds Amendment # 1 | | | LPA Funds Amendment # 1 | $252,821.00 | Total | $1,264,103.00 |

Add Amendment | Remove Amendment

## AMENDMENT # 2

| | Federal Funds | | | State Funds | | | Local Public Agency Funds | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type of Work | Fund Type | Amount | % | Fund Type | Amount | % | Fund Type | Amount | % | Work Totals |
| Participating Construction | CMAQ | ($55,701.60) | * | | | | Local | ($13,925.40) | BAL | ($69,627.00) |
| Construction Engineering | CMAQ | $55,701.60 | * | | | | Local | $13,925.40 | BAL | $69,627.00 |
| Federal Funds Amendment # 2 | | $0.00 | | State Funds Amendment # 2 | | | LPA Funds Amendment # 2 | $0.00 | Total | $0.00 |

Add Amendment | Remove Amendment

| | | | | | | |
|---|---|---|---|---|---|---|
| **Total Federal Funds** | $7,171,282.00 | **Total State Funds** | | **Total LPA Funds** | $1,792,821.00 | **TOTAL** | $8,964,103.00 |

## SCHEDULE NUMBER 2

| Local Public Agency | County | Section Number |
|---|---|---|
| Village of Mount Prospect | Cook | 17-00166-00-CH |

| **Construction** | | **Engineering** | | **Right of Way** | |
|---|---|---|---|---|---|
| Job Number | Project Number | Job Number | Project Number | Job Number | Project Number |
| C-91-383-20 | OUBY(034) | | | | |

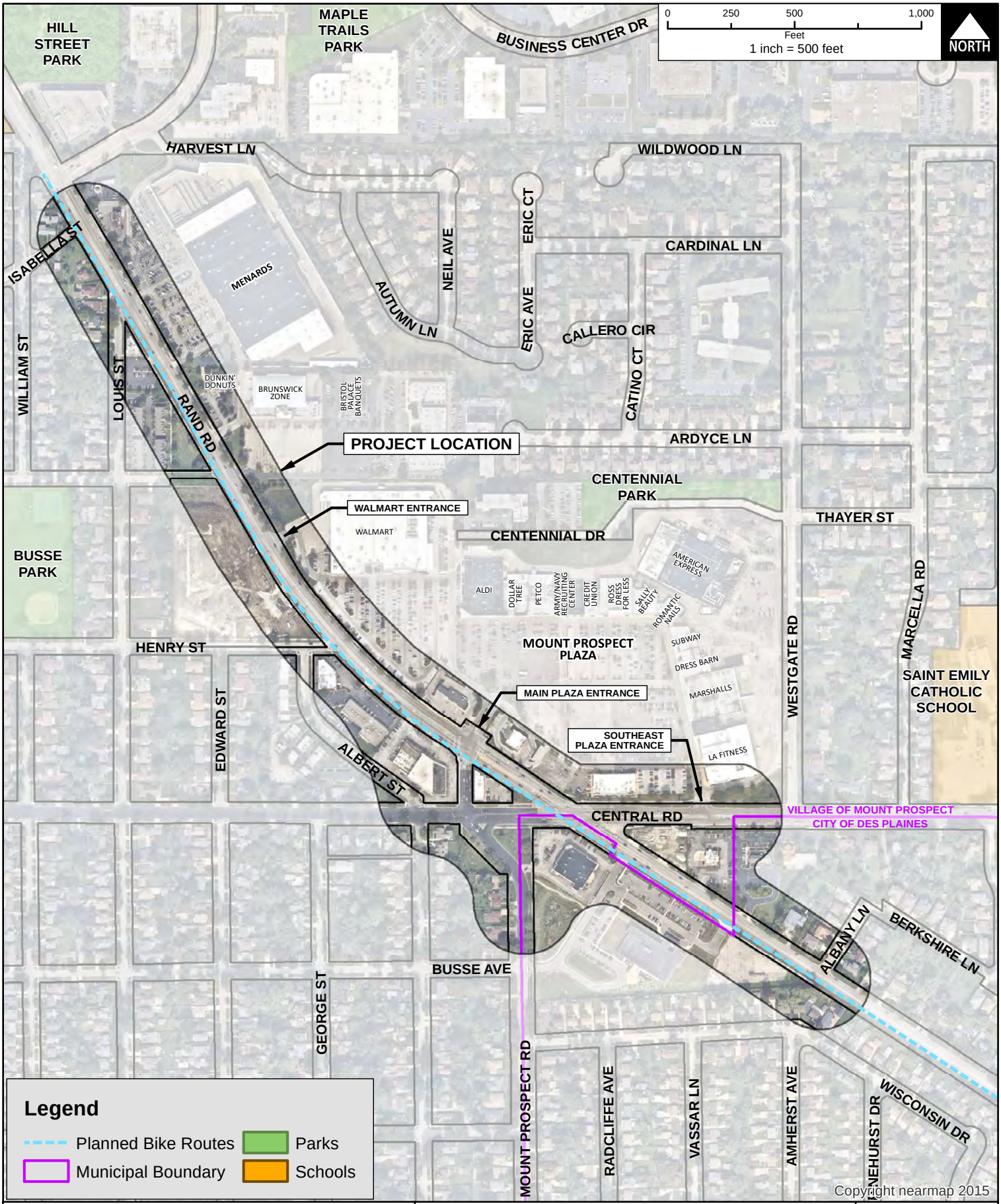
## CUMULATIVE DIVISION OF COST (CDC)

| | Federal Funds | | | State Funds | | | Local Public Agency Funds | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type of Work | Fund Type | Amount | % | Fund Type | Amount | % | Fund Type | Amount | % | Totals |
| Participating Construction | CMAQ | $6,555,580.40 | * | | | | Local | $1,638,895.60 | BAL | $8,194,476.00 |
| Construction Engineering | CMAQ | $615,701.60 | * | | | | Local | $153,925.40 | BAL | $769,627.00 |
| CDC Federal Funds | | $7,171,282.00 | | CDC State Funds | | | CDC LPA Funds | $1,792,821.00 | Total | $8,964,103.00 |

If funding is not a percentage of the total place an asterisk (*) in the space provided for the percentage and explain below:

*Maximum FHWA (CMAQ) Participation 80% Not to Exceed $7,171,282 (Construction Engineering Portion 80% Not to Exceed $615,701.60)

**NOTE**: The costs shown in the Division of Cost table are approximate and subject to change. The final **LPA** share is dependent on the final Federal and State participation. The actual costs will be used in the final division of cost for billing and reimbursement.




CLIENT: VILLAGE OF MOUNT PROSPECT

TITLE: RAND-CENTRAL-MOUNT PROSPECT ROAD INTERSECTIONS PHASE I ENGINEERING STUDY

| | |
|---|---|
| PROJ. NO. | 170133 |
| DATE: | 02/12/2019 |
| SHEET | 1 OF 1 |
| DRAWING NO. | EXH |

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

| | | | | |
|---|---|---|---|---|
| DSGN. | | | SCALE: | 1:6,000 |
| DWN. | DRW | | AUTHOR: | DWALTERS |
| CHKD. | | | PLOT DATE: | 12/19/2019 |
| FILE: | General Location Map | | | |

Path: N:\MOUNTPROSPECT\170133\GIS\Exhibits\General Location Map.mxd

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to approve a change order to the 2025 Crack Filling Contract in an amount not to exceed $75,000.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $75,000.00 |
| Budget Source | Street Resurfacing Construction Fund |
| Category | CONSENT AGENDA |
| Type | Action Item |

## Information

Asphalt streets that have been paved within the past five to six years are chosen for crack sealing repair as part of the Village's annual preventative maintenance program. Pavement typically develops transverse and longitudinal cracks within five to six years. These cracks allow water to get under the pavement and weaken the base, causing premature pavement failures. To prevent further deterioration, the cracks are sealed and the life of the pavement is extended for an additional ten to fifteen years.

Concrete streets conversely tend to last longer before preventative maintenance is required. The Village has a few concrete streets, one being Wolf Road. It was constructed in 1990 and has had periodic crack sealing performed. The northbound lanes were crack filled in early 2025. Southbound lanes have open cracking that need repair.

A contract for crack filling work was awarded to Patriot Pavement Maintenance of Wheeling, Illinois, by the Village Board on February 21, 2024.

This contract was the result of a joint bid promulgated by the Municipal Partnering Initiative (MPI). MPI is a collective of Cook, Lake, and Du Page County municipalities that have successfully leveraged bulk purchasing and workload sharing to reduce the cost of many municipal services. Mount Prospect is a member of MPI.

The bid is structured like other MPI bids that the Village has previously participated in. The length of the contract is for years with the option of annual extensions beyond the termination date by mutual written agreement. The Village is in the second year of the three-year contract.

The 2025 asphalt pavement crack filling project was completed earlier this year with all allocated funds expended.

Wolf Road is currently scheduled for concrete rehabilitation in 2028. The Village received a

$2.55 million Surface Transportation Program (STP) grant to replace deteriorated concrete sections and potentially install an asphalt course on top to improve the rideability of the road. Until then, it is imperative to minimize further deterioration that would increase concrete replacement costs in 2028.

Staff recommends crack-filling the southbound lanes before winter to prevent further damage caused by the freeze/thaw cycle during the winter months. This work should effectively prevent further deterioration of the roadway and maintain a reasonable driving surface until the pavement can be more comprehensively rehabilitated in 2028.

Staff surveyed the southbound lanes and determined that approximately $75,000 worth of concrete mastic crack-filling is needed to completed all southbound lanes between Euclid Avenue and Central Road. This estimate was derived by applying 2025 contract rates for mastic to estimated quantities.

Staff has also identified a surplus of unexpended funds ($75,000) in the Street Resurfacing Construction Fund. These are unspent funds following completion of the 2025 Street Resurfacing Program. The Director of Finance has authorized using these funds for concrete crack-filling on Wolf Road provided the Village Board approves of the contract increase.

The current contract is with Patriot Pavement Maintenance of Wheeling, Illinois. Patriot Pavement has previously performed this work for the Village, and all work was performed satisfactorily.

Patriot Pavement Maintenance has agreed to perform the additional work this year, before the beginning of winter, if approved.

## Discussion

## Alternatives

1. Approve the change order request for Patriot pavement Maintenance of Wheeling, Illinois for $75,000.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends approving a change order that increases the 2025 Pavement Crack Sealant Project by an amount not to exceed $75,000 for the purpose of installing concrete mastic crack fillers in the southbound lanes of Wolf Road between Euclid Avenue and Central Road.

## Attachments

1. Signed contract
2. Crack Sealing 2024 - PATRIOT - PROPOSAL

**EXHIBIT B**

# CONTRACT

## VILLAGE OF MOUNT PROSPECT

## Crack Sealing

THIS AGREEMENT (hereinafter the "Contract") is entered into by and between the Village of Mount Prospect, an Illinois home rule municipality (hereinafter the "Village"), and Patriot Pavement Maintenance, located at Wheeling, Illinois, (hereinafter the "Contractor").

1. GENERAL As stated in the bid document.

2. SPECIFICATIONS As stated in the bid document.

3. CONTRACTOR RESPONSIBILITY FOR PROPERTY/HOLD HARMLESS
Contractor agrees to defend and hold harmless the Village from and against all demands, claims, suits, costs, expenses, damages and adjustments based upon any infringement of any patent relating to goods specified in the contract, and on account of the Village's use of any copyrighted or uncopyrighted, composition, trade secrets, secret process, proprietary rights, patented of unpatented invention, article or appliance furnished or used under the proposal Specifications.

4. ADHERENCE TO LAWS
Employees and agents of Contractor shall obey all federal, state, county and municipal laws and ordinances during the execution of their duties under this Contract. The existence of this Contract does not exempt such individuals from compliance with such laws or ordinances, nor does it convey any special rights or privileges upon those individuals.

Contractor shall meet all applicable licensing requirements of the Village.

In addition, Contractor is required to comply with all federal, state, county and municipal laws and ordinances, including the following:

a. Provide a drug free workplace pursuant to the Illinois Drug Free Workplace Act (30 ILCS 580/1, et seq.);

b. Comply with the Illinois Public Works Employment Discrimination Act (775 ILCS 10/1 et seq.);

c. Comply with Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101, et seq.), and the Rules and Regulations of the Illinois Department of Human

Rights, including establishment and maintenance of a sexual harassment policy as required by Section 2-105 of that Article and Act;

d. Comply with the Americans with Disabilities Act; and

e. Comply with the provisions of the EQUAL EMPLOYMENT OPPORTUNITY CLAUSE required by the Illinois Department of Human Rights as a material term of all public contracts, which states as follows:

**Title 44, Part 750, Section 750, APPENDIX A , Illinois Administrative Code, Equal Employment Opportunity Clause**

**EQUAL EMPLOYMENT OPPORTUNITY**

In the event of Contractor's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of this contract, the Contractor agrees as follows:

1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

2) That, if it hires additional employees in order to perform this contract or any portion thereof, it will determine the availability (in accordance with the Department's Rules) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules, the Contractor will promptly so notify the Department and the contracting agency and

will recruit employees from other sources when necessary to fulfill its obligations thereunder.

5) That it will submit reports as required by the Department's Rules, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules.

6) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules.

7) That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

With respect to the two types of subcontracts referred to under paragraph 7 of the Equal Employment Opportunity Clause above, following is an excerpt of Section 750.30 of the Department of Human Right's Rules and Regulations for Public Contracts:

**Title 44, Part 750, Section 750.30, Illinois Administrative Code, Subcontracts**

Each public Contractor and subcontractor shall in turn include the Equal Employment Opportunity Clause set forth in Appendix A of this Part in each of its subcontracts under which any portion of the contract obligations are undertaken or assumed, said inclusion to be either verbatim or by reference so that the provisions of the clause will be binding upon such subcontractors.

5. FEE SCHEDULE
The charges to be assessed by Contractor under this Contract are set forth in the fee schedule contained in Exhibit A.

6. LOG BOOK, RECORDS & REPORTS REQUIRED
The Contractor shall provide the Village with a written status report on its provision of services required by the Contract. This report shall be due before the tenth day of the following month.

7. METHODS OF PAYMENT
Payment under the Contract will be made in accordance with the Illinois Local Government Prompt Payment Act, 50 ILCS 505/1 et seq.

8. HOLD HARMLESS AGREEMENT (CONTRACTUAL LIABILITY)

Contractor assumes full responsibility for the acts and omissions of its employees and agents while engaged in performing services under the Contract. Contractor agrees, to the greatest extent permitted by Illinois law, to protect, indemnify, save and hold forever harmless the Village, its officers, appointed and elected officials, Mayor and Board of Trustees, employees, volunteers, attorneys and agents from and against any and all liabilities, obligations, claims, losses, damages, penalties, and costs and expenses resulting from any suit, claim, demand, judgment, or cause of action initiated by any person, including Contractor and its officers, officials, employees, subcontractors, volunteers and agents, arising out of, connected with, or in any way associated with the performance of services covered by this Contract or the equipment used in connection therewith.

9. CONTRACTOR'S LIABILITY INSURANCE

Contractor shall not commence with the performance of services under this Contract until it has obtained all insurance required hereunder and such insurance has been approved by the Village. Certificates of such insurance shall be filed with the Village prior to commencing work. Additionally, Contractor will provide the Village with a letter from the insurance carrier that the Village will be notified within thirty (30) days of the pending cancellation of any policy relating to this Contract.

Each insurance company shall be subject to approval by the Village, and the respective policies shall name the Village as an additional named insured. Approval of the insurance by the Village shall not relieve or decrease the liability of Contractor hereunder. Such insurance is primary and in no event will be considered contributory to any insurance purchased by the Village. Such insurance will not be canceled, reduced, or materially changed without providing the Village thirty (30) days advance written notice, via certified mail.

Contractor shall maintain all insurance required under subsections a through h of this Section for not less than one (1) year after completion of this contract.

10. CONTRACT TERMINATION

The Village and Contractor reserve the right to terminate the Contract at any time upon ten (10) days advance written notice to the other party. In addition to the provisions set forth in Section General conditions (A,6) for immediate termination, failure of Contractor to perform any aspect of this Contract properly and/or to provide proper treatment to the general public, in the sole discretion of the Village, is cause for immediate termination of the Contract without prior notice.

11. LENGTH OF CONTRACT

This Contract shall be in effect for three (3) years, with two (2), one (1) year extensions unless terminated by either party under the conditions specified in Section 10, Contract Termination.

12. COMPLIANCE WITH FREEDOM OF INFORMATION ACT REQUEST

The Illinois Freedom of Information Act (FOIA), 5 ILCS 140/1 et seq., applies to public records in the possession of a party with whom the Village has contracted.

The Village will have only a very short period of time from receipt of a FOIA request to comply with the request, and there is a significant amount of work required to process a request, including collating and reviewing the information.

Contractor acknowledges the requirements of FOIA and agrees to comply with all requests made by the Village for public records (as that term is defined by Section 2(c) of FOIA) in its possession and to provide the requested public records to the Village within two (2) business days of the request being made by the Village. Contractor agrees to indemnify and hold harmless the Village from all claims, costs, penalty, losses and injuries (including but not limited to, attorney's fees, other professional fees, court costs and/or arbitration or other dispute resolution costs) arising out of or relating to its failure to provide the public records to the Village under this Contract.

13. Contractor shall not assign this Contract or any part thereof without the prior written consent of the Village. Approval, if any, for such assignment shall be made by the Corporate Authorities of the Village. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective assigns, legal representatives and successors in interest.

14. GOVERNING LAW
This Contract shall be governed by and construed in accordance with the laws of the State of Illinois and applicable federal law. Venue shall only be proper in a court of competent jurisdiction located within the County of Cook, Illinois.

15. SEVERABILITY
The invalidity or unenforceability of one or more of the terms or provisions contained in this Contract shall not affect the validity or enforceability of the remaining terms and provisions of this Contract so long as the material purposes of this contract can be determined and effectuated.

16. INTERPRETATION
Any headings of the Contract are for convenience of reference only and do not define or limit the provisions thereof. Words of gender shall be deemed and construed to include correlative words of other genders. Words importing the singular shall include the plural and vice versa, unless the context shall otherwise indicate. All references to any person or entity shall be deemed to include any person or entity succeeding to the rights, duties and obligations of such person or entity succeeding to the rights, duties and obligations of such person or entity in accordance with the terms and conditions of the Contract.

17. WAIVER OF BREACH
If either party waives a breach of any provision of this Contract by the other party, that waiver will not operate or be construed as a waiver of any subsequent breach by either party or prevent either party from enforcing such provisions.

18. MERGER - AMENDMENT
This Contract sets forth the entire understanding of the parties relative to the subject hereof and supersedes any and all prior agreements, express or implied,

oral or written. No amendment or modification of this Contract shall be effective unless reduced to writing and executed by the parties.

19. COUNTERPARTS
This Contract may be executed in several counterparts each of which shall be an original and all of which shall constitute but one and the same instrument.

20. EFFECTIVE DATE
The Effective Date of this Contract shall be the date executed by the Village President and attested by the Village Clerk.

In Witness thereof, the said parties have executed and signed this contract on

March 19, 2024.

VILLAGE OF MOUNT PROSPECT, an Illinois Municipal Corporation

BY: _____

Attest:

_____
Karen Agoranos, Village Clerk

Corporate Name: Patriot Pavement Maintenance

BY: _____

Attest:

_____
Secretary (Corporate Seal)

## EXHIBIT A

(Upon award of contract, to be attached to Crack Sealing for the municipalities: Arlington Heights, Bannockburn, Evanston, Glenview, Glenview Park District, Highland Park, Lake Bluff, Mount Prospect, Rolling Meadows, Wheeling, and Wilmette as Exhibit A)

## PROPOSAL FORM

**OWNER INFORMATION**

Owner Name: Patriot Pavement Maintenance / Matt Sollars

Address: 165 W. Hintz Rd Wheeling, IL 60090

Business Name: Patriot Pavement Maintenance

Business Address: 165 W. Hintz Rd Wheeling, IL 60090

Phone: 847-813-9034 Business Phone: 847-813-9034

This Business is a:

- ☐ Individual Proprietorship
- ☐ Joint Venture
- ☐ Partnership
- ☒ "S" Corporation

If applicable, give names, addresses, and dates of all partners, officers or directors.

| Name | Address |
|---|---|
| Matt Sollars - | 165 W. Hintz Rd Wheeling, IL 60090 |
| | |
| | |
| | |
| | |
| | |

Has the applicant, business, or member of the business ever had a _____ license or contract revoked, suspended or cancelled?

☐ YES ☒ NO

If yes, explain in full detail on a separate sheet of paper.

Does the business currently hold a license or have a contract with any other municipality for _____ service? ☒ YES ☐ NO

If yes, explain in full on a separate sheet of paper. Have any complaints against the business been filed with the Illinois Commerce Commission, the Office of the Illinois Attorney General, or any other governmental body during the period of one year prior to the date of this proposal? ☐ YES ☒ NO
If yes, explain in full on a separate sheet of paper.

**Please note that the Village reserves the right to conduct its own search with the Illinois Commerce Commission, the Illinois Attorney General, or any other governmental body that and may take into consideration any complaints and/or pending complaints made against the business or owner.**

Services will be either full-service cleaning, both inside and outside, or just outside cleaning.

In submitting this Proposal Form requesting the award of the Crack Sealing for the municipalities Arlington Heights, Bannockburn, Evanston, Glenview, Glenview Park District, Highland Park, Lake Bluff, Mount Prospect, Rolling Meadows, Wheeling, and Wilmette.
I hereby certify that:

1. I will not assign or subcontract delivery services for the Village without prior written approval of the Corporate Authorities of the Village of Mount Prospect;

2. Neither I, nor any person who will be working on my behalf, has been convicted under the laws of Illinois or any other state of an offense which under the laws of this state would be a felony involving the theft of property, violence to persons, or criminal damage to property. Please note that in the case of a person whose last conviction was more than two years past, and can demonstrate a compelling showing that he/she is nevertheless fit, such person or operator may be approved by the Village Manager if otherwise eligible;

3. I am not barred by law from contracting with the Village because of a conviction for prior violations of either Sections 33E-3 or 33E-4 of the Illinois Criminal Code of 1965 (720 ILCS 5/33E-3 (Bid Rigging) or 720 ILCS 5/33-4 (Bid Rotating));

4. I am not delinquent in payment of any taxes to the Illinois Department of Revenue pursuant to Section 11-42.1-1 of the Illinois Municipal Code (65 ILCS 5/11-42.1-1) or in any payment, fee or tax owed to the Village;

5. I provide a drug free workplace pursuant to the Drug Free Workplace Act (30 ILCS 580/1, et seq.);

6. I shall comply with Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101, et seq.), and the Rules and Regulations of the Illinois Department of Human Rights, including establishment and maintenance of a sexual harassment policy as required by Section 2-105 of that Article and Act;

7. I shall comply with the Americans with Disabilities Act;

8. I shall comply with the Illinois Public Works Employment Discrimination Act (775 ILCS 10/1 et seq.); and

9. All of the information I have provided in this Application has been truthful and given in good faith.

I have read and understand the information provided with this Proposal Form, including the Notice to Bidders, Instructions to Bidder, the General Conditions, the Specifications for the municipalities of Arlington Heights, Bannockburn, Evanston, Glenview, Glenview Park District, Highland Park, Lake Bluff, Mount Prospect, Rolling Meadows, Wheeling, and Wilmette Contract, and agree to abide by the conditions set forth therein. My signature below indicates my acceptance of all such conditions and my bid for an award of the crack sealing bid.

Name of Company: Patriot Pavement Maintenance

Bid submitted by: Matt Sollars

Position in company: PRESIDENT

Phone number: 847-813-9034

Date: 2.19.2024

Bidder must use the official firm name and an authorized representative must sign.

# BID FORM

## Village of Mount Prospect Public Works Department

Crack Sealing for the municipalities: Arlington Heights, Bannockburn, Evanston, Glenview, Glenview Park District, Highland Park, Lake Bluff, Mount Prospect, Rolling Meadows, Wheeling, and Wilmette

FROM: Patriot Pavement Maintenance

(hereinafter called "Bidder")

TO: Office of the Village Manager, 3rd Floor
50 South Emerson Street
Mount Prospect, Illinois 60056
(hereinafter called "Village" or "Village of Mount Prospect")

### Crack Sealing

The bidders have familiarized themselves with the services to be performed and probable work conditions required under this Bid affecting the cost of the performance of the required services and with the Bid Documents which include:

Notice to Bidders
Table of Contents
Instructions for Bidders
General Conditions
Specifications
Bid Form
Affidavit – Bid Certification Form
Bid Security
Bid Sheet
Contract Document

Therefore, the Bidder hereby proposes to furnish all supervision, technical personnel, labor, materials, tools, equipment, and services (including all utility and transportation services) required to perform the required services, all in accordance with the above listed documents.

Bidder agrees to perform all of the required services and provide the equipment and materials described in the Bid Documents, as follows:

**Bidder has bid on all items and has provided a price for all requested services.** The Bidder acknowledges it understands all the requested services for which it has submitted a bid.

The Bidder will complete and provide all labor, equipment, materials and mobilization (if applicable) to perform the required services as incidental to the fixed item price for each item proposed.

In submitting this bid, the Bidder understands that the Village reserves the right to add to or subtract from the estimated quantities.

The Village intends to award one (1) contract (if at all) for the items bid. If written notice of award of this bid is mailed, emailed or otherwise delivered to the Bidder at any time before this bid is withdrawn, the Bidder agrees to execute and deliver the contract in the prescribed form and furnish payment and performance bonds, or letter of credit, and the insurance certificates required by the Bid Documents to the Village within ten (10) business days after receipt.

The Bidder, and as successful bidder/contractor upon award of the contract, understands and agrees to the following:

1) The Contractor agrees to provide all required services and items and material to the Village as noted in the Bid Documents and comply with the requirements of the Bid Documents.
2) The Contractor agrees to comply with all applicable federal and state laws, rules and regulations, and county and municipal ordinances, as described in the General Conditions.

All Addenda pertaining to this project shall be acknowledged by the Bidder in the spaces provided below:

| Addendum No. | Addendum Date | Acknowledgment by Bidder or Authorized Representative | Date Acknowledged |
|---|---|---|---|
| | | | |
| | | | |

Failure to acknowledge receipt, as provided above, may be considered sufficient grounds for disqualification of the bidder and rejection of his/her bid submittal. A record of all Addenda and copies of same will be available to all qualified bidders from the Village of Mount Prospect Public Works Department, 1700 West Central Road, Mount Prospect, Illinois two (2) days prior to the letting. It shall be the Bidder's responsibility to become fully advised of all Addenda prior to submitting its bid.

Upon award of the contract, the Village will send Notice of Award to the successful Bidder, the Bidder must then execute the contract and provide the required bonds or letter of credit and certificate of insurance to the Village within ten (10) business days. The Village will then issue a written Notice to Proceed. Failure to complete the work in the designated time frame may result in the Director of Public Works withholding compensation due the Contractor for failure to complete the said work in the designated time frame, calling the bonds, or taking such other action as may be available.

Security ~~in the sum~~ of ten (10%) percent of the amount bid in form of (check one):
10% Bid Bond ____ Certified Check _____Bank Cashier's Check
is attached ~~hereto~~ in accordance with the "Instructions for Bidders".

This Bid Submittal contains the following:

1) Bid Form
2) Affidavit – Bid Certification Form
3) Bid Security
4) Bid Sheets

Respectfully submitted:

Name of Firm/Bidder: Patriot Pavement Maintenance

By: Matt S (Signature)

Title: PRESIDENT

Date: 2-19-2027

Contact Information:

Official Address: 165 W. Hintz Rd
Wheeling, IL 60090

Telephone: 847-813-9034

Email: matt@patriotpavement.net

**ONE (1) SIGNED COPY OF THIS BID FORM AND BID SHEETS ALONG WITH THE AFFIDAVIT – BID CERTIFICATION FORM, AND BID SECURITY SHALL BE SUBMITTED IN A SEALED MARKED ENVELOPE.**

## AFFIDAVIT – BID CERTIFICATION FORM

**Bidder**:

Company/Firm Name: Patriot Pavement Maintenance

Address: 165 W. Hintz Rd Wheeling, IL 60090

As a condition of entering into a contract with the Village of Mount Prospect, and under oath and penalty of perjury and possible termination of contract rights and debarment, the undersigned, Matt Sollars, being first duly sworn on oath, deposes and states that he or she is PRESIDENT (sole owner, partner, joint ventured, President, Secretary, etc.) of Patriot Pavement Maintenance and has the authority to make all
*(Name of Company)*
certifications required by this affidavit.

**Section I** **Non-Collusion**

The undersigned certifies that this bid is genuine and not collusive or a sham, that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any person, to fix the bid price element of this bid, or of that of any other bidder, or to secure any advantage against any other bidder or any person interested in the proposed contract.

**Section II** **Bid Rigging and Rotating**

The undersigned further states that Patriot Pavement Maintenance
*(Name of Company)*
is not barred from bidding or contracting as a result of a conviction for violations of state laws prohibiting bid rigging or bid rotating or any similar offense of any state of the United States, as provided in Sections 33E-3 and 33E-4 of the Illinois Criminal Code, 720 ILCS 5/33E-3, 33E-4.

**Section III** **Drug Free Workplace**

The undersigned further states that Patriot Pavement Maintenance
*(Name of Company)*
provides a drug free workplace pursuant to the Drug Free Workplace Act, 30 ILCS 580/1, et seq., and has, to the extent not covered by a collective bargaining agreement that deals with the subject of the Substance Abuse Prevention in Public Works Projects Act, 820 ILCS 265/1 et seq., a substance abuse prevention program that meets or exceeds these requirements of that Act.

**Section IV** **Tax Payment**

The undersigned further states that Patriot Pavement Maintenance is
*(Name of Company)*

not delinquent in payment of any taxes to the Illinois Department of Revenue, in accordance with Illinois Compiled Statues, 65 ILCS 5/11-42.1. The undersigned understands that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition, voids the contract and allows the municipality to recover all amounts paid to the individual or entity under the contract in civil action.

**Section V** **Sexual Harassment Policy**

Pursuant to Section 2-105(A) of the Illinois Human Rights Act, 775 ILCS 5/2-105 (A), every party to a public contract must:

"Have written sexual harassment policies that shall include, at a minimum, the following information: (I) the illegality of sexual harassment; (II) the definition of sexual harassment under State law; (III) a description of sexual harassment, utilizing examples; (IV) the vendor's internal complaint process including penalties; (V) the legal recourse, investigative and complaint process available through the Department (of Human Rights) and the Commission (Human Rights Commission); (VI) directions on how to contact the Department and Commission; and (VII) protection against retaliation as provided by Section 6-101 of the Act. (Illinois Human Rights Act)."

A "public contract" includes every contract to which the State, any of its political subdivisions, or any municipal corporation is a party." 775 ILCS 5/1-103 (M) (2002),

The undersigned further states that Patriot Pavement Maintenance. has
*(Name of Company)*
a written sexual harassment policy in place in full compliance with 775 ILCS 5/2-105 (A) (4).

It is expressly understood the foregoing statements and representations and promises are made as a condition to the right of the bidder to receive payment under any award made under the terms and provisions of this bid.

The undersigned certifies that all information contained in this Affidavit is true and correct.

Signed by: Matt S Title: PRESIDENT
Signature

Name Printed: Matt Sollars

Signed and sworn to before me this 19 day of February, 2024.
My commission expires:

Kimberly M Harris
Notary Public

OFFICIAL SEAL
KIMBERLY M. HARRIS
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires JAN 5, 2026

## BID SECURITY

Included with this bid is a bank cashier's check, certified check or bid bond in the amount of _____, being ten percent (10%) of the total amount bid by Patriot Pavement Maint, the bidder, in favor of the Village of Mount Prospect. It is hereby agreed that, should bidder be awarded the contract for services contemplated under this bid and fail or refuse to execute a contract for the performance of said services, or to provide the required payment and performance bonds, or letter of credit, and certificate of insurance, then this security, in the amount stipulated above, shall be forfeited and may be retained by the Village of Mount Prospect as liquidated damages and not as a penalty. All bids are to remain firm for a period of ninety (90) days after the bid opening date.

**SUBMITTED THIS** 19th **DAY OF** February, **2024.**

**SEAL** (if corporation)

Patriot Pavement Maintenance

**Bidder:**

Patriot Pavement Maintenance

**Bidder's Agent and Agent's Title**

Western National Mutual

**Title**

Note: If bidder is a partnership, the bid must be signed by at least two of the partners.

If bidder is a corporation, the bid must be signed by an authorized officer of the corporation, attested and sealed by the secretary or other authorized officer.

If a corporation, note here the state of incorporation:

Incorporated under the laws of the State of ILLINOIS.

# BID SHEET

## CRACK SEALING

## SCHEDULE OF PRICES

### Base Bid Items

### A. CRACK SEALANT FOR ASPHALT / CONCRETE

Municipalities require a dust-free operation with a minimum of 90% reduction in airborne particulate. The material provided will be as specified by the Illinois Department of Transportation: Standard Specifications for Road and Bridge Construction, Adopted January 1, 2016, or latest edition, and the Illinois Department of Transportation: Supplemental Specifications and Recurring Special Provisions, Adopted January 1, 2018, or the latest edition.

| | Description | Unit | 2024 Unit Price | 2025 Unit Price | 2026 Unit Price |
|---|---|---|---|---|---|
| 1 | Hot Poured Joint Sealer (IDOT 1050.02) | Lb. | $ 1.58 | $ 1.68 | $ 1.70 |
| 2 | Fiber Modified Joint Sealer | Lb. | $ 1.38 | $ 1.40 | $ 1.42 |
| 3 | Mastic Joint Sealer for asphalt/concrete greater than 2" (black) | Lb. | $ 2.50 | $ 2.50 | $ 2.50 |
| 4 | Mastic Joint Sealer for asphalt/concrete greater than 2" (grey) | Lb. | $ 2.90 | $ 2.90 | $ 2.90 |

### B. ADDITIONAL PRICING AND DISCOUNTS

| | Description | Unit | 2024 Unit Price | 2025 Unit Price | 2026 Unit Price |
|---|---|---|---|---|---|
| 5 | Sweeper with disposal at the Municipal facility | Per hour | $ 150.00 | $ 150.00 | $ 150.00 |
| 6 | Sweeper with disposal performed by contractor | Per hour | $ 150.00 | $ 150.00 | $ 150.00 |
| 7 | Total discount for each municipality willing to provide their own sweeper and disposal | Per town | ($ .01 per LB | ($ .01 Per LB ) | ($ .01 Per LB |
| 8 | Total discount for each municipality willing to stage equipment at municipal facilities | Per town | ($ 0 ) | ($ 0 ) | ($ 0 ) |
| 9 | Sealcoating-Graphene ES 3-year Warranty | SQFT | $ .37 | $ .38 | $ .385 |
| 10 | Sealcoating-Polymer Modified Master Seal | SQFT | $ .15 | $ .15 | $ .155 |
| 11 | Pavement Marking 4" Line | LNFT | $ .28 | $ .29 | $ .30 |
| 12 | Pavement Marking Letters & Symbols | SQFT | $ 3.95 | $ 3.95 | $ 3.95 |

**Submitted this** 19 **day of** February, **2024.**

**Mark outside of the envelope: "Crack Sealing" and deliver to the Village Manager's office at 50 South Emerson Street, 3rd Floor, Mount Prospect, Illinois, 60056, by 1:00 p.m., Monday, February 19, 2024.**

Patriot Pavement Maintenance
Name of Company/Firm

165 W. Hintz Rd Wheeling, IL
Address of Company/Firm

By: Matt

Phone: 847-813-9034

Date submitted: 2-19, 2024

**Also, note any exceptions to the specifications.**

Patriot Pavement Maintenance

**COMPANY** **OWNER**

165 W. Hintz Rd | Wheeling | 847-813-9034

**ADDRESS** **CITY, STATE, ZIP** **PHONE #**

Matt | 2.19.2024, **2024**

**SIGNATURE** **DATE**

**Note: All bids are to remain firm for thirty (90) days. Be sure to mark the outside of the envelope, "Sealed Bid for Crack Sealing."**

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to waive the rule requiring two readings of an ordinance and adopt an ORDINANCE AMENDING ORDINANCE NO. 6634 GRANTING A CONDITIONAL USE FOR A PLANNED UNIT DEVELOPMENT AND A FINAL PLAT OF SUBDIVISION FOR THE PROPERTY COMMONLY KNOWN AS THE MOUNT PROSPECT TECHNOLOGY CAMPUS LOCATED AT 1200 EAST ALGONQUIN ROAD AND 1200 DEMPSTER STREET, MOUNT PROSPECT, ILLINOIS (PZ-21-25)** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | N |
| Dollar Amount | |
| Budget Source | |
| Category | NEW BUSINESS |
| Type | Action Item |

## Information

TUR Ventures, LLC ("Petitioner"), received conditional use approval for a final planned unit development and final plat of subdivision approval on June 21, 2022 (Ord. 6634) to construct three data centers and a new electrical substation in conjunction with Commonwealth Edison ("ComEd"). The Petitioner now proposes an amendment to the approved planned unit development and is seeking a final plat of subdivision and conditional use approval for a final planned unit development as a major change for the construction of a two-building data center campus, second electrical substation, mechanical yard, satellite antenna yard, and related site modifications at 1200 East Algonquin Road and 1200 Dempster Street ("Subject Property"). The proposal requires Village Board approval for final plat and conditional use approval for the final planned unit development as a major change. The proposal meets the requirements and standards related to the Village Code, and staff is supportive of the requests.

## Discussion

**Background:** The Subject Property, formerly the United Airlines world headquarters, was annexed into the Village in 2017. Portions of United Airlines operations moved to downtown Chicago in 2007. United Airlines relocated all headquarter operations to the Willis Tower in 2012. The campus in Mount Prospect shifted to Information Technology and limited training operations following the relocation. United Airlines constructed a 172,000 square foot data center west of the Subject Property in 2013; that facility is not part of the planned unit development (PUD), the subject of the requests. The Village approved a final PUD and a final plat of subdivision at the Subject Property for the development of three data center buildings (each totaling 566,767 gross square feet), an electrical substation (Substation #1), and related site improvements in 2021 and 2022. Demolition of the former United Airlines campus

has since been completed. Sediment basins west of Linneman Road and site improvements for the electrical substation have been constructed, and Substation #1 is nearing completion.

Per the Petitioner, the data center industry has experienced significant changes since the approval of the final PUD. Legislative changes that impact data center operations and the rapid acceleration of artificial intelligence increased demand for data infrastructure. The Petitioner is requesting approval of an amendment to the original PUD ordinance to make modifications that address these evolving industry needs.

**Proposal:** The Petitioner proposes to modify the original PUD to construct a two-building data center campus, second electrical substation ("Substation #2"), mechanical yard, satellite antenna yard, and related site improvements. The amended plans consolidate two of the previously approved data center buildings into a single, larger building separated by a party wall ("ORD1") and propose to construct a second, smaller data center building ("ORD2"). Both buildings are increased to three-stories in height, as compared to the two-story buildings that were previously approved. The Petitioner has entered into an easement agreement with ComEd for Substation #1 and will enter into a similar agreement for Substation #2, under which ComEd would construct and operate the substations. The data centers and Substation #2 would occupy the former United Airlines campus (1200 E. Algonquin Road or the "Data Center Parcel"), while Substation #1 is located across Linneman Road at 1200 Dempster Street. The Data Center Parcel consists of approximately 43.31 acres of land, and is bound by Algonquin Road to the south, Linneman Road to the east, and Dempster Street to the north. The Substation #1 Parcel is approximately 6.14 acres in size and is located at the southeast corner of Dempster Street and Linneman Road.

The staff report contains detailed discussions on the site plan layout, parking, building elevations, mechanical equipment, accessory structures, the satellite antenna yard, Substation #2, landscaping, traffic, lighting, signage, and phasing. The report also contains a summary of the economic impacts of the development, including municipal utility tax revenue, higher property tax contributions, new employment opportunities, and parks improvements donations. A discussion of the noise, emissions, and water usage is provided. The key takeaways are highlighted below:

Cloud HQ's proposed 2025 amendment represents a major evolution from the original 2022 plan. Instead of three smaller buildings, the revised design consolidates into two larger three-story facilities—ORD1 (≈1.3 million SF) and ORD2 (≈872,000 SF)—totaling roughly 2.17 million SF, a 470,000 SF increase from the 2022 plan. The plan raises building heights (up to 138 feet), expands lot coverage (82% versus 68%), and reduces open space (18% versus 25%), while introducing a second substation and upgraded cooling systems capable of supporting a total electrical demand of 345 MW. The amended project is expected to achieve major sustainability gains, including an 84% reduction in projected water use and a 50% reduction in projected sewer discharge through closed-loop cooling technology, all within existing Village utility capacity.

The amendment strengthens emissions, noise, and stormwater management controls. Cleaner generator technologies and advanced acoustic treatments ensure compliance with environmental and sound standards, new stormwater facilities and more than 300 trees will enhance site aesthetics and ecological performance. Economically, the project will deliver substantial fiscal benefits—projecting to generate over $8.4 million annually ($5.46 million annually from ORD1, $3 million annually from ORD2) in electricity tax revenue and an estimated $104.8 million in TIF revenues over the district's remaining life—along with up to 1,000 construction jobs per building and 225-450 permanent high-skill positions paying an

estimated $78,500 in salary per job. Cloud HQ will also maintain its $2 million contribution toward the Rec Plex splash pad, with payments scheduled between 2026 (~$1.2 million) and 2028 (~$800,000) – funding that could be advanced by the Village to align with Mt. Prospect Park District's 2027 project timeline. This donation, along with other public improvements, will be memorialized via a Memorandum of Understanding (MOU), which will be reviewed by the Board. In the unlikely event the second data center is never constructed, reserve funding source would be the SMP TIF. The amendment streamlines the development into a higher-capacity, more efficient, and more economically impactful project that advances both Village infrastructure and community amenities.

**Ongoing Testing and Maintenance of the Generators:** The attached ordinance will condition the project so that the routine testing and maintenance of the generators will comply with the noise limitations set forth in the zoning code, and shall only occur during the daytime hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday, excluding Sundars and Village-recognized holidays. The attached ordinance will also restrict the operation of the generators such that no more than three (3) installed generators operate simultaneously for routine testing or maintenance purposes, unless other approved by the Village Manager. The project will be governed by state and federal EPA guidelines, which cap generator annual operating hours to 100 hours.

**Staff Recommendation:** Staff has reviewed the Petitioner's requests for a final plat of subdivision and a conditional use to amend the final planned unit development as a major change and is supportive of the requests. The Petitioner has also worked extensively with staff to improve the buildings' architectural elevations by breaking down the mass and scale of the buildings, reducing repetition, and creating sufficient modulation and articulation to further minimize visual impacts on neighboring properties. Staff finds that the Petitioner has demonstrated good faith by developing strategies to mitigate potential impacts associated with the amended plans. Steps have been taken to minimize visual, acoustic, and air quality impacts produced by the data center development. The project will provide sufficient screening via substantial landscaping and screen walls to protect the livability and quality of life for adjacent residential and existing businesses. Additionally, the Petitioner will provide noise mitigation measures and will be required to produce documentation and special testing to verify compliance with all performance standards required by the I-1 Limited Industrial District. The proposal takes advantage of an underutilized site in South Mount Prospect, and is a high-quality industrial development. The project's long-term benefits to the Village are significant and will positively impact residents and existing businesses in South Mount Prospect. The 2025 amendment shifts the project toward fewer but much larger buildings, with enhanced utility and mechanical systems, while embedding significant environmental efficiencies—especially in water and sewer use—and maintaining strong fiscal, employment, and recreational benefits for the Village. The proposed use is compatible to the area and the development meets all long-range planning and policy documents related to the site.

**Public Comment:** At the October 23, 2025, Planning & Zoning Commission meeting, a resident to the north of the proposed development, expressed concern about the project's impact on his electric bill and whether the existing power grid has sufficient capacity to serve the development. A representative of ComEd responded that costs would be recovered through the business customer category serving large-load users and would not impact residential customers, and confirmed that ComEd has adequate capacity to accommodate the project.

**Planning and Zoning Commission:** At the Planning and Zoning Commission meeting on October 23, 2025, the Commission recommended approval of the request by a unanimous

vote of 4-0 of the commissioners present.

**Waive Second Reading:** The Petitioner is requesting that the Village Board waive the second reading and take final action at the October 28, 2025 meeting.

## Alternatives

1. Approve a final plat of subdivision titled "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2" prepared by Gewalt Hamilton Associates, Inc. and dated 10/09/2025.
2. Approve a plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/07/2025, dedicating land to the Illinois Department of Transportation (IDOT) for public sidewalks, subject to the condition listed in the attached ordinance.
3. Approve a plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/09/2025, dedicating land to the Cook County Department of Transportation and Highways for public sidewalks, subject to the condition listed in the attached ordinance.
4. Approve a conditional use to amend the final planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five parking spaces, two electrical substations, mechanical yard, satellite antenna yard, and related site improvements, as identified on the Petitioner's approved plans, subject to the conditions listed in the attached ordinance.
5. Action at the discretion of the Village Board.

## Staff Recommendation

Approve:

1. A final plat of subdivision titled "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2" prepared by Gewalt Hamilton Associates, Inc. and dated 10/09/2025.
2. A plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/07/2025, dedicating land to the Illinois Department of Transportation (IDOT) for public sidewalks, subject to the condition listed in the attached ordinance.
3. A plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/09/2025, dedicating land to the Cook County Department of Transportation and Highways for public sidewalks, subject to the condition listed in the attached ordinance.
4. A conditional use to amend the final planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five parking spaces, two electrical substations, mechanical yard, satellite antenna yard, and related site improvements, as identified on the Petitioner's approved plans, subject to the conditions listed in attached ordinance.

## Attachments

1. PZ-21-25 Plans
2. PZ-21-25 Final Plats
3. PZ-21-25 Staff Report

4. PZ-21-25 Administrative Content
5. PZ-21-25 Request to Waive Second Reading
6. PZ-21-25 Technical Reports
7. PZ-21-25 Village Review Letter (10.17.2025)
8. PZ-21-25 Meeting Minutes
9. PZ-21-25 Ordinance_redlined
10. PZ-21-25 Ordinance_clean

# MOUNT PROSPECT TECHNOLOGY CAMPUS
# PUD SITE IMPROVEMENT PLANS
## 1200 E ALGONQUIN RD & 1200 DEMPSTER ST
## MOUNT PROSPECT, IL

J.U.L.I.E
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
CALL 811

811 Know what's below. Call before you dig.

### STANDARD SYMBOLS

| FEATURE | EXISTING | PROPOSED |
|---|---|---|
| BUFFALO BOX | | |
| BUSH/SHRUB | | |
| CATCH BASIN | | C.O. |
| CLEANOUT | | |
| COMBINE SEWER LINE | | |
| CONTOUR | 708 | 708 |
| CULVERT | | |
| DITCH/SWALE | | |
| ELECTRIC LINE | E | E |
| ELECTRIC MANHOLE | | |
| FENCE | X X X X | X X X X |
| FIRE HYDRANT | | |
| FLARED END SECTION | | |
| GAS LINE | G | G |
| GAS MANHOLE | | |
| GAS VALVE | | |
| INLET | | |
| LIGHT POLE | | |
| OVERHEAD WIRES | A | A |
| POWER POLE | | |
| R.O.W LINE | | |
| R.O.W MARKER | | |
| SANITARY FORCEMAIN LINE | | |
| SANITARY SEWER LINE | | |
| SANITARY SEWER MANHOLE | | |
| SIGN | | |
| SPOT ELEVATION | ×850.00 | ×850.0 |
| STORM SEWER LINE | | |
| STORM SEWER MANHOLE | | |
| TELEPHONE LINE | T | T |
| TELEPHONE MANHOLE | | |
| TELEPHONE BOX/PEDESTAL | | |
| TREE-CONIFEROUS (SIZE/TAG#) | 345 | 345 |
| TREE-DECIDUOUS (SIZE/TAG#) | 12" | 12" |
| VALVE BOX | | |
| VALVE VAULT | | |
| WATER VALVE | | |
| WATERMAIN LINE | W | W |

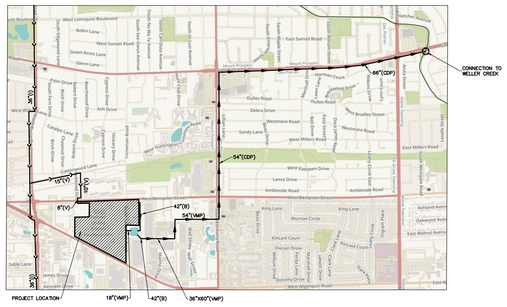
EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

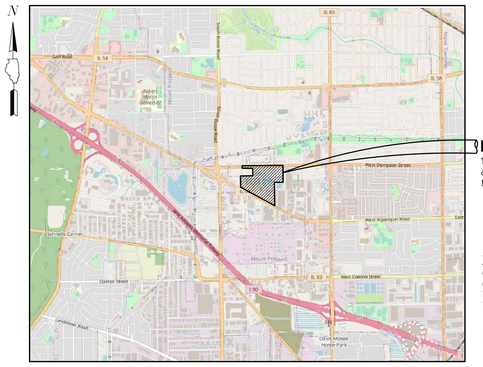
CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.

**NOTE: CONSTRUCTION MEANS, METHODS AND JOB SITE SAFETY IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR**

### MWRD SEWER ROUTING MAP

LEGEND:
(VMP) = VILLAGE OF MT. PROSPECT OWNED
(CDP) = CITY OF DES PLAINES OWNED
(B) = BRIARWOOD BUSINESS CENTER OWNED
(I) = MWRD SEWER
X" = PIPE DIAMETER
SANITARY SEWER
STORM SEWER




**LOCATION MAP**
**(Not to Scale)**

**PROJECT LOCATION**
1200 E ALGONQUIN RD
& 1200 DEMPSTER ST
MOUNT PROSPECT, IL

**TOPOGRAPHIC SURVEY BY:**
GEWALT HAMILTON ASSOCIATES, INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061
TELEPHONE: 847-478-9700

**PROFESSIONAL DESIGN FIRM LICENSE:**
GEWALT HAMILTON ASSOCIATES, INC.
DESIGN FIRM - LAND SURVEYOR/PROF ENG
LICENSE NUMBER: 184.000922-0010
EXPIRES: 4/30/2023

**PLANS PREPARED FOR:**
CLOUDHQ LLC
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

BENCHMARK:
ELEVATIONS SHOWN HEREON ARE OBTAINED VIA GPS USING TRIMBLE® VRS™ NOW (NO PUBLISHED MONUMENT VERIFIED)
DATUM: NAVD88

| POINT # | ELEVATION | DESCRIPTION |
|---|---|---|
| 9 | 666.68 | MAG NAIL IN LINNEMAN ROAD |
| 11 | 668.84 | CUT 'X' IN TOP OF CURB |
| 14 | 664.27 | CUT 'X' IN SIDEWALK |
| 15 | 670.92 | CUT 'X' IN SIDEWALK |
| 200 | 672.95 | IRON PIN |
| 204 | 666.88 | CUT 'X' IN SIDEWALK |
| 205 | 665.91 | CUT 'X' IN SIDEWALK |
| 206 | 673.14 | MAG NAIL IN PARKING LOT |
| 207 | 672.32 | MAG NAIL IN PAVEMENT |
| 208 | 677.35 | MAG NAIL IN PAVEMENT |
| 209 | 663.771 | CUT 'X' IN SIDEWALK |
| 210 | 667.464 | CUT 'X' IN SIDEWALK |
| 211 | 670.414 | CUT 'X' IN SIDEWALK |
| 212 | 675.485 | CUT 'X' IN SIDEWALK |
| 213 | 679.846 | CUT 'X' IN SIDEWALK |
| 214 | 662.955 | CUT 'X' IN TOP OF CURB |
| 215 | 662.856 | CUT 'X' IN TOP OF CURB |

### SHEET INDEX


| | |
|---|---|
| **C01-00** | **TITLE SHEET** |
| C01-01 | GENERAL NOTES |
| C01-02 | GENERAL NOTES - MWRD |
| C01-03 | PUD SITE PLAN |
| **C02-00** | **EXISTING CONDITIONS & DEMOLITION PLAN - OVERALL** |
| C02-01 | EXISTING TREE SURVEY EXHIBIT |
| C02-02 | EXISTING TREE SURVEY TABLE |
| **C03-00** | **GEOMETRIC PLAN - OVERALL** |
| C03-01 | GEOMETRIC PLAN - SHEET 1 |
| C03-02 | GEOMETRIC PLAN - SHEET 2 |
| C03-03 | GEOMETRIC PLAN - SHEET 3 |
| C03-04 | CONSTRUCTION PHASING AND LOGISTICS PLAN - PHASE 1 |
| C03-05 | CONSTRUCTION PHASING AND LOGISTICS PLAN - PHASE 2 |
| **C04-00** | **GRADING PLAN - OVERALL** |
| C04-01 | GRADING PLAN - SHEET 1 |
| C04-02 | GRADING PLAN - SHEET 2 |
| C04-03 | GRADING PLAN - SHEET 3 |
| C04-04:22 | SITE SECTIONS |
| **C05-00** | **UTILITY PLAN STORM - OVERALL** |
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| C05-02 | UTILITY PLAN STORM - SHEET 2 |
| C05-03 | UTILITY PLAN STORM - SHEET 3 |
| **C06-00** | **UTILITY PLAN SANITARY - OVERALL** |
| C06-01 | UTILITY PLAN SANITARY - SHEET 1 |
| C06-02 | UTILITY PLAN SANITARY - SHEET 2 |
| C06-03 | UTILITY PLAN SANITARY - SHEET 3 |
| **C07-00** | **UTILITY PLAN WATER MAIN - OVERALL** |
| C07-01 | UTILITY PLAN WATER MAIN - SHEET 1 |
| C07-02 | UTILITY PLAN WATER MAIN - SHEET 2 |
| C07-03 | UTILITY PLAN WATER MAIN- SHEET 3 |
| **C08-00** | **SOIL EROSION AND SEDIMENT CONTROL PLAN (NOT INCLUDED)** |
| **C09-00:06** | **DETAILS** |
| C09-07:08 | STORMTRAP DETENTION DETAILS |
| **C10-00** | **PROPOSED DRAINAGE EXHIBIT - FULL BUILD-OUT CONCEPT** |
| EX R | EXHIBIT R |
| EX AT | VEHICLE TURNING MOVEMENTS EXHIBIT |
| **C11-00:10** | **LANDSCAPE PLANS** |
| 1 | FINAL PLAT OF SUBDIVISION |


**COORDINATING/PERMITTING AGENCIES:**

| | |
|---|---|
| VILLAGE OF MOUNT PROSPECT | 847-870-5640 |
| METROPOLITAN WATER RECLAMATION DISTRICT LOCAL SEWER SECTION | 312-751-5600 |
| MWRD FIELD OFFICE | 708-588-4055 |
| ILLINOIS ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) | 217-782-0610 |
| ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF WATER POLLUTION CONTROL SANITARY SEWER PERMIT | 1-217-782-2027 |
| ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF PUBLIC WATER SUPPLIES | 1-217-782-3397 |
| ILLINOIS DEPARTMENT OF TRANSPORTATION | 1-847-705-4132 |
| COOK COUNTY DEPARTMENT OF TRANSPORTATION & HIGHWAYS | 1-312-603-1670 |

DRAINAGE STATEMENT

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF THE SURFACE WATERS WILL NOT BE CHANGED BY CONSTRUCTION OF THIS SUBDIVISION (DEVELOPMENT), OR ON THIS SITE, OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE PROPERTY OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF CONSTRUCTION OF THE SUBDIVISION (DEVELOPMENT), OR THIS SITE.

Date: 08.29.2025

DONALD E. DIXON, P.E.
Engineer

**Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.**
P (708) 588-4055
E WMOJobStart@mwrd.org

**ISSUED FOR PRELIMINARY/FINAL PUD REVIEW - SUBMITTAL #4**

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
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| 3 | 02.21.2025 | ISSUED FOR 100% DD |
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| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

REVISIONS

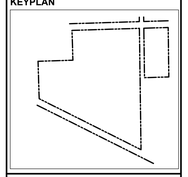
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



TITLE SHEET

JOB 5253.220
SHEET **C01-00**

## GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED ACCORDING TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" LATEST EDITION, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" LATEST EDITION, THE ILLINOIS PLUMBING CODE, THE DETAILS IN THESE PLANS, THE CONTRACT DOCUMENTS, ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, THE IEPA AND ORDINANCES OF AUTHORITIES HAVING JURISDICTION AND ALL ADDENDA THERETO.

2. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

3. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.

4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE PRIOR TO ORDERING MATERIALS. IN ADDITION, THE CONTRACTOR MUST VERIFY THE LINE AND GRADES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSION OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS/HER OWN RISK AND EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY COSTS INCURRED..

5. ALL PAVEMENT DIMENSIONS ARE SHOWN TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

6. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE THE MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.

8. IF DURING CONSTRUCTION THE CONTRACTOR ENCOUNTERS OR OTHERWISE BECOMES AWARE OF ANY SEWERS OR UNDERDRAINS OTHER THAN THOSE SHOWN ON THE PLANS, HE/SHE SHALL INFORM THE ENGINEER, WHO SHALL DIRECT THE WORK NECESSARY TO MAINTAIN OR REPLACE THE FACILITIES IN SERVICE AND TO PROTECT THEM FROM DAMAGE DURING CONSTRUCTION IF MAINTAINED. EXISTING FACILITIES TO BE MAINTAINED THAT ARE DAMAGED BECAUSE OF NON-COMPLIANCE WITH THIS PROVISION SHALL BE REPLACED AT THE CONTRACTOR'S OWN EXPENSE.

9. THE CONTRACTOR SHALL PROVIDE TEMPORARY TOILET FACILITIES AND HAND SANITIZING STATIONS FOR THE USE OF ALL THE CONTRACTORS PERSONNEL EMPLOYED ON THE WORK SITE. THE FACILITIES SHALL BE MAINTAINED IN PROPER SANITARY CONDITION THROUGHOUT THE PROJECT. THE LOCATION OF THE TEMPORARY FACILITIES SHALL BE APPROVED BY THE ENGINEER.

10. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE NPDES PERMIT AND SWPPP MANUAL. IF NO NPDES PERMIT OR SWPPP MANUAL IS NEEDED FOR THE PROJECT THE CONTRACTOR SHALL PERFORM SOIL EROSION SEDIMENT CONTROL BEST PRACTICES OR AS DIRECTED BY THE OWNER TO PREVENT ILLICIT DISCHARGES FROM THE SITE.

## UTILITY NOTES

1. UNDERGROUND WORK SHALL INCLUDE TRENCHING, DISPOSAL OF EXCESS MATERIAL, DEWATERING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION, AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED BUT SHALL BE CONSIDERED AS INCLUDED TO THE COST OF THE CONTRACT. ALL SEWER SHALL BE INSTALLED USING A LASER AND BEGIN AT THE DOWNSTREAM END.

2. MACHINE CORE ALL CONNECTIONS TO EXISTING STRUCTURES USING A CORE DRILL. HAMMERING OR SAWING OF STRUCTURES WILL NOT BE ALLOWED.

3. SANITARY SERVICE CONNECTIONS TO NEW SEWERS SHALL BE MADE WITH WYE BRANCHES. WYE BRANCHES SHALL BE FACTORY MANUFACTURED PERMANENTLY AFFIXED TO THE MAIN SEWER. TEE BRANCHES ARE NOT ALLOWED.

4. ALL CONNECTIONS TO EXISTING SANITARY MANHOLES SHALL BE INSTALLED WITH A NEOPRENE BOOT SECURED WITH DOUBLE STAINLESS STEEL STRAPS MEETING THE REQUIREMENTS OF ASTM C-923.

5. ALL CONNECTIONS TO EXISTING OR DISSIMILAR STORM/SANITARY LINES SHALL BE DONE WITH STAINLESS STEEL NON-SHEAR COUPLINGS.

6. STONE BEDDING AND BACKFILL SHALL BE OMITTED FOR A DISTANCE OF 15 FEET UP AND DOWNSTREAM OF SEWERS DRAINING TO OR FROM PONDS OR STREAMS. THE REPLACED BEDDING SHALL BE SILTY CLAY SOIL MECHANICALLY COMPACTED TO 90% MODIFIED PROCTOR DENSITY. THE USE OF PERMEABLE SOILS WILL NOT BE PERMITTED.

7. ALL WATER MAIN SHALL HAVE MECHANICAL RESTRAINED TYPE JOINTS AT ALL CONNECTIONS AND FITTINGS. IN ADDITION, ALL HARDWARE SHALL BE STAINLESS STEEL.

8. THRUST BLOCKING SHALL BE PROVIDED ON WATER MAIN AT ALL BENDS, TEES, ELBOWS, ETC. INDIVIDUAL INSPECTION FOR ALL THRUST BLOCKING IS REQUIRED. THRUST BLOCKING SHALL BE POURED IN PLACE CONCRETE. PRECAST BLOCKS MAY BE USED AS APPROVED BY THE ENGINEER IN THE FIELD.

9. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER. ALL DOWNSPOUTS, SIDE YARD DRAINS, AND OUTSIDE DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM. FOOTING DRAINS SHALL FIRST DRAIN TO A SUMP PIT.

## PROJECT SPECIFIC NOTES

1. THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS THAT INCLUDE; CRITICAL SPOT GRADES SUCH AS OVERFLOW ELEVATIONS, SPOT ELEVATIONS NEAR ENTRANCES, SPOT ELEVATIONS ALONG THE DESIGNATED ADA ROUTE, SUFFICIENT INFORMATION SUCH THAT THE ENGINEER MAY VERIFY DETENTION VOLUMES, RIM AND INVERT ELEVATIONS OF ALL SEWERS, RIM AND TOP OF PIPE ELEVATIONS OF ALL WATER MAIN, LOCATIONS OF ALL INSTALLED UNDERGROUND UTILITIES, LOCATIONS OF ALL BURIED BENDS AND FITTINGS AND ALL FIELD CHANGES FROM THE APPROVED DRAWINGS.

2. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF 12 MONTHS FROM THE DATE OF INITIAL ACCEPTANCE OF THE WORK BY THE OWNER AGAINST ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE.

3. ALL CONSTRUCTION WILL BE INSPECTED BY THE OWNER'S REPRESENTATIVE. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY AS WELL AS THE STANDARD SPECIFICATIONS.

4. ALL PUBLIC WATER MAINS AND SANITARY SEWER MAINS MUST BE ACCEPTED BY THE VILLAGE OF MOUNT PROSPECT.

5. THE SEWER AND WATER CONTRACTOR SHALL BE REQUIRED TO BE LICENSED AND BONDED WITH THE VILLAGE OF MOUNT PROSPECT BEFORE WORK IS STARTED.

6. CONTRACTOR SHALL NOTIFY THE VILLAGE OF MOUNT PROSPECT (847-870-5640) AND THE PROJECT ENGINEER (847-478-9700) AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT.

7. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, THE MUNICIPALITY AND THEIR AGENTS, FROM ALL LIABILITY INVOLVED IN CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK ON THIS PROJECT.

8. THE CONTRACTOR MUST CARRY INSURANCE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. ALL OFFICIALS, EMPLOYEES AND AGENTS OF GEWALT HAMILTON ASSOCIATES MUST BE LISTED AS ADDITIONAL INSURED.

9. ALL ELEVATIONS ARE ON NAVD 88 VERTICAL DATUM.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL TO ADEQUATELY INFORM AND PROTECT THE PUBLIC OF ALL CONSTRUCTION OPERATIONS.

11. STOCKPILING MATERIAL WITHIN THE 100 YEAR FLOOD PLAIN AND OR THE FLOODWAY IS STRICTLY PROHIBITED

12. PRIOR TO PLACEMENT OF FABRIC AND STONE, THE SUBGRADE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER. PROOF-ROLLING SHALL BE DONE USING A THREE AXLE DUMP TRUCK TOGETHER WITH LOAD WEIGHING AT LEAST TWENTY-FIVE (25) TONS. THE LOAD SHALL BE UNIFORMLY PLACED IN THE DUMP BODY. ALL DEFICIENCIES SHALL BE REPAIRED AND RE-PROOF-ROLLED UNTIL FOUND ACCEPTABLE TO THE ENGINEER.

13. CRUSHED CONCRETE IS NOT PERMITTED FOR USE ON THE PROJECT UNLESS PRIOR WRITTEN NOTICE IS GIVEN BY THE ENGINEER.

14. ALL STONE USED ON THE PROJECT SHALL BE CRUSHED UNLESS SPECIFICALLY NOTED OTHERWISE.

15. ALL CONNECTIONS TO EXISTING STORM MANHOLES SHALL BE INSTALLED WITH A NEOPRENE BOOT SECURED WITH DOUBLE STAINLESS STEEL STRAPS MEETING THE REQUIREMENTS OF ASTM C-923.

16. ALL CONCRETE SHALL HAVE A LIGHT BROOM FINISH APPLIED WITHIN 1 HOUR OF FINAL STRIKING.

17. ALL CONCRETE SHALL CONSIST OF PORTLAND CEMENT CONCRETE MEETING REQUIREMENTS OF SECTION 1020. ALL SIDEWALKS, CURBS AND POST FOUNDATIONS SHALL BE CLASS SI 3,500 PSI @ 14 DAYS. ALL PAVEMENT SHALL BE CLASS PV 3,500 PSI @ 14 DAYS. WHERE NOTED ON THE PLANS HIGH EARLY CONCRETE SHALL BE CLASS PV TYPE III 3,500 PSI CONCRETE @ 3 DAYS. ALL CONCRETE REQUIRING A CURE TIME FASTER THAN 3 DAYS SHALL HAVE A MIX DESIGN SUBMITTED TO THE ENGINEER FOR APPROVAL. WHEN REQUIRED BY THE MUNICIPALITY, FLY ASH SHALL NOT BE USED IN THE MIX DESIGN. SLUMP SHALL BE 2-4" AND AIR CONTENT SHALL BE BETWEEN 5-8% UNLESS MODIFIED BY ARTICLE 1020.04.

18. ALL CONCRETE SHALL HAVE A WHITE, IDOT TYPE 3 CURING COMPOUND APPLIED TO THE SURFACE WITHIN 1 HOUR OF FINAL STRIKING AT THE MANUFACTURER RECOMMENDED APPLICATION RATE.

19. 3/4" THICK PRE-MOLDED FIBER EXPANSION JOINTS WITH 2 , 3/4" x 18" PLAIN ROUND, STEEL DOWEL BARS SHALL BE INSTALLED IN ALL CURBS AT (45') FORTY-FIVE FOOT INTERVALS AND AT ALL P.C.'S, P.T.'S AND CURB RETURNS. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. ALL EXPANSION JOINTS MUST BE FREE OF CONCRETE FOR FULL DEPTH. CONTRACTION JOINTS SHALL BE TOOLED AT 15' INTERVALS.

20. UNLESS OTHERWISE NOTED ON THE PLANS WHENEVER NEW CONCRETE ABUTS EXISTING/ OR NEW CONCRETE SET A 1/2" THICK PRE-MOLDED FIBER EXPANSION JOINT AND DOWEL WITH SMOOTH 12" #4 BARS @ 24" O.C. THIS INCLUDES CONCRETE POURED ADJACENT TO EXISTING SIDEWALKS, CURBS AND BUILDING. THE DOWEL BARS SHOULD BE 4" INTO EXISTING CONCRETE WITH 8" EXTENDING INTO NEW CONCRETE.

21. ALL DOWEL BARS AND TIE BARS SHALL BE EPOXY COATED UNLESS NOTED OTHERWISE.

22. ALL PAVEMENT AND BUILDING SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY (ASTM D-1557). ALL SUBGRADE IN LAWN AREAS SHALL BE COMPACTED TO 90% MODIFIED PROCTOR DENSITY (ASTM D-1557). ALL TOPSOIL AND SUBGRADE 6" BELOW TOPSOIL SHALL BE COMPACTED TO 80% STANDARD PROCTOR DENSITY (ASTM D-698)

23. SPREAD SCREENED TOPSOIL ON ALL DISTURBED AREAS AND PROPOSED GREEN AREAS. TOPSOIL SHALL COMPLY WITH REQUIREMENTS OF ARTICLE 1081.05.

24. ALL SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ILLINOIS SUPPLEMENT OR ILLINOIS DEPARTMENT OF TRANSPORTATION DETAILS.

25. ALL SIGNAGE NOT ATTACHED TO SIGNAL OR LIGHTING POLES SHALL BE MOUNTED ON TELESCOPING STEEL SIGN SUPPORTS WITH BREAKAWAY BASES IN ACCORDANCE WITH SECTION 728.

26. ALL SIGNAGE SHALL HAVE TYPE ZZ SHEETING.

## EROSION CONTROL NOTES

1. AT A MINIMUM, THE CONTRACTOR SHALL INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S URBAN MANUAL.

2. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS.

3. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY ROAD OF MATERIAL THAT IS FROM THE PROJECT. THIS WILL BE DONE AT THE CLOSE OF EACH DAY OF WORK OR MORE FREQUENTLY AS FIELD CONDITIONS WARRANT.

4. ALL STORM WATER STRUCTURES WITH OPEN LIDS SHALL BE PROTECTED WITH INLET FILTER BASKETS. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED AS NEEDED, AND BASKETS SHALL BE REPAIRED OR REPLACED AS NEEDED.

5. AFTER ACHIEVING PERMANENT VEGETATION, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED, AND THE DRAINAGE STRUCTURES SHALL BE CLEANED.

6. THE CONTRACTOR SHALL KEEP A WATER SOURCE AT THEIR DISPOSAL FOR THE PURPOSE OF WATERING DOWN SOIL ON SITE AND ADJACENT ROADWAYS WHICH OTHERWISE MAY BECOME AIRBORNE.

7. THE CONTRACTOR SHALL STABILIZE ALL IDLE, DISTURBED AREAS WITHIN SEVEN DAYS OF CESSATION OF THE CONSTRUCTION ACTIVITIES IN THAT AREA.

8. THE CONTRACTOR IS EXPRESSLY ADVISED NOT TO DISTURB AREAS WHICH ARE OUTSIDE THOSE NECESSARY TO PROVIDE THE IMPROVEMENTS AS CALLED FOR IN THE PLANS.

9. ALL EROSION CONTROL MEASURES SHALL BE REPLACED IF DAMAGED OR MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.

10. ALL BYPASS CHANNELS, MUST BE CONSTRUCTED SO THAT CHANNEL FLOWS WILL NOT CAUSE EROSION OF EXCAVATED MATERIAL. IN EACH CASE A SEDIMENTATION BASIN MUST BE CONSTRUCTED SO AS TO ALLOW THE SEDIMENT TO SETTLE PRIOR TO THE DOWNSTREAM OUTLET OF THE PROJECT AREA.

11. PUMPS MAY BE USED AS BYPASS DEVICES, BUT IN NO CASE WILL THE WATER BE DIVERTED OUTSIDE THE PROJECT LIMIT. ALL PUMPED WATER SHALL BE FREE OF SILT. PUMPING MAY REQUIRE THE USE OF A SEDIMENT CONTAINMENT FILTER BAG AND OTHER SUPPLEMENTAL SEDIMENT CONTROL MEASURES.

12. CONCRETE WASHOUT FACILITIES SHALL BE MADE AVAILABLE IF NEEDED, AND PROPERLY MAINTAINED THROUGHOUT THE PROJECT.

13. PROPERLY MANAGE ALL MATERIAL STORAGE AREAS, PORTABLE TOILETS, AND EQUIPMENT FUELING, CLEANING, AND MAINTENANCE AREAS TO ENSURE THESE AREAS ARE FREE OF SPILLS, LEAKS, OR OTHER POTENTIAL POLLUTANTS.

14. WASTE, CONSTRUCTION DEBRIS, AND BUILDING MATERIALS SHALL BE COLLECTED AND PLACED IN APPROVED RECEPTACLES.

CORGAN

kW Mission Critical Engineering Member of WSP

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GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

| | ISSUES | |
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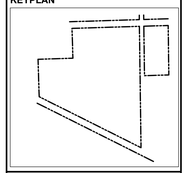
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



GENERAL NOTES

JOB 5253.220
SHEET

C01-01

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A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   * STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * VILLAGE OF MOUNT PROSPECT MUNICIPAL CODE;
   * THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   * IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055 OR SEND EMAIL NOTIFICATION WITH PROJECT NAME, LOCATION AND PERMIT NUMBER TO WMOJOBSTART@MWRD.ORG).

2. THE VILLAGE OF MOUNT PROSPECT ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.

3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS _____ FT.

2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.

3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.

4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.

5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.

6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.

8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL OF PROPER UTILITY AGENCIES.

9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.

10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.

2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.

3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.

4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).

5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.

6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.

7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

| PIPE MATERIAL | PIPE SPECIFICATIONS | JOINT SPECIFICATIONS |
|---|---|---|
| VITRIFIED CLAY PIPE | ASTM C-700 | ASTM C-425 |
| REINFORCED CONCRETE SEWER PIPE | ASTM C-76 | ASTM C-443 |
| CAST IRON SOIL PIPE | ASTM A-74 | ASTM C-564 |
| DUCTILE IRON PIPE | ANSI A21.51 | ANSI A21.11 |
| POLYVINYL CHLORIDE (PVC) PIPE | | |
| 6-INCH TO 15-INCH DIAMETER SDR 26 | ASTM D-3034 | ASTM D-3212 |
| 18-INCH TO 27-INCH DIAMETER F/DY=46 | ASTM F-679 | ASTM D-3212 |
| HIGH DENSITY POLYETHYLENE (HDPE) | ASTM D-3350<br>ASTM D-3035 | ASTM D-3261,F-2620 (HEAT FUSION)<br>ASTM D-3212,F-477 (GASKETED) |
| WATER MAIN QUALITY PVC | | |
| 4-INCH TO 36-INCH | ASTM D-2241 | ASTM D-3139 |
| 4-INCH TO 12-INCH | AWWA C900 | ASTM D-3139 |
| 14-INCH TO 48-INCH | AWWA C905 | ASTM D-3139 |

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

| PIPE MATERIAL | PIPE SPECIFICATIONS | JOINT SPECIFICATIONS |
|---|---|---|
| POLYPROPYLENE (PP) PIPE | | |
| 12-INCH TO 24-INCH DOUBLE WALL | ASTM F-2736 | D-3212, F-477 |
| 30-INCH TO 60-INCH TRIPLE WALL | ASTM F-2764 | D3212, F-477 |

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.

10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.

11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
    b) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    c) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.

12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.

13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.

14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.

15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.

16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.

17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.

18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.

3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.

4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
    a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
    b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.

6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.

9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.

10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.

11. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.

12. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).

13. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

14. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.

15. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.

16. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.

17. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.

18. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.

19. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.

20. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.

21. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.

22. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.

23. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

TECHNICAL GUIDANCE MANUAL — 10/13/2022

MWRD GENERAL NOTES — STD. DWG. NO.18 — PAGE NO. 19

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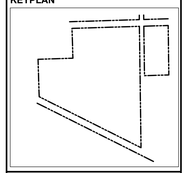
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DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



GENERAL NOTES - MWRD

JOB 5253.220
SHEET

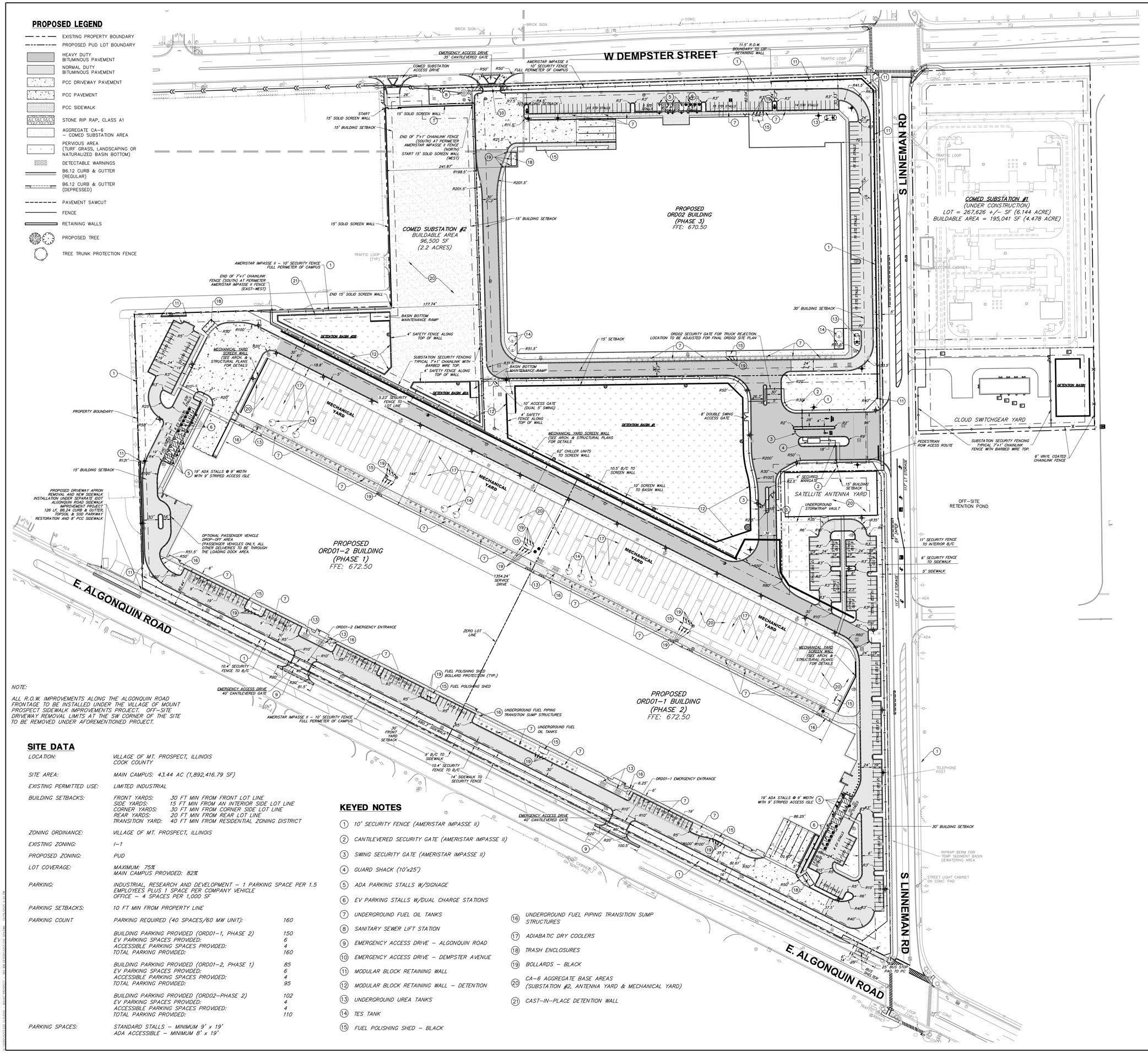
C01-02



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## PROPOSED LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PUD LOT BOUNDARY
- HEAVY DUTY BITUMINOUS PAVEMENT
- NORMAL DUTY BITUMINOUS PAVEMENT
- PCC DRIVEWAY PAVEMENT
- PCC PAVEMENT
- PCC SIDEWALK
- STONE RIP RAP, CLASS A1
- AGGREGATE CA–6 – COMED SUBSTATION AREA
- PERVIOUS AREA (TURF GRASS, LANDSCAPING OR NATURALIZED BASIN BOTTOM)
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- PAVEMENT SAWCUT
- FENCE
- RETAINING WALLS
- PROPOSED TREE
- TREE TRUNK PROTECTION FENCE




GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

## NOTE:

ALL R.O.W. IMPROVEMENTS ALONG THE ALGONQUIN ROAD FRONTAGE TO BE INSTALLED UNDER THE VILLAGE OF MOUNT PROSPECT SIDEWALK IMPROVEMENTS PROJECT. OFF–SITE DRIVEWAY REMOVAL LIMITS AT THE SW CORNER OF THE SITE TO BE REMOVED UNDER AFOREMENTIONED PROJECT.

## SITE DATA

| | | |
|---|---|---|
| LOCATION: | VILLAGE OF MT. PROSPECT, ILLINOIS<br>COOK COUNTY | |
| SITE AREA: | MAIN CAMPUS: 43.44 AC (1,892,416.79 SF) | |
| EXISTING PERMITTED USE: | LIMITED INDUSTRIAL | |
| BUILDING SETBACKS: | FRONT YARDS: 30 FT MIN FROM FRONT LOT LINE<br>SIDE YARDS: 15 FT MIN FROM AN INTERIOR SIDE LOT LINE<br>CORNER YARDS: 30 FT MIN FROM CORNER SIDE LOT LINE<br>REAR YARDS: 20 FT MIN FROM REAR LOT LINE<br>TRANSITION YARD: 40 FT MIN FROM RESIDENTIAL ZONING DISTRICT | |
| ZONING ORDINANCE: | VILLAGE OF MT. PROSPECT, ILLINOIS | |
| EXISTING ZONING: | I–1 | |
| PROPOSED ZONING: | PUD | |
| LOT COVERAGE: | MAXIMUM: 75%<br>MAIN CAMPUS PROVIDED: 82% | |
| PARKING: | INDUSTRIAL, RESEARCH AND DEVELOPMENT – 1 PARKING SPACE PER 1.5 EMPLOYEES PLUS 1 SPACE PER COMPANY VEHICLE<br>OFFICE – 4 SPACES PER 1,000 SF | |
| PARKING SETBACKS: | 10 FT MIN FROM PROPERTY LINE | |
| PARKING COUNT | PARKING REQUIRED (40 SPACES/60 MW UNIT): | 160 |
| | BUILDING PARKING PROVIDED (ORD01–1, PHASE 2) | 150 |
| | EV PARKING SPACES PROVIDED: | 6 |
| | ACCESSIBLE PARKING SPACES PROVIDED: | 4 |
| | TOTAL PARKING PROVIDED: | 160 |
| | BUILDING PARKING PROVIDED (ORD01–2, PHASE 1) | 85 |
| | EV PARKING SPACES PROVIDED: | 6 |
| | ACCESSIBLE PARKING SPACES PROVIDED: | 4 |
| | TOTAL PARKING PROVIDED: | 95 |
| | BUILDING PARKING PROVIDED (ORD02–PHASE 2) | 102 |
| | EV PARKING SPACES PROVIDED: | 4 |
| | ACCESSIBLE PARKING SPACES PROVIDED: | 4 |
| | TOTAL PARKING PROVIDED: | 110 |
| PARKING SPACES: | STANDARD STALLS – MINIMUM 9' x 19'<br>ADA ACCESSIBLE – MINIMUM 8' x 19' | |

## KEYED NOTES

1. 10' SECURITY FENCE (AMERISTAR IMPASSE II)
2. CANTILEVERED SECURITY GATE (AMERISTAR IMPASSE II)
3. SWING SECURITY GATE (AMERISTAR IMPASSE II)
4. GUARD SHACK (10'x25')
5. ADA PARKING STALLS W/SIGNAGE
6. EV PARKING STALLS W/DUAL CHARGE STATIONS
7. UNDERGROUND FUEL OIL TANKS
8. SANITARY SEWER LIFT STATION
9. EMERGENCY ACCESS DRIVE – ALGONQUIN ROAD
10. EMERGENCY ACCESS DRIVE – DEMPSTER AVENUE
11. MODULAR BLOCK RETAINING WALL
12. MODULAR BLOCK RETAINING WALL – DETENTION
13. UNDERGROUND UREA TANKS
14. TES TANK
15. FUEL POLISHING SHED – BLACK
16. UNDERGROUND FUEL PIPING TRANSITION SUMP STRUCTURES
17. ADIABATIC DRY COOLERS
18. TRASH ENCLOSURES
19. BOLLARDS – BLACK
20. CA–6 AGGREGATE BASE AREAS (SUBSTATION #2, ANTENNA YARD & MECHANICAL YARD)
21. CAST–IN–PLACE DETENTION WALL

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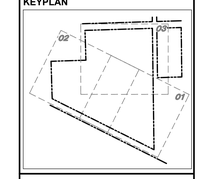
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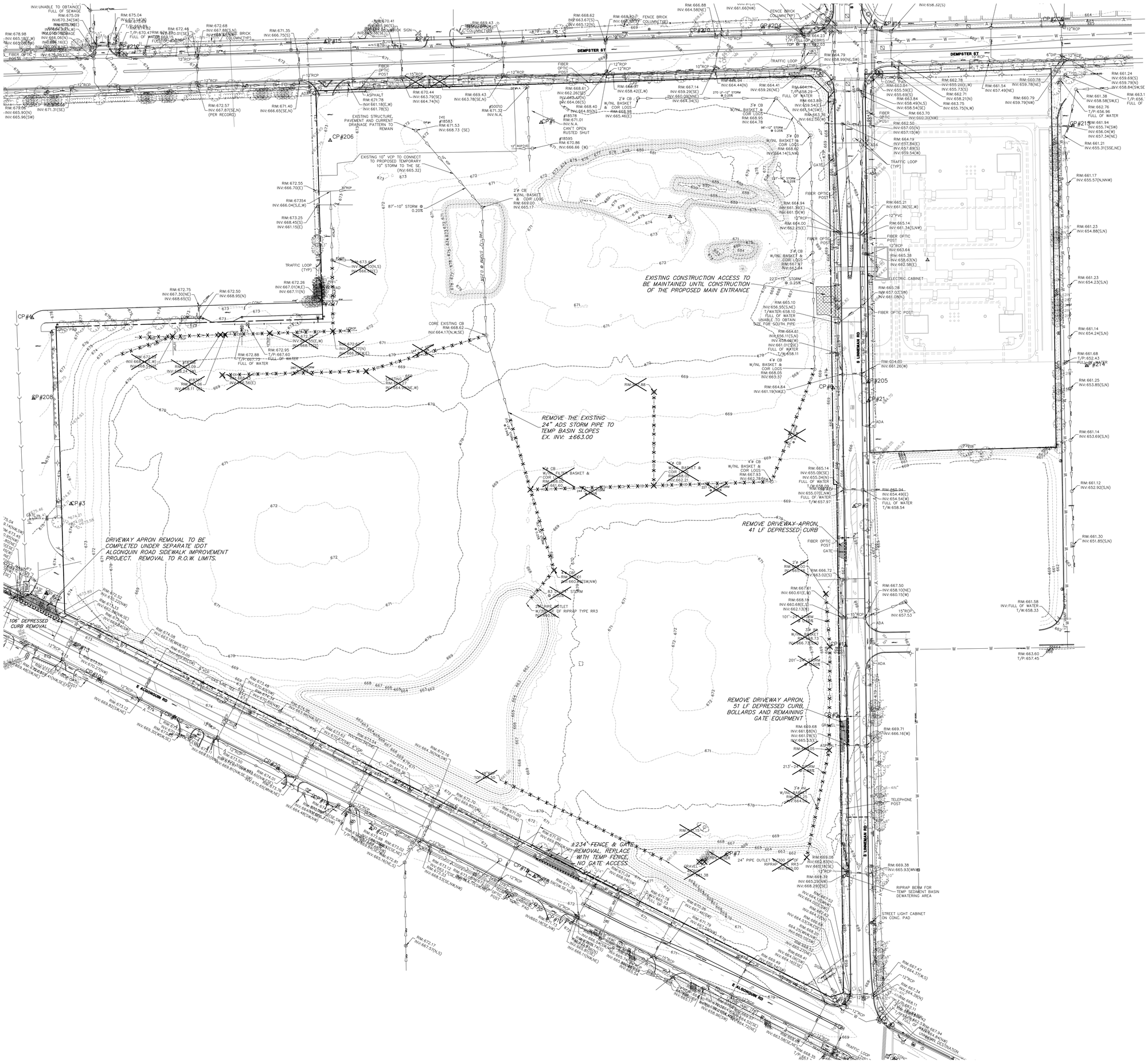
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



PUD SITE PLAN

JOB 5253.220
SHEET
C01-03




GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

## REMOVAL LEGEND

- AGGREGATE REMOVAL
- DRIVEWAY PAVEMENT REMOVAL (POST MASS GRADING)
- PAVEMENT REMOVAL FULL DEPTH
- SIGN REMOVAL
- TREE/SHRUB REMOVAL
- PERIMETER EROSION BARRIER
- TREE TRUNK PROTECTION FENCE
- CURB/COMBINATION CURB AND GUTTER REMOVAL
- UTILITY TO BE REMOVED
- FENCE TO BE REMOVED
- PAVEMENT SAWCUT
- STRUCTURE TO BE ABANDONED
- STRUCTURE REMOVAL
- CONSTRUCTION FENCE
- B-110 SOIL BORING
- CONSTRUCTION ENTRANCE

*NOTES.*
1. *CONSTRUCT CENTRAL SEDIMENT BASIN & NEW DISCHARGE PRIOR TO FILLING & DEMOLITION OF DRAINAGE PIPES IN & OUT OF EXISTING BASINS.*
2. *ALL WORK SHALL CONFORM TO REQUIREMENTS OF IEPA NPDES PERMIT ILR10ZBEP.*
3. *NO WORK SHALL BE COMMENCED PRIOR TO ISSUANCE OF MWRD EARTHWORK/FOUNDATION LIMITED PERMIT.*
4. *MWRD PERMIT 2023-0015 & 24-035 WILL BE CLOSED OUT PRIOR TO ISSUANCE OF NEW EARTHWORK/FOUNDATION LIMITED PERMIT.*

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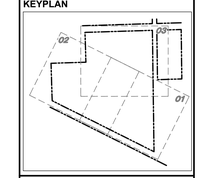
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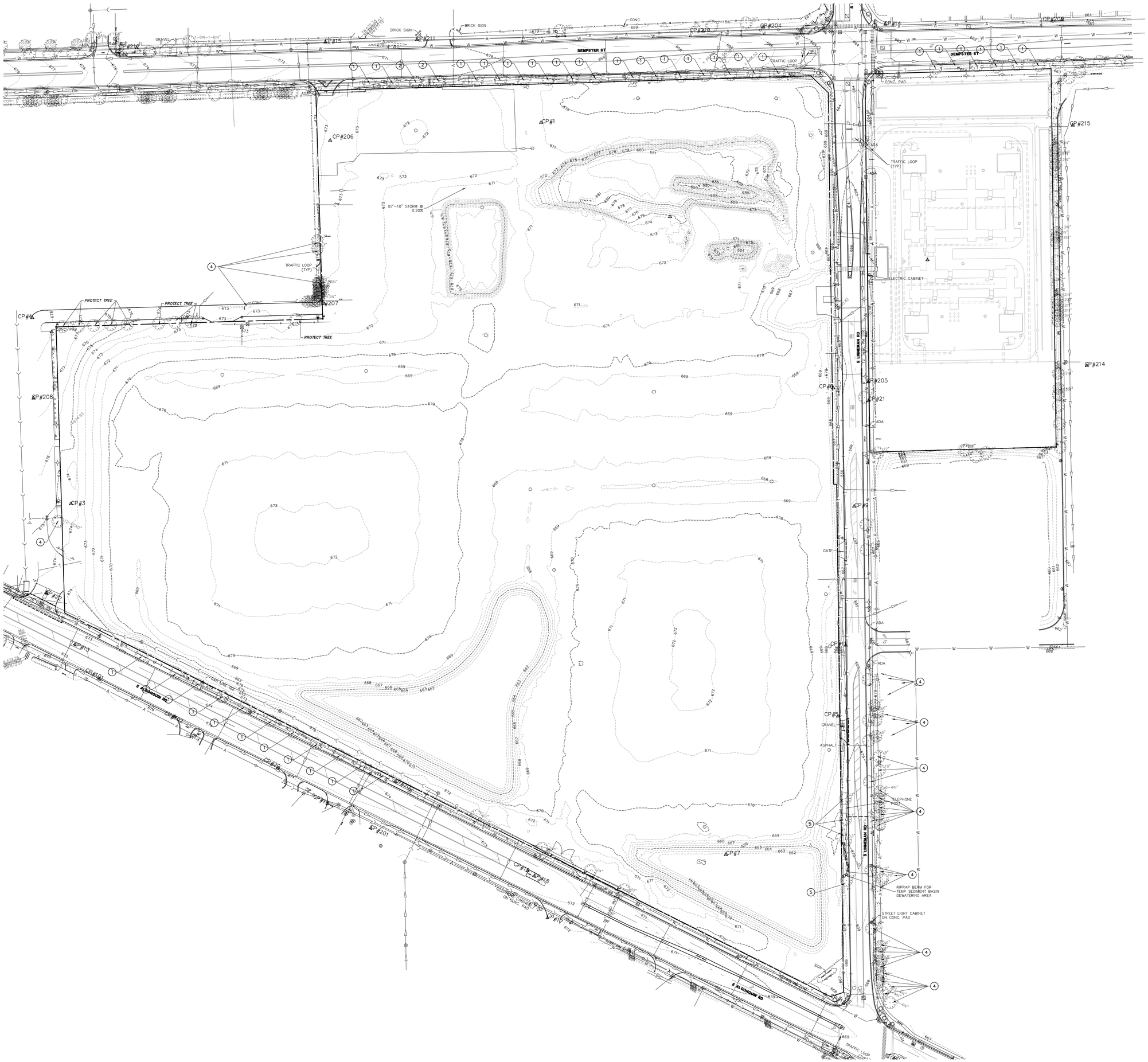
KEYPLAN




EXISTING CONDITIONS & DEMOLITION PLAN - OVERALL

**JOB** 5253.220
**SHEET**

**C02-00**




GRAPHIC SCALE

60 0 30 60

( IN FEET )

1 inch = 60 ft.

## KEYED NOTES

1. ROW TREE TO BE PRESERVED
2. ROW TREE TO BE REMOVED
3. PROJECT SITE TREE TO BE PRESERVED
4. OUTSIDE OF PROJECT LIMITS
5. ROW TREE ADDED AFTER TREE SURVEY

NOTES

1. ALL TREES NOT MARKED FOR REMOVAL OR PRESERVATION WILL BE REMOVED.
2. TREES OUTSIDE OF FENCE AND PROJECT LIMITS DO NOT NEED TO BE PROTECTED.
3. SEE C02-03 FOR KEY NOTE REFERENCES.

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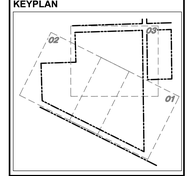
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




EXISTING TREE SURVEY EXHIBIT

JOB 5253.220
SHEET

**C02-01**

| Tag No. | Common Name | Size | Cond. | Form | |
|---|---|---|---|---|---|
| 1 | Common Hackberry | 3.25 | 2 | 2 | |
| 2 | Common Hackberry | 3.75 | 2 | 2 | |
| 3 | Common Hackberry | 3.25 | 2 | 2 | |
| 4 | Hybrid Elm | 4.5 | 2 | 3 | |
| 5 | Hybrid Elm | 4.5 | 2 | 3 | |
| 6 | Hybrid Elm | 4 | 3 | 3 | |
| 7 | Kentucky Coffeetree | 3.5 | 3 | 3 | |
| 8 | Kentucky Coffeetree | 4 | 2 | 2 | |
| 9 | Kentucky Coffeetree | 4 | 2 | 3 | |
| 10 | Kentucky Coffeetree | 3.75 | 2 | 3 | |
| 11 | Kentucky Coffeetree | 3.25 | 3 | 2 | |
| 12 | Norway Maple | 11 | 6 | 5 | |
| 13 | Norway Maple | 15 | 4 | 3 | |
| 69 | Common Honeylocust | 28 | 2 | 3 | |
| 72 | Common Honeylocust | 24 | 4 | 3 | |
| 73 | Common Honeylocust | 25 | 3 | 3 | |
| 75 | Common Honeylocust | 22 | 3 | 4 | |
| 327 | Basswood (American Linden) | 27 | 3 | 3 | |
| 331 | Basswood (American Linden) | 19 | 3 | 4 | |
| 332 | Basswood (American Linden) | 13 | 5 | 4 | |
| 333 | Basswood (American Linden) | 18 | 3 | 3 | |
| 336 | Basswood (American Linden) | 23 | 2 | 3 | |
| 337 | Basswood (American Linden) | 20 | 3 | 3 | |
| 338 | Basswood (American Linden) | 19 | 3 | 3 | |
| 341 | Basswood (American Linden) | 16 | 5 | 4 | |
| 342 | Basswood (American Linden) | 14 | 4 | 4 | |

| Tag No. | Common Name | Size | Cond. | Form | |
|---|---|---|---|---|---|
| 369 | Eastern Red-cedar | 3.5 | 2 | 2 | |
| 370 | Eastern Red-cedar | 3.25 | 2 | 2 | |
| 371 | Eastern Red-cedar | 3.25 | 2 | 2 | |
| 373 | Eastern Red-cedar | 3.25 | 2 | 2 | |
| 374 | Eastern Red-cedar | 3.25 | 2 | 2 | |
| 375 | Eastern Red-cedar | 3.5 | 2 | 2 | |
| 376 | Eastern Red-cedar | 3.5 | 2 | 3 | |
| 377 | Eastern Red-cedar | 4 | 2 | 3 | |
| 378 | Eastern Red-cedar | 3.5 | 2 | 2 | |
| 379 | Eastern Red-cedar | 4 | 2 | 3 | |
| 380 | Cockspur Hawthorn | 3.5 | 2 | 2 | |
| 382 | Osage-orange (Hedge-apple) | 4 | 3 | 3 | |
| 383 | Common Honeylocust | 7 | 3 | 3 | |
| 384 | Common Honeylocust | 3.25 | 3 | 2 | |
| 385 | Common Honeylocust | 6 | 3 | 3 | |
| 386 | Osage-orange (Hedge-apple) | 3 | 4 | 3 | |
| 387 | Osage-orange (Hedge-apple) | 3.5 | 3 | 3 | |
| 388 | Kentucky Coffeetree | 3.75 | 2 | 3 | |
| 389 | Kentucky Coffeetree | 3.5 | 2 | 3 | |
| 390 | Kentucky Coffeetree | 3.5 | 2 | 3 | |
| 391 | Kentucky Coffeetree | 3.25 | 2 | 2 | |
| 392 | Kentucky Coffeetree | 3.5 | 3 | 3 | |
| 393 | Kentucky Coffeetree | 3 | 2 | 3 | |
| 394 | Hybrid Elm | 4.25 | 3 | 3 | |
| 395 | Hybrid Elm | 4 | 3 | 3 | |
| 396 | Hybrid Elm | 4 | 3 | 3 | |
| 397 | Hybrid Elm | 3.25 | 3 | 3 | |
| 398 | Hybrid Elm | 4 | 3 | 3 | |
| 399 | Hybrid Elm | 4.25 | 3 | 3 | |
| 400 | Common Hackberry | 3.25 | 3 | 2 | |
| 401 | Common Hackberry | 3.25 | 2 | 2 | |
| 402 | Common Hackberry | 4 | 2 | 2 | |
| 403 | Common Hackberry | 3 | 3 | 3 | |
| 404 | Common Hackberry | 3.5 | 3 | 3 | |

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ISSUES

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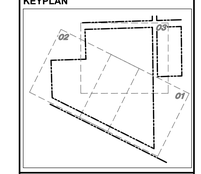
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1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

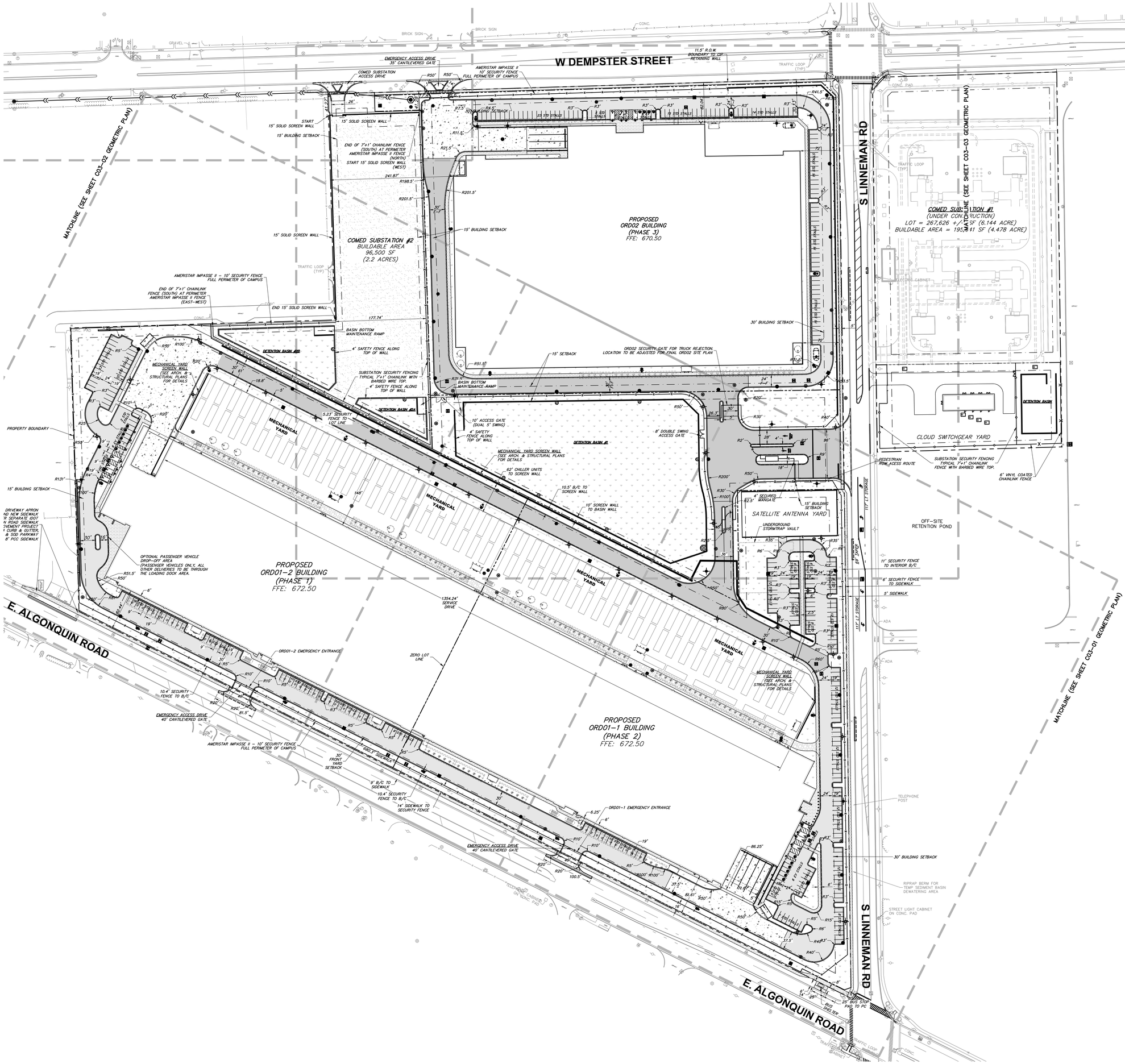
KEYPLAN




EXISTING TREE SURVEY TABLE

JOB 5253.220
SHEET

C02-02




N

GRAPHIC SCALE

60 0 30 60

( IN FEET )

1 inch = 60 ft.

## PROPOSED LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PUD LOT BOUNDARY
- HEAVY DUTY BITUMINOUS PAVEMENT
- NORMAL DUTY BITUMINOUS PAVEMENT
- PCC DRIVEWAY PAVEMENT
- PCC PAVEMENT
- PCC SIDEWALK
- STONE RIP RAP, CLASS A1
- AGGREGATE CA-6 - COMED SUBSTATION AREA
- PERVIOUS AREA (TURF GRASS, LANDSCAPING OR NATURALIZED BASIN BOTTOM)
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- PAVEMENT SAWCUT
- FENCE
- RETAINING WALLS
- PROPOSED TREE
- TREE TRUNK PROTECTION FENCE

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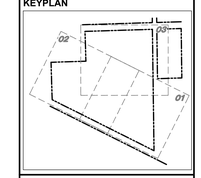
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MOUNT PROSPECT, IL

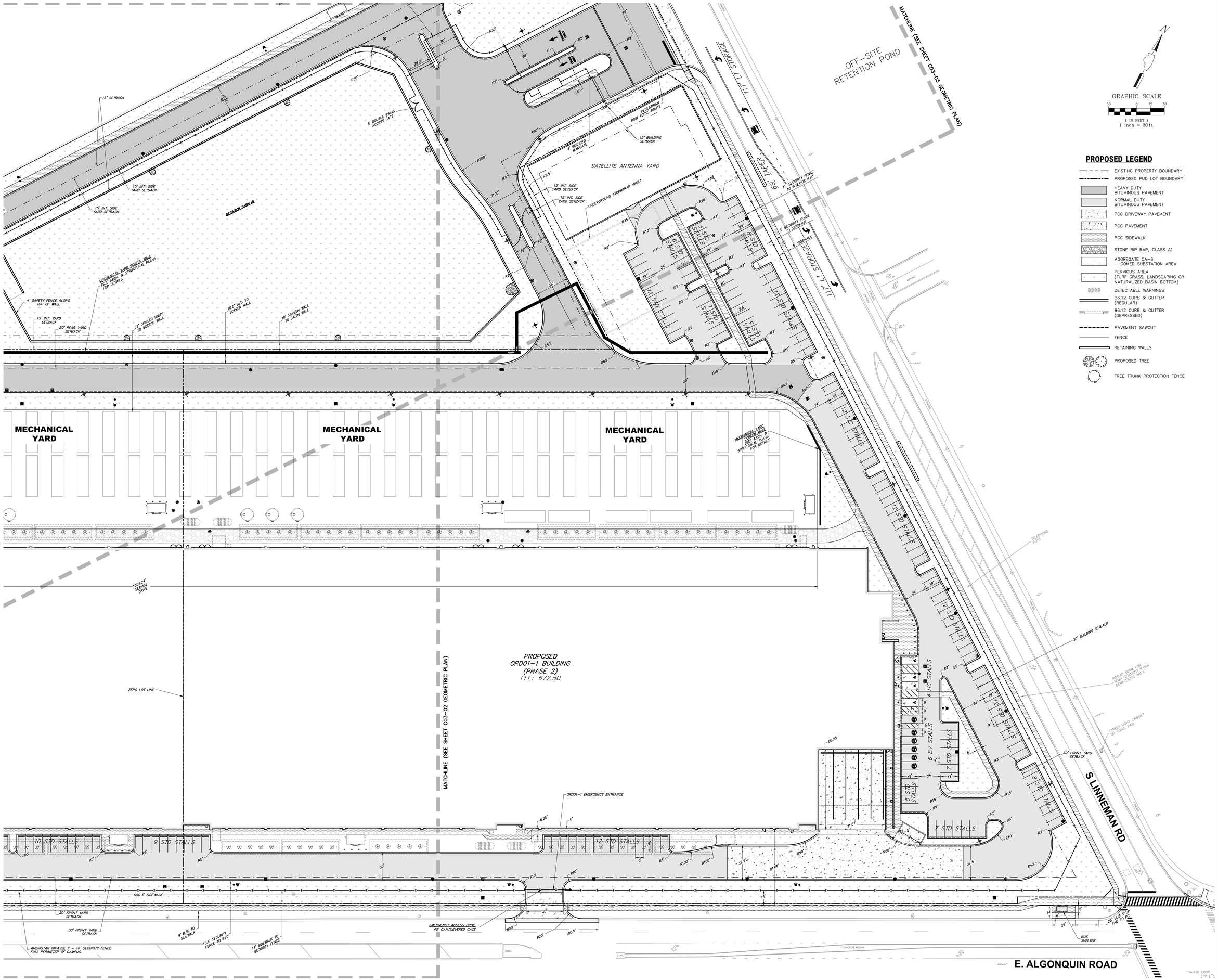
KEYPLAN




GEOMETRIC PLAN - OVERALL

JOB 5253.220
SHEET

C03-00




## PROPOSED LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PUD LOT BOUNDARY
- HEAVY DUTY BITUMINOUS PAVEMENT
- NORMAL DUTY BITUMINOUS PAVEMENT
- PCC DRIVEWAY PAVEMENT
- PCC PAVEMENT
- PCC SIDEWALK
- STONE RIP RAP, CLASS A1
- AGGREGATE CA-6 – COMED SUBSTATION AREA
- PERVIOUS AREA (TURF GRASS, LANDSCAPING OR NATURALIZED BASIN BOTTOM)
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- PAVEMENT SAWCUT
- FENCE
- RETAINING WALLS
- PROPOSED TREE
- TREE TRUNK PROTECTION FENCE

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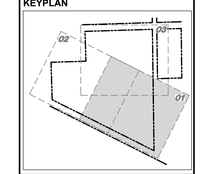
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




GEOMETRIC PLAN - SHEET 1

JOB 5253.220
SHEET
C03-01

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

## PROPOSED LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PUD LOT BOUNDARY
- HEAVY DUTY BITUMINOUS PAVEMENT
- NORMAL DUTY BITUMINOUS PAVEMENT
- PCC DRIVEWAY PAVEMENT
- PCC PAVEMENT
- PCC SIDEWALK
- STONE RIP RAP, CLASS A1
- AGGREGATE CA-6 – COMED SUBSTATION AREA
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- DETECTABLE WARNINGS
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- B6.12 CURB & GUTTER (DEPRESSED)
- PAVEMENT SAWCUT
- FENCE
- RETAINING WALLS
- PROPOSED TREE
- TREE TRUNK PROTECTION FENCE

MATCHLINE (SEE SHEET C03-03 GEOMETRIC PLAN)

COMED SUBSTATION #2
BUILDABLE AREA
96,500 SF
(2.2 ACRES)

15' SOLID SCREEN WALL

TRAFFIC LOOP (TYP)

177.74'

END 15' SOLID SCREEN WALL

AMERISTAR IMPASSE II – 10' SECURITY FENCE FULL PERIMETER OF CAMPUS

20' REAR YARD SETBACK

BASIN BOTTOM MAINTENANCE RAMP

4' SAFETY FENCE ALONG TOP OF WALL

END OF 7'+1' CHAINLINK FENCE (SOUTH) PERIMETER AMERISTAR IMPASSE II FENCE (EAST-WEST)

DETENTION BASIN #3

TYPICAL SUBSTATION SECURITY FENCING 7'+1' CHAINLINK WITH BARBED WIRE TOP

DETENTION BASIN #4

10' ACCESS GATE (DUAL 5' SWING)

15' SETBACK

R51.5'

R31.5'

15' INT. SIDE YARD SETBACK

8' DOUBLE SWING ACCESS GATE

R50'

26.3'

MECHANICAL YARD SCREEN WALL (SEE ARCH. & STRUCTURAL PLANS FOR DETAILS

15' INT. YARD SETBACK

62' CHILLER UNITS TO SCREEN WALL

10.5' B/C TO SCREEN WALL

10' SCREEN WALL TO BASIN WALL

MECHANICAL YARD

MECHANICAL YARD

MECHANICAL YARD

148'

1324.24' SERVICE DRIVE

MATCHLINE (SEE SHEET C03-01 GEOMETRIC PLAN)

PROPOSED ORD01-2 BUILDING (PHASE 1) FFE: 672.50

ZERO LOT LINE

OPTIONAL PASSENGER VEHICLE DROP-OFF AREA (PASSENGER VEHICLES ONLY, ALL OTHER DELIVERIES TO BE THROUGH THE LOADING DOCK AREA.

PROPERTY BOUNDARY

15' BUILDING SETBACK

13 STD STALLS

15 STD STALLS

2 STD STALLS

6 EV STALLS

4 HC STALLS

PROPOSED DRIVEWAY APRON REMOVAL AND NEW SIDEWALK INSTALLATION UNDER SEPARATE IDOT ALGONQUIN ROAD SIDEWALK IMPROVEMENT
126 LF, B6.24 CURB & GUTTER, PROPOSE & SOD PARKWAY RESTORATION AND 6" PCC SIDEWALK

ORD01-2 EMERGENCY ENTRANCE

16 STD STALLS

9 STD STALLS

11 STD STALLS

10 STD STALLS

9 STD STALLS

680.3' SIDEWALK

30' FRONT YARD SETBACK

30' FRONT YARD SETBACK

9' B/C TO SIDEWALK

10.4' SECURITY FENCE TO B/C

14' SIDEWALK TO SECURITY FENCE

10.4' SECURITY FENCE TO B/C

AMERISTAR IMPASSE II – 10' SECURITY FENCE FULL PERIMETER OF CAMPUS

EMERGENCY ACCESS DRIVE 40' CANTILEVERED GATE

E. ALGONQUIN ROAD

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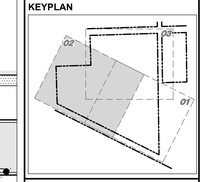
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




GEOMETRIC PLAN - SHEET 2

JOB 5253.220
SHEET
C03-02

DEMPSTER ST

W DEMPSTER STREET

S LINNEMAN RD

MATCHLINE – REF. INSET A

MATCHLINE (SEE SHEET C03-01 GEOMETRIC PLAN)

EMERGENCY ACCESS DRIVE
35' CANTILEVERED GATE

COMED SUBSTATION
ACCESS DRIVE

AMERISTAR IMPASSE II
10' SECURITY FENCE
FULL PERIMETER OF CAMPUS

11.5' R.O.W. BOUNDARY TO CIP RETAINING WALL

TRAFFIC LOOP
(TYP)

START
15' SOLID SCREEN WALL

15' SOLID SCREEN WALL

15' BUILDING SETBACK

END OF 7'+1' CHAINLINK FENCE (SOUTH) AT
PERIMETER AMERISTAR IMPASSE II FENCE (NORTH)
START 15' SOLID SCREEN WALL (WEST)

30' BUILDING SETBACK

23 STD STALLS

5 STD STALLS

2 H.C. STALLS

2 STD STALLS

15 STD STALLS

14 STD STALLS

15 STD STALLS

15 STD STALLS

15 STD STALLS

PROPOSED
ORD02 BUILDING
(PHASE 3)
FFE: 670.50

COMED SUBSTATION #2
BUILDABLE AREA
96,200 SF
(2.2 ACRES)

241.87'

177.74'

148'

END 15' SOLID SCREEN WALL

BASIN BOTTOM
MAINTENANCE RAMP

4' SAFETY FENCE ALONG
TOP OF WALL

SUBSTATION SECURITY FENCING
TYPICAL 7'+1' CHAINLINK WITH BARBED WIRE TOP

DETENTION BASIN #2A

10' ACCESS GATE
(DUAL 5' SWING)

DETENTION BASIN #1

MECHANICAL YARD SCREEN WALL
(SEE ARCH. & STRUCTURAL PLANS
FOR DETAILS

15' INT. YARD
SETBACK

20' REAR YARD
SETBACK

15' INT. SIDE
YARD SETBACK

62" CHILLER UNITS
TO SCREEN WALL

10.5' B/C TO
SCREEN WALL

10' SCREEN WALL
TO BASIN WALL

MECHANICAL
YARD

ORD02 SECURITY GATE FOR TRUCK REJECTION.
LOCATION TO BE ADJUSTED FOR FINAL ORD02 SITE PLAN

8' DOUBLE SWING
ACCESS GATE

4" SECURED
MANGATE

PEDESTRIAN
ROW ACESS ROUTE

SATELLITE ANTENNA YARD

UNDERGROUND STORMTRAP VAULT

11.7' LT STORAGE

69' TAPER

11' SECURITY FENCE
TO INTERIOR B/C

OFF-SITE
RETENTION POND

MATCHLINE (SEE SHEET C03-01 GEOMETRIC PLAN)

CONC. PAD

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

## PROPOSED LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PUD LOT BOUNDARY
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- NORMAL DUTY BITUMINOUS PAVEMENT
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- PCC PAVEMENT
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- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
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- PAVEMENT SAWCUT
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- PROPOSED TREE
- TREE TRUNK PROTECTION FENCE

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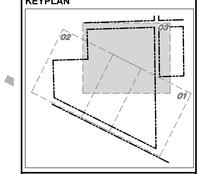
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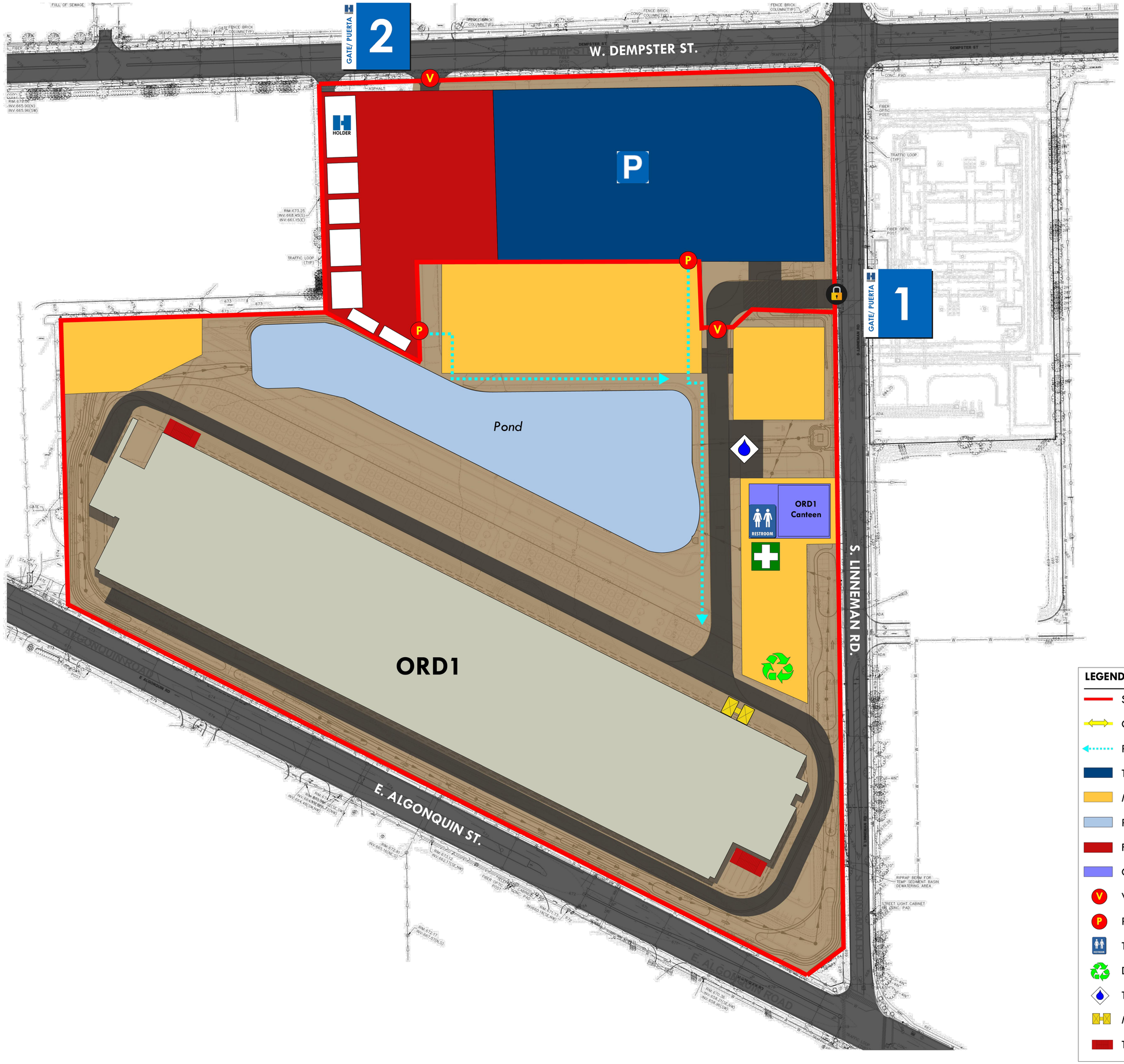
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




GEOMETRIC PLAN - SHEET 3

JOB 5253.220
SHEET C03-03




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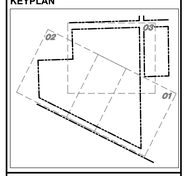
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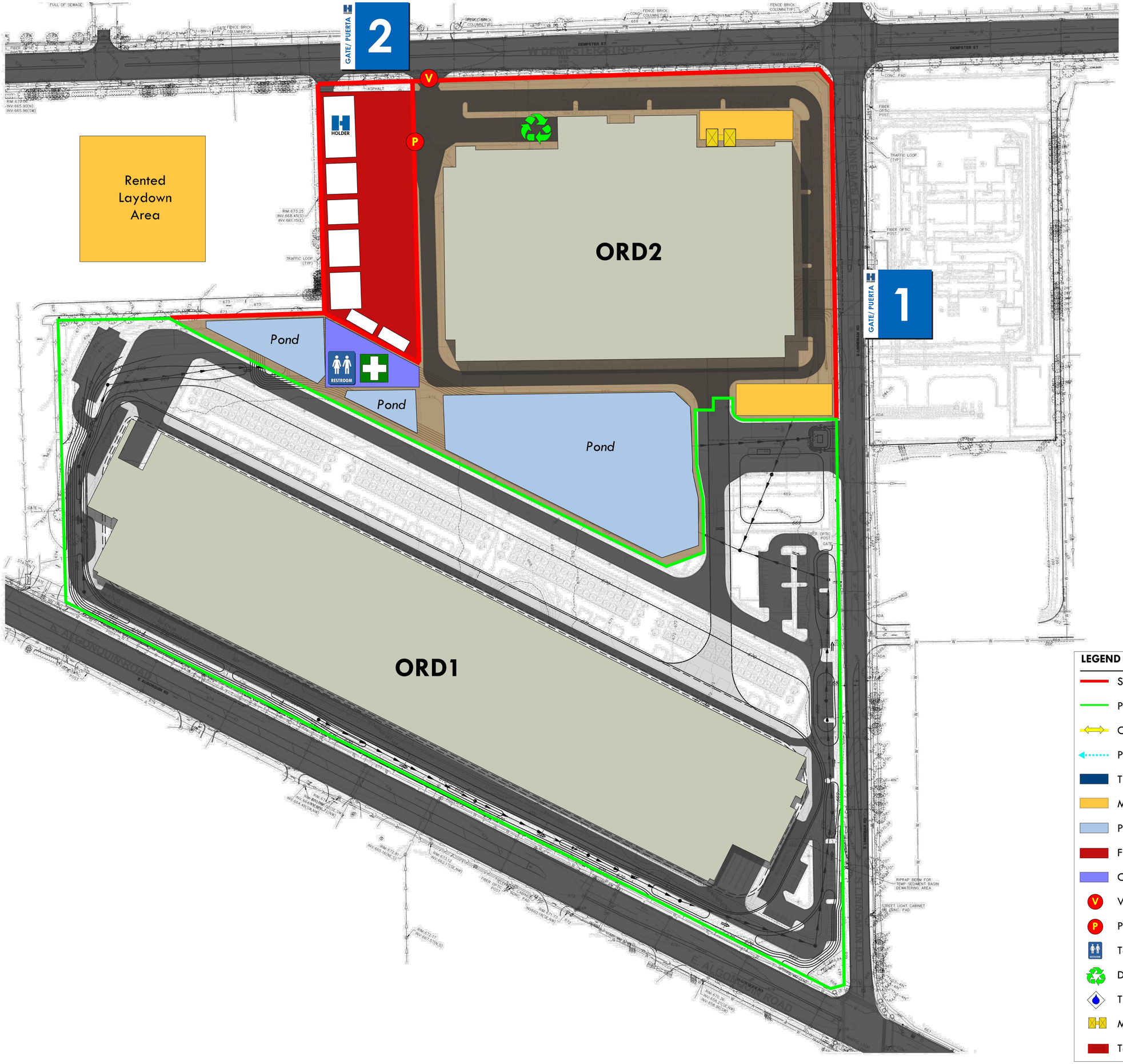
KEYPLAN




CONSTRUCTION PHASING AND LOGISTICS PLAN - PHASE 1

JOB 5253.220
SHEET

C03-04




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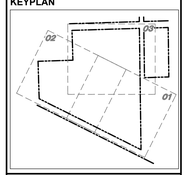
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1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

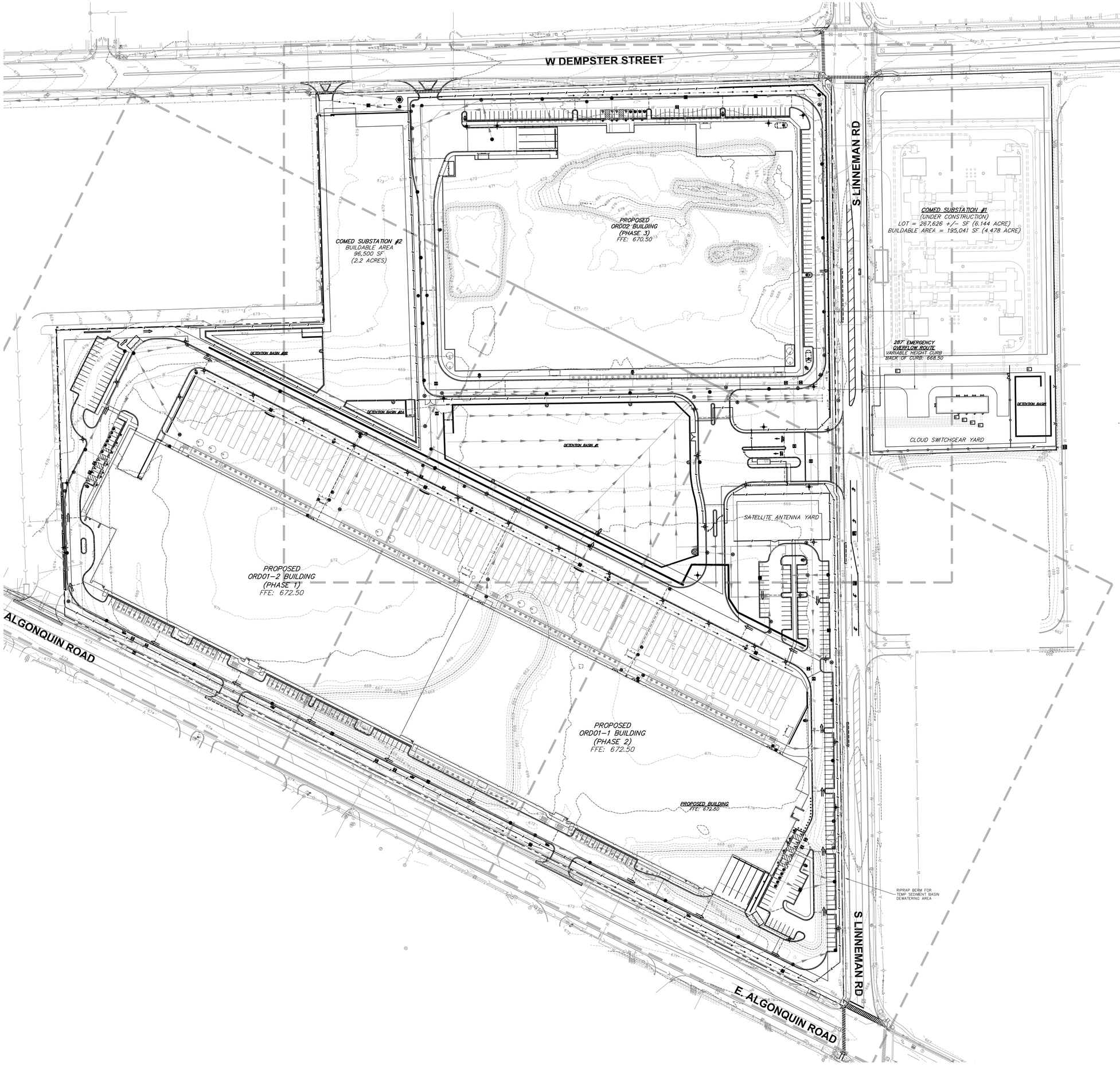
KEYPLAN




CONSTRUCTION PHASING AND LOGISTICS PLAN - PHASE 2

JOB 5253.220
SHEET

C03-05




N

GRAPHIC SCALE

60 0 30 60

( IN FEET )

1 inch = 60 ft.

## GRADING LEGEND

- 674.70 / 674.20 / +670.30 — TOP OF CURB FLOW LINE / PROPOSED SPOT ELEVATION
- XXX — CONTOUR
- ADJ. ###.## — STRUCTURE ADJUSTMENT
- SUMMIT — SUMMITS
- 0.50% — SLOPES
- SWALES
- OVERLAND FLOW ROUTE
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- B6.12 CURB & GUTTER (REVERSE PITCH)
- B6.24 CURB & GUTTER (REGULAR)
- BARRIER CURB
- BARRIER CURB (DEPRESSED)
- BUTT JOINT

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CONSULTING ENGINEERS

ISSUES

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REVISIONS

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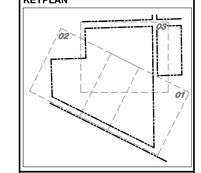
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

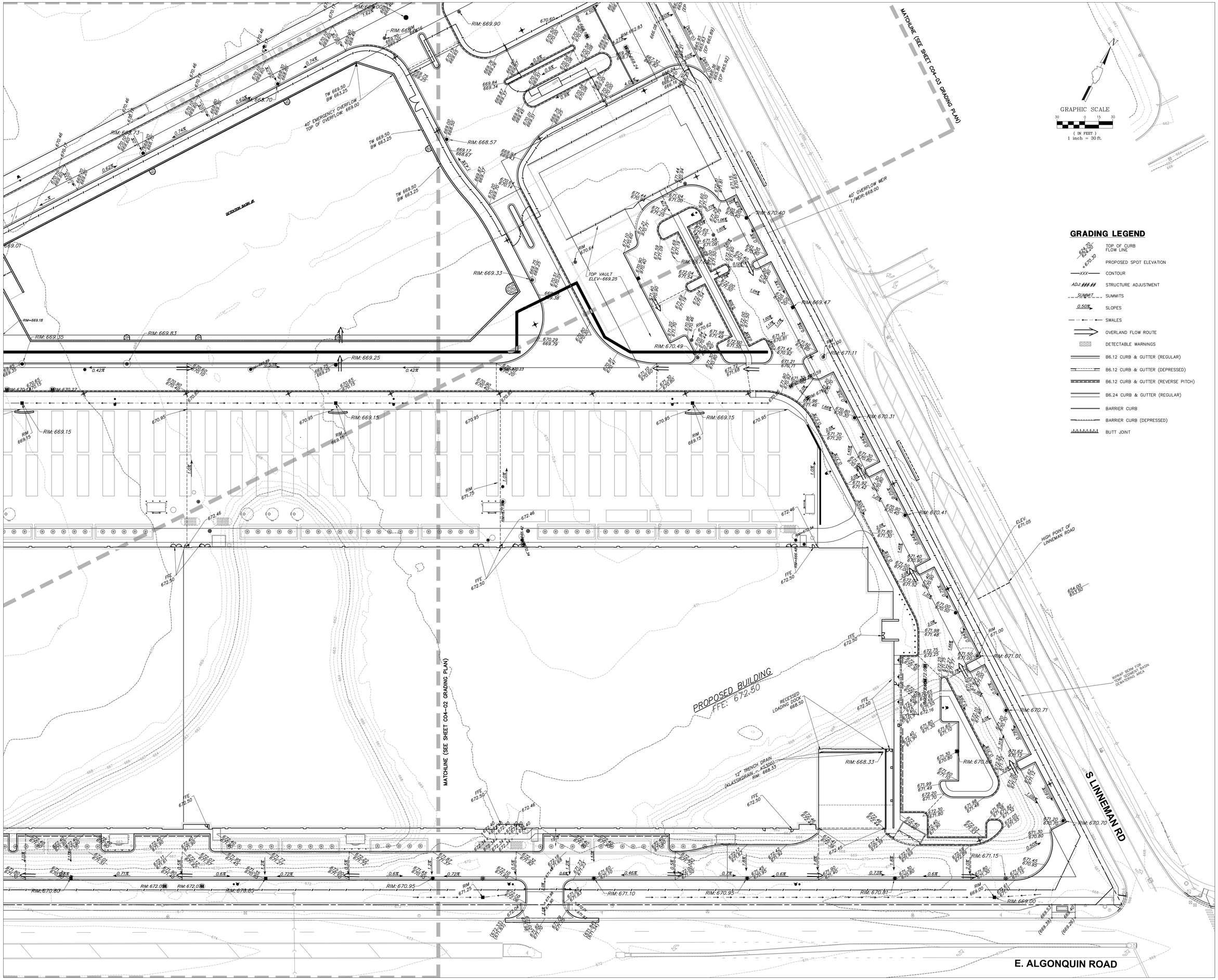
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




GRADING PLAN - OVERALL

JOB 5253.220
SHEET
C04-00




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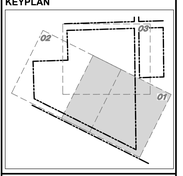
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




GRADING PLAN - SHEET 1

JOB 5253.220
SHEET

C04-01

## GRADING LEGEND

- TOP OF CURB / FLOW LINE
- PROPOSED SPOT ELEVATION
- CONTOUR
- STRUCTURE ADJUSTMENT
- SUMMITS
- SLOPES
- SWALES
- OVERLAND FLOW ROUTE
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- B6.12 CURB & GUTTER (REVERSE PITCH)
- B6.24 CURB & GUTTER (REGULAR)
- BARRIER CURB
- BARRIER CURB (DEPRESSED)
- BUTT JOINT

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

MATCHLINE (SEE SHEET C04-03 GRADING PLAN)

MATCHLINE (SEE SHEET C04-01 GRADING PLAN)

E. ALGONQUIN ROAD

DETENTION BASIN #3

DETENTION BASIN #4

BASIN INFO:
RIM: 668.50
BASIN BOTTOM: 664.50
SHOW=660.50

12" TRENCH DRAIN (KLASSKDRAIN - KS300)
RIM: 668.33

RECESSED LOADING DOCK 668.50

40' EMERGENCY OVERFLOW
TOP OF OVERFLOW: 669.00

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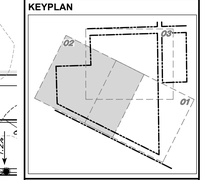
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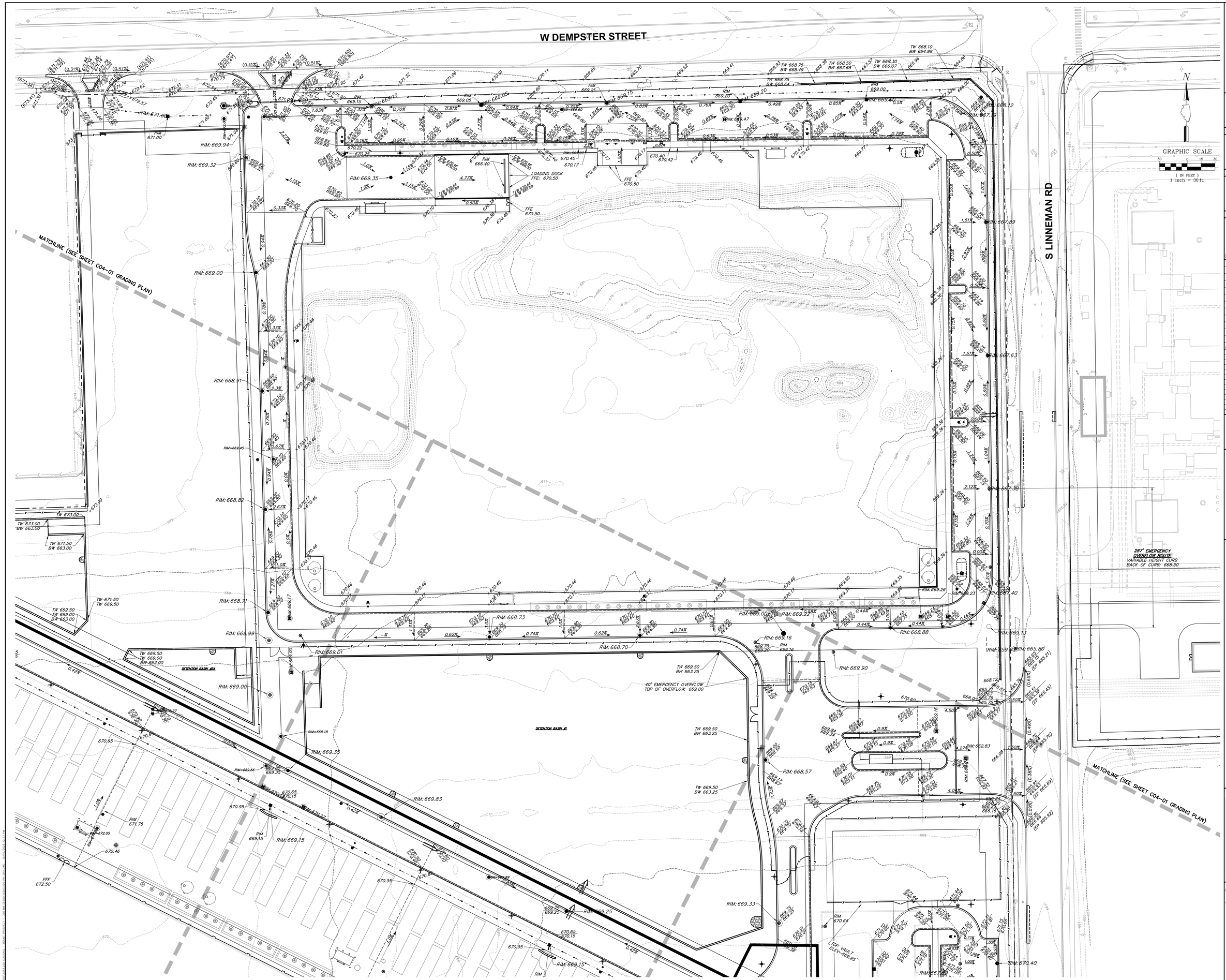
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




GRADING PLAN - SHEET 2

JOB 5253.220
SHEET
C04-02




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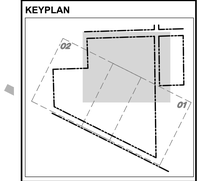
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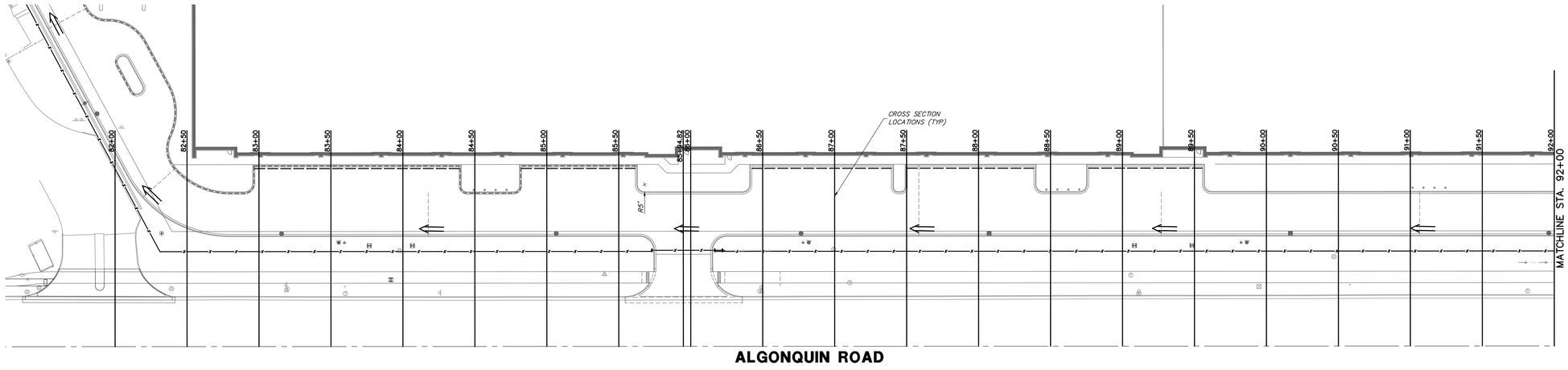
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



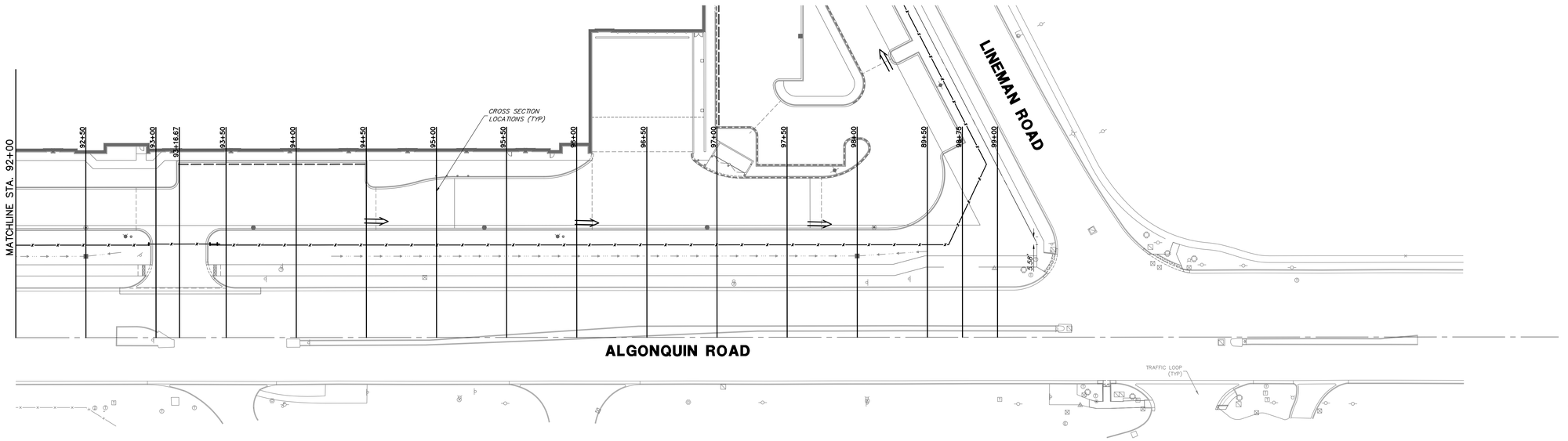

GRADING PLAN
- SHEET 3

JOB 5253.220
SHEET
C04-03




**ALGONQUIN ROAD**




**ALGONQUIN ROAD**

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

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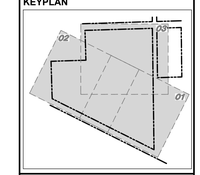
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

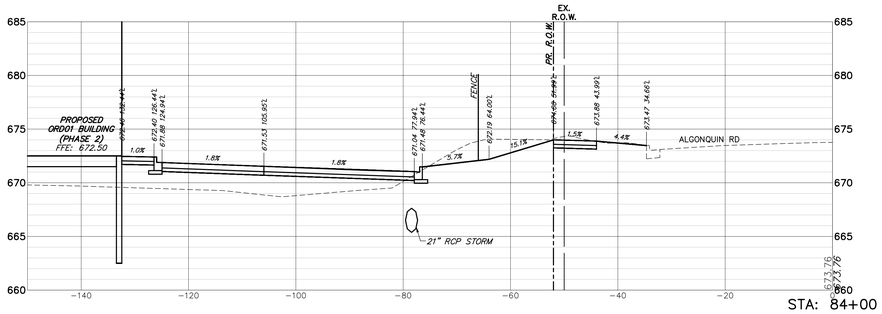


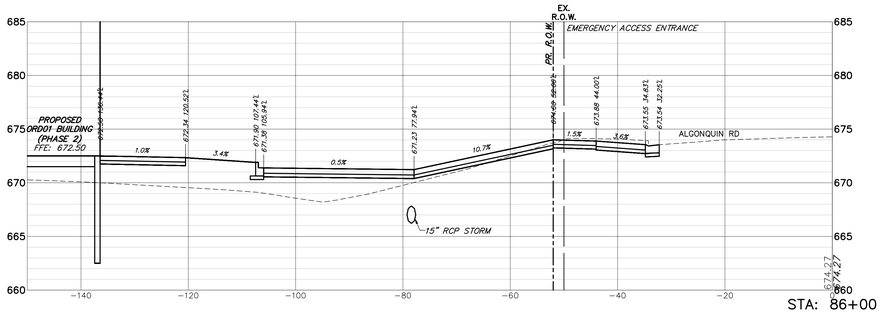

CROSS SECTIONS - LOCATIONS ALGONQUIN ROAD

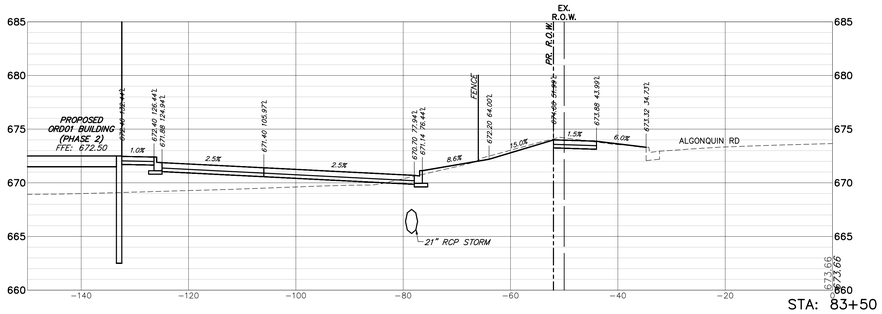
**JOB** 5253.220
**SHEET**

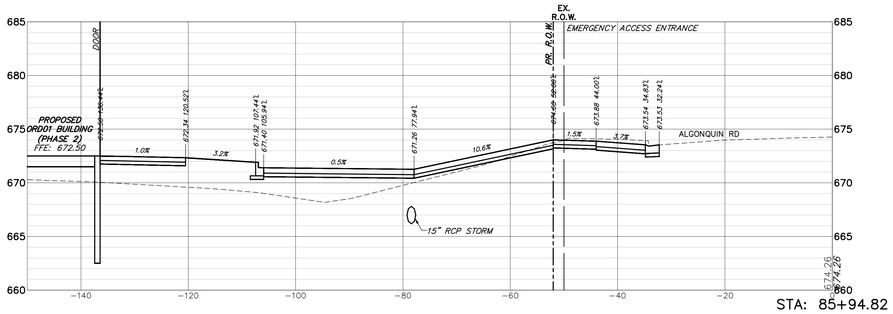
**C04-04**

GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.



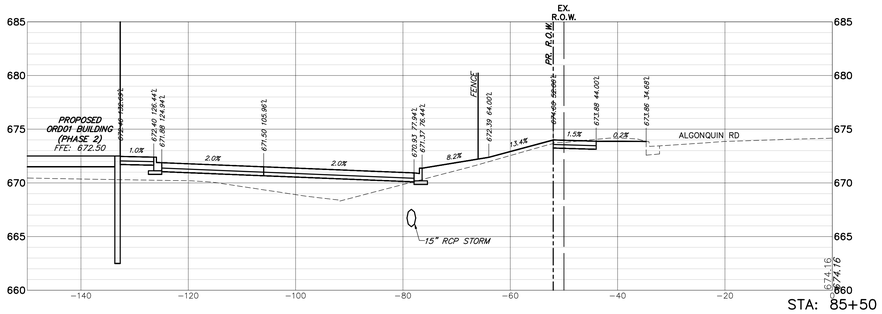



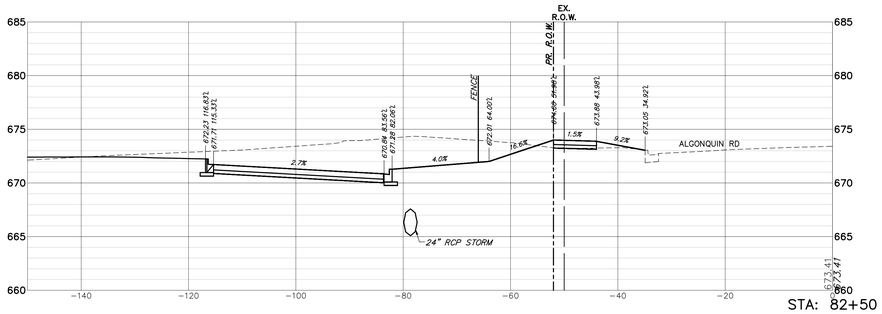



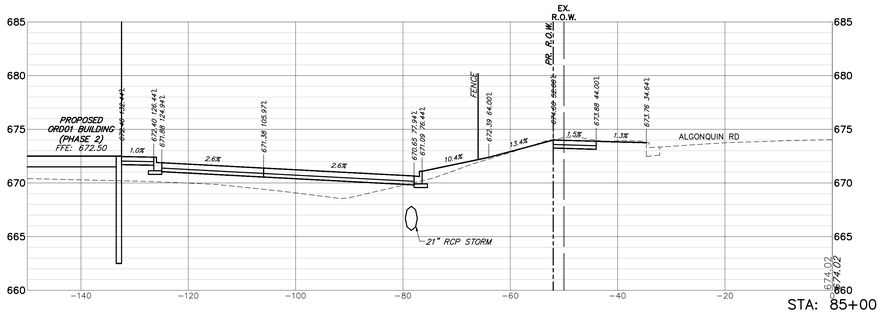



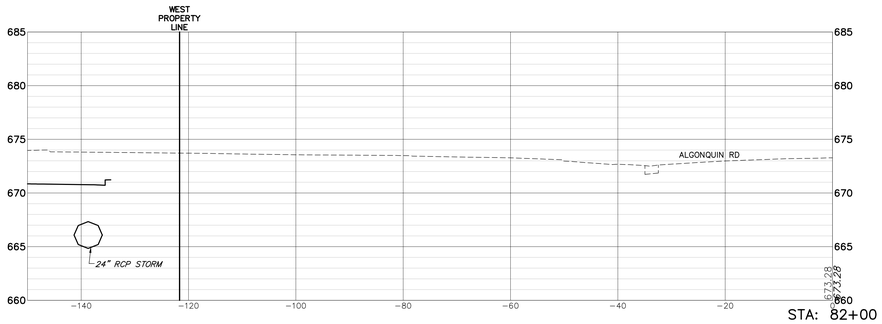


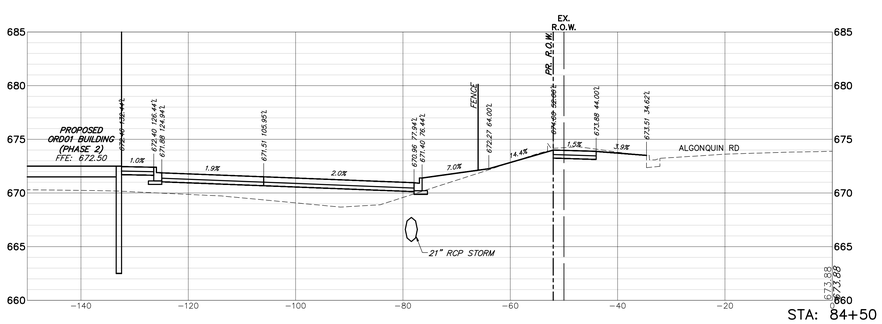





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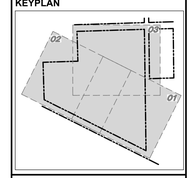
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

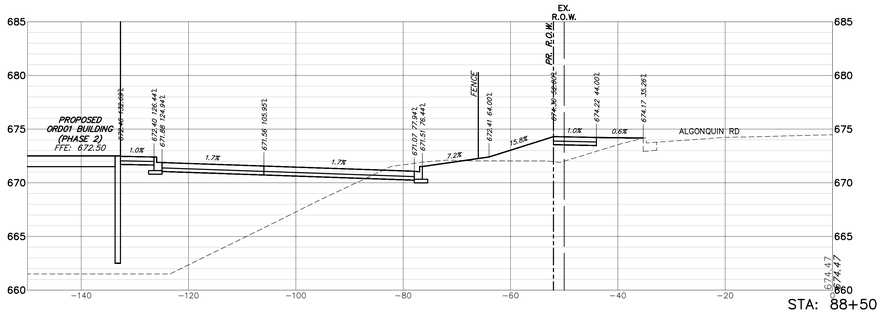
KEYPLAN




CROSS SECTIONS - ALGONQUIN ROAD

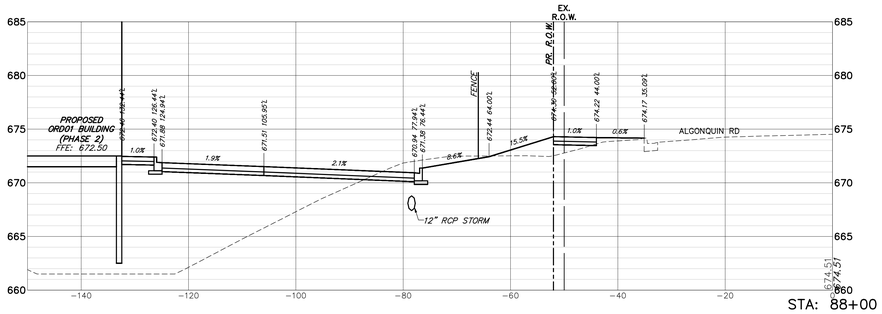
JOB 5253.220
SHEET
C04-05

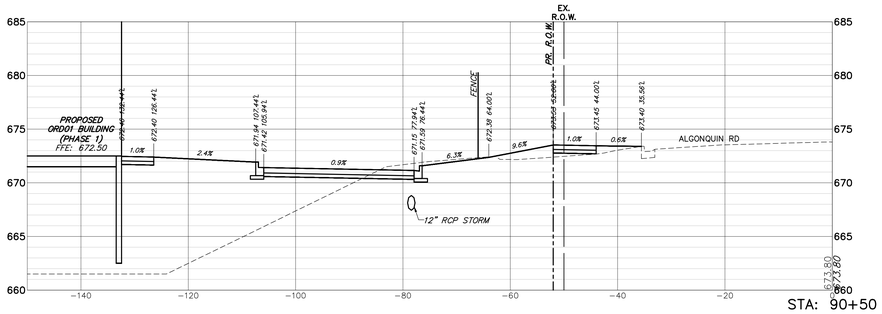
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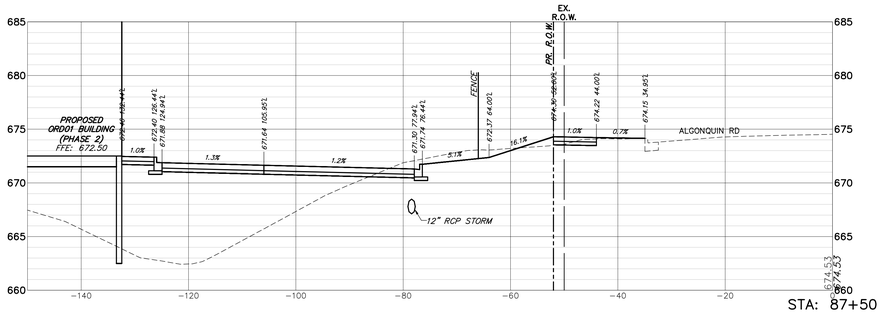


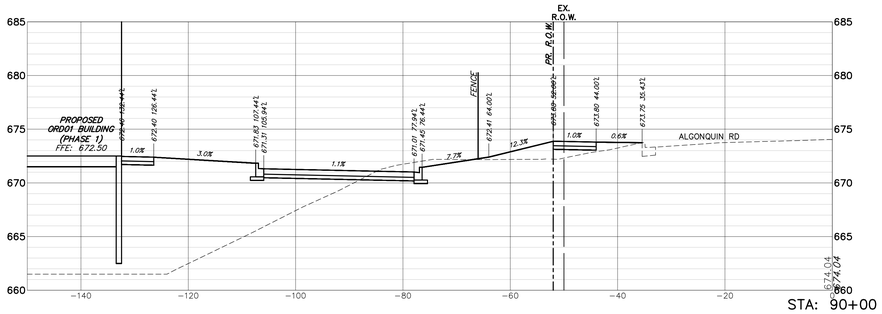


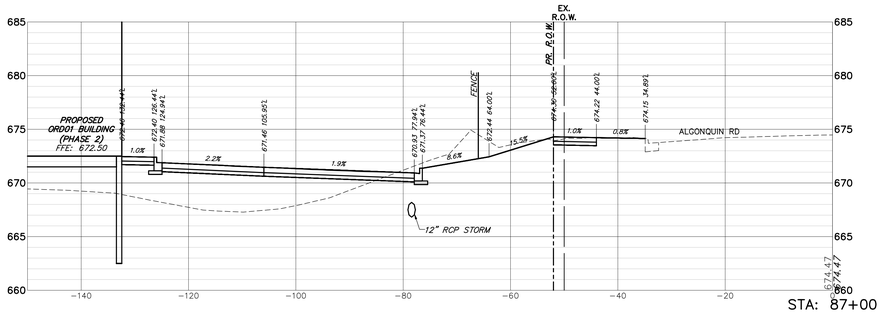


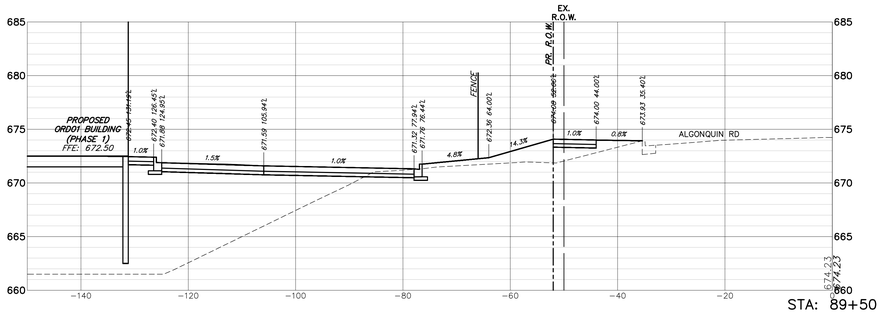


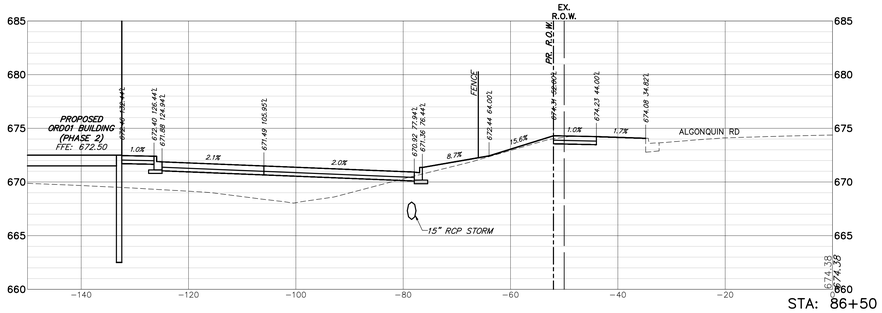



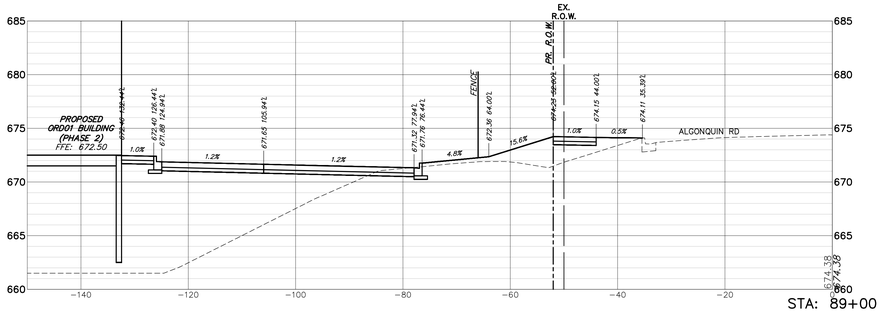




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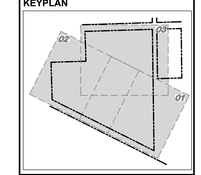
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

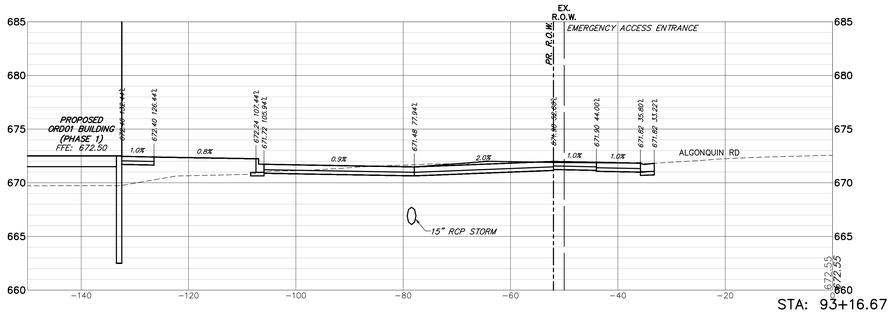
KEYPLAN

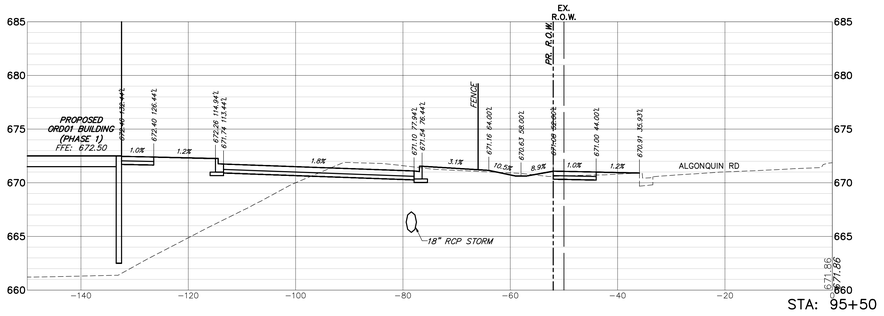


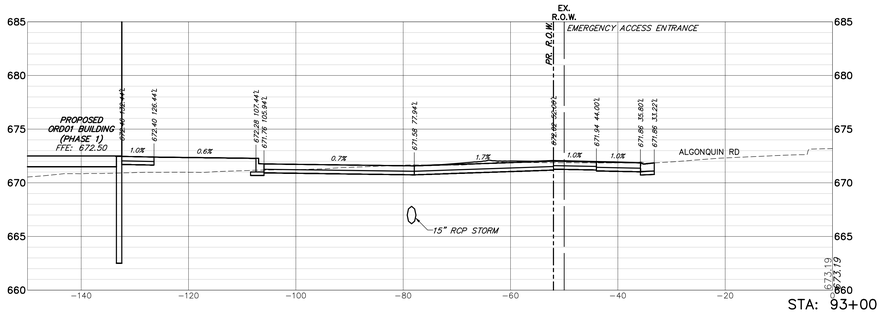

CROSS SECTIONS - ALGONQUIN ROAD

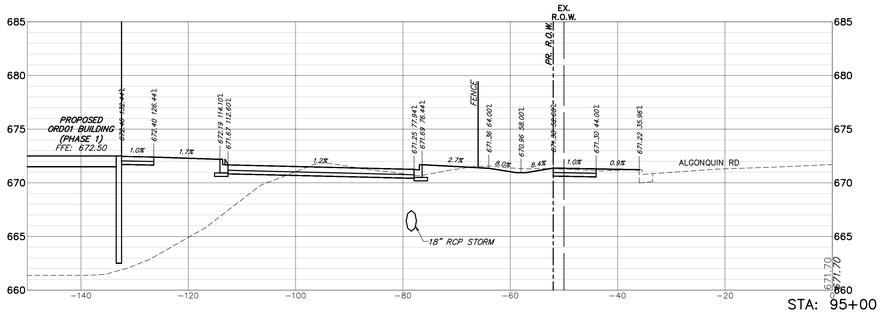
JOB 5253.220
SHEET
C04-06

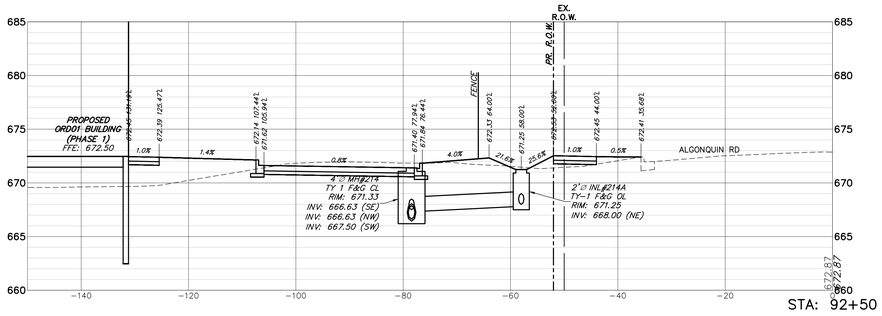
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.

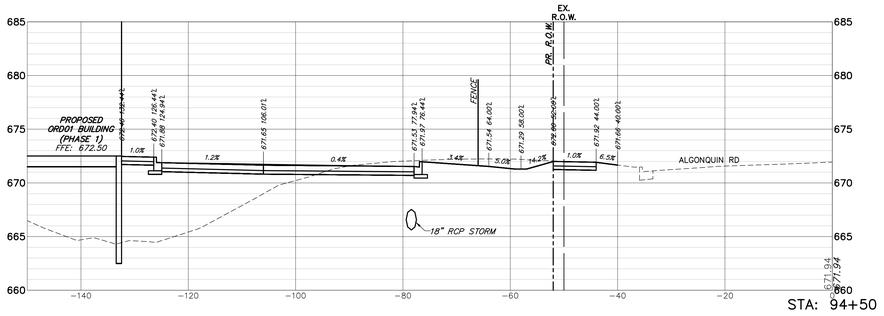


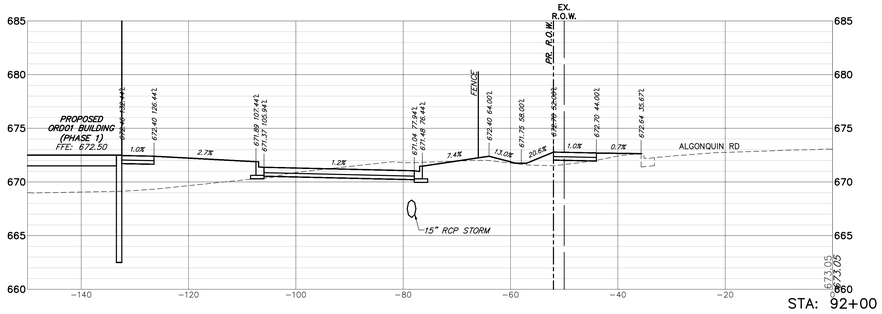



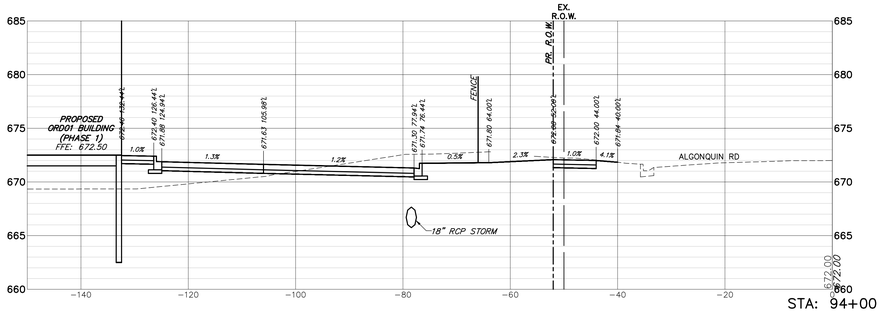



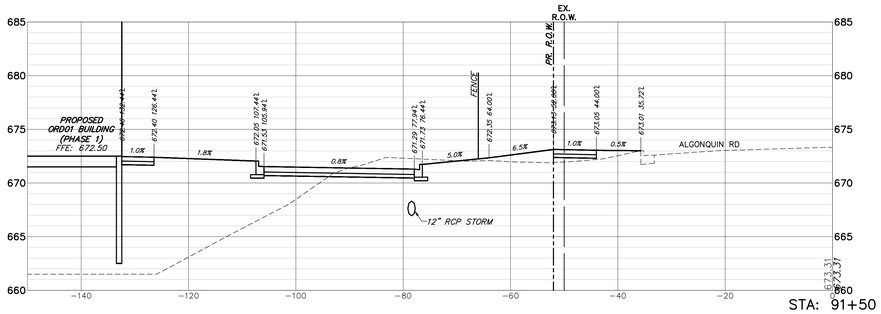



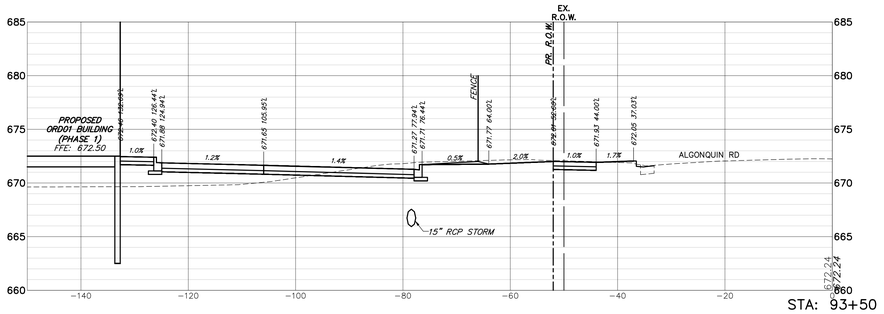




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CONSULTING ENGINEERS

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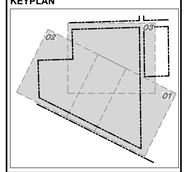
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

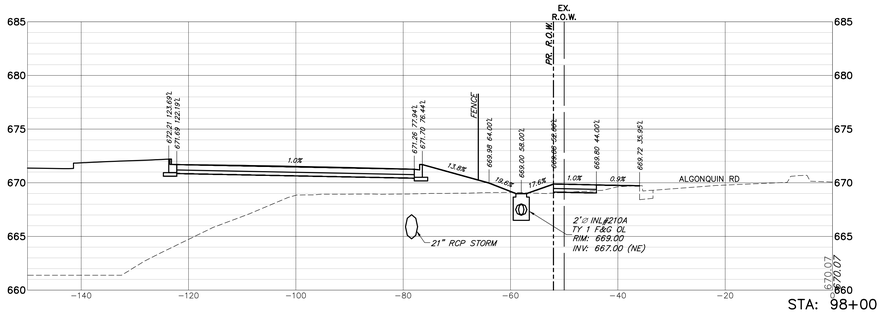
KEYPLAN



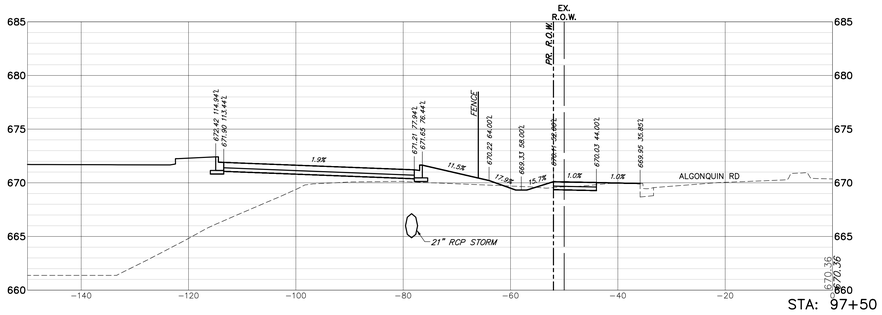

CROSS SECTIONS - ALGONQUIN ROAD

JOB 5253.220
SHEET
C04-07

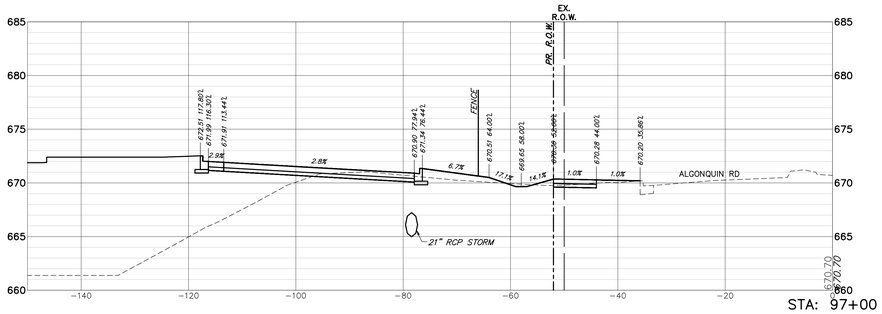
GRAPHIC SCALE
10 0 5 10
( IN FEET )
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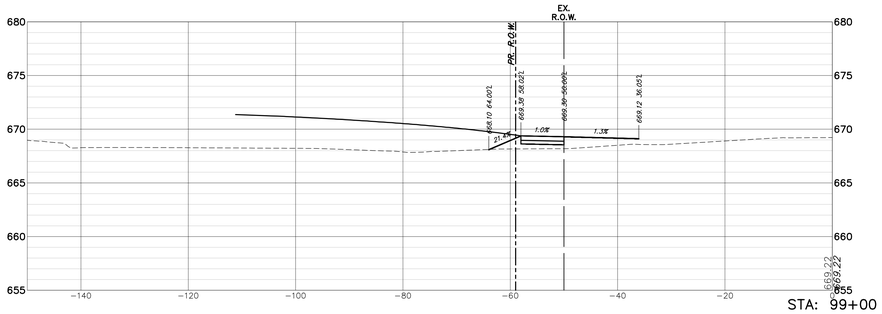
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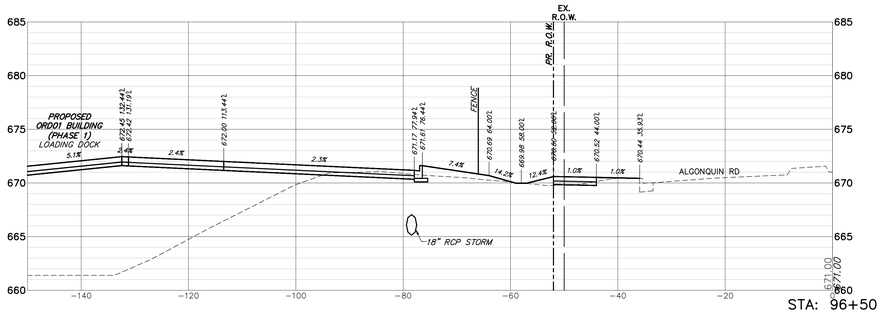
STA: 97+50



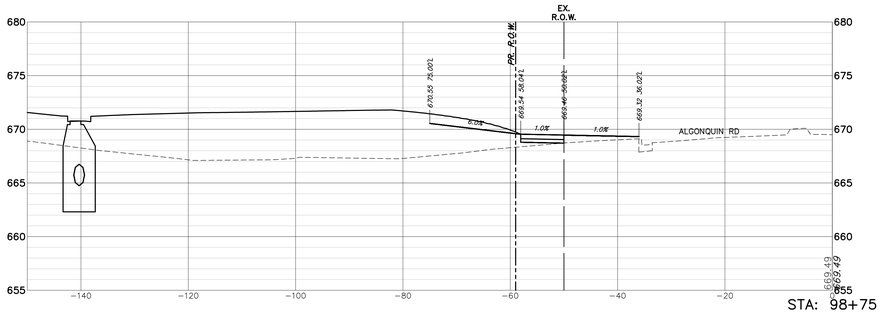
STA: 97+00



STA: 99+00



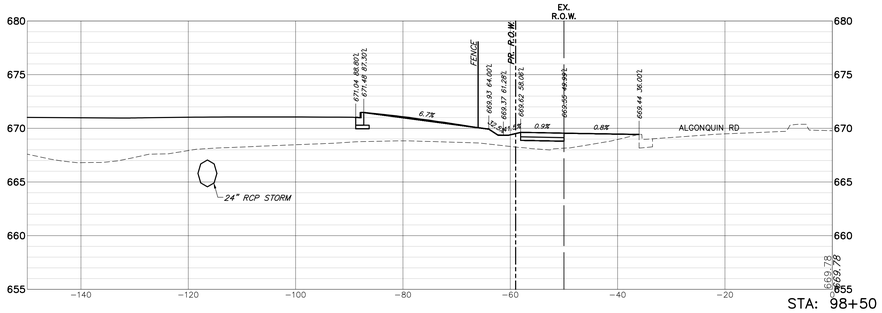
STA: 96+50



STA: 98+75



STA: 96+00



STA: 98+50

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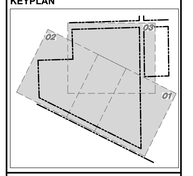
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




CROSS SECTIONS - ALGONQUIN ROAD

JOB 5253.220
SHEET

C04-08

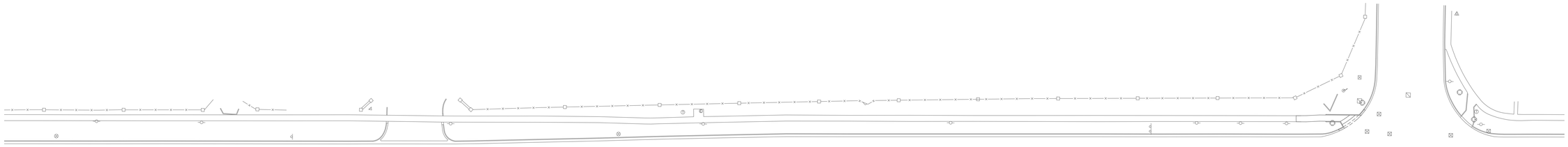
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GRAPHIC SCALE

30 0 15 30

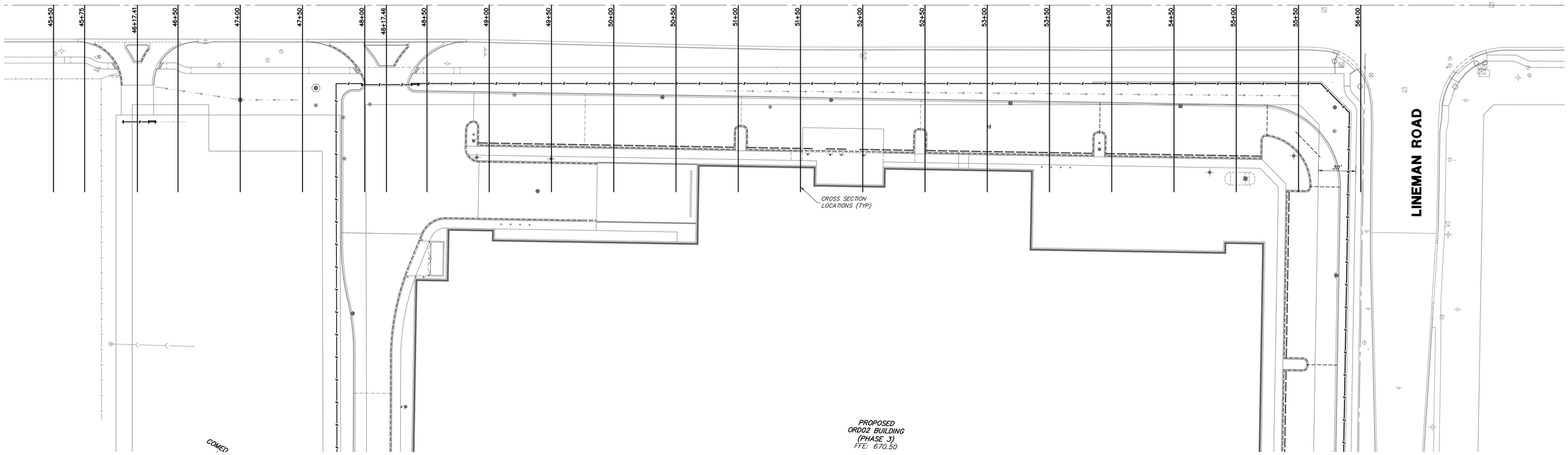
( IN FEET )

1 inch = 30 ft.





## DEMPSTER ROAD




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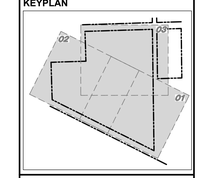
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MOUNT PROSPECT, IL

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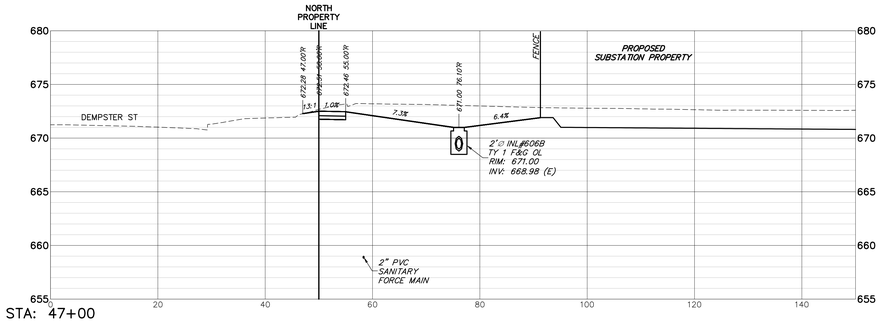



CROSS SECTIONS - LOCATIONS DEMPSTER ROAD

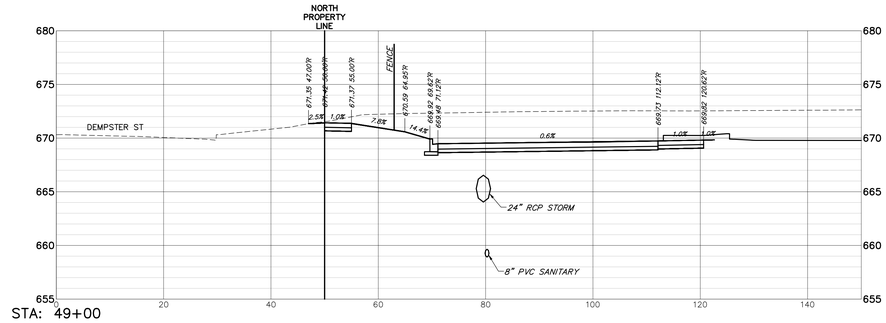
JOB 5253.220
SHEET

C04-09

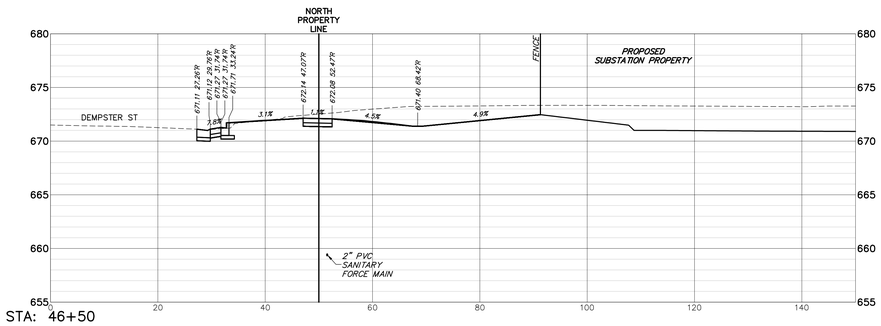
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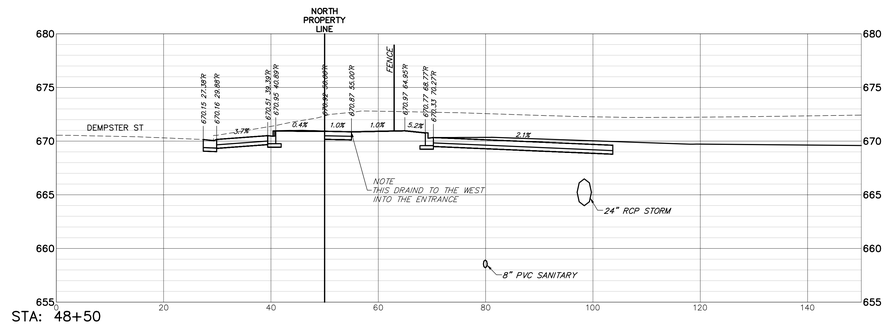

STA: 47+00



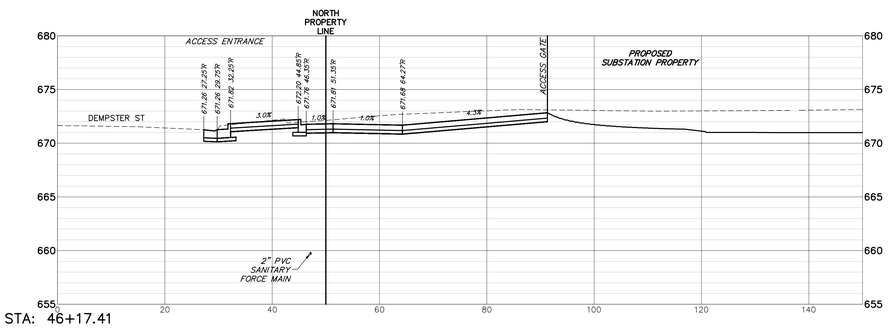

STA: 49+00



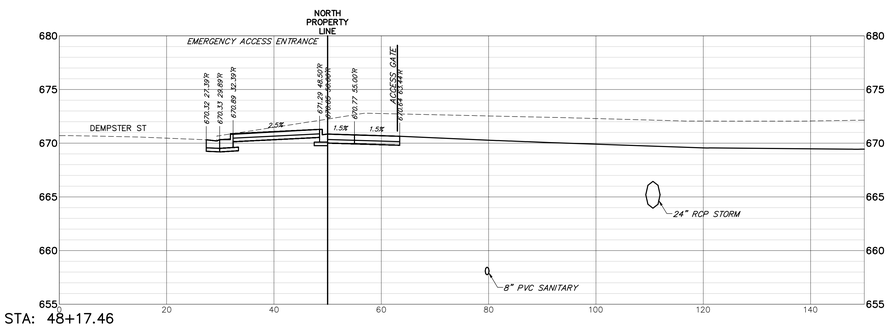

STA: 46+50



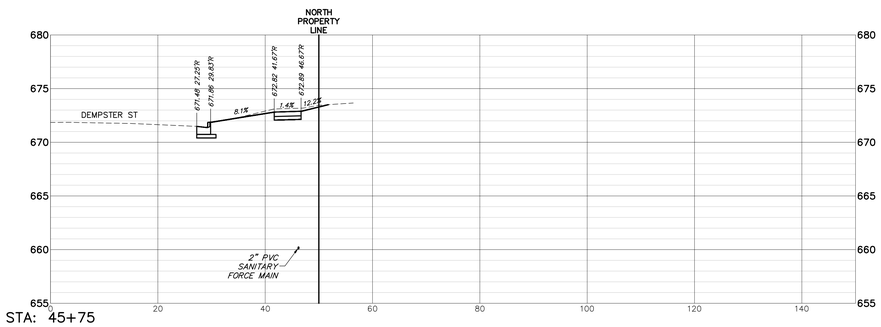

STA: 48+50



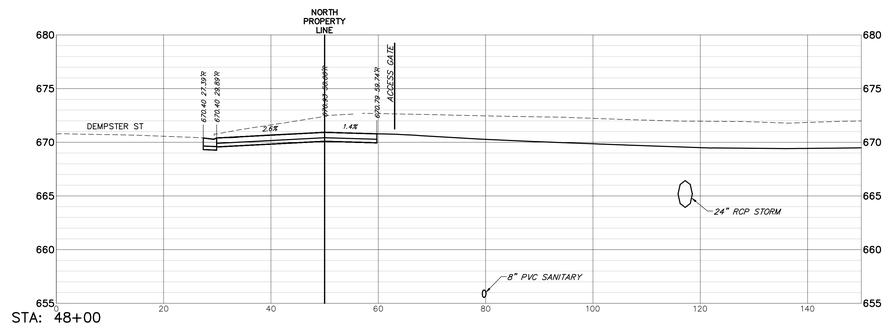

STA: 46+17.41



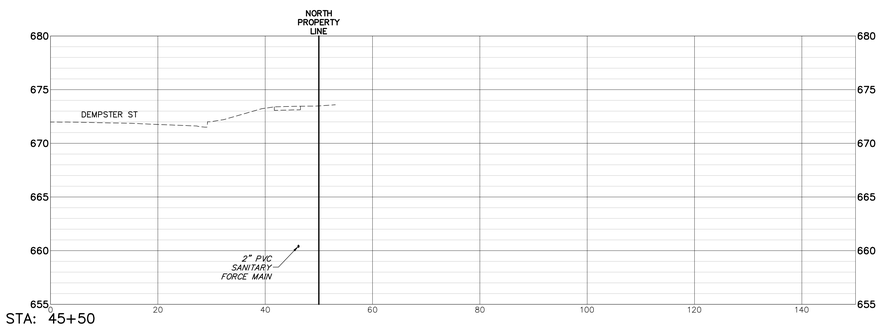

STA: 48+17.46



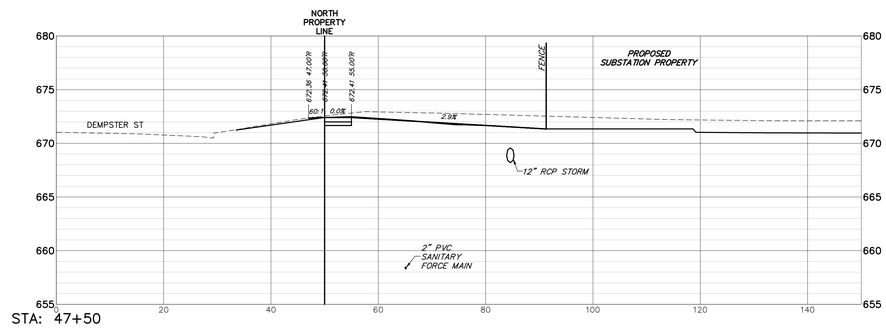

STA: 45+75




STA: 48+00




STA: 45+50




STA: 47+50

GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.

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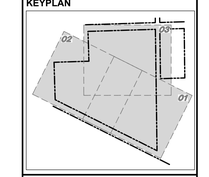
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




CROSS SECTIONS - DEMPSTER ROAD

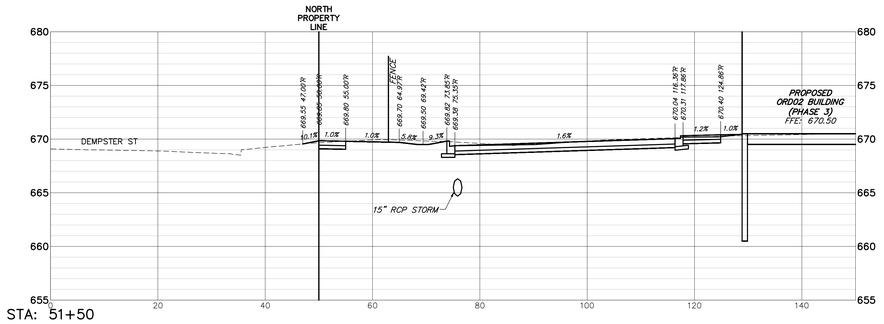
JOB 5253.220
SHEET

C04-10

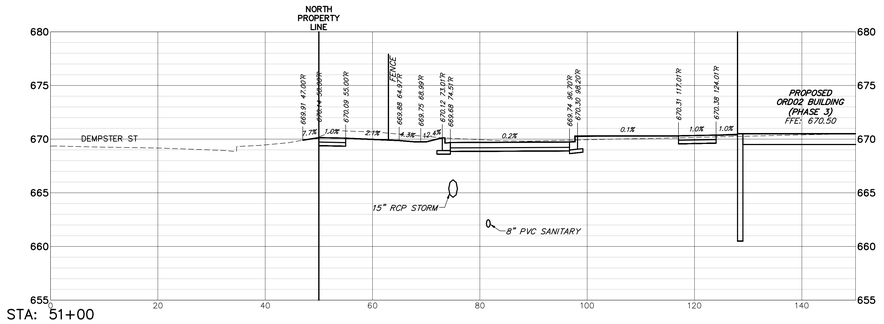


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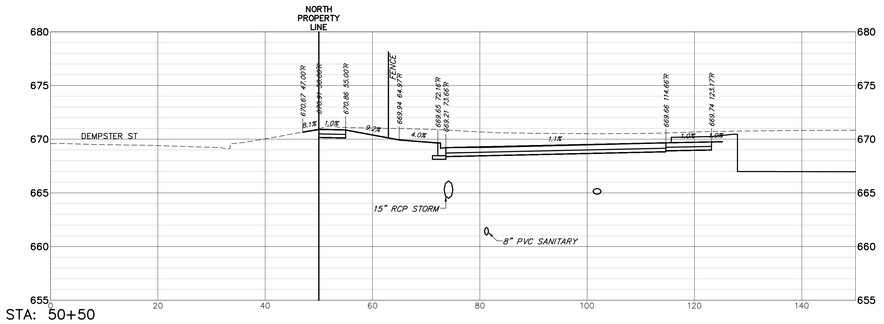
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.



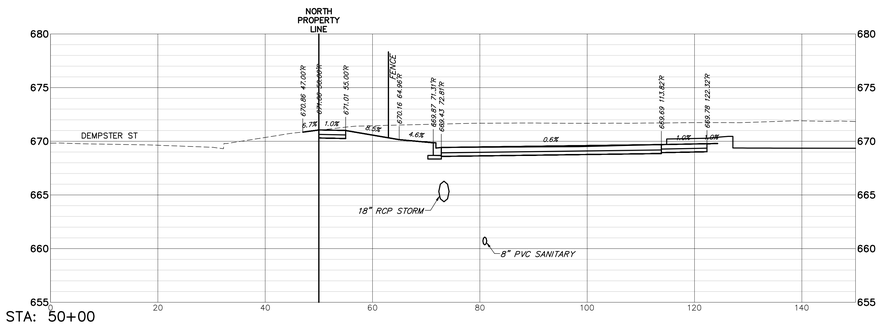
STA: 51+50



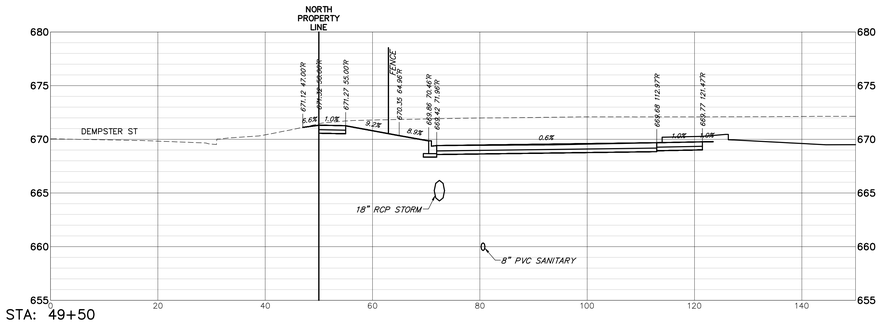
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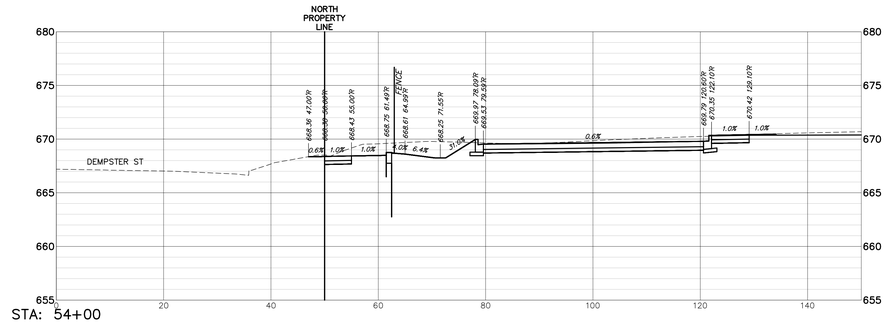
STA: 50+50



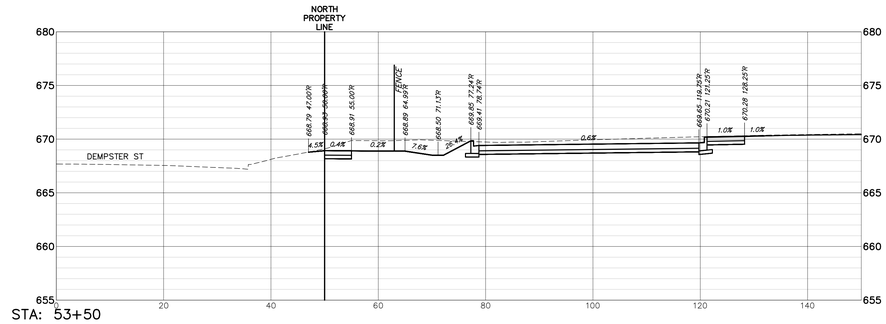
STA: 50+00



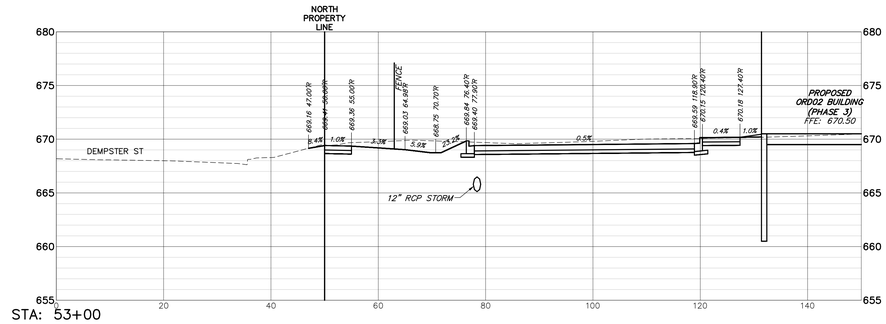
STA: 49+50



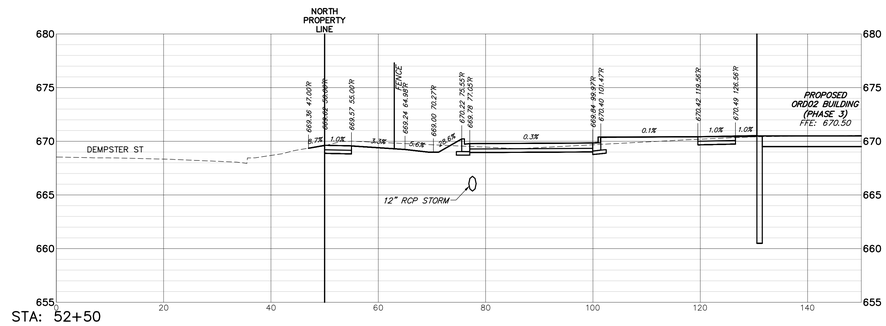
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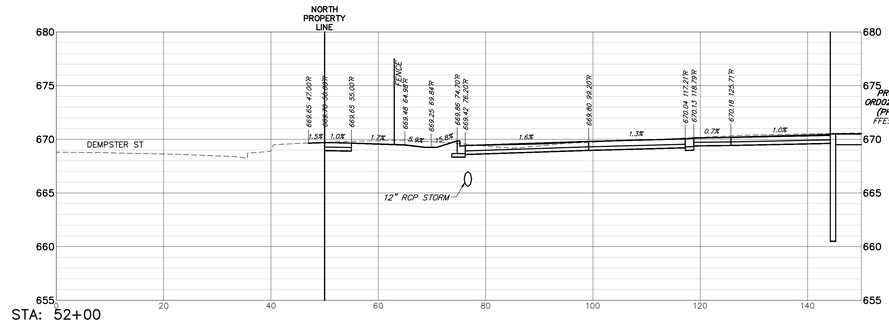
STA: 53+50



STA: 53+00



STA: 52+50



STA: 52+00

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| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

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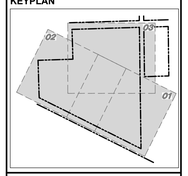
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



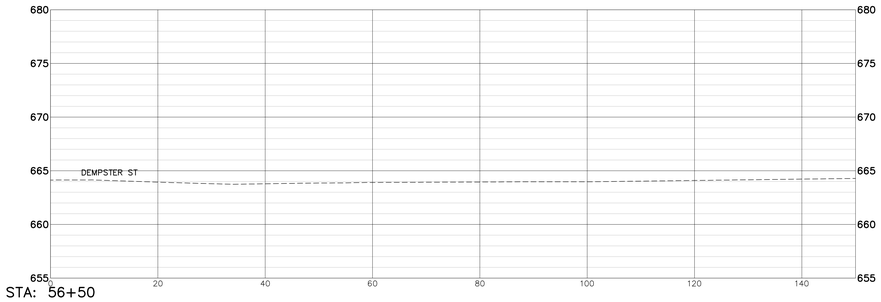

CROSS SECTIONS - DEMPSTER ROAD

JOB 5253.220
SHEET

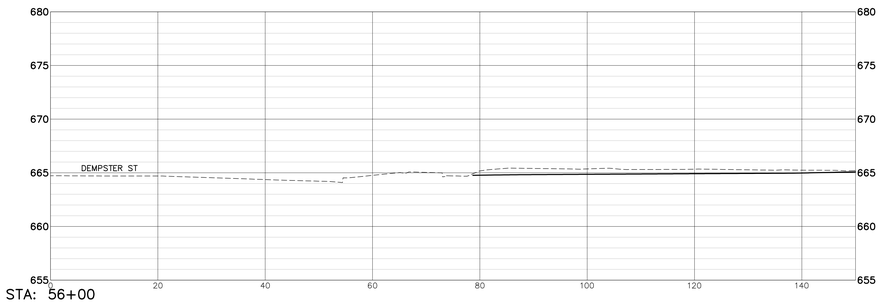
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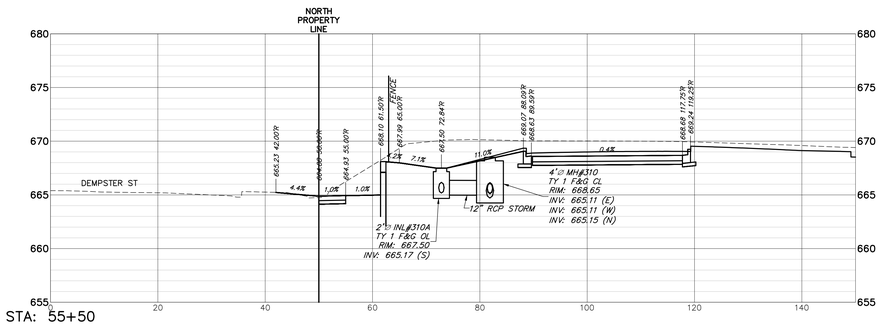
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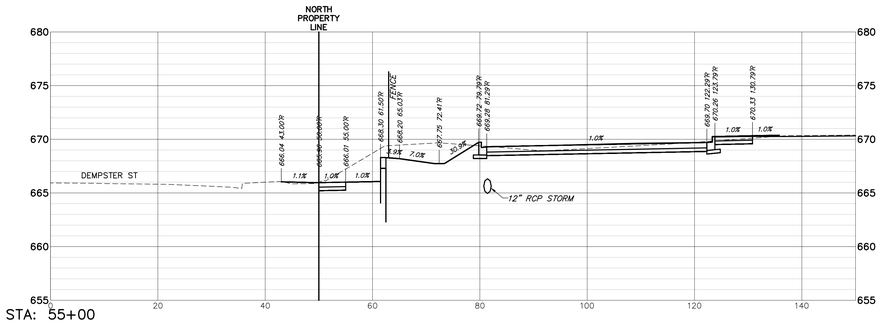

STA: 56+50



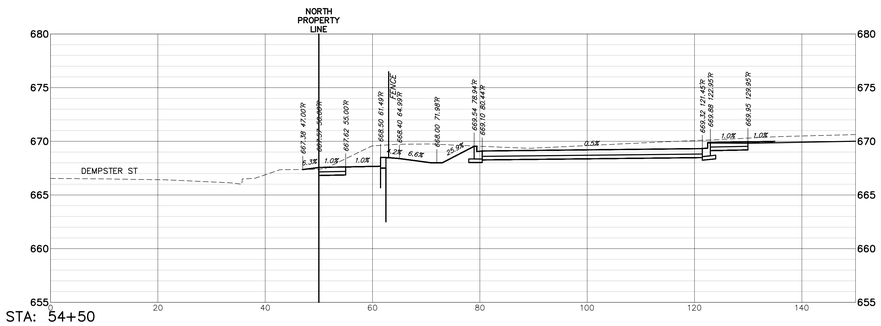

STA: 56+00




STA: 55+50




STA: 55+00




STA: 54+50

GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.

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CONSULTING ENGINEERS

ISSUES

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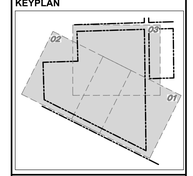
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



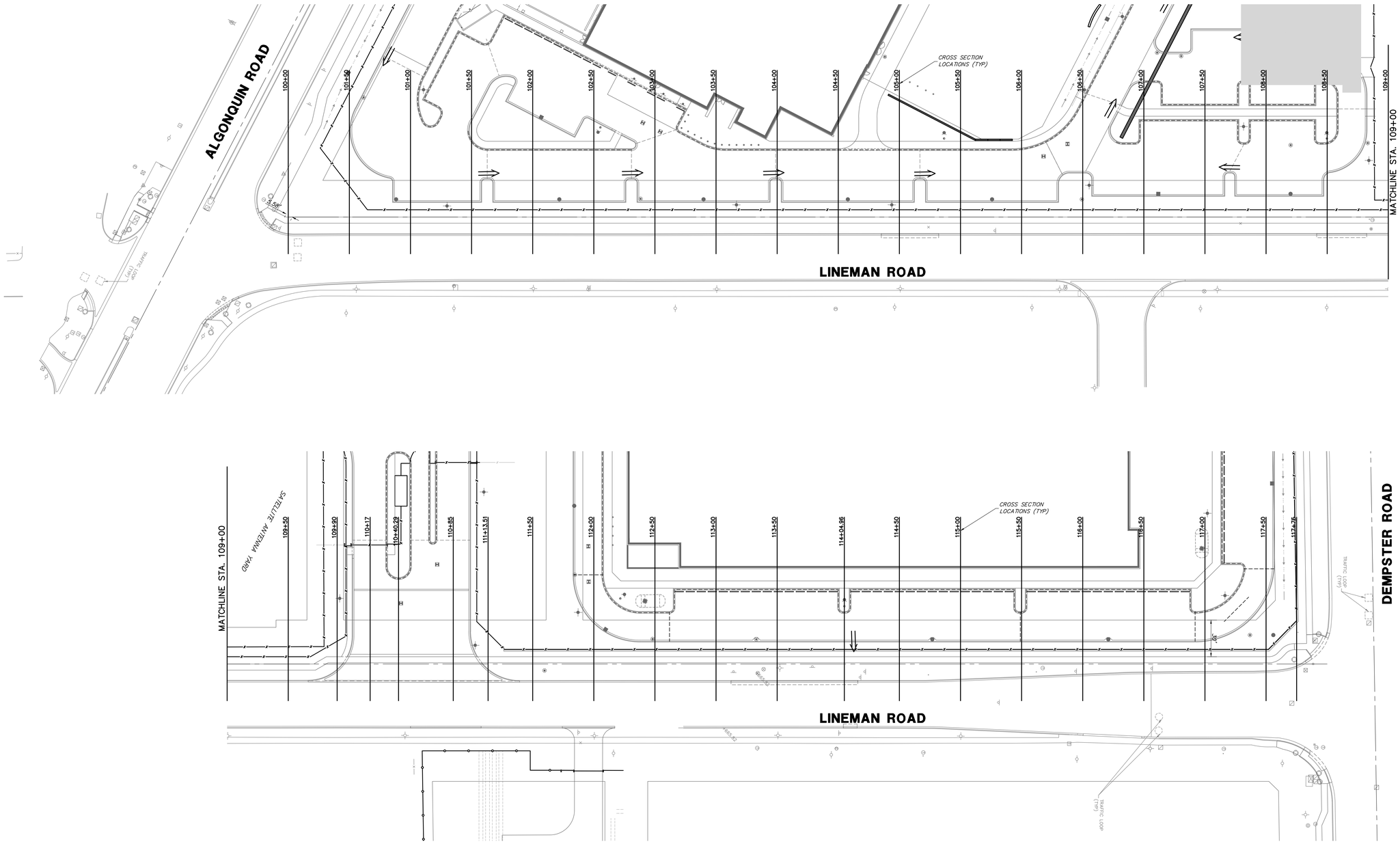

CROSS SECTIONS - DEMPSTER ROAD

JOB 5253.220
SHEET

C04-12



C:\ACCDOCS\5253.01 DUNDEE – MOUNT PROSPECT – 3KLWK.RFDOM\5253.220\e15.DWG 10/15/2025 3:41 PM




GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

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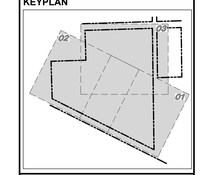
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

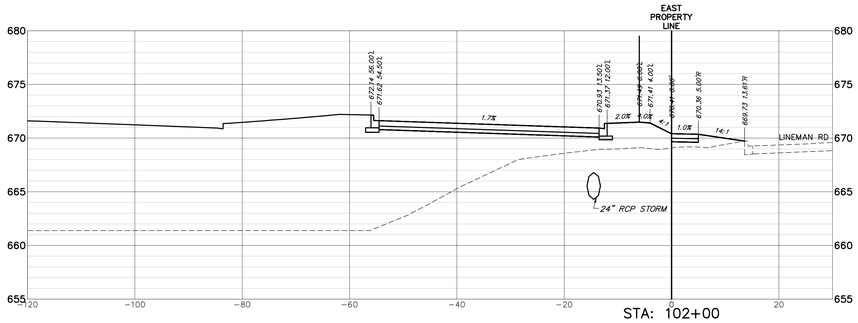



CROSS SECTIONS - LOCATIONS LINEMAN ROAD

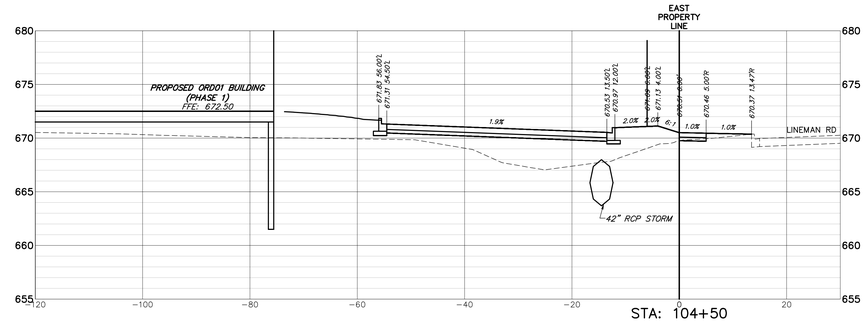
JOB 5253.220
SHEET

**C04-13**

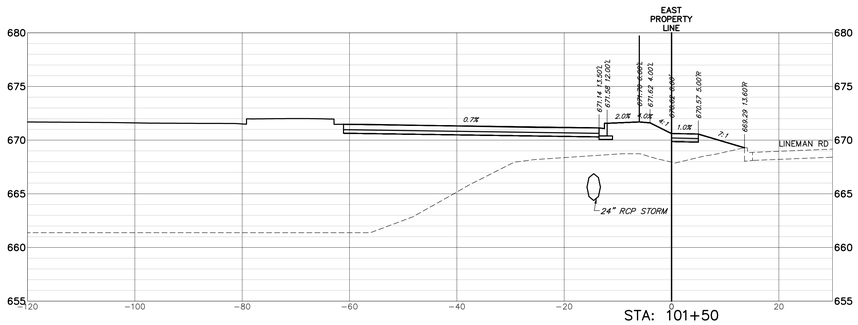
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.



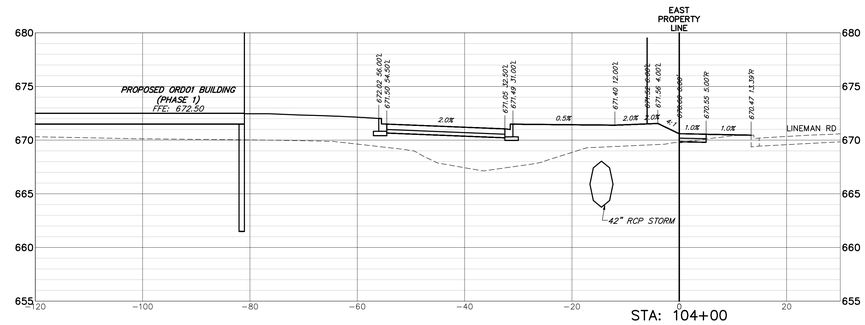
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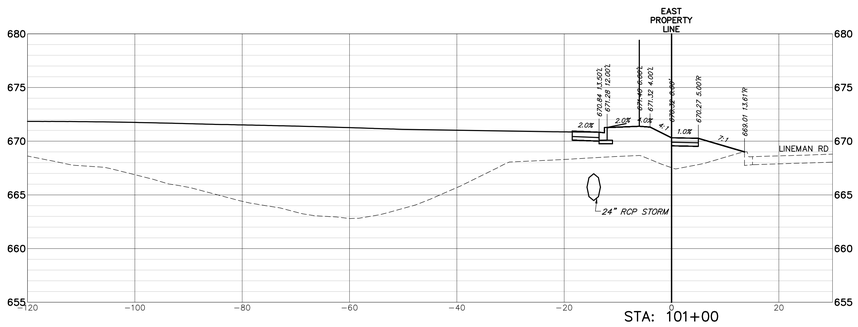
STA: 104+50



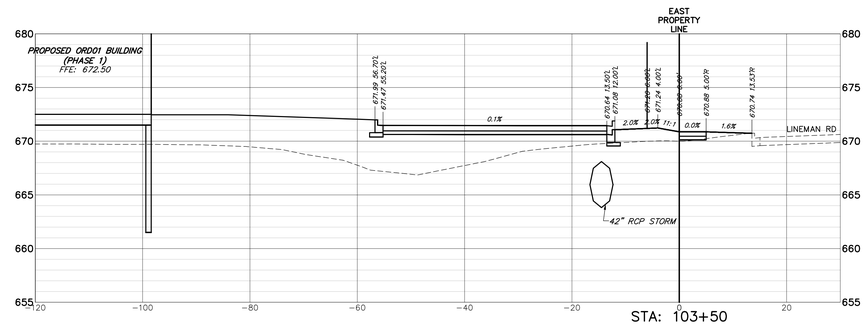
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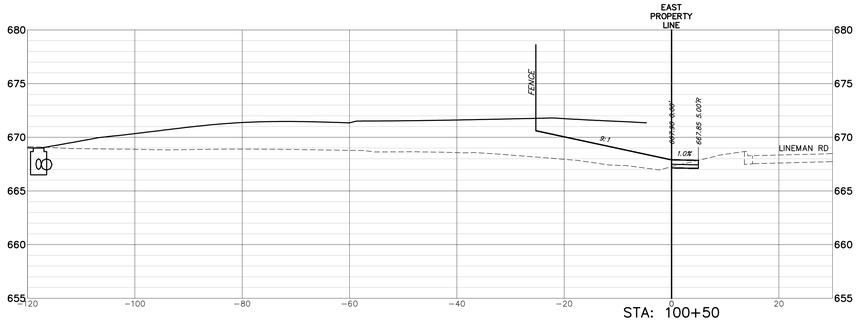
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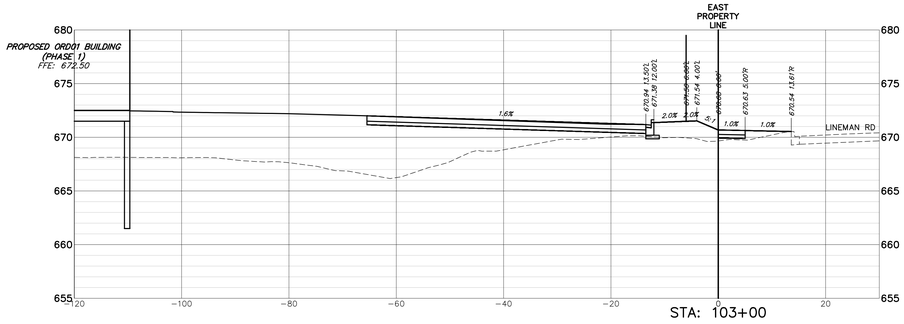
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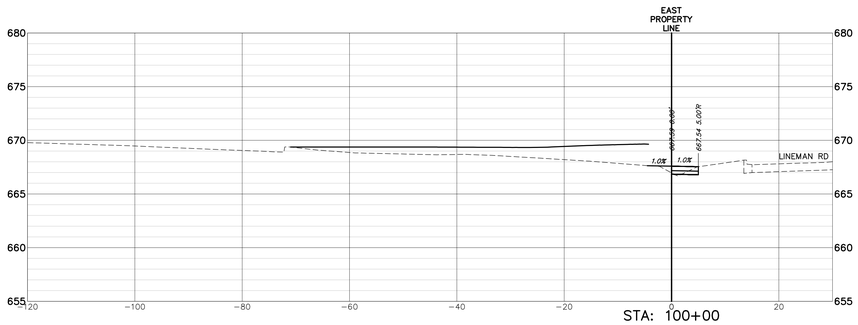
STA: 103+50



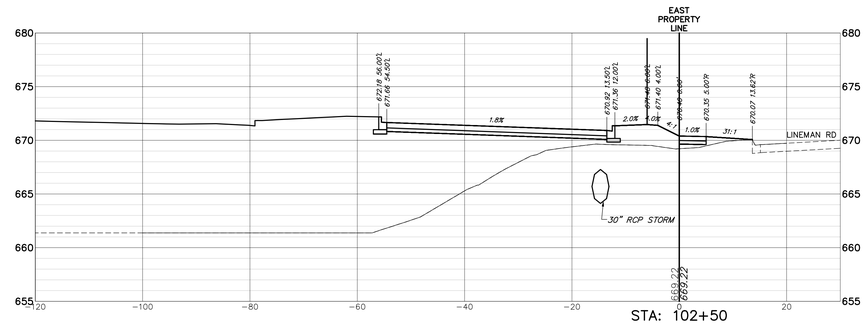
STA: 100+50



STA: 103+00



STA: 100+00



STA: 102+50

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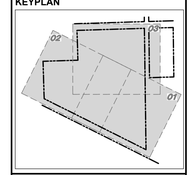
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



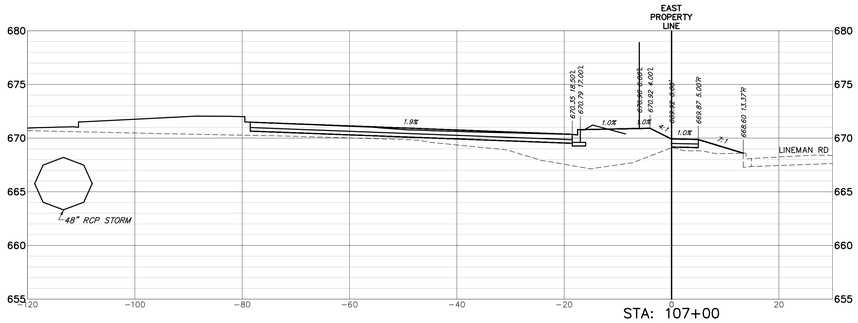

CROSS SECTIONS - LINEMAN ROAD

JOB 5253.220
SHEET
C04-14

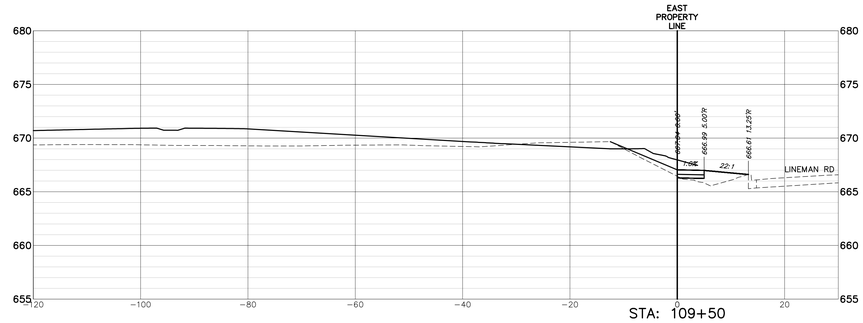


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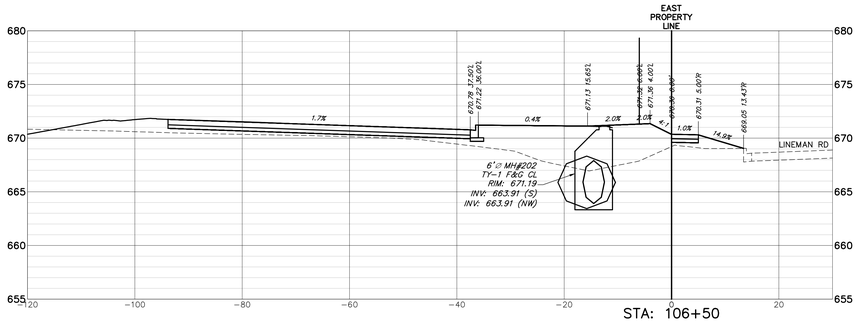
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.



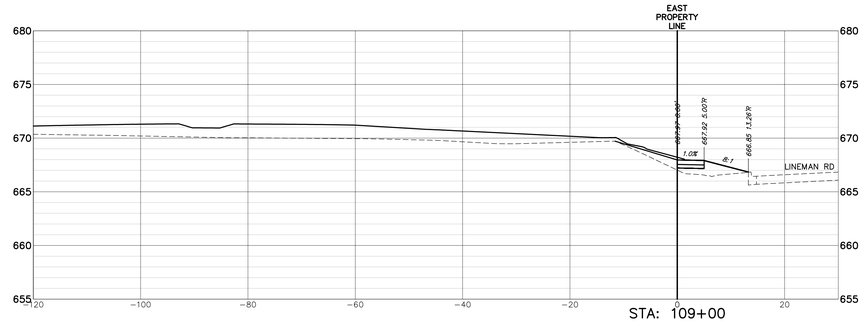

STA: 107+00



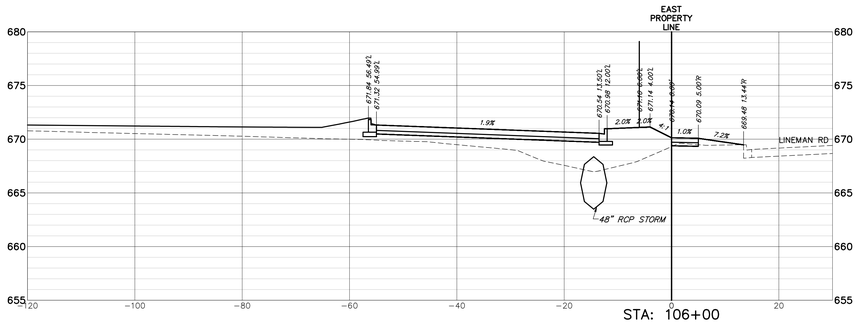

STA: 109+50



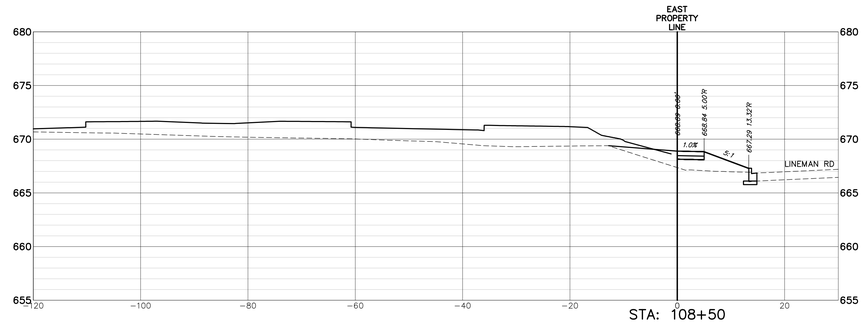

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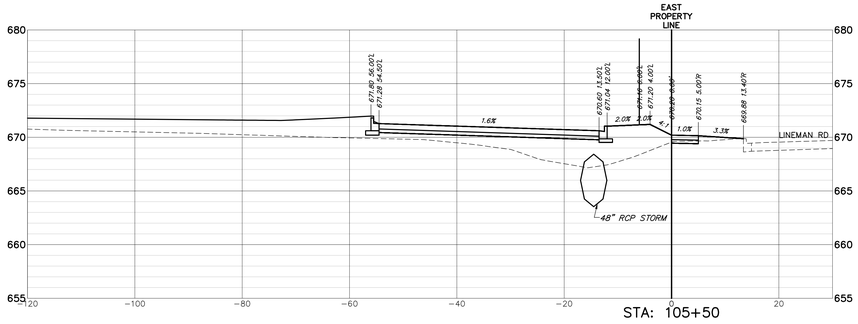

STA: 109+00



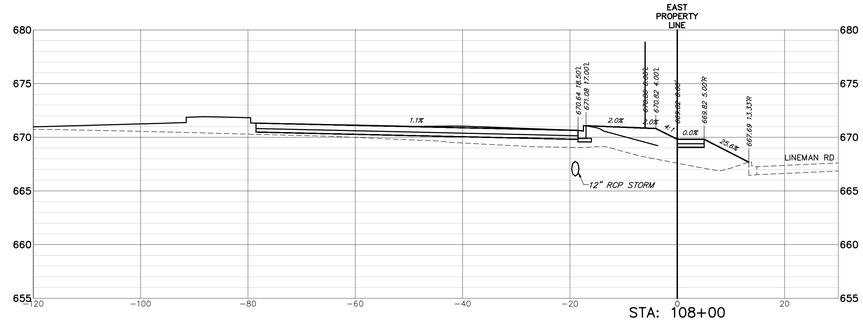

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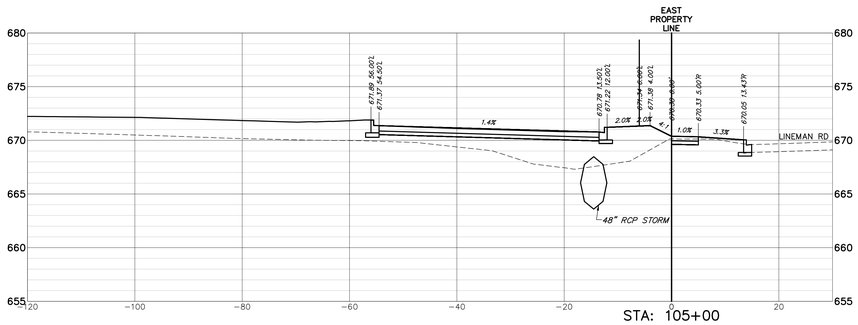

STA: 108+50



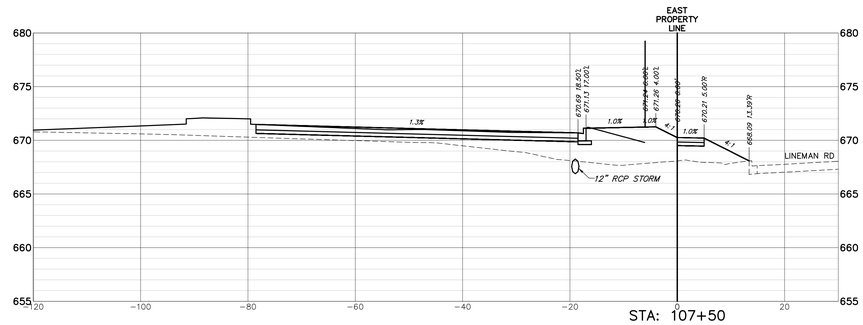

STA: 105+50




STA: 108+00




STA: 105+00




STA: 107+50

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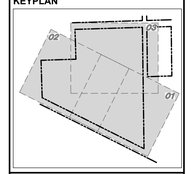
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




CROSS SECTIONS - LINEMAN ROAD

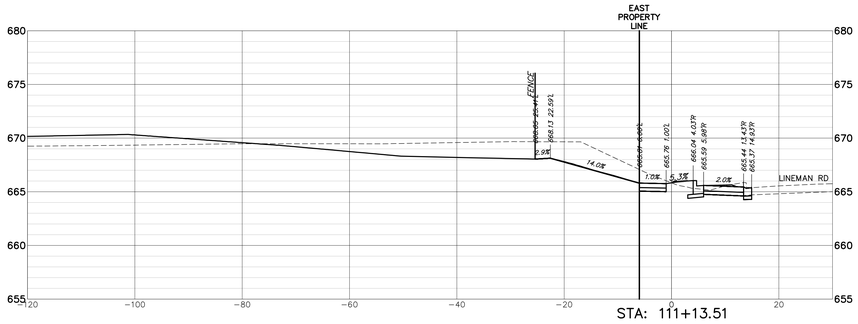
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SHEET

**C04-15**

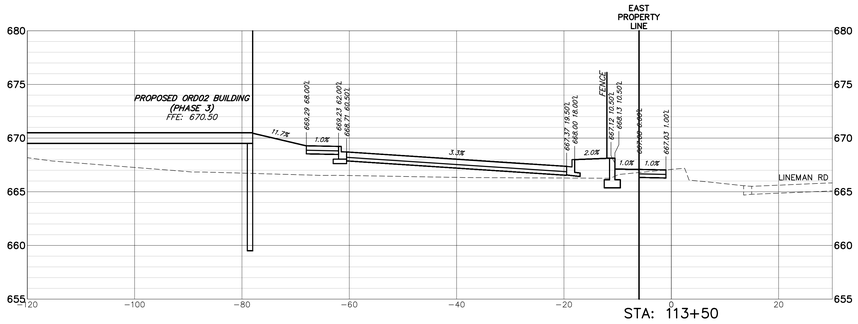


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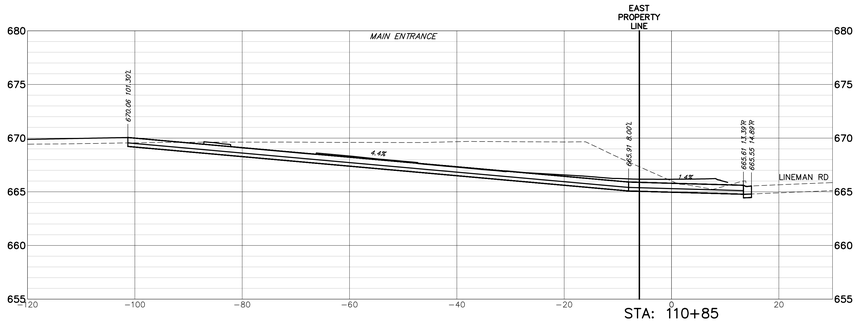
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 Ft. V. 1" = 5 ft.



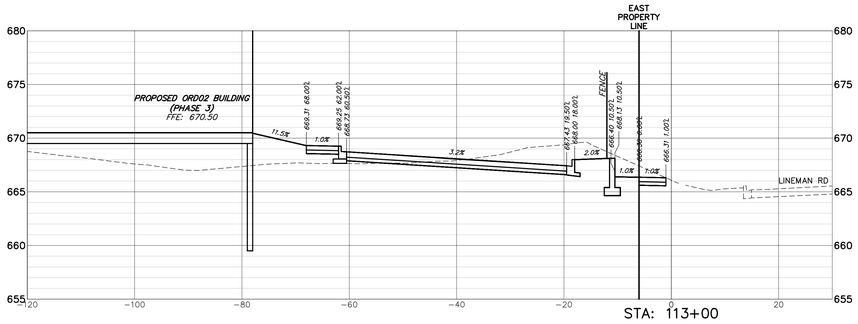
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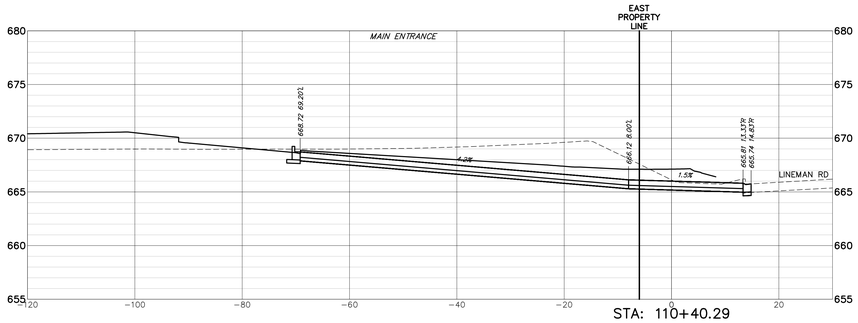
STA: 113+50



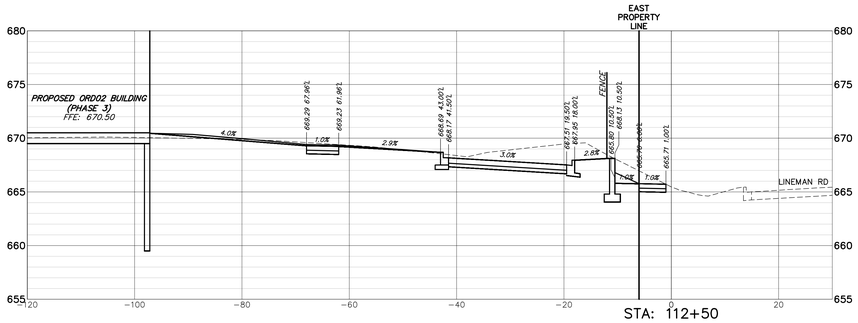
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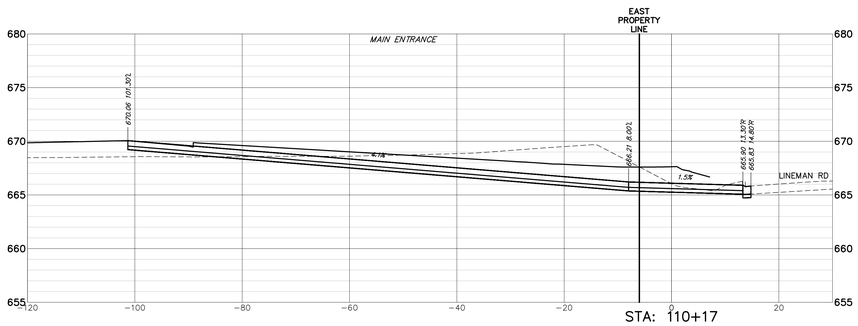
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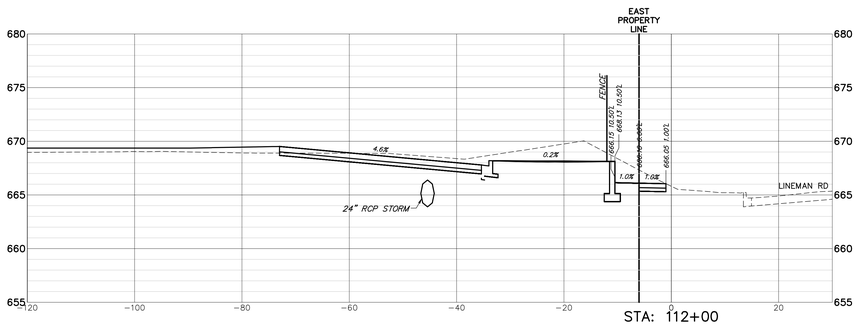
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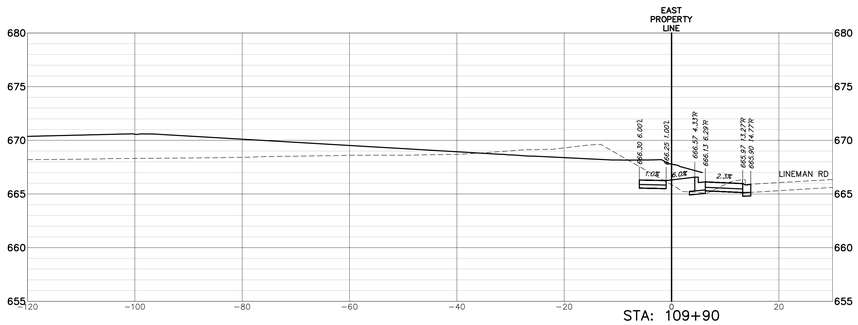
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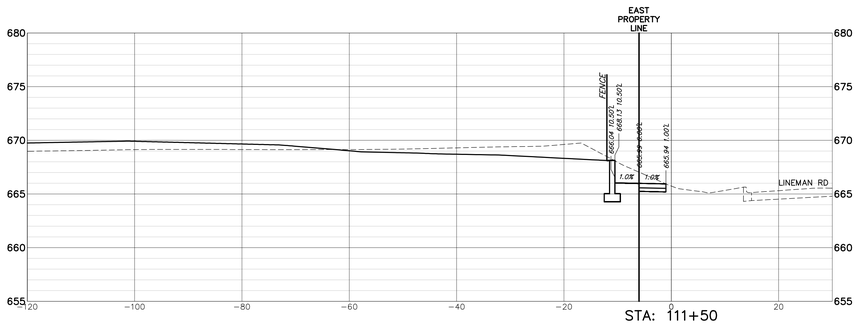
STA: 110+17



STA: 112+00



STA: 109+90



STA: 111+50

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CONSULTING ENGINEERS

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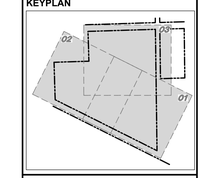
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SIGNED: _____ P.E.
DONALD E. DIXON
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

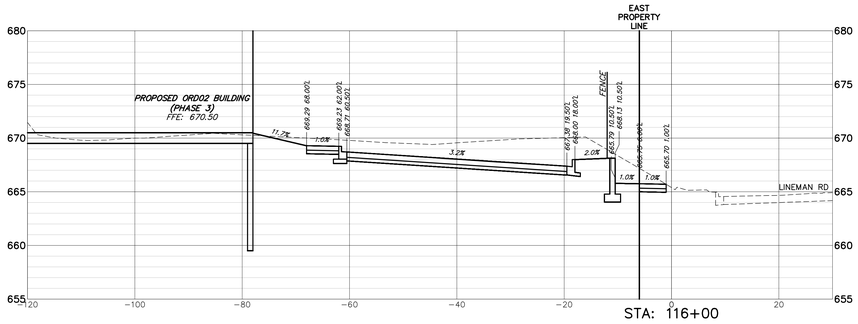
KEYPLAN



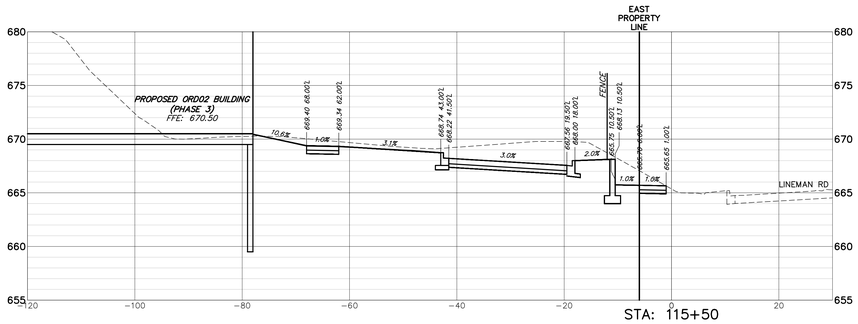

CROSS SECTIONS - LINEMAN ROAD

JOB 5253.220
SHEET
C04-16

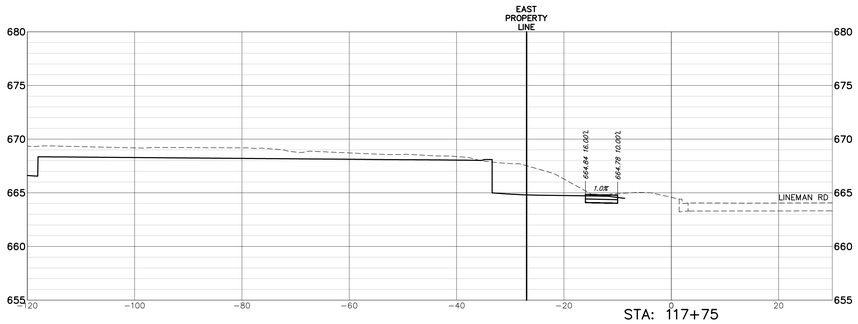
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.



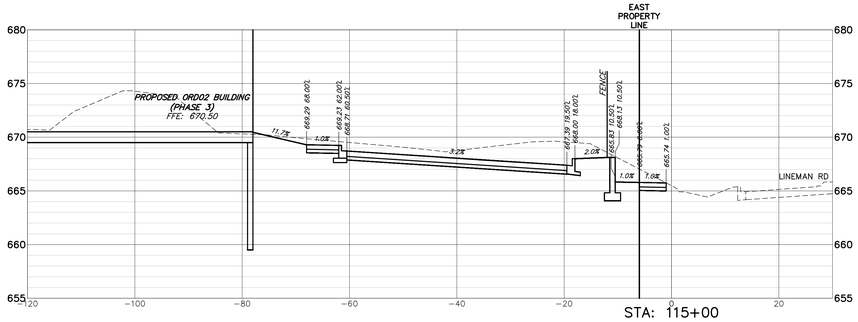
STA: 116+00



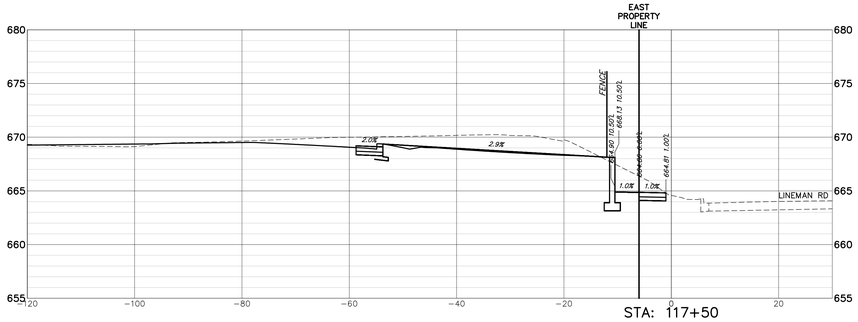
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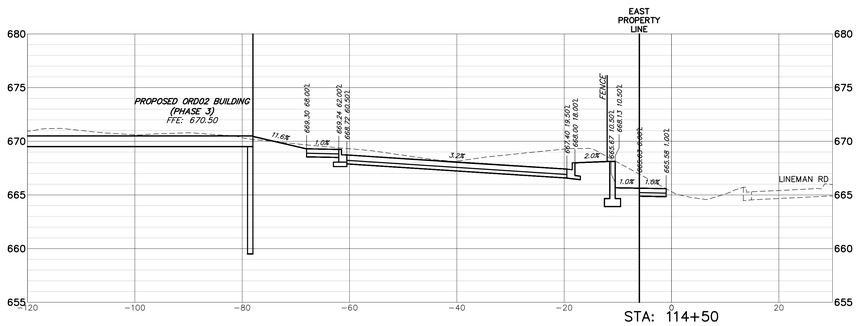
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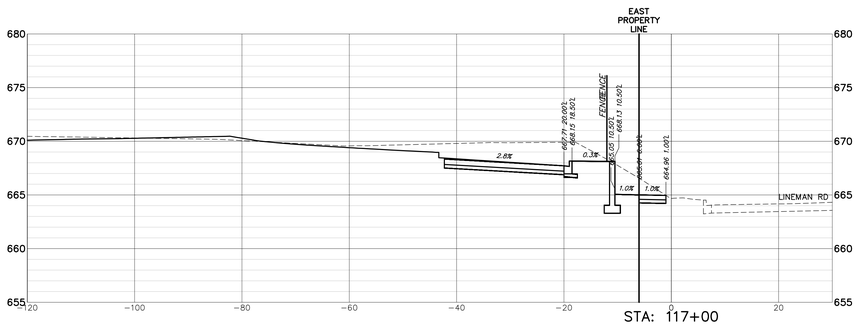
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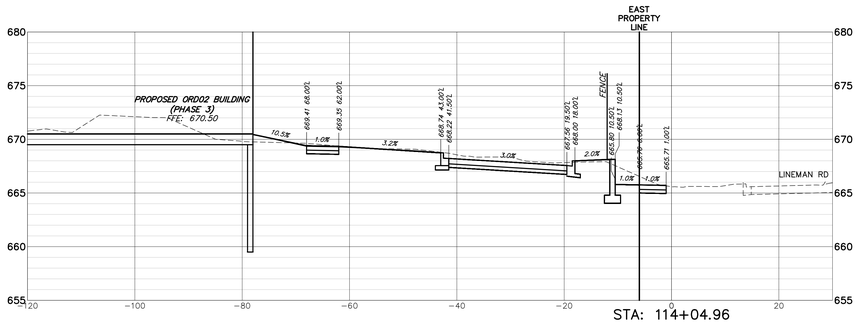
STA: 117+50



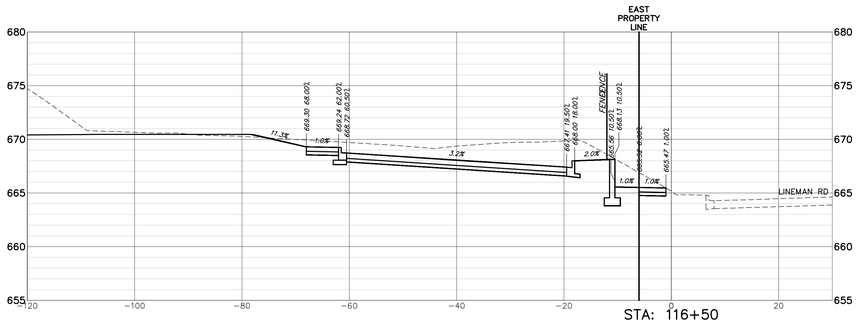
STA: 114+50



STA: 117+00



STA: 114+04.96



STA: 116+50

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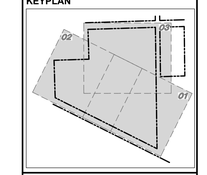
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MOUNT PROSPECT TECHNOLOGY CAMPUS

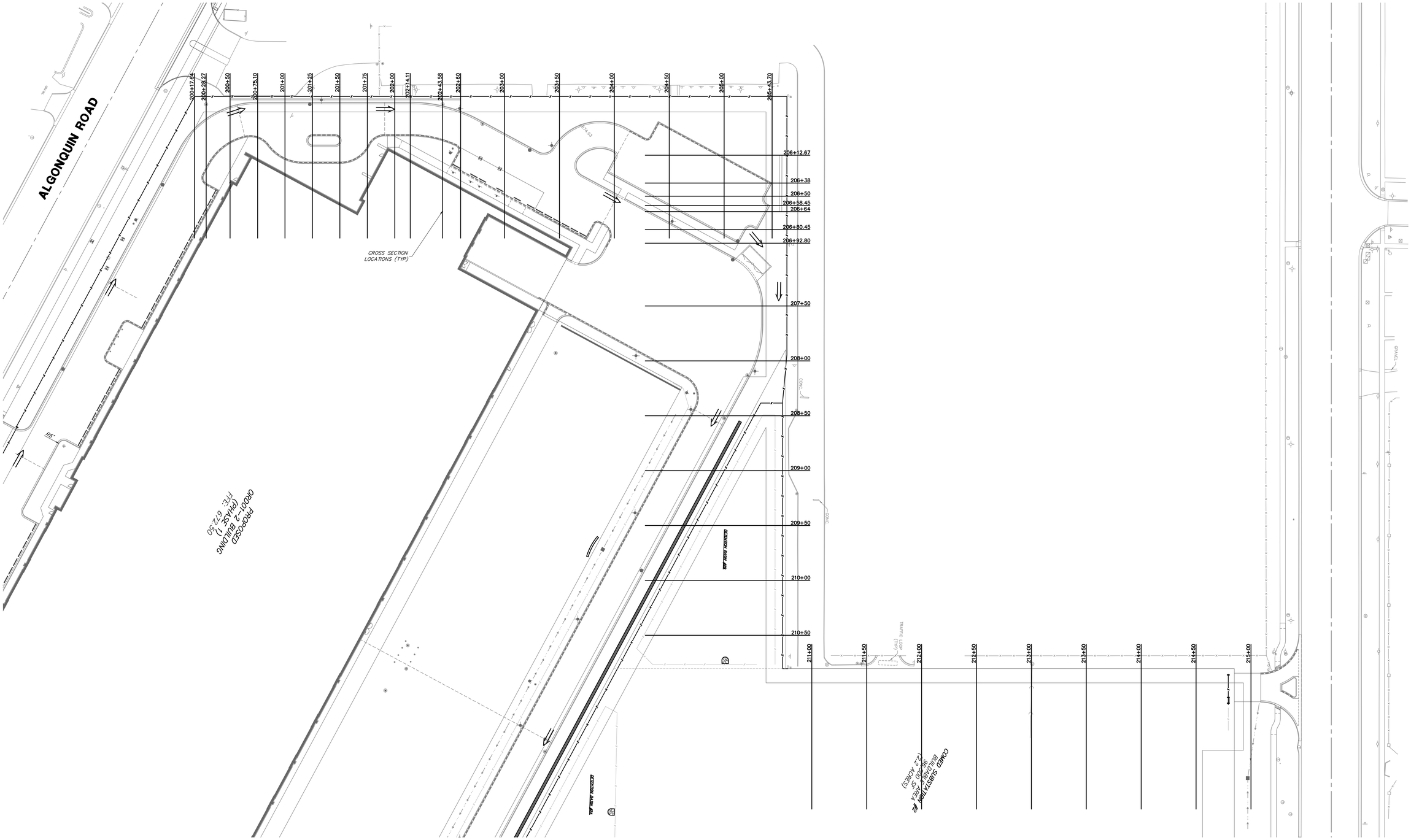
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

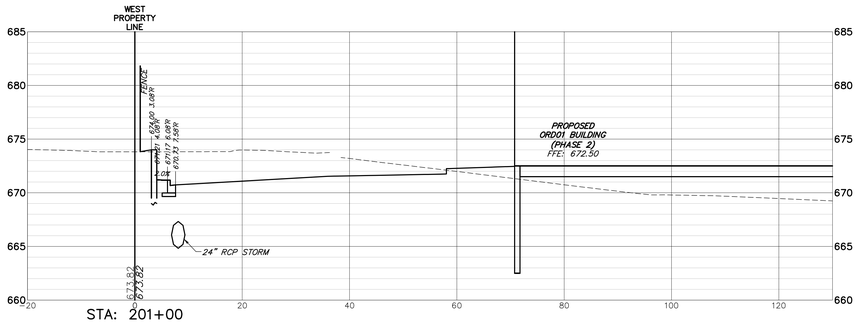
KEYPLAN



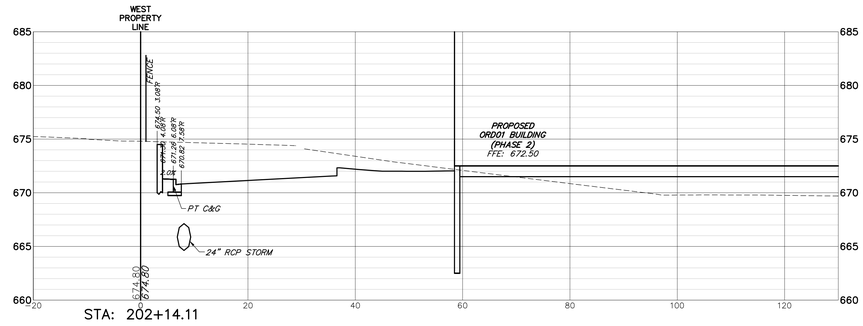

CROSS SECTIONS - LINEMAN ROAD

JOB 5253.220
SHEET
C04-17

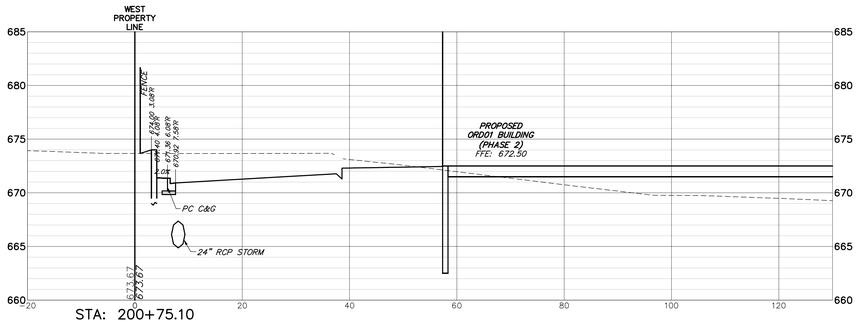

ALGONQUIN ROAD
200+17.64
200+28.27
200+50
200+75.10
201+00
201+25
201+50
201+75
202+00
202+14.11
202+43.58
202+60
203+00
203+50
204+00
204+50
205+00
205+43.70
206+12.67
206+38
206+50
206+58.45
206+64
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209+50
210+00
210+50
211+00
211+50
212+00
212+50
213+00
213+50
214+00
214+50
215+00
CROSS SECTION LOCATIONS (TYP)
PROPOSED DRIVE-2 BUILDING FFE: 672.50
GENERAL PLAN JBA
CONCRETE PAVEMENT (TYP)
CONCRETE SIDEWALK (TYP)
CONCRETE CURB (TYP)
ASPHALT PAVEMENT (TYP)
CONCRETE SIDEWALK (TYP)
CONCRETE CURB (TYP)
CONCRETE SIDEWALK (TYP)
ASPHALT PAVEMENT (TYP)
CONCRETE CURB (TYP)
CONCRETE SIDEWALK (TYP)
CONCRETE CURB



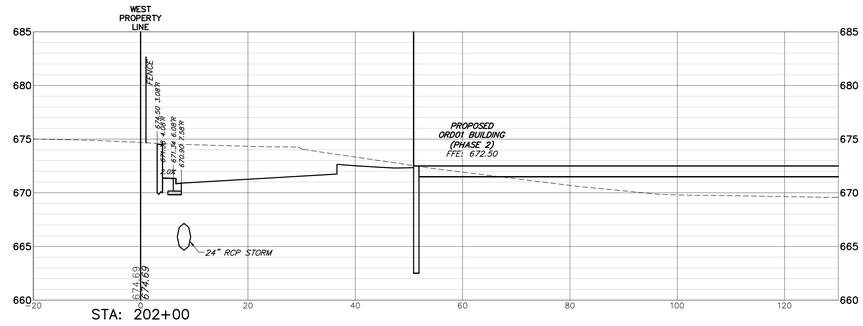

STA: 201+00



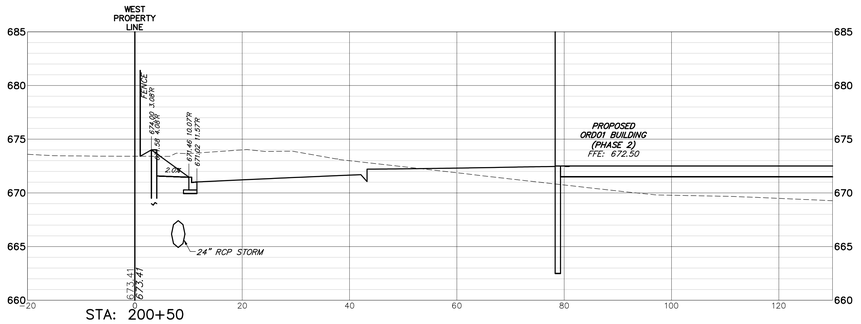

STA: 202+14.11



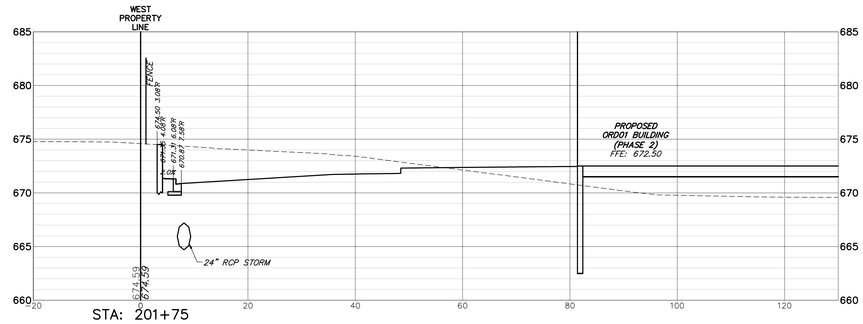

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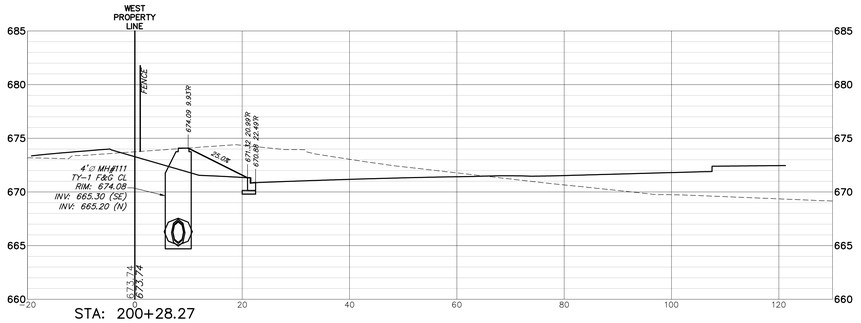

STA: 202+00



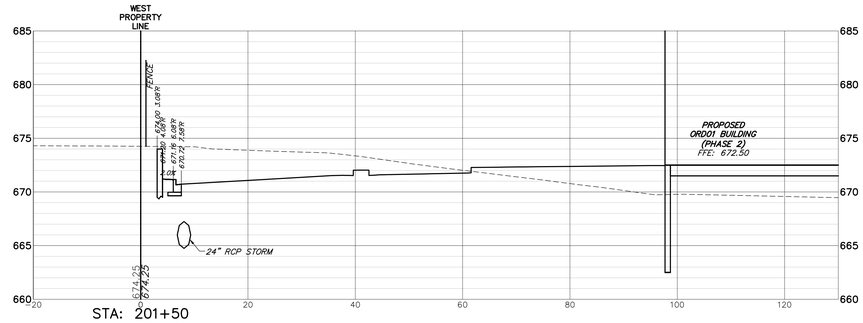

STA: 200+50



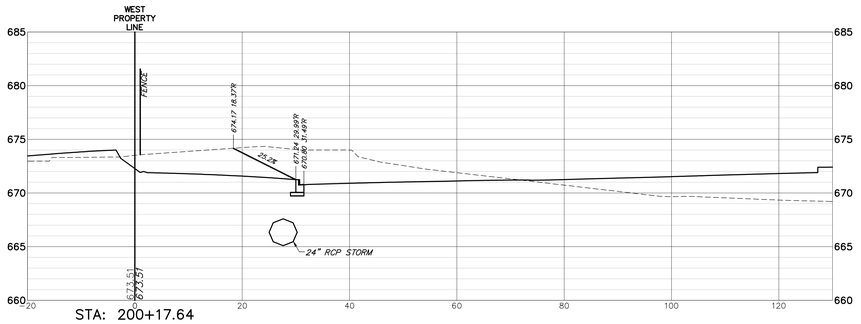

STA: 201+75



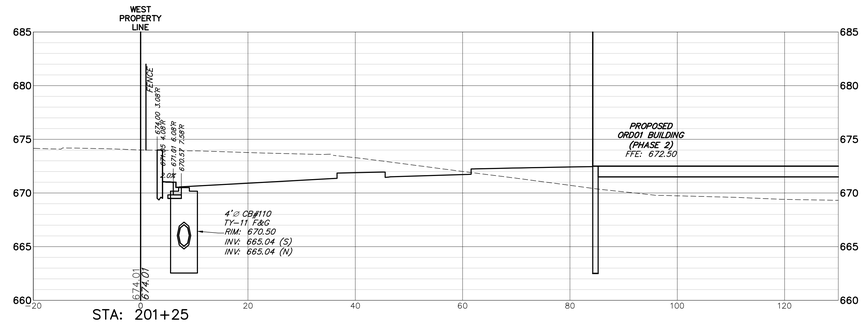

STA: 200+28.27




STA: 201+50




STA: 200+17.64




STA: 201+25

GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.

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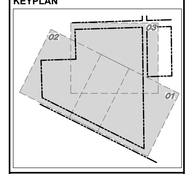
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

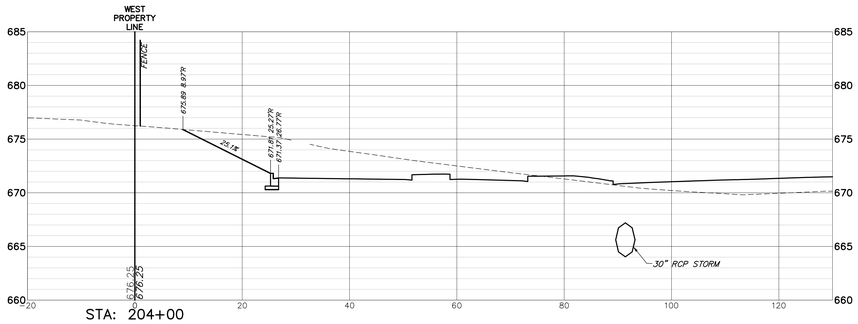
KEYPLAN



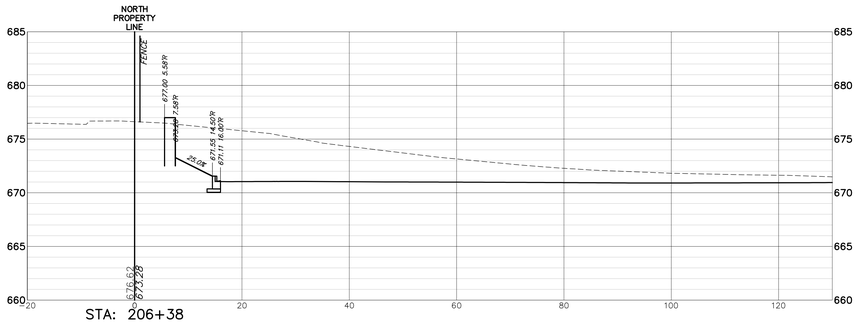

CROSS SECTIONS - WEST PROPERTY LINE

**JOB** 5253.220
**SHEET**

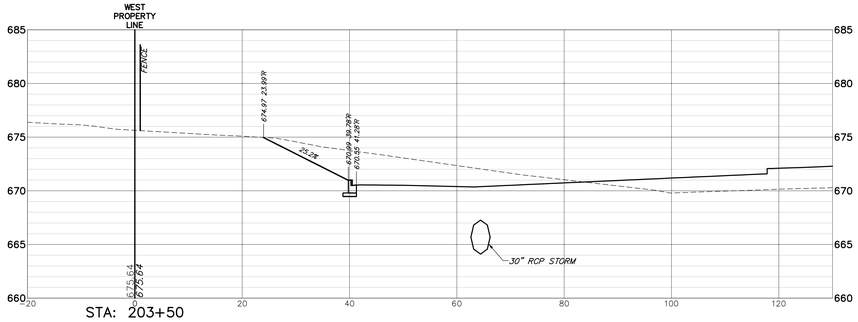
**C04-19**



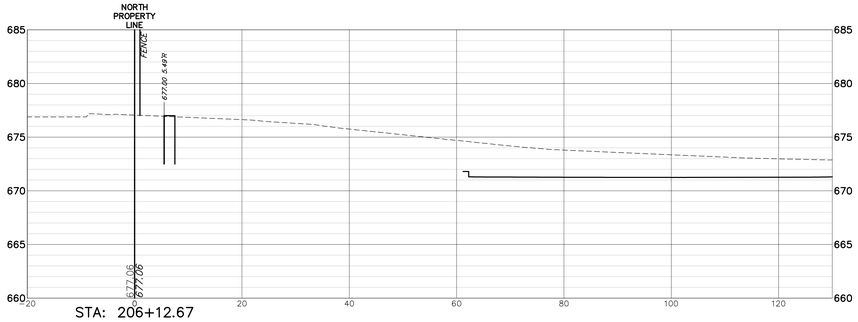

STA: 204+00



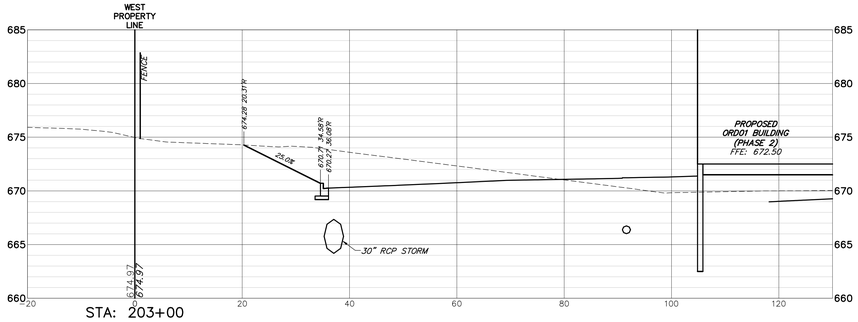

STA: 206+38



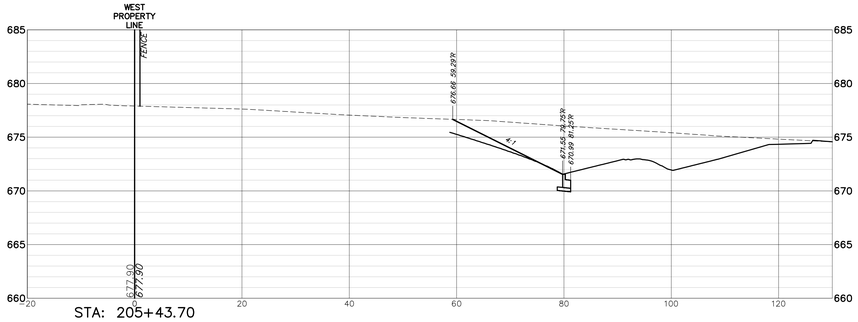

STA: 203+50



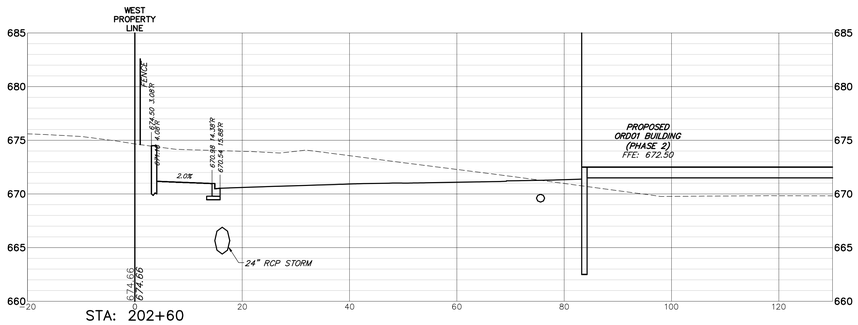

STA: 206+12.67



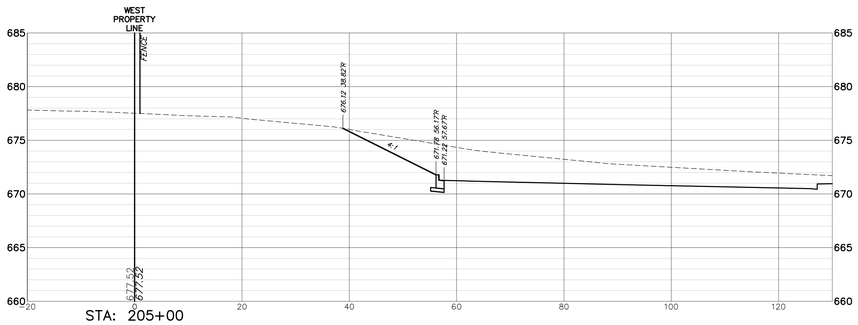

STA: 203+00



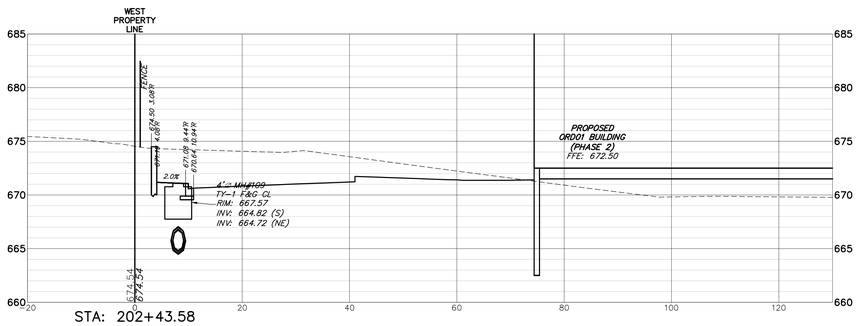

STA: 205+43.70



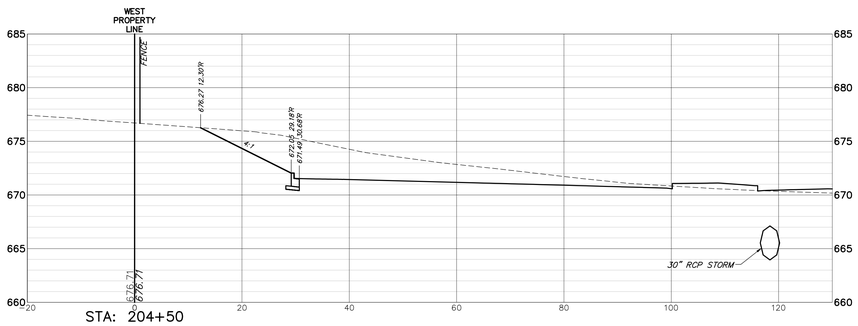

STA: 202+60




STA: 205+00




STA: 202+43.58




STA: 204+50

GRAPHIC SCALE
10 0 5 10
( IN FEET )
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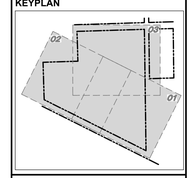
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

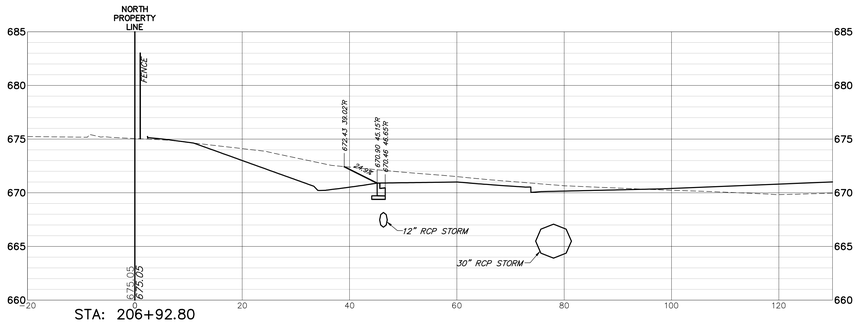



CROSS SECTIONS - WEST PROPERTY LINE

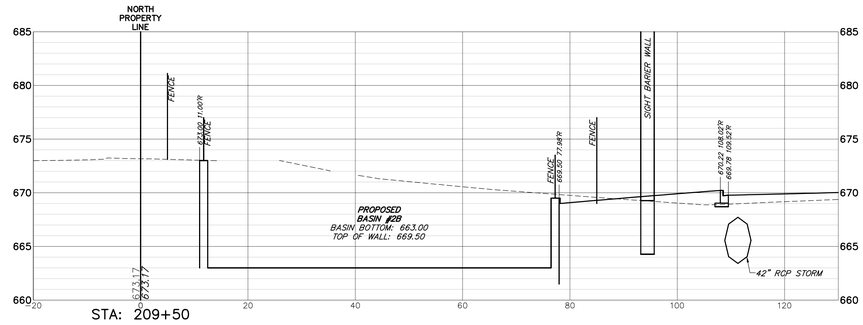
JOB 5253.220

SHEET

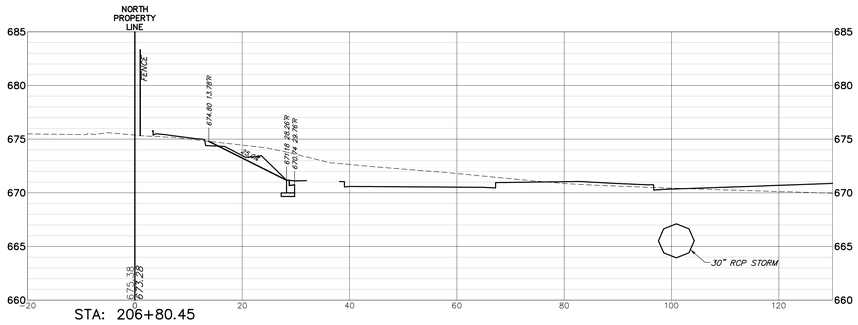
C04-20



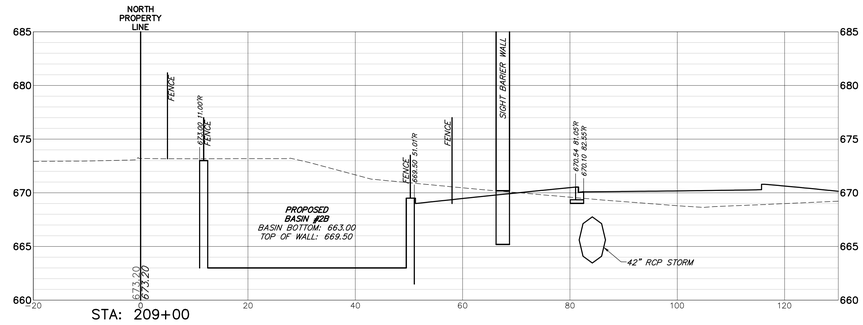

STA: 206+92.80



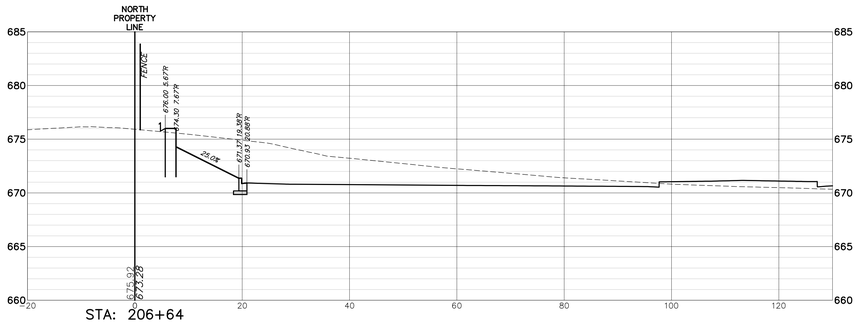

STA: 209+50



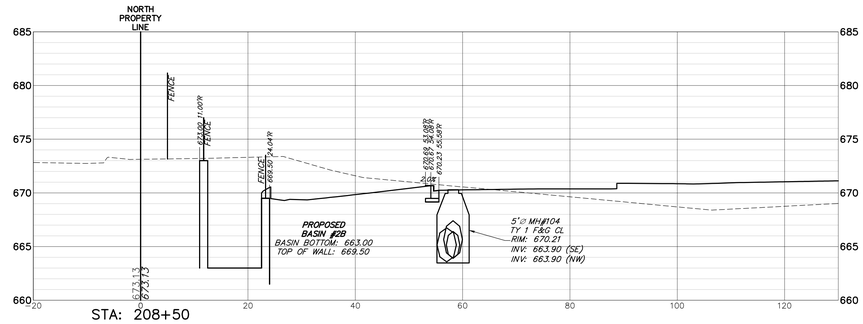

STA: 206+80.45



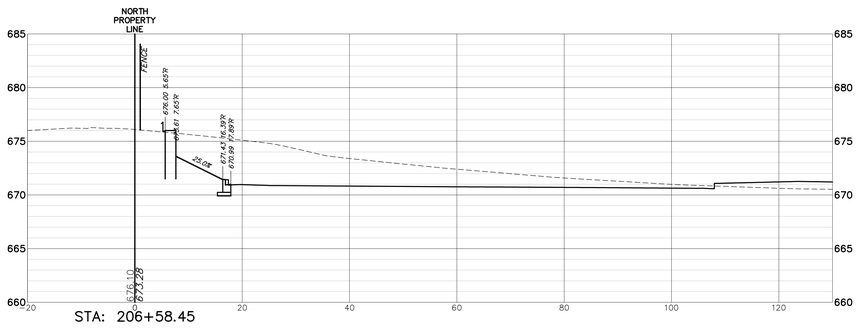

STA: 209+00



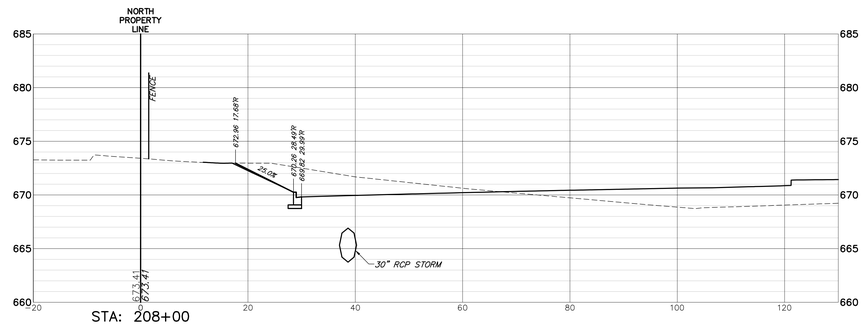

STA: 206+64



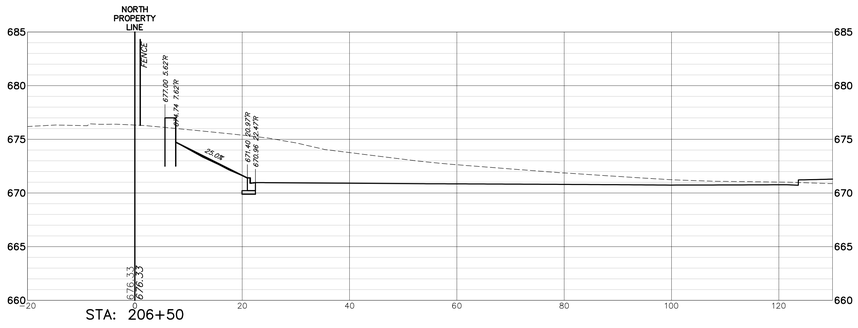

STA: 208+50



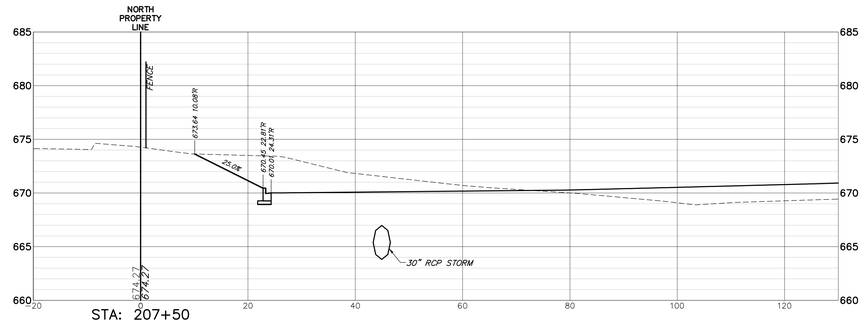

STA: 206+58.45




STA: 208+00




STA: 206+50




STA: 207+50

GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 Ft. V. 1" = 5 ft.

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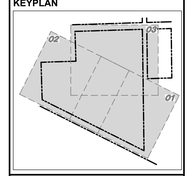
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

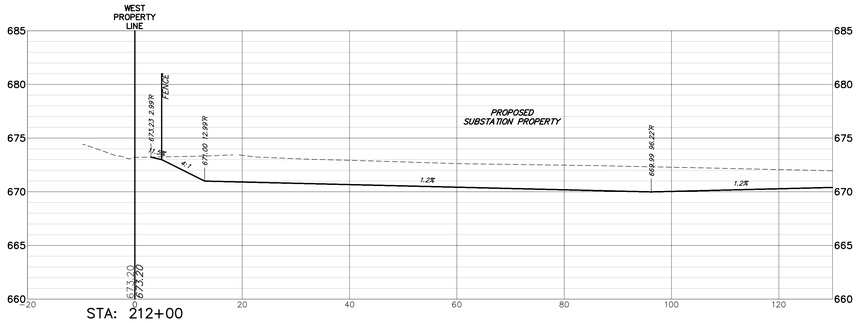


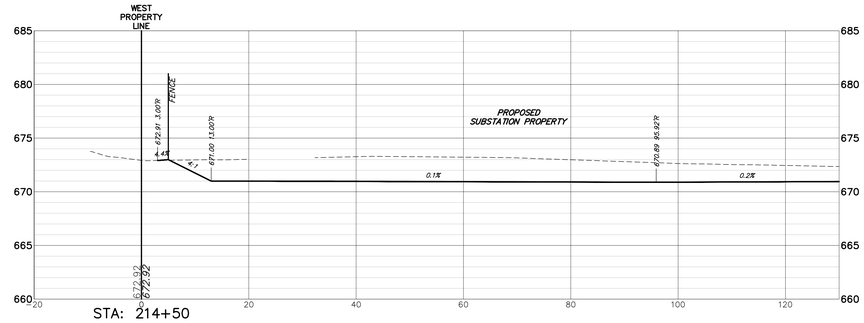

CROSS SECTIONS - WEST PROPERTY LINE

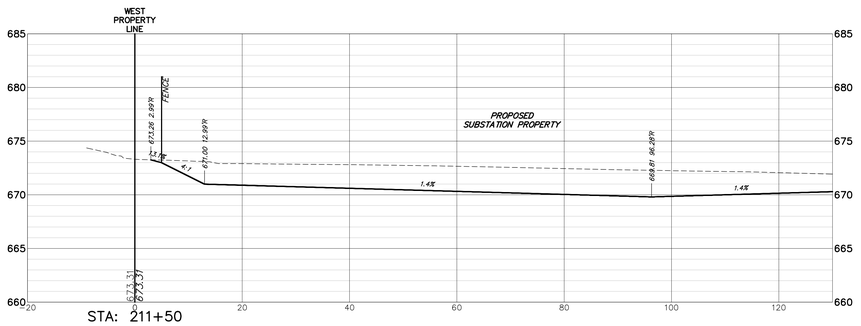
**JOB** 5253.220
**SHEET**

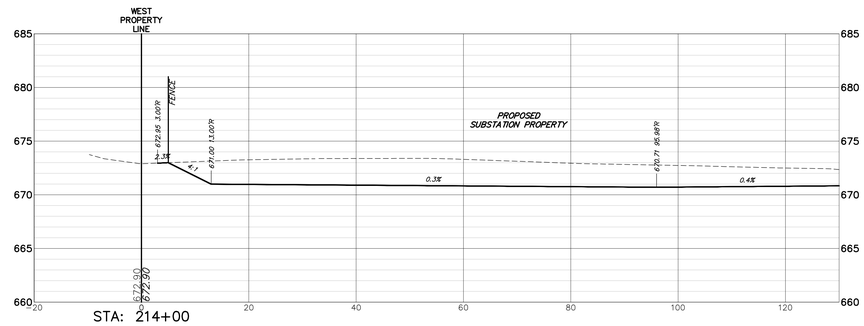
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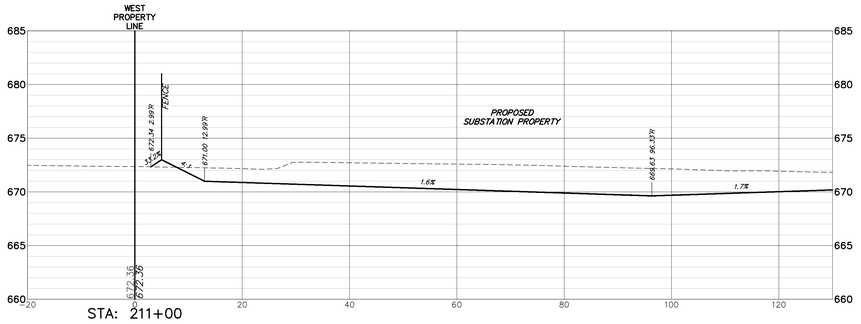
GRAPHIC SCALE
10 0 5 10
( IN FEET )
H. 1" = 10 ft. V. 1" = 5 ft.

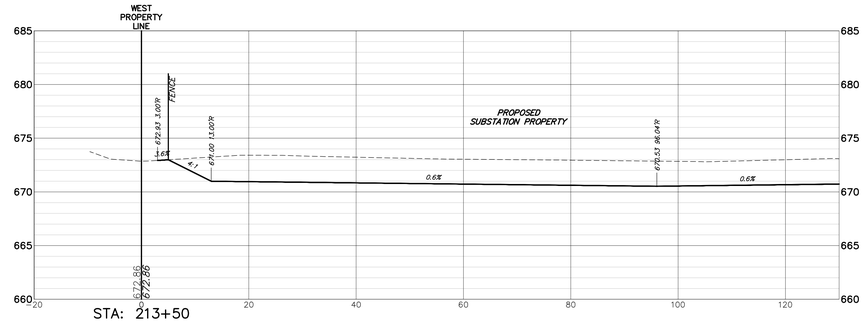


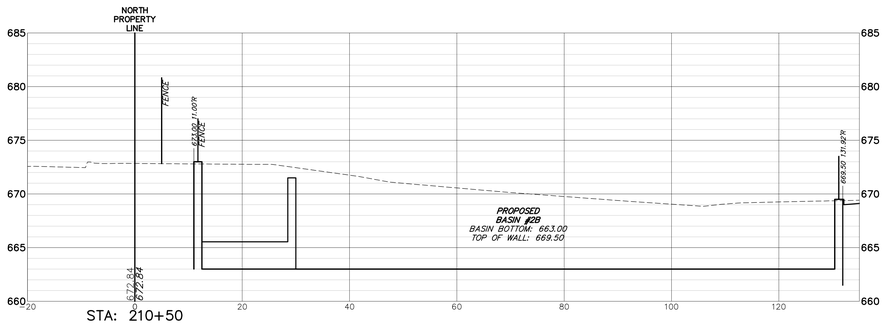



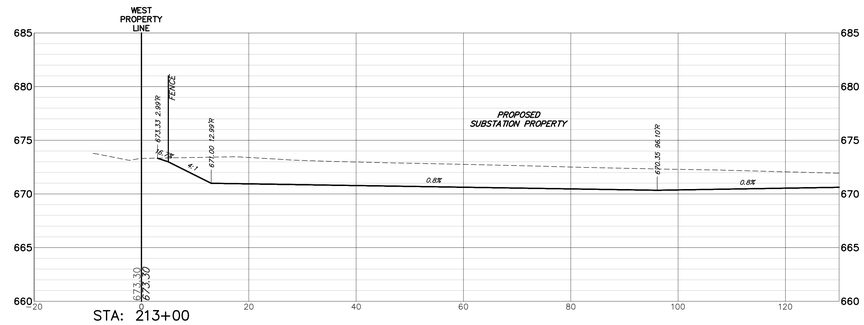



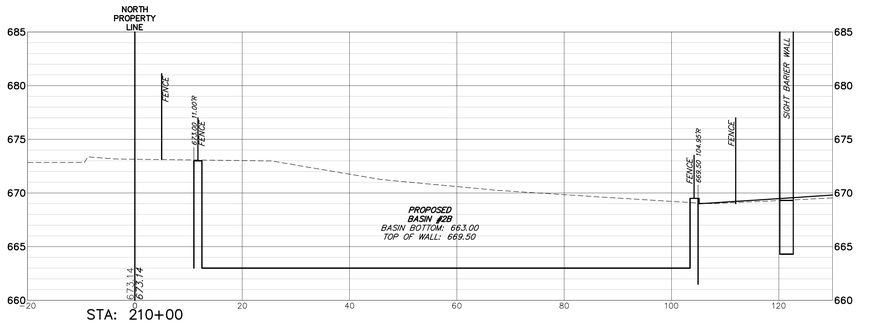



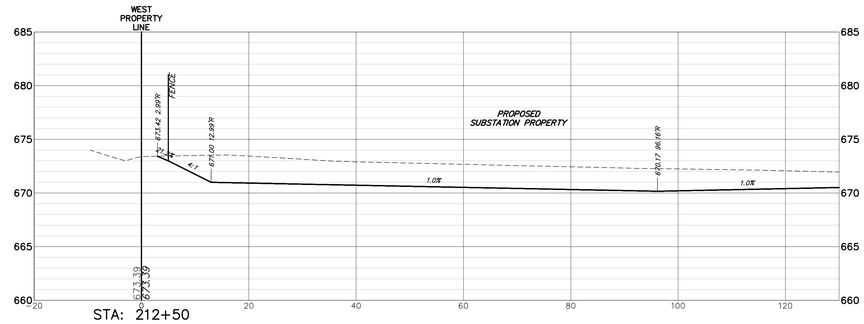




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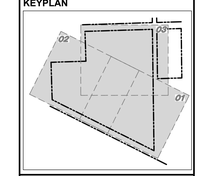
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

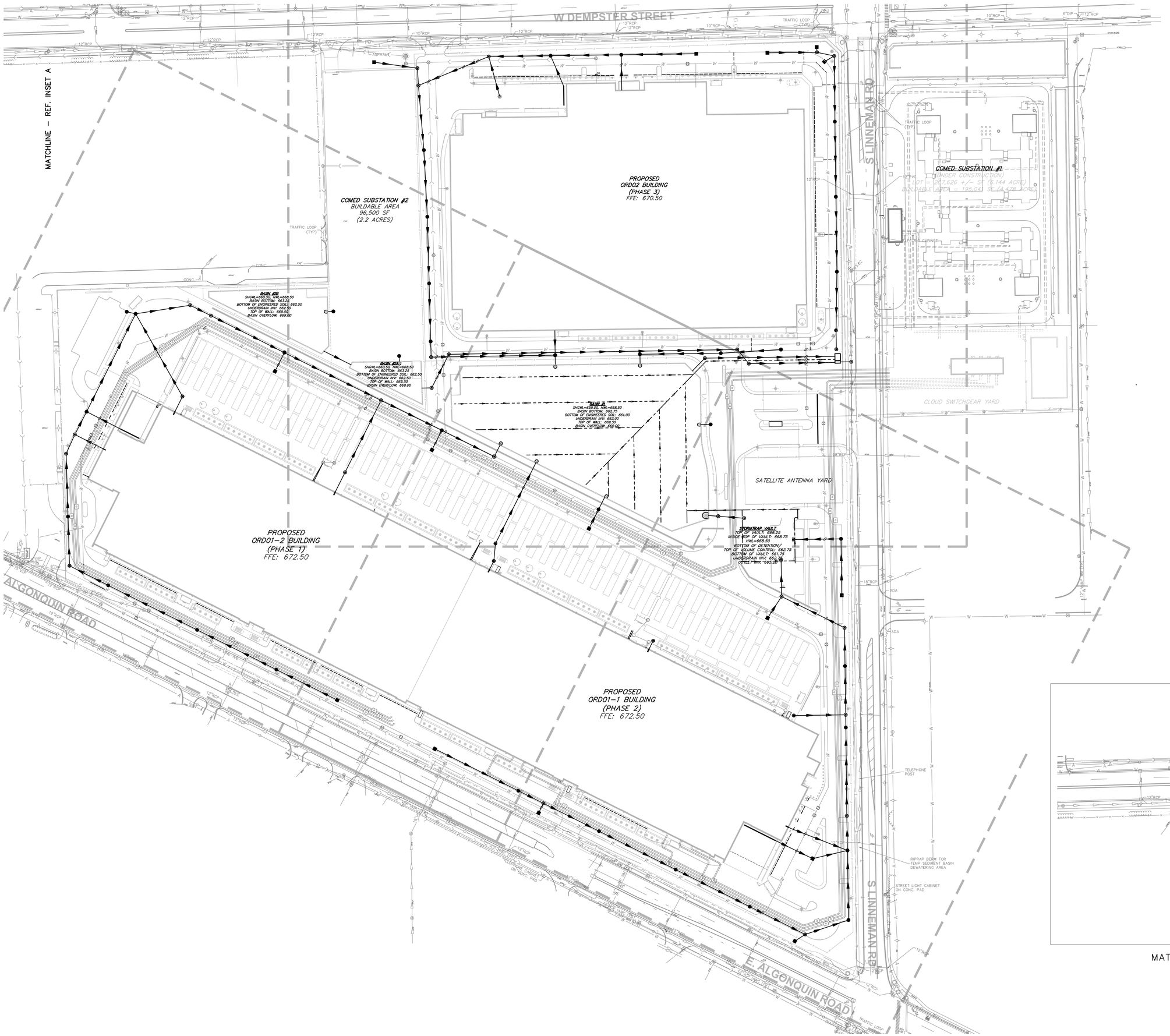



CROSS SECTIONS - WEST PROPERTY LINE

**JOB** 5253.220

**SHEET**

**C04-22**




GRAPHIC SCALE

60 0 30 60

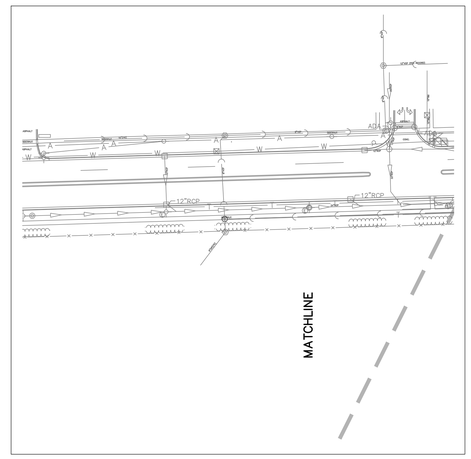
( IN FEET )

1 inch = 60 ft.

## UTILITY PLAN LEGEND

| | |
|---|---|
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| W | EXISTING WATERMAIN |
| | PROPOSED STORM SEWER |
| | PROPOSED STORM UNDERDRAIN |
| | PROPOSED SANITARY SEWER |
| W | PROPOSED WATERMAIN |

| EXISTING | PROPOSED | |
|---|---|---|
| | | STORM MANHOLE |
| | | STORM CATCHBASIN |
| | | STORM INLET |
| | | FLARED END SECTION |
| | | SANITARY MANHOLE |
| | | VALVE VAULT |
| | | VALVE BOX |
| | | FIRE HYDRANT |
| | | BUFFALO BOX |
| | | STREET LIGHT |
| | | POWER POLE |
| | | SIGN |




MATCHLINE INSET A
(1" = 60')

NOTE:

ALL UTILITIES ONSITE AS WELL AS THE LIFT STATION AND FORCEMAIN TO THE POINT OF CONNECTION TO THE RECEIVING SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.

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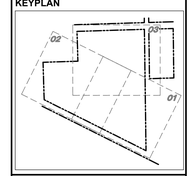
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

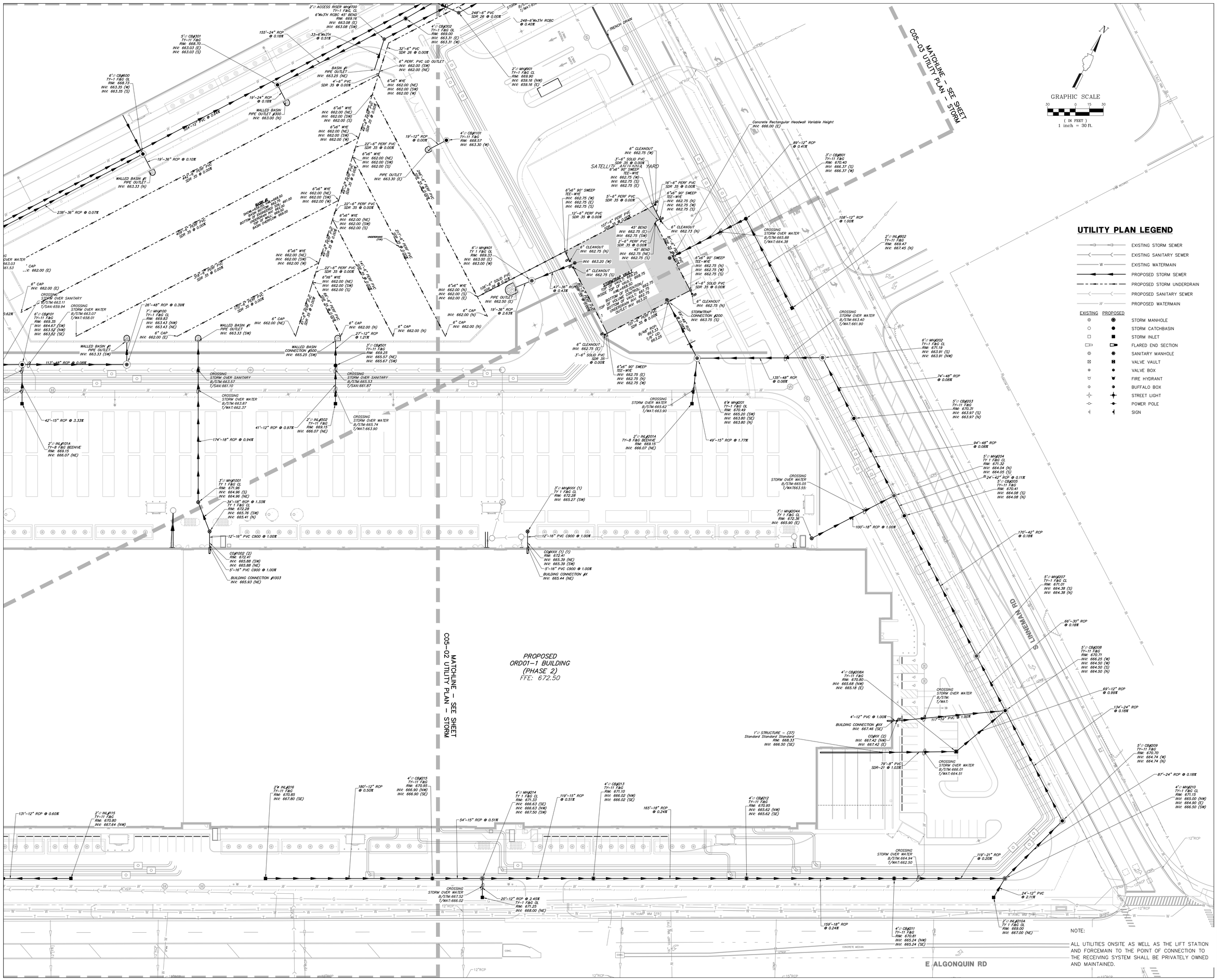
KEYPLAN




UTILITY PLAN
STORM -
OVERALL

JOB 5253.220
SHEET

C05-00




## UTILITY PLAN LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED STORM UNDERDRAIN
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN

| EXISTING | PROPOSED |
|---|---|
| | STORM MANHOLE |
| | STORM CATCHBASIN |
| | STORM INLET |
| | FLARED END SECTION |
| | SANITARY MANHOLE |
| | VALVE VAULT |
| | VALVE BOX |
| | FIRE HYDRANT |
| | BUFFALO BOX |
| | STREET LIGHT |
| | POWER POLE |
| | SIGN |

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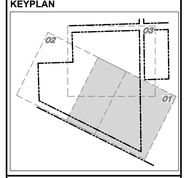
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
STORM - SHEET 1

**JOB** 5253.220
**SHEET**

C05-01

## UTILITY PLAN LEGEND

| | |
|---|---|
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| W | EXISTING WATERMAIN |
| | PROPOSED STORM SEWER |
| | PROPOSED STORM UNDERDRAIN |
| | PROPOSED SANITARY SEWER |
| W | PROPOSED WATERMAIN |

| EXISTING | PROPOSED | |
|---|---|---|
| | | STORM MANHOLE |
| | | STORM CATCHBASIN |
| | | STORM INLET |
| | | FLARED END SECTION |
| | | SANITARY MANHOLE |
| | | VALVE VAULT |
| | | VALVE BOX |
| | | FIRE HYDRANT |
| | | BUFFALO BOX |
| | | STREET LIGHT |
| | | POWER POLE |
| | | SIGN |

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

MATCHLINE – SEE SHEET C05-03 UTILITY PLAN – STORM

COMED SUBSTATION #2
BUILDABLE AREA
96,500 SF
(2.2 ACRES)

PROPOSED
ORD01-2 BUILDING
(PHASE 1)
FFE: 672.50

MATCHLINE – SEE SHEET C05-01 UTILITY PLAN – STORM

E ALGONQUIN RD

NOTE:
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| △ | REVISIONS | |

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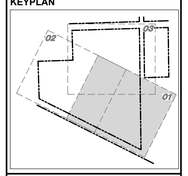
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DONALD E. DIXON
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
STORM - SHEET 2

**JOB** 5253.220
**SHEET**

C05-02

DEMPSTER ST

MATCHLINE – SEE SHEET C05–02 UTILITY PLAN – STORM

MATCHLINE – SEE SHEET C05–01 UTILITY PLAN – STORM

MATCHLINE – SEE SHEET C05–02 UTILITY PLAN – STORM

MATCHLINE – SEE SHEET C05–01 UTILITY PLAN – STORM

4'□ MH#607 TY–11 F&G CL RIM: 669.15 INV: 664.31 (S) INV: 664.41 (E) INV: 664.31 (W)

4'□ MH#608 TY–11 F&G RIM: 669.05 INV: 664.65 (SE) INV: 664.65 (E) INV: 664.65 (W)

4'□ CB#609 TY–11 F&G RIM: 669.15 INV: 665.21 (E) INV: 664.92 (W) INV: 664.92 (S)

2'□ INL#311 TY–11 F&G RIM: 669.00 INV: 665.30 (E)

2'□ INL#310A TY 1 F&G CL RIM: 667.50 INV: 665.17 (S)

4'□ MH#310 TY 1 F&G CL RIM: 668.65 INV: 665.11 (E) INV: 665.11 (W) INV: 665.15 (N)

5'□ MH#309 TY–11 F&G CL RIM: 668.12 INV: 665.04 (W) INV: 664.65 (SW) INV: 665.04 (S)

INL#309A RIM: 667.19 INV: 664.75 (NE)

95'–12" RCP @ 0.20%

34'–12" RCP @ 0.20%

10'–12" RCP @ 0.20%

21'–12" RCP @ 0.45%

144'–12" RCP @ 0.49%

136'–15" RCP @ 0.20%

119'–18" RCP @ 0.20%

84'–12" RCP @ 1.17%

2'□ INL#306B TY 1 F&G CL RIM: 671.00 INV: 668.98 (E)

4'□ MH#306A TY 1 F&G CL RIM: 669.94 INV: 668.00 (S) INV: 668.00 (W)

33'–12" RCP @ 11.57%

6'□ MH#306 TY–1 F&G CL RIM: 669.32 INV: 664.16 (E) INV: 664.16 (S) INV: 664.16 (N)

146'–24" RCP @ 0.10%

CROSSING STORM OVER WATER B/STM:664.01 T/WAT:662.46

CROSSING STORM OVER WATER B/STM:663.96 T/WAT:662.46

CROSSING STORM OVER SANITARY B/STM:663.94 T/SAN:656.54

CROSSING STORM OVER SANITARY B/STM:664.04 T/SAN:659.61

80'–12" RCP @ 0.55%

64'–6" PVC @ 0.79%

68'–15" PVC @ 0.36%

CROSSING STORM OVER WATER B/STM:664.80 T/WA1:664.20

2'□ CB#607A TY–11 F&G RIM: 669.35 INV: 664.77 (N)

6" TIDEFLEX INLINE BACKFLOW PREVENTOR

BUILDING CONNECTION 6094A INV: 665.16 (N)

2'□ INL#310 TY–11 F&G RIM: 669.20 INV: 665.92 (W)

12" TRENCH DRAIN #608A (KLASSKDRAIN – KS300) RM: 666.40 INV: 665.15 (N), END OUTLET

125'–24" RCP @ 0.10%

5'□ CB#605 TY–1 F&G CL RIM: 669.00 INV: 664.03 (N) INV: 664.03 (S)

128'–24" RCP @ 0.10%

PROPOSED ORD02 BUILDING (PHASE 3) FFE: 670.50

COMED SUBSTATION #2 BUILDABLE AREA 96,200 SF (2.2 ACRES)

5'□ CB#604 TY–1 F&G CL RIM: 668.91 INV: 663.90 (N) INV: 663.90 (S)

128'–36" RCP @ 0.10%

5'□ MH#603 TY–1 F&G CL RIM: 668.82 INV: 663.77 (N) INV: 663.77 (S)

5'□ CB#602 TY–1 F&G CL RIM: 668.71 INV: 663.65 (N) INV: 663.65 (S)

BASIN #2B INLET

STORM OVER SANITARY B/STM:663.51 T/SAN:659.39

CROSSING STORM OVER WATER B/STM:663.13 T/WAT:662.53

RCP @ 0.00%

BASIN #2B PIPE OUTLET INV: 663.50 (SE)

59'–24" RCP @ 0.00%

Concrete Rectangular Headwall OVERFLOW W/ RESTRICTOR PLATE INV: 663.50 (NW)

6'□ MH#601 TY–1 F&G CL RIM: 669.99 INV: 663.62 (N) INV: 663.52 (E)

2'□ MH#603 TY–1 F&G CL RIM: 668.01 INV: 662.91 (SW) INV: 662.91 (E)

30'–36" RCP @ 0.10%

6'□ MH#604 TY–1 F&G CL RIM: 669.00 INV: 663.38 (W) INV: 663.38 (NE)

BASIN #2A INLET

BASIN #2A SHOWL=660.50, THW=660.50 BOTTOM: 663.25 BOTTOM OF ENGINEERED SOIL: 662.50 UNDERDRAIN INV: 662.50 TOP OF WALL: 669.50 BASIN OVERFLOW: 669.00

238'–36" RCP @ 0.07%

19'–36" RCP @ 0.10%

554'–12" RCP @ 0.64%

19'–24" RCP @ 0.18%

WALLED BASIN #1 PIPE OUTLET INV: 663.33 (N)

WALLED BASIN PIPE OUTLET #300 INV: 663.00 (N)

BASIN #1 PIPE OUTLET INV: 663.25 (NE)

155'–24" RCP @ 0.18%

2" ACCESS RISER MH#700

6'Wx3'H RCBC 45° BEND INV: 663.08 (E) INV: 663.08 (SW)

33–6'Wx3'H @ 0.51%

CROSSING RCBC STORM OVER STORM B/RCBC STM:662.20 T/STM:660.44

35'–12" RCP @ 0.66%

116'–24" RCP @ 0.18%

36'–24" RCP @ 0.18%

4'□ CB#303 TY–11 F&G RIM: 668.88 INV: 663.83 (E) INV: 663.52 (W)

2'□ MH#302 TY–1 F&G CL RIM: 669.22 INV: 659.39 (W) INV: 659.39 (SE)

4'□ MH#304 TY–1 F&G CL RIM: 669.13 INV: 664.02 (N) INV: 664.02 (W)

S LINNEMAN RD

STORM OVER WATER B/STM:663.69 T/WA1:656.93

106'–24" RCP @ 0.18%

EX. 24" RCP INV: 655.90

OUTLET CONTROL STRUCTURE #901 10" CENTERWALL W/ 10" OPENING @ INV: 658.10 18"x18" RESTRICTOR PLATE W/ 9.9" ORIFICE @ INV: 658.10 6'x3' BOX CULVERT: 662.08 (W), 6'x2' BOX CULVERT: 662.00 (N) 6" LIO: 662.00 (W) 18" RCP INLET: 658.10 (E) 18" RCP OUTLET: 658.20 (W)

INV: 662.08 (W) INV: 662.00 (N) INV: 658.20 (W)

21'–18" RCP @ 0.95%

4'□ CB#302 TY–1 F&G CL RIM: 669.00 INV: 663.31 (E) INV: 663.31 (W)

32'–6" PVC SDR 26 @ 0.00%

248'–6" PVC SDR 26 @ 0.00%

166'–12" PVC @ 0.58%

6" PERF. PVC UD OUTLET INV: 662.00 (SW) INV: 662.00 (NE)

CROSSING STORM OVER WATER B/STM:661.98 T/WA1:656.93

248–6"Wx3'H RCBC @ 0.40%

CROSSING STORM OVER WATER B/STM:658.04 T/WA1:656.93

5'□ MH#900 TY–1 F&G CL RIM: 665.80 INV: 657.90 (W) INV: 655.90 (N) INV: 655.90 (S)

2'□ MH#901 TY–1 F&G CL RIM: 669.90 INV: 659.16 (NW) INV: 659.16 (E)

TRENCH DRAIN

CLOUD SWITCH

4'□ CB#308 TY–1 F&G CL RIM: 667.80 INV: 664.81 (S) INV: 664.81 (N)

4'□ CB#307 TY–1 F&G CL RIM: 667.63 INV: 664.55 (S) INV: 664.55 (N)

4'□ CB#306 TY–1 F&G CL RIM: 667.38 INV: 664.29 (S) INV: 664.29 (N)

4'□ CB#305 Standard Standard Standard RIM: 667.40 INV: 664.09 (S) INV: 664.09 (N)

COMED SUBSTATION #2 (UNDER CONSTRUCTION) LOT AREA = 267,626 SF BUILDABLE AREA = 96,200 SF

12"PVC

144'–24" RCP @ 0.10%

144'–24" RCP @ 0.10%

CONC. PAD

CONCRETE

16"RCP

12"RCP

54"RCP

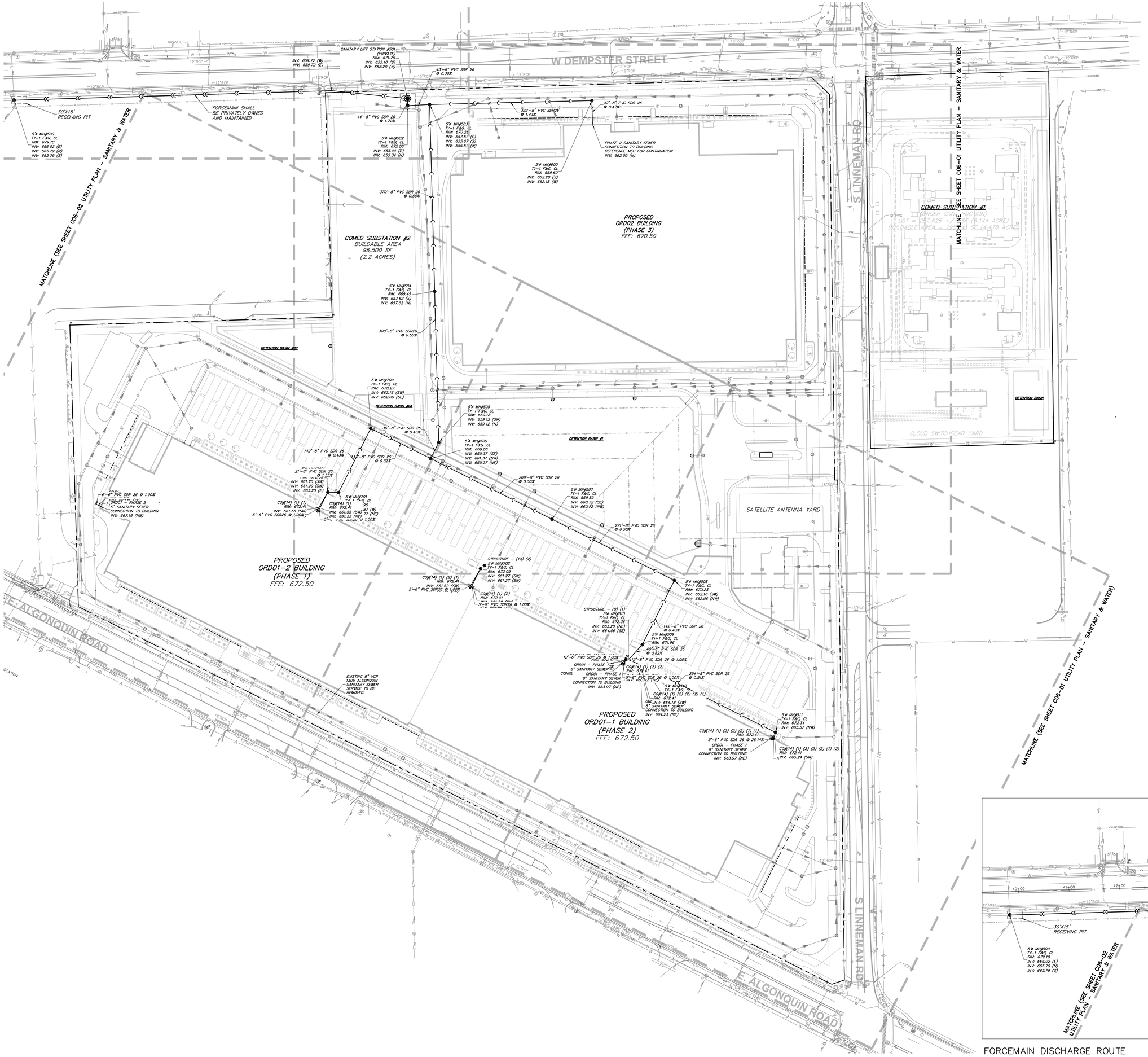
48"RCP

10"RCP

8"VCP

6"VCP

W W W




N

GRAPHIC SCALE

60 0 30 60

( IN FEET )

1 inch = 60 ft.

## UTILITY PLAN LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN

| EXISTING | PROPOSED | |
|---|---|---|
| ◎ | ◉ | STORM MANHOLE |
| ○ | ● | STORM CATCHBASIN |
| □ | ■ | STORM INLET |
| ▭ | ▭ | FLARED END SECTION |
| ◎ | ◉ | SANITARY MANHOLE |
| ⊠ | ■ | VALVE VAULT |
| ⊗ | ● | VALVE BOX |
| ♉ | ● | FIRE HYDRANT |
| ⊕ | ● | BUFFALO BOX |
| ☼ | ✦ | STREET LIGHT |
| ○ | ● | POWER POLE |
| ⚲ | ⚲ | SIGN |

NOTE:

ALL UTILITIES ONSITE AS WELL AS THE LIFT STATION AND FORCEMAIN TO THE POINT OF CONNECTION TO THE RECEIVING SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.




FORCEMAIN DISCHARGE ROUTE

SCALE: 1" = 60"

CORGAN

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| ISSUES | | |
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| REVISIONS |
|---|

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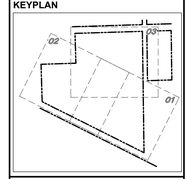
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN SANITARY - OVERALL

JOB 5253.220
SHEET

**C06-00**

C06-03 MATCHLINE – SEE SHEET UTILITY PLAN – SANITARY

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

SATELLITE ANTENNA YARD

RETENTION BASIN #1

5'ø MH#505
TY-1 F&G, CL
RIM: 669.18
INV: 659.12 (SW)
INV: 659.12 (N)

CROSSING
STORM OVER SANITARY
B/STM: 663.11
T/SAN: 659.94

5'ø MH#506
TY-1 F&G, CL
RIM: 669.66
INV: 659.37 (SE)
INV: 661.37 (NW)
INV: 659.27 (NE)

269'-8" PVC SDR 26
@ 0.50%

5'ø MH#507
TY-1 F&G, CL
RIM: 669.89
INV: 660.72 (SE)
INV: 660.72 (NW)

271'-8" PVC SDR 26
@ 0.50%

CROSSING
SANITARY OVER WATER
B/SAN: 659.51
T/WAT: 658.01

CROSSING
STORM OVER SANITARY
B/STM: 663.57
T/SAN: 661.10

CROSSING
STORM OVER SANITARY
B/STM: 665.53
T/SAN: 661.87

5'ø MH#508
TY-1 F&G, CL
RIM: 670.23
INV: 662.16 (SW)
INV: 662.06 (NW)

CROSSING
SANITARY OVER WATER
B/SAN: 662.24
T/WAT: 660.74

142'-8" PVC SDR 26
@ 0.43%

STRUCTURE – (8) (1)
5'ø MH#510
TY-1 F&G, CL
RIM: 672.34
INV: 663.20 (NE)
INV: 664.06 (SE)

5'ø MH#509
TY-1 F&G, CL
RIM: 671.96
INV: 662.87 (SW)
INV: 662.77 (NE)

40'-8" PVC SDR 26
@ 0.62%

294'-8" PVC SDR 26
@ 0.51%

5'ø MH#511
TY-1 F&G, CL
RIM: 670.34
INV: 665.57 (NW)

STRUCTURE – (14) (2)
5'ø MH#720
TY-1 F&G, CL
RIM: 672.05
INV: 661.27 (SW)
INV: 661.27 (SW)

CO#(14) (1) (2) (1)
RIM: 672.41
INV: 661.62 (SW)
5'-6" PVC SDR26 @ 1.00%

CO#(14) (1) (2)
RIM: 672.41
INV: 661.62 (SW)
5'-6" PVC SDR26 @ 1.00%

12'-6" PVC SDR 26 @ 1.00%

CO#(14) (1) (2) (2) (1)
RIM: 672.41
INV: 663.92 (SW)
5'-6" PVC SDR 26 @ 1.00%

ORD01 – PHASE 1
6" SANITARY SEWER
CONNECTION TO BUILDING
INV: 663.97 (NE)

CO#(14) (1) (2) (2)
RIM: 672.41
INV: 663.92 (SW)
15'-8" PVC SDR 26 @ 1.00%

ORD01 – PHASE 1
6" SANITARY SEWER
CONNECTION TO BUILDING
INV: 663.97 (NE)

CO#(14) (1) (2) (2) (2) (1)
RIM: 672.41
INV: 664.18 (SW)
5'-6" PVC SDR 26 @ 1.00%

ORD01 – PHASE 1
6" SANITARY SEWER
CONNECTION TO BUILDING
INV: 664.23 (NE)

CO#(14) (1) (2) (2) (2) (1) (1)
RIM: 673.41
5'-6" PVC SDR 26 @ 26.14%

ORD01 – PHASE 1
6" SANITARY SEWER
CONNECTION TO BUILDING
INV: 663.97 (NE)

CO#(14) (1) (2) (2) (2) (2) (1) (2)
RIM: 672.41
INV: 665.24 (SW)
5'-6" PVC SDR 26 @ 1.00%

C05-02 MATCHLINE – SEE SHEET UTILITY PLAN – SANITARY

PROPOSED
ORD01-1 BUILDING
(PHASE 2)
FFE: 672.50

EXISTING 8" VCP 1305 ALGONQUIN SANITARY SEWER SERVICE TO BE REMOVED.

S LINNEMAN RD

E. ALGONQ

NOTE:
ALL UTILITIES ONSITE AS WELL AS THE LIFT STATION AND FORCEMAIN TO THE POINT OF CONNECTION TO THE RECEIVING SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.

## UTILITY PLAN LEGEND

| | |
|---|---|
| | EXISTING STORM SEWER |
| | EXISTING SANITARY SEWER |
| W | EXISTING WATERMAIN |
| | PROPOSED STORM SEWER |
| | PROPOSED SANITARY SEWER |
| W | PROPOSED WATERMAIN |

| EXISTING | PROPOSED | |
|---|---|---|
| | | STORM MANHOLE |
| | | STORM CATCHBASIN |
| | | STORM INLET |
| | | FLARED END SECTION |
| | | SANITARY MANHOLE |
| | | VALVE VAULT |
| | | VALVE BOX |
| | | FIRE HYDRANT |
| | | BUFFALO BOX |
| | | STREET LIGHT |
| | | POWER POLE |
| | | SIGN |

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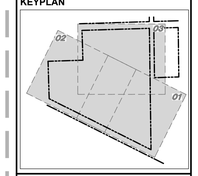
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
SANITARY -
SHEET 1

JOB 5253.220
SHEET

C06-01

MATCHLINE – SEE SHEET C06-03 UTILITY PLAN – SANITARY

COMED SUBSTATION #2
BUILDABLE AREA
96,500 SF
(2.2 ACRES)

5'ø MH#504
TY–1 F&G, CL
RIM: 669.45
INV: 657.62 (S)
INV: 657.52 (N)

300'–8" PVC SDR26
@ 0.50%

CROSSING
STORM OVER SANITARY
B/STM:663.13
T/SAN:659.29

5'ø MH#505
TY–1 F&G, CL
RIM: 669.18
INV: 659.12 (SW)
INV: 659.12 (N)

DETENTION BASIN #3

DETENTION BASIN #2

DETENTION BASIN #1

5'ø MH#700
TY–1 F&G, CL
RIM: 670.27
INV: 662.16 (SW)
INV: 662.06 (SE)

CROSSING
STORM OVER SANITARY
B/STM:663.01
T/SAN:659.49

36'–8" PVC SDR 26
@ 0.43%

CROSSING
STORM OVER SANITARY
B/STM:663.11
T/SAN:659.94

5'ø MH#506
TY–1 F&G, CL
RIM: 669.66
INV: 659.37 (SE)
INV: 661.37 (NW)
INV: 659.27 (NE)

269'–8" PVC SDR 26
@ 0.50%

5'ø MH#507
TY–1 F&G, CL
RIM: 669.89
INV: 660.72 (SE)
INV: 660.72 (NW)

271'–8" PVC SDR 26
@ 0.50%

CROSSING
STORM OVER SANITARY
B/STM:664.34
T/SAN:662.70

CROSSING
STORM OVER SANITARY
B/STM:664.69
T/SAN:660.18

CROSSING
SANITARY OVER WATER
B/SAN:659.51
T/WAT:658.01

CROSSING
STORM OVER SANITARY
B/STM:663.57
T/SAN:661.10

CROSSING
STORM OVER SANITARY
B/STM:665.53
T/SAN:661.87

133'–8" PVC SDR 26
@ 0.52%

142'–8" PVC SDR 26
@ 0.43%

21'–8" PVC SDR 26
@ 1.55%

5'ø MH#702
TY–1 F&G, CL
RIM: 672.05
INV: 661.20 (SW)
INV: 661.20 (SW)
INV: 663.20 (E)

5'ø MH#701
TY–1 F&G, CL
RIM: 671.96
INV: 662.87 (W)
INV: 662.77 (NE)

COK(14) (1)
RIM: 672.41
INV: 661.55 (SW)
INV: 661.55 (NE)

COK(14) (1) (1)
RIM: 672.41
INV: 661.55 (SW)
INV: 661.55 (NE)

5'–6" PVC SDR26 @ 1.00%

5'–6" PVC SDR26 @ 1.00%

STRUCTURE – (14) (2)
5'ø MH#702
TY–1 F&G, CL
RIM: 672.05
INV: 661.27 (SW)
INV: 661.27 (SW)

COK(14) (1) (2) (1)
RIM: 672.41
INV: 661.62 (SW)

5'–6" PVC SDR26 @ 1.00%

COK(14) (1) (2)
RIM: 672.41
INV: 661.62 (SW)

5'–6" PVC SDR26 @ 1.00%

PROPOSED
ORD01–2 BUILDING
(PHASE 1)
FFE: 672.50

6'–6" PVC SDR 26 @ 1.00%

COK–
RIM: 672.37
INV: 667.11 (SE)
INV: 667.11 (NW)
5'–6" ORD01 – PHASE 2
6" SANITARY SEWER
CONNECTION TO BUILDING
INV: 667.16 (NW)

MATCHLINE – SEE SHEET C06–01 UTILITY PLAN – SANITARY

EXISTING 8" VCP 130S ALGONQUIN SANITARY SEWER SERVICE TO BE REMOVED.

R55'

GAS LINE TEE

E. ALGONQUIN ROAD

STRUCTURE – 51
TY–1
RIM
INV: 66.
INV: 66

12'–6" I
COK
5'–6" P
8"
CONNE

## UTILITY PLAN LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN

| EXISTING | PROPOSED | |
|---|---|---|
| ◎ | ◉ | STORM MANHOLE |
| ○ | ● | STORM CATCHBASIN |
| □ | ■ | STORM INLET |
| ▭ | ▬ | FLARED END SECTION |
| ◎ | ◉ | SANITARY MANHOLE |
| ⊠ | ■ | VALVE VAULT |
| ⊗ | ● | VALVE BOX |
| ♉ | ♉ | FIRE HYDRANT |
| ⊙ | ● | BUFFALO BOX |
| ☼ | ☼ | STREET LIGHT |
| ○ | ● | POWER POLE |
| ⚲ | ⚲ | SIGN |

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

NOTE:
ALL UTILITIES ONSITE AS WELL AS THE LIFT STATION AND FORCEMAIN TO THE POINT OF CONNECTION TO THE RECEIVING SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.

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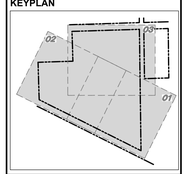
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Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
SANITARY -
SHEET 2

JOB 5253.220
SHEET

C06-02

W DEMPSTER STREET

SANITARY LIFT STATION #501 (PRIVATE)
RIM: 671.75
INV: 655.10 (S)
INV: 658.20 (W)
INV: 659.72 (W)
INV: 659.72 (E)

43'–8" PVC SDR 26 @ 0.30%

14'–8" PVC SDR 26 @ 1.72%

5'ø MH#502
TY–1 F&G, CL
RIM: 672.00
INV: 655.44 (E)
INV: 655.34 (N)

5'ø MH#503
TY–1 F&G, CL
RIM: 670.28
INV: 657.57 (E)
INV: 655.67 (S)
INV: 655.57 (W)

CROSSING
STORM OVER SANITARY
B/STM: 663.94
T/SAN: 656.54

MATCHLINE – SEE SHEET C06–06 UTILITY PLAN – SANITARY

CROSSING
STORM OVER SANITARY
B/STM: 664.18
T/SAN: 659.96

CROSSING
STORM OVER SANITARY
B/STM: 664.04
T/SAN: 659.61

322'–8" PVC SDR26 @ 1.43%

CROSSING
STORM OVER SANITARY
B/STM: 664.69
T/SAN: 661.67

CROSSING
SANITARY OVER WATER
B/SAN: 662.32
T/WAT: 660.82

47'–8" PVC SDR 26 @ 0.47%

PHASE 2 SANITARY SEWER CONNECTION TO BUILDING REFERENCE MEP FOR CONTINUATION
INV: 662.50 (N)

5'ø MH#600
TY–1 F&G, CL
RIM: 669.60
INV: 662.28 (S)
INV: 662.18 (W)

MATCHLINE – SEE SHEET C06–02 UTILITY PLAN – SANITARY

370'–8" PVC SDR 26 @ 0.50%

PROPOSED ORD02 BUILDING (PHASE 3)
FFE: 670.50

COMED SUBSTATION #2
BUILDABLE AREA
96,200 SF
(2.2 ACRES)

5'ø MH#504
TY–1 F&G, CL
RIM: 669.43
INV: 657.62 (S)
INV: 657.52 (N)

300'–8" PVC SDR26 @ 0.50%

S LINNEMAN RD

COMED SU
(UNDER C
LOT = 267,626
BUILDABLE AREA =

N

GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

## UTILITY PLAN LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN

| EXISTING | PROPOSED | |
|---|---|---|
| | | STORM MANHOLE |
| | | STORM CATCHBASIN |
| | | STORM INLET |
| | | FLARED END SECTION |
| | | SANITARY MANHOLE |
| | | VALVE VAULT |
| | | VALVE BOX |
| | | FIRE HYDRANT |
| | | BUFFALO BOX |
| | | STREET LIGHT |
| | | POWER POLE |
| | | SIGN |

MATCHLINE – SEE SHEET C06–01 UTILITY PLAN – SANITARY

5'ø MH#700
TY–1 F&G, CL
RIM: 670.27
INV: 662.16 (SW)
INV: 662.06 (SE)

DETENTION BASIN #2A

CROSSING
STORM OVER SANITARY
B/STM: 663.13
T/SAN: 659.29

CROSSING
STORM OVER SANITARY
B/STM: 663.21
T/SAN: 659.49

5'ø MH#505
TY–1 F&G, CL
RIM: 669.18
INV: 659.12 (SW)
INV: 659.12 (N)

36'–8" PVC SDR 26 @ 0.43%

CROSSING
STORM OVER SANITARY
B/STM: 664.34
T/SAN: 662.10

DETENTION BASIN #1

CROSSING
STORM OVER SANITARY
B/STM: 663.11
T/SAN: 659.94

5'ø MH#506
TY–1 F&G, CL
RIM: 669.66
INV: 659.37 (SE)
INV: 661.37 (NW)
INV: 659.27 (NE)

142'–8" PVC SDR 26 @ 0.43%

133'–8" PVC SDR 26 @ 0.52%

CROSSING
STORM OVER SANITARY
B/STM: 664.48
T/SAN: 661.19

CROSSING
SANITARY OVER WATER
B/SAN: 662.31
T/WAT: 660.81

21'–8" PVC SDR 26 @ 1.55%

5'ø MH#701
TY–1 F&G, CL
RIM: 672.05
INV: 661.20 (SW)
INV: 661.20 (SW)
INV: 663.20 (E)

5'ø MH#507
TY–1 F&G, CL
RIM: 669.89
INV: 660.72 (SE)
INV: 660.72 (NW)

265'–8" PVC SDR 26 @ 0.50%

CROSSING
STORM OVER SANITARY
B/STM: 663.52
T/SAN: 661.32

271'–8" PVC SDR 26 @ 0.50%

CROSSING
STORM OVER SANITARY
B/STM: 665.57
T/SAN: 661.87

SATELLITE ANTENNA YARD

CLOUD SWITCHG

C06–01 MATCHLINE – SEE SHEET UTILITY PLAN – SANITARY

MATCHLINE – SEE SHEET C06–01 UTILITY PLAN – SANITARY

MATCHLINE – SEE SHEET C06–02 UTILITY PLAN – SANITARY

COR(14) (1) (1)
RIM: 672.41
INV: 661.55 (SW)
INV: 661.55 (NE)
INV: 661.55 (NE)

5'–6" PVC SDR26 @ 1.00%

COR(14) (1)
RIM: 672.41
INV: 661.55 (SW)
INV: 661.55 (NE)

5'ø MH#701
TY–1 F&G, CL
RIM: 671.96
INV: 662.97 (W)
INV: 662.77 (NE)

STRUCTURE – (14) (2)
5'ø MH#702
TY–1 F&G, CL
RIM: 672.05
INV: 661.27 (SW)

NOTE:

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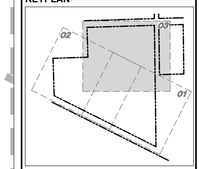
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Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

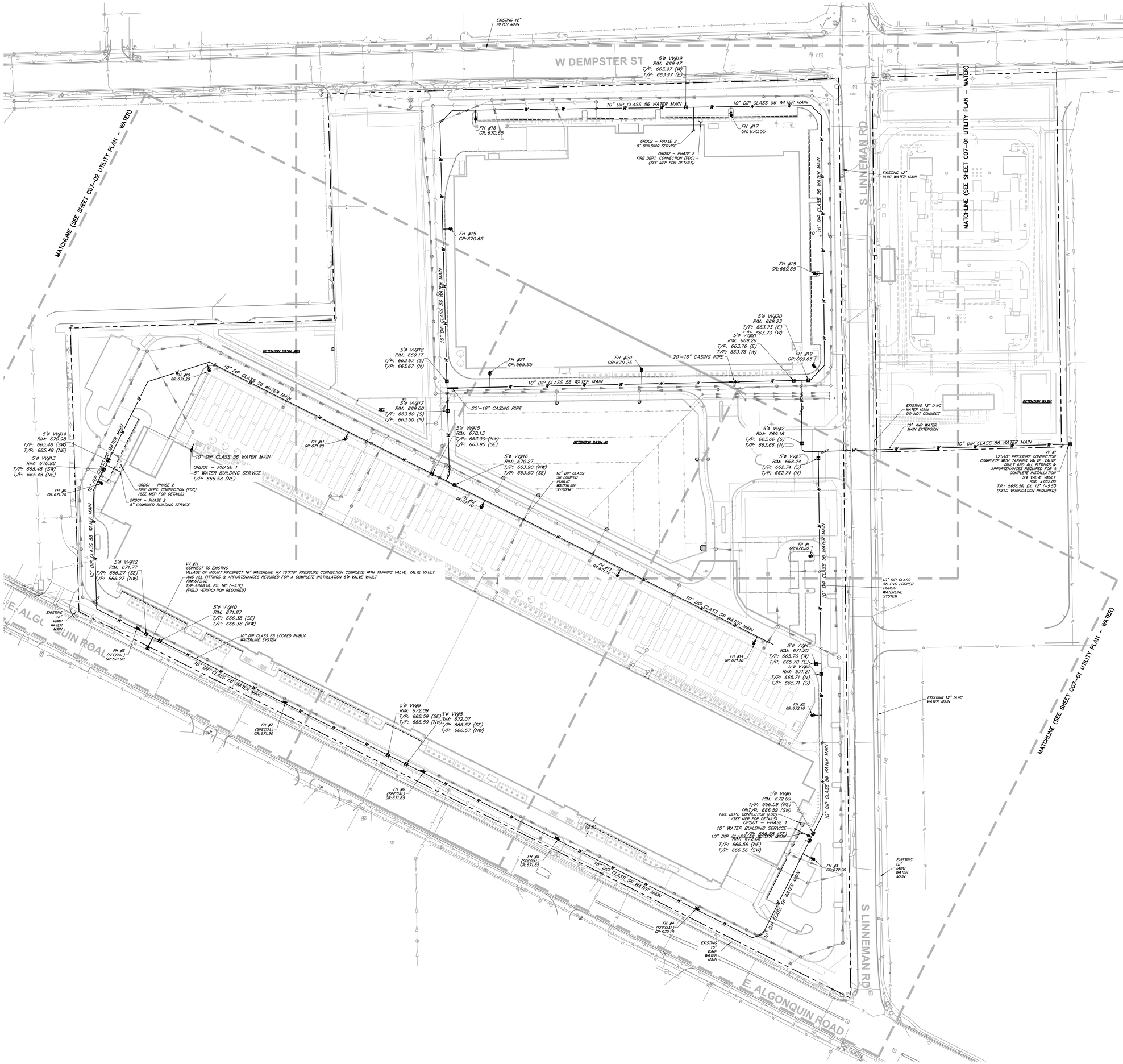
KEYPLAN




UTILITY PLAN
SANITARY -
SHEET 3

JOB 5253.220
SHEET

C06-03




N

GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

## UTILITY PLAN LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN

| EXISTING | PROPOSED | |
|---|---|---|
| | | STORM MANHOLE |
| | | STORM CATCHBASIN |
| | | STORM INLET |
| | | FLARED END SECTION |
| | | SANITARY MANHOLE |
| | | VALVE VAULT |
| | | VALVE BOX |
| | | FIRE HYDRANT |
| | | BUFFALO BOX |
| | | STREET LIGHT |
| | | POWER POLE |
| | | SIGN |

NOTE:

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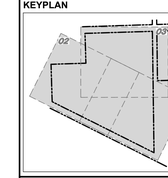
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
WATER MAIN - OVERALL

**JOB** 5253.220
**SHEET**

**C07-00**

FH #20
GR: 670.25

10"x6" TEE

10" DIP CLASS 56 WATER MAIN

FH #21
GR: 669.95

10"x6" TEE

DETENTION BASIN #1

"6" CASING PIPE

OVER WATER
663.03
661.53

5'ø VV#15
RIM: 670.13
T/P: 663.90 (NW)
T/P: 663.90 (SE)

CROSSING
STORM OVER WATER
B/STM: 663.07
T/WAT: 658.01

5'ø VV#16
RIM: 670.27
T/P: 663.90 (NW)
T/P: 663.90 (SE)

10" DIP CLASS 56 LOOPED PUBLIC WATERLINE SYSTEM

T/P: 663.50

T/P: 658.01

CROSSING
DUCT BANKS OVER WATER
B/DB: 662.26
T/WAT: 658.01

BEND

T/P: 658.01

T/P: 663.90

CROSSING
SANITARY OVER WATER
B/SAN: 659.51
T/WAT: 658.01

10"x10" TEE

T/P: 663.90

T/P: 662.37

FH #12
GR: 671.10

10"x6" TEE

T/P: 662.37

T/P: 663.90

CROSSING
STORM OVER WATER
B/STM: 663.87
T/WAT: 662.37

T/P: 663.90

T/P: 663.90

FH #13
GR: 671.10

10"x6" TEE

CROSSING
STORM OVER WATER
B/STM: 665.74
T/WAT: 663.90

10" DIP CLASS 56 WATER MAIN

T/P: 663.90

T/P: 660.74

T/P: 663.90

CROSSING
SANITARY OVER WATER
B/SAN: 662.24
T/WAT: 660.74

FH #14
GR: 671.10

10"x6" TEE

T/P: 663.90

T/P: 665.54

CROSSING
STORM OVER WATER
B/STM: 665.63
T/WAT: 663.90

5'ø VV#4
RIM: 671.20
T/P: 665.70 (W)
T/P: 665.70 (E)

5'ø VV#5
RIM: 671.21
T/P: 665.71 (N)
T/P: 665.71 (S)

T/P: 665.46

T/P: 661.90

CROSSING
STORM OVER WATER
B/STM: 663.40
T/WAT: 661.90

T/P: 661.90

T/P: 663.53

10"x10" TEE

EXISTING 12" IAWC WATER MAIN

CROSSING #2
STORM OVER WATER10
B/STM: 663.05
T/WA663.55:

10"x6" TEE

T/P: 665.74

T/P: 663.55

T/P: 665.74

10" DIP CLASS 56 WATER MAIN

22.5° BEND

5'ø VV#6
RIM: 672.09
T/P: 666.59 (NE)
T/P: 666.59 (SW)

ORD01 – PHASE 1
FIRE DEPT. CONNECTION (FDC)
(SEE MEP FOR DETAILS)

ORD01 – PHASE 1
10" WATER BUILDING SERVICE
T/P: 666.58 (SE)

10" DIP CLASS 56 WATER MAIN

10"x10" TEE

CROSSING
STORM OVER WATER
B/STM:
T/WAT:

EXISTING 12" IAWC WATER MAIN

10"x6" TEE

FH #3
GR: 672.20

5'ø VV#7
RIM: 672.06
T/P: 666.56 (NE)
T/P: 666.56 (SW)

CROSSING
STORM OVER WATER
B/STM: 666.01
T/WAT: 664.51

T/P: 666.00

T/P: 664.51

T/P: 664.51

T/P: 666.00

10" DIP CLASS 56 WATER MAIN

S LINNEMAN RD

T/P: 665.46

T/P: 662.50

CROSSING
STORM OVER WATER
B/STM: 664.94
T/WAT: 662.50

CROSSING
DUCT BANKS OVER WATER
B/DB: 663.53
T/WAT: 662.50

45° BENDS

T/P: 665.44

T/P: 662.50

5'ø VV#8
RIM: 672.07
T/P: 666.57 (SE)
T/P: 666.57 (NW)

5'ø VV#9
RIM: 672.09
T/P: 666.59 (SE)
T/P: 666.59 (NW)

CROSSING
STORM OVER WATER
B/STM: 667.52
T/WAT: 666.02

T/P: 666.02

T/P: 666.02

10"x6" TEE

10" DIP CLASS 56 WATER MAIN

10"x6" TEE

10"x6" TEE

FH #5
(SPECIAL)
GR: 671.85

FH #3
(SPECIAL)
GR: 671.85

FH #4
(SPECIAL)
GR: 672.10

EXISTING 16"
VoMP WATER MAIN

NOTE:

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E. ALGONQ

C07-03 MATCHLINE – SEE SHEET C07-03 UTILITY PLAN – WATER

MATCHLINE – SEE SHEET C07-02 UTILITY PLAN – WATER

GRAPHIC SCALE
30 0 15 30
( IN FEET )
1 inch = 30 ft.

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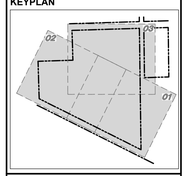
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

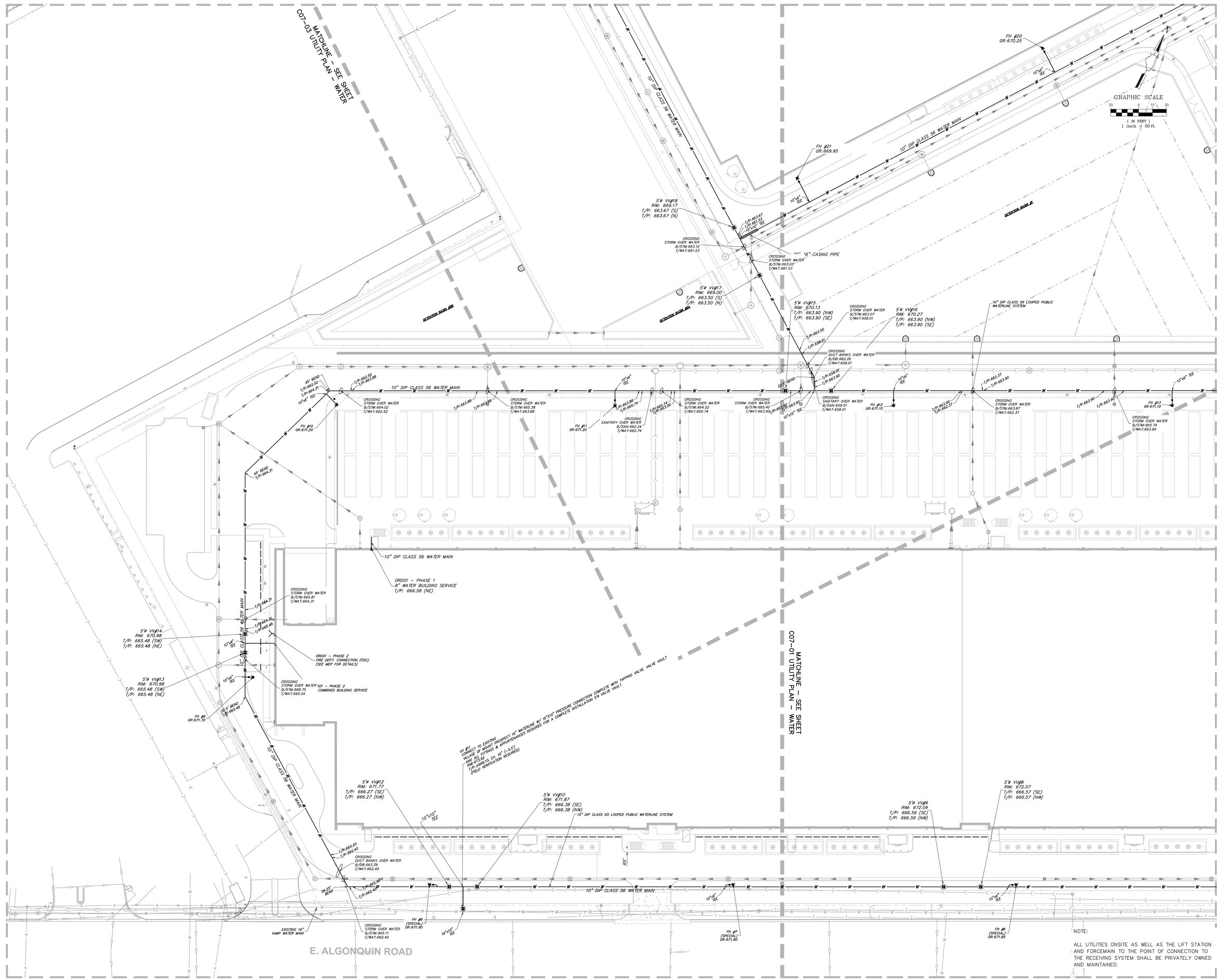
KEYPLAN




UTILITY PLAN
WATER MAIN -
SHEET 1

JOB 5253.220
SHEET

C07-01




NOTE:

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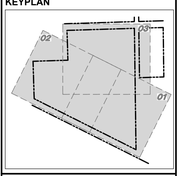
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# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
WATER MAIN -
SHEET 2

**JOB** 5253.220
**SHEET**

**C07-02**

W DEMPSTER STREET

S LINNEMAN RD

MATCHLINE – SEE SHEET C07–02 UTILITY PLAN – WATER

MATCHLINE – SEE SHEET C07–01 UTILITY PLAN – WATER

MATCHLINE – SEE SHEET C07–01 UTILITY PLAN – WATER

MATCHLINE – SEE SHEET C07–02 UTILITY PLAN – WATER

5'ø VV#19
RIM: 669.47
T/P: 663.97 (W)
T/P: 663.97 (E)

5'ø VV#20
RIM: 669.23
T/P: 663.73 (E)
T/P: 663.73 (W)

5'ø VV#21
RIM: 669.26
T/P: 663.76 (E)
T/P: 663.76 (W)

5'ø VV#18
RIM: 669.17
T/P: 663.67 (S)
T/P: 663.67 (N)

5'ø VV#17
RIM: 669.00
T/P: 663.50 (S)
T/P: 663.50 (N)

5'ø VV#15
RIM: 670.13
T/P: 663.90 (NW)
T/P: 663.90 (SE)

5'ø VV#16
RIM: 670.37
T/P: 663.90 (NW)
T/P: 663.90 (SE)

5'ø VV#2
RIM: 669.16
T/P: 663.66 (S)
T/P: 663.66 (N)

5'ø VV#3
RIM: 668.24
T/P: 662.74 (S)
T/P: 662.74 (N)

FH #15
GR: 670.65

FH #16
GR: 670.65

FH #17
GR: 670.55

FH #18
GR: 669.65

FH #19
GR: 669.65

FH #20
GR: 670.25

FH #21
GR: 669.95

FH #11
GR: 671.20

FH #12
GR: 671.10

FH #13
GR: 671.10

FH #1
GR: 672.55

10" DIP CLASS 56 WATER MAIN

10" DIP CLASS 56 LOOPED PUBLIC WATERLINE SYSTEM

20"–16" CASING PIPE

ORD02 – PHASE 2
8" BUILDING SERVICE

ORD02 – PHASE 2
FIRE DEPT. CONNECTION (FDC)
(SEE MEP FOR DETAILS)

EXISTING 12" IAWC WATER MAIN

EXISTING 12" IAWC WATER MAIN DO NOT CONNECT

10" VMP WATER MAIN EXTENSION

DETENTION BASIN #1

DETENTION BASIN #2

VALVE VAULT

NOTE:

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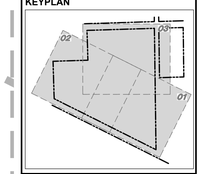
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MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




UTILITY PLAN
WATER MAIN - SHEET 3

JOB 5253.220
SHEET

C07-03

PERMIT COVERAGE AND REQUIREMENTS

The management practices, controls and other provisions contained in this Storm Water Pollution Prevention Plan (SWPPP) are at least as protective as the requirements contained in the Illinois Environmental Protection Agency (IEPA) NPDES ILR10 permit, 2018 and the Illinois Urban Manual, 2017. Requirements specified in plans or permits for this project approved by local officials that are applicable to protecting surface water resources are, upon submittal of a NOI to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in the storm water pollution prevention plan. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for this project.

CONTROL IMPLEMENTATION SCHEDULE

Perimeter controls of the site and stabilized construction entrance shall be installed prior to demolishing, clearing and grubbing. Perimeter controls shall be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Existing storm sewer inlets that will function during the construction process should have the sediment control measures installed as indicated prior to soil – disturbing activities, including demolition and site clearing. In addition, sediment control measures shall be installed in newly constructed inlets immediately after their installation is complete. Erosion control blanket may be used to stabilize the construction areas where the final grade has been reached but cannot be permanently stabilized due to planting season restrictions. Permanent controls, such as riprap, shall be installed at each storm sewer outfall structure prior to any storm water discharge. Temporary perimeter controls shall only be removed after final stabilization of those portions of the site upward of the perimeter control. Temporary drop-in sediment bags will be installed in all inlets to prevent infiltration of sediment–laden ground water into existing and proposed structures. Sediment bags shall remain in place until placement of base course in paved areas or until vegetation has taken hold. Care shall be taken when removing sediment bags to avoid release of sediment into the storm sewer.

POST CONSTRUCTION STORM WATER MANAGEMENT

Storm water management devices installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed may include storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). Velocity dissipation devices shall be located (i.e. riprap) at discharge locations and along the length of any outfall channel as necessary to provide a non–erosive velocity flow from the structure to the water course so that the natural physical and biological characteristics and functions are maintained and protected. Structural measures should be placed on upland soils to the degree attainable. The contractor is responsible for the installation and maintenance of storm water management measures until final stabilization of the site.

SOIL EROSION AND SEDIMENT CONTROLS

The appropriate soil erosion and sediment controls shall be implemented onsite and shall be maintained in the current state of construction. All damaged or defective temporary sediment and erosion control measures must be repaired or replaced as soon as possible to maintain NPDES compliance.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be installed according to the Standard Practice. The contractor shall be responsible for the installation of any additional erosion and sediment control measures necessary to prevent erosion and sedimentation as determined by the engineer, owner, or permitting authority.

1. Stabilization Practices

Areas that will not be paved or covered with non–erosive material shall be stabilized as indicated on the erosion control plan using procedures in substantial conformance with the Illinois Urban Manual. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, staged or staggered development, and other appropriate measures.

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever with paragraph b above and/or any other activities that will cease or disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible but not later than 14 days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below.

(i) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
(ii) On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall be described in the SWPPP.

2. Structural Practices

Structural practices will be utilized to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Structural practices should be placed on upland soils to the degree practicable. The installation of these devices may be subject to Section 404 of the CWA.

(i) The following design requirements apply to sediment basins if such structural practices will be installed to reduce sediment concentrations in storm water discharges:
   a. When discharging from the sediment basin, utilize outlet structures that withdraw water from the surface in order to minimize the discharges.
   b. Prevent erosion of the sediment basin using stabilization controls (e.g., erosion control blanket), at the inlet and outlet using erosion controls and velocity dissipation devices.
   c. Sediment basins shall be designed to facilitate maintenance, including sediment removal from the basins, as necessary.

(ii) The following requirements apply to protecting storm drain inlets:
   a. Install inlet protection measures that removes sediment from discharges prior to entry into any storm drain inlet that carries stormwater flow from your site to a water of the U.S., provided you have authority to access the storm drain inlet.
   b. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

OFF–SITE VEHICLE TRACKING

A stabilized pad of aggregate underlain with filter fabric shall be located at any point where traffic will be entering or leaving the construction site to or from a public right–of–way, street, alley, sidewalk, or parking area to help reduce vehicle tracking of sediments. Roads shall be swept as needed to reduce excess sediment, dirt or stone tracked from the site. Accumulated sediment and stone shall be removed from the stabilized construction entrance as needed. Water runoff from such washing area shall be periodically inspected and repaired as necessary throughout the life of the project. Vehicles hauling erodible material to and from the construction site should be covered with a tarp. The stabilized construction entrance shall be installed prior to any soil disturbance (including demolition) and removed prior to any paving.

DUST CONTROL

As requested, a water truck will be used to limit the amount of dust leaving the site. The following list of control measures may also be implemented on–site to limit the generation of dust as needed:Sprinkling/Irrigation, Vegetative cover, Mulch, Spray–on soil treatments, Tillage, Stone.

WASTE MANAGEMENT

No solid materials, including building materials, shall be discharged to protected natural areas, a storm sewer system or Waters of the State (except as authorized by a Section 404 permit). All waste materials shall be collected and stored in approved receptacles. No wastes shall be placed in any location other than in the approved containers appropriate for the materials being discarded. There shall be no liquid wastes deposited into dumpsters or other containers which may leak. Receptacles with deficiencies shall be replaced as soon as possible and the appropriate clean–up procedure shall take place, if necessary. Construction waste material is not to be buried on site. Waste disposal should comply with all local, State and Federal regulations. Hazardous material shall not be stored on site. Any hazardous waste should be disposed of in the manner specified by local or State regulation or by the manufacturer.

MATERIAL STORAGE

Materials and or contaminants shall be stored in a manner that minimizes the potential to discharge into storm drains or watercourses. An on–site area shall be designated for material delivery and storage. All materials kept on–site shall be stored in their original containers with legible labels, and if possible, under a roof or other enclosure. Labels shall be replaced if damaged or difficult to read. Bermed–off storage areas are an acceptable control measure to prevent contamination of storm water. MSD sheets shall be available for referencing cleanup procedures. Any release of chemicals/contaminants shall be immediately cleaned up and disposed of properly. Contractor shall immediately report all spills to the Primary Contact, who shall notify the appropriate agencies, if needed. To reduce the risks associated with hazardous materials on–site, hazardous products shall be kept in original containers unless they are not re–sealable. The original labels and MSD data shall be retained on–site at all times. Hazardous materials and all other materials on–site shall be stored in accordance with manufacturer's MSDS specifications. Materials of hazardous materials, follow manufacturers' or local and State recommended methods on Local, State and Federal regulations.

DE–WATERING OPERATIONS

During de–watering/pumping operations, only uncontaminated water should be allowed to discharge to protected natural areas; Waters of the State or to a storm sewer system. Inlet hoses should be placed in a stabilized sump pit or flooded at the surface of the water with a screen in order to limit the amount of sediment intake. Pumping should not be discharged to a stabilized area that consists of an energy dissipating device (i.e. stone) on a stabilized surface, sediment filter bag on a stabilized surface or a sediment trap channel. Adequate erosion controls should be used during de–watering operations as necessary. Stabilized conveyance channels should be installed to direct water to the desired location as applicable. Additional erosion control and sediment control measures may be installed at the outlet area at the discretion of the Primary Contact or Engineer.

SANITARY FACILITIES

To the extent practicable, sanitary facilities shall be located at a minimum 8 feet behind the curb and gutter of the internal roads and be located in an area that does not drain to any protected waters of the State or storm water structures. Sanitary facilities shall be anchored to the ground to prevent tipping over. Sanitary facilities located on impervious surfaces shall be placed on top of a secondary containment device or be surrounded by a control device (i.e. gravel–bag berm).

CONCRETE WASTE MANAGEMENT

Concrete mixer trucks shall only perform washouts in designated areas. Concrete waste or washout is not allowed in the street or allowed to reach a storm water drainage system or watercourse. A sign shall be posted at each location to identify the washout. Washouts shall be located at least 50 feet from a storm water drainage inlets or watercourse. Concrete washout areas shall be located at least 10 feet behind the curb, if the washout area is adjacent to a paved road. A stabilized entrance as detailed on the erosion control plan shall be installed at each washout area. The washout shall be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater. The dried concrete waste material shall be picked up and disposed of properly when 75% of the capacity is reached. Hardened concrete can be properly recycled and reused on–site or hauled off–site to an appropriate facility.

SPILL PREVENTIONS

Discharges of hazardous substances or oil caused by a spill are not authorized by the ILR10 permit. If a spill occurs, notify the Primary Contact immediately. The construction site shall have the capacity to control, contain and remove spills if they occur. Spills shall be cleaned up immediately in accordance with MSD sheets and shall not be buried on–site or washed into storm sewer drainage inlets, drainageways or Waters of the State.

Spills in excess of Federal Reportable Quantities (as established under 40 CFR Parts 110, 117 or 302) shall be reported to the National Response Center by calling (800) 424–8802. MSDS sheets shall be available for reference and Reportable Quantities for materials. Spills of toxic or hazardous materials shall be reported to the appropriate State or local government (EPA, regardless of size. When cleaning up a spill, the area shall be kept well ventilated and appropriate personal protective equipment shall be used to avoid injury from contact with a hazardous substance.

In addition to proper Waste Management, Concrete Waste Management, Concrete Cutting, Vehicle Storage and Maintenance, Material Storage and Sanitary Station protection, the following minimum practices shall be followed to reduce the risk of spills:

- Petroleum products shall be stored in tightly sealed and clearly labeled containers.
- All paint containers shall be tightly sealed and stored when not required for use. Excess paint shall be disposed of according to the manufacturer's instructions or State and local regulations and shall not be discharged to the storm sewer. Contractors shall follow manufacturers' recommendations for proper use and disposal of materials.

CONCRETE CUTTING

Concrete waste management should be implemented to contain and dispose of saw–cutting slurries. Concrete cutting shall not take place during or immediately after a rainfall event. Waste generated from concrete cutting should be cleaned up and disposed into the concrete washout facility described above.

VEHICLE STORAGE AND MAINTENENCE

When not in use, vehicles utilized in the development operations of the site shall be stored in a designated upland area away from any natural or created watercourse, pond, drainage–way or storm drain. Whenever possible, vehicle maintenance, fueling, and washing will occur off–site. If allowed on–site, vehicle maintenance (including both routine maintenance as well as on–site repairs) shall be made within the designated area to prevent the migration of mechanical fluids (oil, antifreeze, etc.) into watercourses, wetlands or storm drains. Drip pans or absorbent pads shall be used for all vehicle and equipment maintenance activities that involve grease, oil, solvents or other vehicle fluids. Construction vehicles shall be inspected frequently to identify any leaks. Leaks shall be repaired immediately, or the vehicle should be removed from the site. Dispose of all used oil, antifreeze, solvents and other automotive–related chemicals according to manufacturer MSDS instructions. Contractors shall immediately report spills to the Primary Contact.

NON–STORM WATER DISCHARGES

Authorized Discharges

The following non–storm water discharges may be authorized by this permit provided the non–storm water component of the discharge is in compliance with Part IV.D.6 (Non–Storm Water Discharges) of the ILR10 permit:

- Discharges from firefighting activities
- Water main flushing
- Fire hydrant flushing
- Watering for Dust Control
- Irrigation drainage for vegetative growth for seeding, etc.
- Uncontaminated groundwater

The pollution prevention measures described below will be implemented for non–storm water components of the discharge.

- The fire hydrant and water main should not be flushed directly on the exposed area or subgrade of the pavement. Hoses should be used to direct the flow onto a stabilized area.
- Erosion due to irrigation of seeding shall be minimized.

Prohibited Discharges

The following non–storm water discharges are prohibited by this permit:

- Concrete and wastewater from washout of concrete (unless managed by an appropriate control)
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
- Soaps, solvents, detergents
- Toxic or hazardous substances from a spill or other release

DISCHARGES TO RECEIVING WATERS WITH AN APPROVED TMDL

Discharges to waters for which there is an approved Total Maximum Daily Load (TMDL) waste load allocation for sediment or a parameter that addresses sediment (total suspended solids, turbidity or siltation) are not eligible for coverage under the ILR10 permit unless the owner/operator develops and certifies a SWPPP that is consistent with allocations listed in the TMDL. To be eligible for coverage under the ILR10 permit, operators must incorporate into their SWPPP any conditions and/or Best Management Practices (BMPs) applicable to their discharges necessary for consistency with the TMDL within any timeframes established in the TMDL. If a specific numeric allocation has been established that would apply to the project's discharges, the permittee must incorporate that allocation into its SWPPP and implement necessary steps to meet it.

INSPECTIONS

Qualified personnel (provided by the permittee or contractor– see Table 1.) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days, and within 24 hours of the end of a storm or by the end of the following business or work day that is 0.5 inches or greater.

- Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions (when ground and/or air temperatures are at or below 32°F), provided vegetative operations will recommence when construction activities are conducted, or if there is a 0.5 inches or greater rain event, or a discharge due to snowmelt occurs.
- Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.
- Based on the results of the inspection, the appropriate revisions of potential pollutant sources identified in the SWPPP and the pollution prevention control measures identified in the SWPPP shall be revised as soon as practicable after such inspection. Such modifications shall provide for timely implementation of any changes to the plan within 7 calendar days following the inspection.
- A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at least three years from the date that the permit coverage expires or is terminated. All inspection reports shall be retained at the construction site. The reports shall be signed in accordance with Part VI.G (Signatory Requirements) of this permit. Any flooding or other unsafe conditions that delay inspections shall be documented in the inspection report.
- The permittee (or qualified inspector) shall notify the appropriate Agency Field Operations Section office by email at epa.swncompc@illinois.gov, telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit.
- The permittee (or qualified inspector) shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the SWPPP observed during an inspection conducted, including those not required by the SWPPP. Submission shall be on forms provided by the IEPA and include specific information on the cause of the noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact, which may have resulted from the noncompliance. Corrective actions must be undertaken immediately to address the identified non–compliance issue(s).
- All reports of non–compliance shall be signed by a responsible authority as defined in Part V.G (Signatory Requirements).
- After the initial contact has been made with the appropriate Agency Field Operations Section Office, all reports of noncompliance shall be mailed to the IEPA at the following address:

  Illinois Environmental Protection Agency
  Division of Water Pollution Control
  Compliance Assurance Section
  1021 North Grand Avenue East
  Post Office Box 19276
  Springfield, Illinois 62794–9276

CORRECTIVE ACTIONS

The Contractor must take corrective actions to address any of the following conditions identified on site:

(i) A stormwater control needs repair or replacement
(ii) A stormwater control necessary to comply with the requirements of this permit was never installed or was installed incorrectly.
(iii) Site discharges are causing an exceedance of applicable water quality standards.
(iv) A prohibited discharge has occurred.

Corrective Actions shall be completed as soon as possible and documented within seven (7) days in an Inspection Report or report of noncompliance. If it is infeasible to complete the installation or repair within 7 calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7–day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7–day timeframe.

RECORDKEEPING

The permittee shall retain copies of the SWPPP and all reports and notices required by the ILR10 permit, and records of all data used to complete the Notice of Intent to be covered by the ILR10 permit, for a period of at least three years from the date that the permit coverage expires or is terminated unless extended by request of the IEPA. In addition, the contractor shall retain a copy of the SWPPP required by the ILR10 permit at the construction site from the date of project initiation to the date of final stabilization.

LOG OF MAJOR GRADING AND CONSTRUCTION ACTIVITIES

A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in this SWPPP.

KEEPING PLANS CURRENT

The permittee or contractor shall amend the SWPPP whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for discharge of pollutants to Waters of the State and which has not otherwise been addressed in the SWPPP or if the SWPPP proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP by signing the contractor's certification statement.The SWPPP and site map must be modified within 7 days for any changes to construction plans, stormwater controls or other activities at the site that are no longer accurately reflected in the SWPPP. Any revisions of the documents for the SWPPP shall be kept on site at all times.

FINAL STABILIZATION

Final Stabilization has occurred when all soil disturbing activities at the site have been completed, and either of the two following conditions have been met:

(i) A uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
(ii) Equivalent permanent stabilization measures (such as the use of riprap, gabions or geotextiles) have been employed.

For individual lots in residential construction, final stabilization has occurred when either:

(i) The homebuilder has completed final stabilization as specified above, or
(ii) The homebuilder has established temporary stabilization including perimeter controls for individual lot prior to occupation of the home by the homeowner and informed the homeowner of the need for, and the benefits of, final stabilization.

When the site has been finally stabilized and all storm water discharges from construction sites that are authorized by the ILR10 permit are eliminated, the permittee of the facility must submit a completed Notice of Termination that is signed in accordance with Part V.G (Signatory Requirements) of the ILR10 permit. Elimination of storm water discharges associated with industrial activity means that all disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time, or that all storm water discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have otherwise been eliminated.

## BMP Operation and Maintenance

Silt Fence

Silt fences shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

Silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.

Should the fabric decompose or become ineffective prior to the end of the expected usable life and the fence still is necessary, the fabric or the entire system shall be replaced promptly.

Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one–half the height of the silt fence.

Any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, a seedbed prepared, and the site vegetated.

Stabilized Construction Entrance

The entrance shall be maintained in a condition that will prevent tracking of sediment onto public right–of–ways or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public right–of–ways must be removed immediately. Periodic inspection and needed maintenance shall be provided after each rain.

Inlet Protection

Each inlet protection practice or device shall be inspected after every runoff event. Accumulated sediment shall be removed per manufacturers' directions but not less than when the capacity of the sediment storage area has been reduced by half. Sediment that has been removed shall be placed such that it will not reenter the storm drain system.

Repairs or replacement of inlet protection devices shall be made immediately.

For devices to be kept in place in the winter season, areas shall be cleared of any sediment accumulation and prepared or protected for snow removal operations.

Inlet protection practices shall be removed upon job completion.

Erosion Control Blanket

Inspect all erosion control blankets periodically and after rainstorms to check for damage due to water running under the blanket or if the blankets that have been displaced by wind. Any areas where water seeped under the blanket, more staples may be needed per given area or more frequent anchoring trenches used with better compaction. If significant erosion has occurred under the blanket, regrading and reseeding may also be necessary. Any erosion control blankets that have been displaced will need to be re–installed and re–stapled. This may indicate that the wrong type of blanket was chosen. One may need to revisit the site characteristics and then select a different type of erosion control blanket or chose a different practice.

Temporary Concrete Washout Facility

Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 100 mm (4 in.) for above grade facilities and 300 mm (12 in.) for below grade facilities. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete or slurry and returning the facilities to a functional condition.

Existing facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is two–thirds full.

Temporary concrete washout facilities shall be inspected for damage (e.g. tears in plastic liner, missing sand bags, etc.). Damaged facilities shall be repaired promptly.

Portable Sediment Tank

The tank shall be cleaned out when one–third of the storage volume is filled with sediment. All sediment collected in the tank shall be disposed of in an approved sediment trapping device (i.e. temporary sediment trap) or on the construction site or as approved by the engineer/inspector.

Temporary Sediment Trap

Inspect temporary sediment traps after each period of significant rainfall. Remove sediment and restore the trap to its original dimensions when the sediment has accumulated to one–half the design depth of the permanent pool. Place the sediment that is removed in the designated disposal area and replace the contaminated part of the gravel facing.

Check the structure for damage from erosion or piping. Periodically check the depth of the spillway to ensure it is a minimum of 1.5 feet below the low point of the embankment to slightly above the design grade. Any rip rap displaced from the spillway must be replaced immediately.

After all sediment–producing areas have been permanently stabilized, remove the structure and all unstable sediment. Smooth the area to blend with the adjoining areas and stabilize properly.

Ditch Check (Manufactured)

Manufactured ditch check shall be inspected every 7 days and after each 1/2" rainfall or snow equivalent.

Sediment shall be removed from the upstream of the ditch check when sediment has reached one–half the height of the ditch check. Inspect any fabric for tears or dislodging after the sediment is removed and repair or replace immediately. Additional requirements may apply per manufacturer specifications or permit requirements.

Products shall be maintained in same condition as when installed. Rolled erosion control ditch checks must be replaced whenever tears, splits, unraveling or compressed straw or excelsior is apparent.

Any fabric used as a base or apron underneath the plastic permeable or synthetic porous runoff control structure ditch checks that is torn or dislodged must be replaced or repaired.

Remove debris (litter, cornstalks) when observed.

Water or sediment going around the ditch check indicates incorrect installation or maintenance is required. The flow of water over the center of the ditch check or through the device must be reestablished. The manufactured ditch check may need length up the side slope, sediment removed from pores, or the flow velocities are too great for the type of ditch check.

Manufactured ditch checks are not designed to be a part are not designed to be part of the permanent storm water management system. Their material components are not conducive to being incorporated into soils once they have reached their useful life.

Remove manufactured ditch checks once all upslope areas are stabilized, and swale or ditch stabilization is complete. The biodegradable form of plastic permeable ditch checks can be left in place on top of the permanent stabilization such as blankets to provide velocity reductions, provided they are not a hazard to mowing operations. Vegetated ditch checks may remain in place within the ditch or swale if permanent vegetation is desired such as in the case of establishing a vegetated swale.

Rock Check Dam

On active construction sites, the rock check dams shall be inspected at least once every 7 days and within 24 hours of a rainfall of 0.5 inches or more. If any erosion has taken around the sides or below the rock check dam, or if rocks have been dislodged, repairs shall be made to prevent further damage. Sediment shall be removed once has accumulated to one–half the height of the rock check dam. The center of the rock check dam shall also be inspected periodically to ensure that the center of the dam is lower than the sides.

Unless they will be incorporated into permanent stormwater management control, rock check dams must be removed when useful life has been completed. In temporary ditches and swales, rock check dams should be removed, and the ditch filled in when they are no longer needed. In permanent structures rock check dams should be removed when the grass has matured sufficiently to protect the ditch or swale. The area beneath the rock check dams should be seeded and mulched immediately after they are removed.

For rock check dams that are made a part of stormwater management control, regular inspections should be made to see if any erosion has occurred around or below the dams and if any rock has been dislodged. Immediately make all needed repairs to prevent further damage. If sediment trapping is to be a continuing function of the rock check dam, the sediment shall be removed when it has accumulated to one–half the depth of the rock check dam.

Rock Outlet Protection

Inspect outlet structures after heavy rains to see if any erosion around or below the riprap has taken place or if stones have been dislodged. Immediately make all needed repairs.

Dewatering

The frequency of inspections shall depend on the dewatering method, amount of discharge, potential damage, and quality of the receiving bodies of water.

1. Inspections shall be conducted to ensure proper operation and compliance with any permits or water standards.
2. Accumulated sediment shall be removed from the flow area and temporary diversions shall be repaired, as required.
3. Outlet areas shall be checked, and repairs shall be made in a timely manner, as needed.
4. Pump outlets shall be inspected for erosion, and sumps shall be inspected for accumulated sediment.
5. Dewatering bags shall be stopped and replaced when half full of sediment or when the pump discharge has reduced to an impractical rate.
6. If the receiving area is showing any signs of cloudy water, erosion, or sediment accumulation, changes shall be stopped immediately once safety and property damage concerns have been addressed.
7. Sediment shall be disposed in accordance with all applicable laws and regulations.

Discharges from Dewatering Activities

Discharges from dewatering activities, including from dewatering of trenches and excavations, are allowable if managed by appropriate controls:

- Dewatering discharges shall be treated or controlled to minimize discharge of pollutants.
- The discharge shall not include visible floating solids or foam.
- An oil–water separator (or suitable filtration device) shall be used to treat oil, grease, or other similar pollutants if dewatering water is known to contain these materials.
- To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water before discharging.
- Backwash water (water used to clean any filters used as part of stormwater treatment) must be properly treated or hauled off site for disposal.
- Dewatering treatment devices shall be properly maintained as described above.

Natural Buffers

For any stormwater discharges from construction activities within 50 feet of a Waters of the United States, except for activities for water–dependent structures authorized by a Section 404 permit, the permittee shall:

(i) Provide a 50–foot undisturbed natural buffer between the construction activity and the Waters of the United States; or
(ii) Provide additional erosion and sediment controls within that area.

TABLE 1

| ACTION | RESPONSIBLE PARTY |
|---|---|
| Provide qualified personnel for weekly and 0.5 inch rain event inspections | Contractor ☐ Permittee/Owner ☒ |
| Install and maintain erosion control practices and address Corrective Actions | Contractor ☒ |

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.12.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL/FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

REVISIONS

This Document was produced by or under the authority of Registered Engineer: Donald E. Dixon

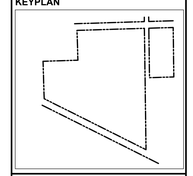
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



SESC NOTES

JOB 5253.220
SHEET

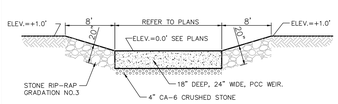
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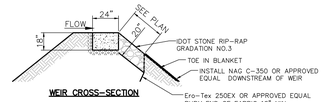


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NOTE:

PORTLAND CEMENT CONCRETE SHALL CONFORM TO IDOT CLASS 'SI' SPECIFICATIONS.




**WEIR CROSS-SECTION**

03.15.2016

GHA GEWALT HAMILTON ASSOCIATES, INC.

## CONCRETE OVERFLOW WEIR DETAIL

NOTES:

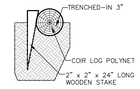
1. DO NOT SCALE DRAWING.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS

**PLAN VIEW**




DROP INLET OR MANHOLE
INLET PROTECTION FOR DROP INLETS OR MANHOLES

**SECTION VIEW**




* USE 9LB DENSITY 12" DIAMETER, 20' LONG COIR LOG POLYNET FOR STANDARD CIRCULAR DRAINAGE STRUCTURES. PLACE THE COIR LOG AROUND THE STRUCTURE AND JOIN THE ENDS TOGETHER WITH COIR TWINE. USE 2"x2"x24" WOODEN STAKES SPACED 3' APART TO HOLD DOWN LOG POLYNET.

MAINTENANCE
1. CLEAN OUT SEDIMENT BEHIND LOG WHEN ½ FULL
2. RESECURE LOOSE LOGS
3. REPLACE LOGS AS NEEDED
4. REMOVE WHEN NOT NEEDED

03.15.2016

GHA GEWALT HAMILTON ASSOCIATES, INC.

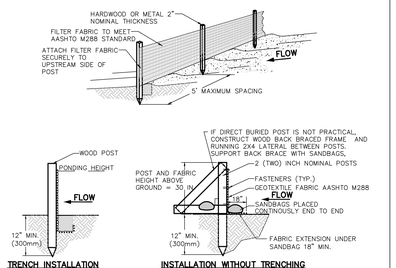
## COIR ROLL DETAIL INLET PROTECTION

NOTES:

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
4. FABRIC AND INSTALLATION SHALL MEET THE REQUIREMENTS OF ASSHTO STANDARD SPECIFICATION M-288-00.
5. SLICING METHOD IS PREFERRED.

| PROPERTY | TEST PROCEDURE | |
|---|---|---|
| Grab Elongation | | |
| Machine Direction | ASTM D-4533 | 123 lbs |
| X-Machine Direction | ASTM D-4833 | 101 lbs |
| Permittivity | ASTM D-4491 | 0.05 $sec^{-1}$ |
| A.S.O. | ASTM D-4751 | 30 u.s. Sieve |
| UV Stability | ASTM D-4355 | 70% |

1. SET POSTS AND EXCAVATE OR SLIT-TRENCH A 6-INCH DEEP TRENCH UP-SLOPE ALONG THE LINE OF THE POST
2. ATTACH AASHTO GEOTEXTILE FILTER FABRIC TO EACH POST WITH A MINIMUM OF 3(THREE) FASTENERS PER POST AND EXTEND TO THE BOTTOM OF THE TRENCH. ACCEPTABLE FASTENERS INCLUDE STAPLES, ZIP-TIES, OR WIRE TIES.
3. BACKFILL AND COMPACT THE EXCAVATED SPOIL MATERIALS




03.15.2016

GHA GEWALT HAMILTON ASSOCIATES, INC.

## SILT FENCE INSTALLATION DETAIL

NOTES:

1. DISCHARGE WATER ONTO A STABILIZED AREA (i.e. GRASS LINE SWALE, GRASS FIELD, PAVED AREA, AGGREGATE) OR INTO A SECONDARY SEDIMENT CONTAINMENT SYSTEM.
2. DISCHARGE WATER MUST FLOW AWAY FROM THE CONSTRUCTION AREA.
3. SEDIMENT CAPTURED BY THE FILTER BAG MUST BE PROPERLY DISPOSED OF.
4. FABRIC TYPE MAY NEED TO BE CHANGED BASED ON SEDIMENT TYPES.

MAINTENANCE
1. CHANGE FILTER BAG WHEN NEEDED
2. REMOVE SEDIMENT FROM BAG
3. DISPOSE OF BAG

SPECIFICATIONS
FABRIC = LINQ OR ERO-TEX225EX (NEEDLEPUNCHED NONWOVEN) OR APPROVED EQUAL

SIZES
- 10' x 15' FOR 2" DISCHARGE HOSE
- 20' x 15' FOR 3" DISCHARGE HOSE
- 25' x 15' FOR 4" DISCHARGE HOSE
- 35' x 15' FOR 6" DISCHARGE HOSE




**TOP VIEW**

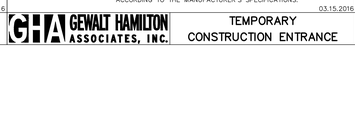



**SIDE VIEW**

03.15.2016

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## SEDIMENT CONTAINMENT FILTER BAG



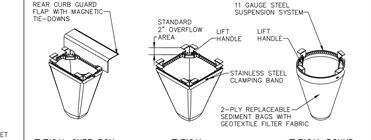

NOTE:

IF WASH RACKS ARE USED THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

03.15.2016

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## TEMPORARY CONSTRUCTION ENTRANCE




**TYPICAL CURB BOX INLET FILTER** | **TYPICAL FLAT/RECTANGULAR/ROLLED CURB INLET FILTER** | **TYPICAL ROUND INLET FILTER**

| Material Property | Test Method | Value (min. ave.) | |
|---|---|---|---|
| > Inner Filter Bag Specs (2ft²/min vol) | | Non-Woven | Woven Mono |
| Grab Tensile | ASTM D 4632 | 100 lbs | 200 lbs |
| Puncture Strength | ASTM D 4833 | 65 lbs | 90 lbs |
| Trapezoidal Tear | ASTM D 4535 | 45 lbs | 75 lbs |
| UV Resistance | ASTM D 4355 | 70% at 500 hrs | 90% |
| App Open Size (AOS) | ASTM D 4751 | 70 sieve (.212 mm) | 40 sieve (.425 mm) |
| Permittivity | ASTM D 4491 | 2.0/sec | 2.1/sec |
| Water Flow Rate | ASTM D 4491 | 145 gpm/sqft | 145gpm/sqft |
| > Polyester Outer Reinforcement Bag Specifications | | | |
| Weight | ASTM D 3776 | 4.55 oz/sqyd +/-15% | |
| Thickness | ASTM D 1777 | .040 +/- .005 | |
| > Frame Construction | | | |
| ASI Structural Steel, 11 Gauge, Zinc Plated | ASTM A 576 | Tensile Strength > 58,000 psi Yield Strength > 36,000 psi | |

MAINTENANCE
1. CLEAN OUT AFTER EVERY RAIN EVENT

ACCEPTABLE MANUFACTURER'S AS LISTED BELOW:

1. INLET & PIPE PROTECTION, INC. Naperville, IL 60564 847 722-0690
2. MARATHON MATERIALS, INC. Plainfield, IL 60544 800-983-9493

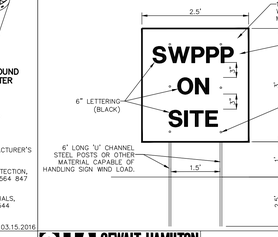
03.15.2016

GHA GEWALT HAMILTON ASSOCIATES, INC.

## INLET FILTER BASKET DETAIL

NOTES:

1. WORDING IS TO BE PLACED ON WATERPROOF MATERIAL OR ENCLOSED WITHIN A WATERPROOF ENCASEMENT.
2. THE SIGN SHALL BE FASTENED TO THE POSTS AT A MINIMUM OF SIX (6) LOCATIONS WITH STAINLESS STEEL HARDWARE.
3. THE SIGN SHALL BE POSTED AT THE MAIN ENTRANCE TO THE CONSTRUCTION SITE. IF THE ENTRANCE LOCATION IS RELOCATED, THE SWPPP SIGNAGE SHALL ALSO BE RELOCATED.



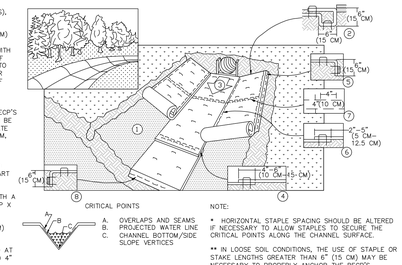

03.15.2016

GHA GEWALT HAMILTON ASSOCIATES, INC.

## SWPPP SIGNAGE

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED BEYOND THE UP SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH. AFTER STAPLING, APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP'S.
3. ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINS THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4"-6" (10 CM-15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP'S.
5. FULL LENGTH EDGE OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM)DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5 CM-12.5 CM) (DEPENDING ON RECP'S TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M-12 M) INTERVALS.USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.




A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:

* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (12 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.

NOTE:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.

03.15.2016

GHA GEWALT HAMILTON ASSOCIATES, INC.

## EROSION CONTROL BLANKET CHANNEL INSTALLATION

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" - (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.

NOTE:

*IN LOOSE SOIL, CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.




03.15.2016

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## EROSION CONTROL BLANKET SLOPE INSTALLATION

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

| | | |
|---|---|---|
| | | ISSUES |
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.19.2025 | ISSUED FOR PUD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
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| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |
| △ | | REVISIONS |

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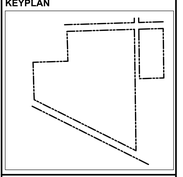
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

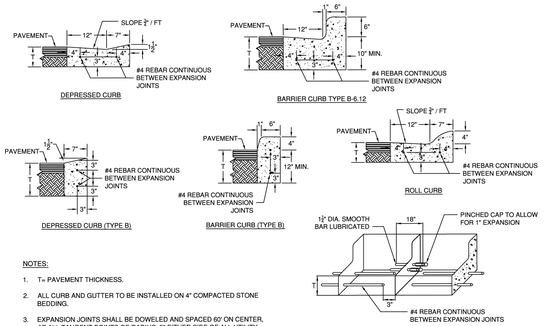


SESC DETAILS

**JOB** 5253.220
**SHEET**

**C08-05**

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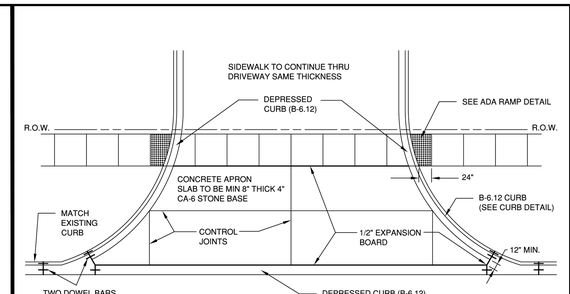

NOTES:

1. $T_H$ PAVEMENT THICKNESS.
2. ALL CURB AND GUTTER TO BE INSTALLED ON 4" COMPACTED STONE BEDDING.
3. EXPANSION JOINTS SHALL BE DOWELED AND SPACED 60' ON CENTER, AT ALL TANGENT POINTS OF RADIUS, 5' EITHER SIDE OF ALL UTILITY STRUCTURES AND BETWEEN NEW AND EXISTING CURB.
4. EXPANSION JOINT MATERIAL SHALL BE PLACED BEHIND ALL CURB ABUTTING CONCRETE PAVEMENT OR SIDEWALK.
5. CONTROL JOINTS SHALL BE SAW CUT A MINIMUM OF 1 ½" AT 15' ON CENTER.



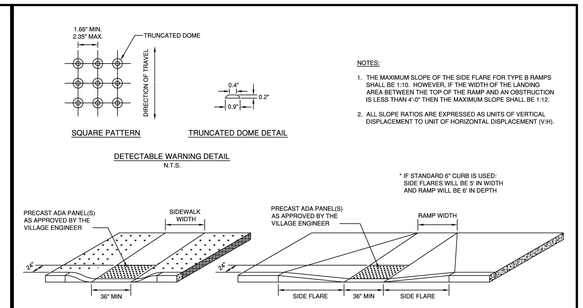

**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**CURB AND GUTTER DETAIL**
**Last Revised: 8-09**

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**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**COMMERCIAL DRIVEWAY APRON DETAIL**
**Last Revised: 8-09**

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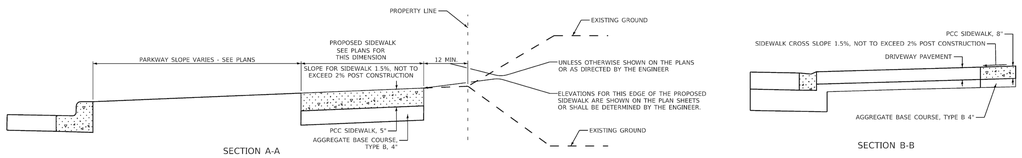

NOTES:

1. THE MAXIMUM SLOPE OF THE SIDE FLARE FOR TYPE B RAMPS SHALL BE 1:10. HOWEVER, IF THE WIDTH OF THE LANDING AREA BETWEEN THE TOP OF THE RAMP AND AN OBSTRUCTION IS LESS THAN 4'-0" THEN THE MAXIMUM SLOPE SHALL BE 1:12.
2. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNIT OF HORIZONTAL DISPLACEMENT (V:H).

* IF STANDARD 6" CURB IS USED: SIDE FLARES WILL BE 5' IN WIDTH AND RAMP WILL BE 6' IN DEPTH

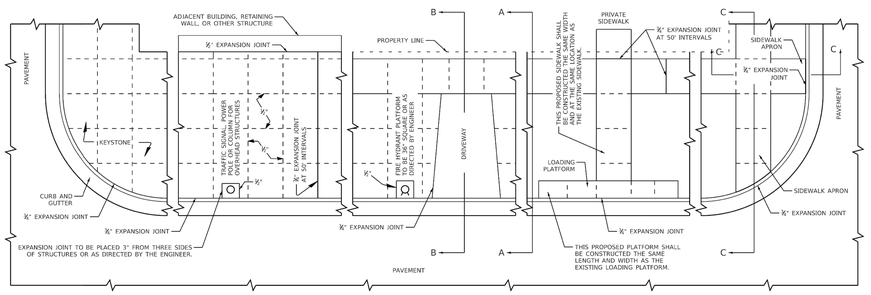
**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**ADA RAMP DETAIL**
**Last Revised: 8-09**

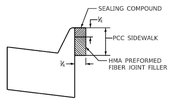
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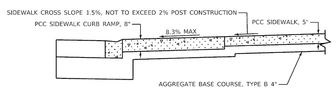








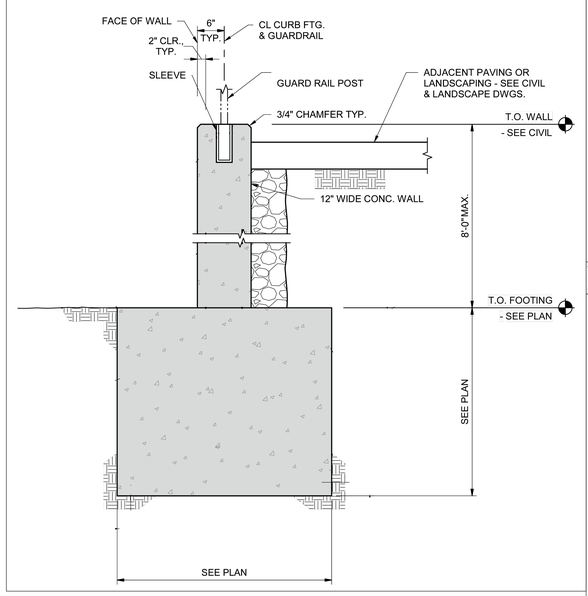




GENERAL NOTES:

ALL EXPANSION JOINTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 424.07 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PORTLAND CEMENT CONCRETE SIDEWALK OF THE THICKNESS SPECIFIED.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

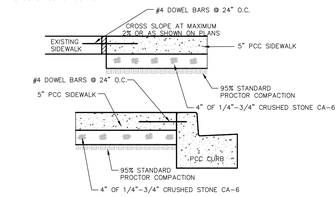
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|---|---|---|---|---|---|---|---|
| MUNICIPALITY, IL | COUNTY HIGHWAY: | XXX | COUNTY OF COOK DEPARTMENT OF TRANSPORTATION AND HIGHWAYS | COMPUTED: XXX | REVISIONS | DATE | PORTLAND CEMENT CONCRETE SIDEWALK CONSTRUCTION DETAIL COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS STANDARD C-003 | C-XXX |
| MUNICIPALITY, IL | FISCAL YEAR: | XXXX | | DRAWN: XXX | GENERAL | 1/1/20 | | |
| NAME TOWNSHIP | SECTION: | XX-XXXXX-XX-XX | | CHECKED: XXX | NEW DRAWING SECTION C-C | 11/10/22 | | NOT TO SCALE SHEET A |




CAST-IN-PLACE RETAINING WALL DETAIL (TYPICAL)

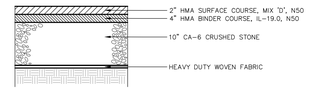
NOTES:

1. SET 1/2" EXPANSION JOINTS AT POINTS ABUTTING CURB OR PAVEMENT AND AT 60' MAX. INTERVALS.
2. CONTROL JOINTS SHALL BE 1/8" TO 1/4" SIDE AND 1/4 OF THE SIDEWALK THICKNESS DEEP. THE EDGE OF THE CONTROL JOINTS SHALL BE GIVE A 1/4" RADIUS.
3. SIDEWALK WIDTH AS SHOWN ON PLANS.
4. SIDEWALK JOINTS SHALL MATCH CURB CONTROL AND CONSTRUCTION JOINTS.




02.01.2021

**GHA GEWALT HAMILTON ASSOCIATES, INC.** PCC SIDEWALK DETAIL



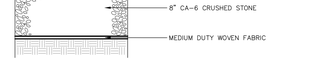

02.01.2021

**GHA GEWALT HAMILTON ASSOCIATES, INC.** HEAVY DUTY PAVEMENT DETAIL



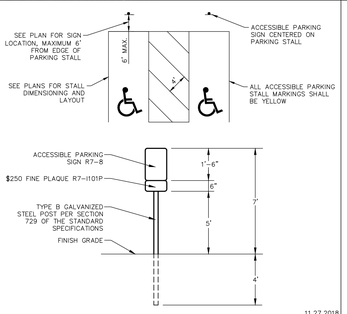

10.12.2018

**GHA GEWALT HAMILTON ASSOCIATES, INC.** EXPANSION JOINT DETAIL



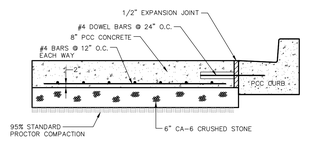

02.01.2021

**GHA GEWALT HAMILTON ASSOCIATES, INC.** NORMAL DUTY PAVEMENT DETAIL



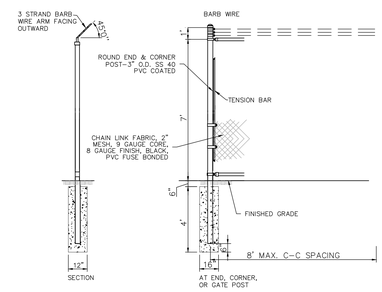

11.27.2018

**GHA GEWALT HAMILTON ASSOCIATES, INC.** ACCESSIBLE PARKING DETAIL




10.12.2018

**GHA GEWALT HAMILTON ASSOCIATES, INC.** PCC PAVEMENT DETAIL




**7' VINYL COATED CHAINLINK SECURITY FENCE WITH 1' BARBED WIRE TOP**

7'+1 FENCE DETAIL

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

REVISIONS

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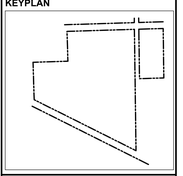
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SIGNED: P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

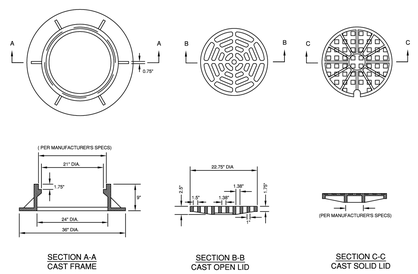
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



DETAILS

JOB 5253.220
SHEET
C09-00




SECTION A-A
CAST FRAME

SECTION B-B
CAST OPEN LID

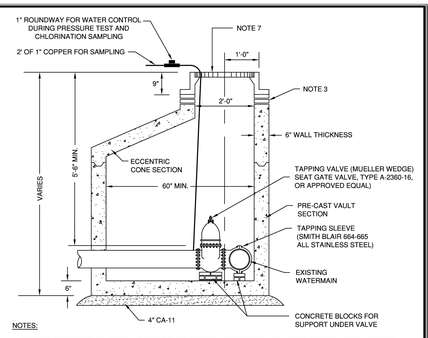
SECTION C-C
CAST SOLID LID

NOTES:

1. APPROVED MANUFACTURER'S PRODUCT NUMBERS FOR FRAMES AND LIDS:
   - PAVED AREAS (SOLID LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A SOLID COVER
   - PAVED AREAS (OPEN LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A5590M GRATE
   - NON-PAVED AREAS (SOLID LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE A SOLID COVER
   - NON-PAVED AREAS (OPEN LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE 01 BEEHIVE GRATE
2. SANITARY FRAMES AND COVERS FOR MANHOLES LOCATED WITHIN FLOODPLAIN AREAS AND HAVING A RIM ELEVATION BELOW THE FLOOD PROTECTION ELEVATION SHALL BE WATER TIGHT, LOCK TYPE COVERS- NEENAH NO. R-1758-B OR APPROVED EQUAL.
3. ALL SANITARY LIDS MUST BE GASKET TYPE WITH CONCEALED PICKHOLES.
4. SOLID LIDS FOR VILLAGE OWNED STRUCTURES MUST HAVE THE WORDS "VILLAGE OF MOUNT PROSPECT" AND HAVE THE NAME OF THE UTILITY (WATER-SANITARY-STORM) CAST INTO THE LID.
5. OPEN LIDS MUST HAVE THE WORDS "DUMP NO WASTE, DRAINS TO WATERWAYS" CAST INTO THE LID.
6. OTHER MANUFACTURER'S PRODUCTS OF EQUAL SPECIFICATION MAY BE SUBSTITUTED AT THE APPROVAL OF THE VILLAGE ENGINEER.

**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**FRAMES AND LIDS**
**Last Revised: 8-09**

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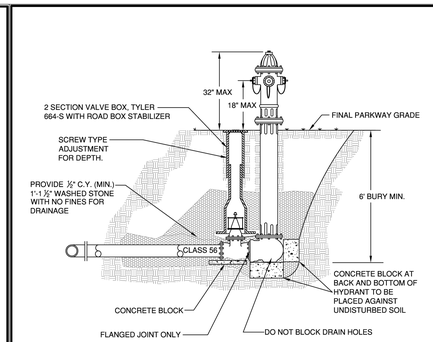



NOTES:

1. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH MASTIC TYPE BITUMINOUS JOINTING COMPOUND.
2. PRECAST BARREL SECTION ASTM C-478 AND ASTM C-443.
3. PRECAST CONCRETE RING CONSTRUCTION ASTM C-478-64T ADJUSTMENT TO 12" MAXIMUM, USING THE MINIMUM NEEDED TO ACHIEVE THE DESIRED ELEVATION - 3 RINGS MAXIMUM. RUBBER NOISE RINGS SHALL BE USED IN ALL TRAFFIC AREAS.
4. PIPE OPENINGS TO BE CAST INTO WALL.
5. ALL VAULTS ARE TO HAVE CONES INSTALLED SO THAT CENTER OF COVER IS DIRECTLY OVER OPERATING NUT .
6. 1" MUELLER H-15000 CORPORATION STOP (FLARE TYPE ONLY) TO BE TAPPED DIRECTLY INTO MAIN FOR CHLORINATION SAMPLES.
7. ALL SAMPLING PARTS MUST BE NEW.
8. APPROVED MANUFACTURER'S PRODUCT NUMBERS FOR FRAMES AND LIDS:
   - PAVED AREAS: EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A SOLID COVER
   - NON-PAVED AREAS: EAST JORDAN 1050, MEDIUM DUTY, TYPE A SOLID COVER

**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**PRESSURE TAP DETAIL**
**Last Revised: 8-09**

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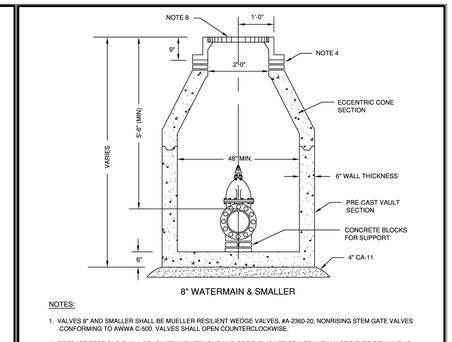



NOTES:

1. ALL HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 A-423 OR APPROVED EQUAL WITH 5- ½" MAIN VALVE, (2) 2 ½" HOSE NOZZLE, (1) - 4-½" PUMPER NOZZLE ALL NATIONAL STANDARD, 1 ½" PENTAGON, OPEN LEFT (COUNTER-CLOCKWISE) 6' BURY.
2. PROVIDE 6" N.R.S. RESILIENT WEDGE GATE VALVE AND VALVE BOX WITH "WATER" CAST INTO THE LID, MUELLER A-2360-16 OPEN LEFT.
3. ZINC CAPS WILL BE REQUIRED ON ALL MECHANICAL JOINT FITTINGS.

**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**FIRE HYDRANT DETAIL**
**Last Revised: 8-09**

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8" WATERMAIN & SMALLER

NOTES:

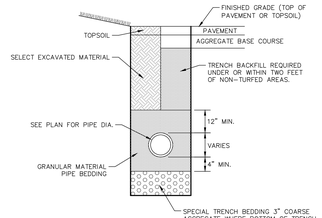
1. VALVES 8" AND SMALLER SHALL BE MUELLER RESILIENT WEDGE VALVES, #A-2360-20, NONRISING STEM GATE VALVES CONFORMING TO AWWA C-500. VALVES SHALL OPEN COUNTERCLOCKWISE.
2. PRECAST SECTIONS SHALL BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH MASTIC TYPE BITUMINOUS JOINTING COMPOUND.
3. PRECAST CONCRETE BARREL SECTION ASTM C-478 AND ASTM C-443.
4. PRECAST CONCRETE RING CONSTRUCTION ASTM C-478-64T ADJUSTMENT TO 12" MAXIMUM, USING THE MINIMUM NEEDED TO ACHIEVE THE DESIRED ELEVATION - 3 RINGS MAXIMUM. RUBBER NOISE RINGS SHALL BE USED IN ALL TRAFFIC AREAS.
5. PIPE OPENINGS TO BE CAST INTO WALL.
6. ALL VAULTS ARE TO HAVE CONES INSTALLED SO THAT CENTER OF COVER IS DIRECTLY ABOVE VALVE OPERATOR.
7. 1" MUELLER H-15000 CORPORATION STOP MUST BE TAPPED DIRECTLY INTO MAIN AT EACH VALVE VAULT( TWO TAPS MAY BE REQUIRED AT THE DIRECTION OF THE VILLAGE).
8. APPROVED MANUFACTURER'S PRODUCT NUMBERS FOR FRAMES AND LIDS:
   - PAVED AREAS: EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A SOLID COVER
   - NON-PAVED AREAS: EAST JORDAN 1050, MEDIUM DUTY, TYPE A SOLID COVER

**Village of Mount Prospect**
**Public Works Department**
**1700 W. Central Rd.**
**GATE VALVE DETAIL**
**Last Revised: 8-09**

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NOTE:
SEE WATER TABLE FOR MATERIAL REQUIREMENTS.

TRENCH WIDTH
WIDTH (MAX.) = 9" + OD + 9" WHEN TRENCH ≤ 5 FT.
WIDTH (MAX.) = 18" + OD + 18" WHEN TRENCH > 5 FT.




03.17.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — WATER MAIN TRENCH

## VERTICAL SEPARATION REQUIREMENTS

| CROSSING | REQUIRED VERTICAL SEPARATION | ADDITIONAL REQUIREMENTS (SELECT ONE) |
|---|---|---|
| WATER OVER SEWER | WATER INVERT 18" ABOVE CROWN OF SEWER. | **VERTICAL SEPARATION < 18"**<br>1. WATER OR SEWER TO BE ENCASED FOR A MINIMUM DISTANCE OF 10' FROM THE EDGE OF PIPE, ON EITHER SIDE, PERPENDICULAR TO THE CROSSING.<br>2. SEWER TO BE WATERMAIN CLASS PIPE FOR A DISTANCE OF 10' FROM THE EDGE OF PIPE ON EITHER SIDE PERPENDICULAR TO THE CROSSING. |
| SEWER OVER WATER | SEWER INVERT 18" ABOVE CROWN OF WATER. | **VERTICAL SEPARATION < 18" (NEVER ALLOWED)**<br>1. WATER OR SEWER TO BE ENCASED FOR A MINIMUM DISTANCE OF 10' FROM THE EDGE OF PIPE ON EITHER SIDE PERPENDICULAR TO THE CROSSING.<br>2. SEWER TO BE WATERMAIN CLASS PIPE FOR A DISTANCE OF 10' FROM THE EDGE OF PIPE ON EITHER SIDE PERPENDICULAR TO THE CROSSING. |

## HORIZONTAL SEPARATION REQUIREMENTS

| REQUIRED HORIZONTAL SEPARATION | ADDITIONAL REQUIREMENTS |
|---|---|
| 10' OF LATERAL SEPARATION. FROM EDGE OF PIPE TO EDGE OF PIPE. | **HORIZONTAL SEPARATION < 10'**<br>1. WATER INVERT 18" ABOVE CROWN OF SEWER.<br>**HORIZONTAL SEPARATION < 10' & VERTICAL SEPARATION < 18"**<br>2. SEWER CONSTRUCTED WITH WATERMAIN CLASS PIPE (SEE VERTICAL SEPARATION REQUIREMENTS) AND PRESSURE TESTED TO THE MAXIMUM EXPECTED SURCHARGE PRIOR TO BACKFILLING. |

## RESTRAINED LENGTH TABLE

| TYPE OF FITTING | RESTRAINED LENGTH (EACH WAY) |
|---|---|
| TEE AND PLUG | LENGTH OF TEE |
| 90° BEND | 18'-0" |
| 45 ° BEND | 8'-0" |
| 22 1/2° BEND | 4'-0" |
| 11 1/4° BEND | 2'-0" |

## LOCKING GASKET LENGTH TABLE

| TYPE OF BEND,/FITTING | DISTANCE FROM BEND/FITTING (EACH WAY) |
|---|---|
| 45° HORIZONTAL BEND | 15'-0" |
| 22.5° HORIZONTAL BEND | 10'-0" |
| 45 ° VERTICAL OFFSET | 25'-0" |
| TEES | PROVIDE THRUST BLOCK |
| PRESSURE CONNECTION | PROVIDE THRUST BLOCK |
| END CAPS | PROVIDE THRUST BLOCK |

NOTES:

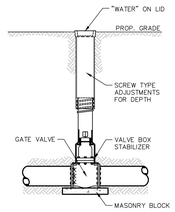
1. SEE WATER TABLE FOR FURTHER MATERIAL REQUIREMENTS.
2. SEPARATION REQUIREMENTS APPLY TO BOTH EXISTING AND PROPOSED WATERMAIN, STORM SEWER, SANITARY SEWER, COMBINED SEWER, AND ALL SERVICE CONNECTIONS.
3. WATERMAINS SHALL BE SEPARATED FROM SEPTIC TANKS, DISPOSAL FIELDS, SEEPAGE BEDS, AND LIFT STATIONS BY A MINIMUM OF 25'.

03.17.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — WATER MAIN INSTALLATION AND SEPARATION REQUIREMENTS

NOTES:

1. SEE WATER TABLE FOR FURTHER REQUIREMENTS.

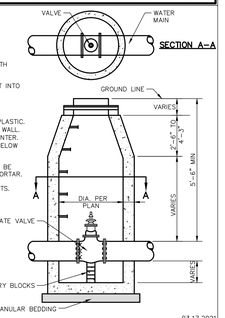



03.17.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — VALVE BOX

NOTES:

1. SEE WATER TABLE FOR FURTHER REQUIREMENTS.
2. PRECAST REINFORCED CONCRETE SECTIONS PER ASTM C-478 AND PREFORMED BITUMINOUS JOINTS WITH INTEGRAL PRECAST BOTTOMS.
3. PIPE OPENINGS SHALL BE PRECAST INTO WALLS.
4. I.D.O.T. #602601 FOR FLAT TOPS.
5. STEPS TO BE STEEL REINFORCED PLASTIC.
   A. IMBEDDED 3" INTO STRUCTURE WALL.
   B. SPACED AT 16" CENTER TO CENTER.
   C. FIRST STEP LOCATED 8"-12" BELOW FRAME.
6. FINAL ADJUSTMENT TO FRAMES TO BE DONE WITH STEEL SHIMS SET IN MORTAR.
7. SEE TABLE FOR BOOT REQUIREMENTS.

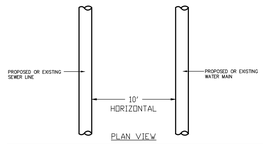



| DIA | MIN. THICKNESS (t) |
|---|---|
| 48" | 4" |
| 60" | 5" |
| 72" | 6" |

03.17.2021

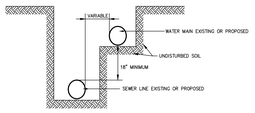
**GEWALT HAMILTON ASSOCIATES, INC.** — VALVE VAULT

WHEN PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR MORE FROM EXISTING WATER (OR SEWER), NO SPECIAL CONSTRUCTION REQUIRED.
SEE SECTION 41-2.01B (1)



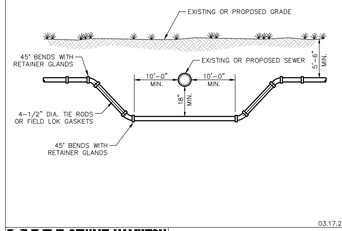

PLAN VIEW

WHEN PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10 FEET FROM EXISTING WATER (OR SEWER), DETAILS BELOW SHALL APPLY.
SEE SECTION 41-2.01B (2)




**WATER AND SEWER SEPARATION REQUIREMENTS**

**GEWALT HAMILTON ASSOCIATES, INC.** — HORIZONTAL WATER MAIN SEPARATION

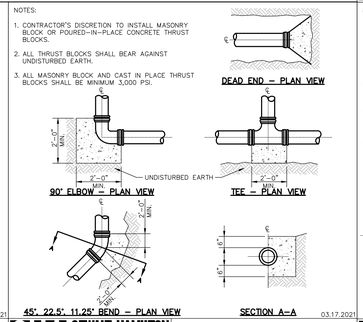



03.17.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — THRUST BLOCKING

NOTES:

1. CONTRACTOR'S DISCRETION TO INSTALL MASONRY BLOCK OR POURED-IN-PLACE CONCRETE THRUST BLOCKS.
2. ALL THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
3. ALL MASONRY BLOCK AND CAST IN PLACE THRUST BLOCKS SHALL BE MINIMUM 3,000 PSI.

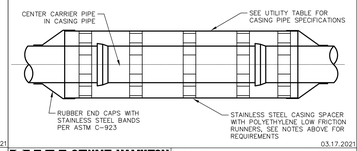



03.17.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — PIPE CASING FOR WATER MAIN SEPARATION REQUIREMENTS

NOTES:

1. CASING SPACERS AND HARDWARE SHALL BE T-304 STAINLESS STEEL.
2. CASING SPACERS SHALL BE INSTALLED AT EACH END OF THE CASING PIPE A MAXIMUM OF 2' FROM THE END OF THE CASING PIPE.
3. FOR DUCTILE IRON PIPE INSTALLATIONS CASING SPACERS SHALL BE PLACED AT A MAXIMUM INTERVAL OF 10'
4. FOR PVC AND HDPE INSTALLATIONS CASING SPACERS SHALL BE PLACED AT A MAXIMUM INTERVAL OF 6'
5. CASING SPACERS ON PVC PIPE SHALL BE INSTALLED AT THE SPIGOT END OF EACH PIPE.
6. CASING SPACERS SHALL BE A MINIMUM OF 8" WIDE.
7. CASING SPACERS SHALL ELECTRICALLY ISOLATE THE CARRIER PIPE FROM THE CASING PIPE.
8. CASING RUNNERS SHALL HAVE A COEFFICIENT OF FRICTION < 0.13 PER ASTM D-1894 ON SMOOTH STEEL SURFACES
9. SEE TRENCH DETAIL FOR TRENCHING REQUIREMENTS

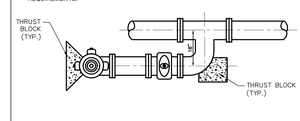



03.17.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — SPECIAL FIRE HYDRANT

NOTES:

1. SEE WATER TABLE FOR FURTHER REQUIREMENTS.




NOTES:

1. CONTRACTOR WILL SUPPLY HYDRANTS WITH AUXILIARY VALVES AND MECHANICAL JOINT CONNECTIONS WITH PLAN END CAST IRON PIPE BETWEEN HYDRANT AND VALVE.
2. THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR FIRE HYDRANT ASSEMBLY RELOCATION, WHICH PRICE SHALL INCLUDE PROVIDING AND INSTALLING THE HYDRANT, THE VALVE AND VALVE BOX, THE CONNECTION PIPES, BACKFILL MATERIAL, AND THRUST BLOCKS AS DETAILED.
3. EXISTING FIRE HYDRANT RELOCATION SHALL BE IN ACCORDANCE WITH SECTION 564 OF THE I.D.O.T. STANDARD SPECIFICATIONS.
4. WHEN A 4" MINIMUM DISTANCE BETWEEN HYDRANT AND WATER MAIN CANNOT BE OBTAINED THE HYDRANT SHALL BE INSTALLED AND/OR RELOCATED PER THE SPECIAL FIRE HYDRANT DETAIL SHOWN. THE COST OF ANY ADDITIONAL MATERIALS OR LABOR SHALL BE CONSIDERED INCIDENTAL TO THE COST OF HYDRANT INSTALLATION AND/OR RELOCATION.

03.24.2021

**GEWALT HAMILTON ASSOCIATES, INC.** — SPECIAL FIRE HYDRANT

CORGAN

kW Mission Critical Engineering
Member of WSP

PASE
408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS

## ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

## REVISIONS

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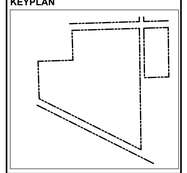
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

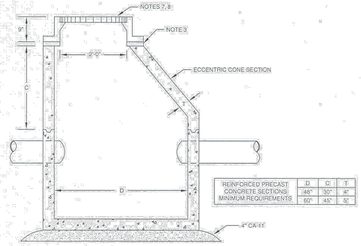


DETAILS

JOB 5253.220
SHEET
**C09-01**



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| REINFORCED PRECAST CONCRETE SECTIONS MINIMUM REQUIREMENTS | D | C | T |
|---|---|---|---|
| | 48" | 30" | 4" |
| | 60" | 45" | 5" |

NOTES:

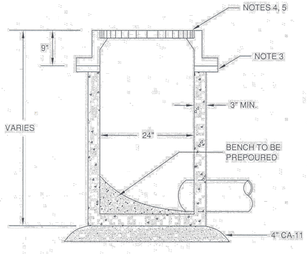
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3. PRECAST CONCRETE RING CONSTRUCTION ASTM C-478-64? ADJUSTMENT TO 12" MAXIMUM, USING THE MINIMUM NEEDED TO ACHIEVE THE DESIRED ELEVATION - 3 RINGS MAXIMUM. RUBBER NOISE RINGS SHALL BE USED IN ALL TRAFFIC AREAS.
4. STEPS SHALL BE EMBEDDED INTO WALL A MINIMUM OF 3". STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE!
5. MINIMUM DIAMETER (D) SHALL BE AS FOLLOWS:
   - 48" FOR 8" - 18" PIPE
   - 60" FOR 21" - 36" PIPE
   - 72" FOR 39" - 60" PIPE
6. A FACTORY INSTALLED "RUBBER BOOT SEAL" SHALL BE PRECAST INTO ALL PIPE OPENINGS WHEN CATCH BASINS ARE TIED INTO COMBINED SEWER SYSTEM. (RESILIENT WATERTIGHT CONNECTION PER ASTM C-923)
7. APPROVED MANUFACTURER'S PRODUCT NUMBERS FOR FRAMES AND LIDS:
   - PAVED AREAS: EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE 1020M1 GRATE
   - NON-PAVED AREAS: EAST JORDAN 1050, MEDIUM DUTY, TYPE 01 BEEHIVE GRATE
8. OPEN LIDS MUST HAVE THE WORDS "DUMP NO WASTE, DRAINS TO WATERWAYS" CAST INTO THE LID.

**Village of Mount Prospect**
Public Works Department
1700 W Central Rd

**CATCH BASIN TYPE-A DETAIL**

Scale: None | Last Revised: 12-11

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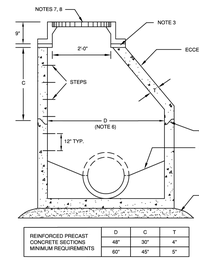

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**Village of Mount Prospect**
Public Works Department
1700 W Central Rd

**INLET DETAIL**

Scale: None | Last Revised: 12-11




| REINFORCED PRECAST CONCRETE SECTIONS MINIMUM REQUIREMENTS | D | C | T |
|---|---|---|---|
| | 48" | 30" | 4" |
| | 60" | 45" | 5" |

NOTES:

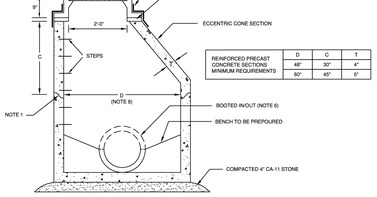
1. PRECAST SECTIONS SHALL BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH TWO (2) STRIPS BUTYL RUBBER.
2. PRECAST CONCRETE BARREL SECTION ASTM C-478 AND ASTM C-443.
3. PRECAST CONCRETE RING CONSTRUCTION ASTM C-478-64? ADJUSTMENT TO 12" MAXIMUM, USING THE MINIMUM NEEDED TO ACHIEVE THE DESIRED ELEVATION - 3 RINGS MAXIMUM. RUBBER NOISE RINGS SHALL BE USED IN ALL TRAFFIC AREAS.
4. STEPS SHALL BE EMBEDDED INTO WALL A MINIMUM OF 3 INCHES AND SHALL BE STEEL REINFORCED POLYURETHANE STEPS (12" WIDE).
5. FOR OPTIONAL PRECAST CONCRETE FLAT SLAB TOP REFER TO IDOT STANDARD 602601.
6. MINIMUM DIAMETER (D) SHALL BE AS FOLLOWS:
   - 48" FOR 8" - 18" PIPE
   - 60" FOR 21" - 36" PIPE
   - 72" FOR 39" - 60" PIPE
7. APPROVED MANUFACTURER'S PRODUCT NUMBERS:
   - PAVED AREAS (SOLID LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A SOLID COVER
   - PAVED AREAS (OPEN LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE 1020M1 GRATE
   - NON-PAVED AREAS (SOLID LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE A SOLID COVER
   - NON-PAVED AREAS (OPEN LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE 01 BEEHIVE GRATE
8. ADDITIONAL DETAILS FOR STORM FRAMES AND LIDS:
   - SOLID LIDS FOR VILLAGE OWNED STRUCTURES MUST HAVE THE WORDS "VILLAGE OF MOUNT PROSPECT" AND HAVE THE NAME OF THE UTILITY (STORM) CAST INTO THE LID.
   - OPEN LIDS MUST HAVE THE WORDS "DUMP NO WASTE, DRAINS TO WATERWAYS" CAST INTO THE LID.
   - OTHER MANUFACTURER'S PRODUCTS OF EQUAL SPECIFICATION MAY BE SUBSTITUTED AT THE APPROVAL OF THE VILLAGE ENGINEER.

**Village of Mount Prospect**
Public Works Department
1700 W. Central Rd.

**STORM MANHOLE DETAIL**

Last Revised: 8-09

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| REINFORCED PRECAST CONCRETE SECTIONS MINIMUM REQUIREMENTS | D | C | T |
|---|---|---|---|
| | 48" | 30" | 4" |
| | 60" | 45" | 5" |

NOTES:

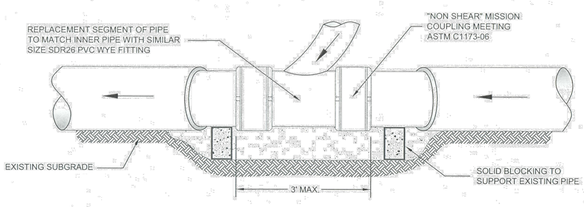
1. PRECAST SECTIONS SHALL BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH TWO (2) STRIPS BUTYL RUBBER.
2. PRECAST CONCRETE BARREL SECTION ASTM C-478 AND ASTM C-443.
3. PRECAST CONCRETE RING CONSTRUCTION ASTM C-478-64? ADJUSTMENT TO 12" MAXIMUM, USING THE MINIMUM NEEDED TO ACHIEVE THE DESIRED ELEVATION - 3 RINGS MAXIMUM. RUBBER NOISE RINGS SHALL BE USED IN ALL TRAFFIC AREAS.
4. STEPS SHALL BE EMBEDDED INTO WALL A MINIMUM OF 3 INCHES AND SHALL BE STEEL REINFORCED POLYURETHANE STEPS (12" WIDE) AND 12" BETWEEN EACH STEP.
5. FOR OPTIONAL PRECAST CONCRETE FLAT SLAB TOP REFER TO IDOT STANDARD 602601.
6. A FACTORY INSTALLED "RUBBER BOOT SEAL" SHALL BE PRECAST INTO MANHOLES AT ALL PIPE OPENINGS (SANITARY ONLY) - ASTM C923
7. FOR ALL RENOVATED/NEW MANHOLES, USE EITHER THE CRETEX INTERNAL/EXTERNAL CHIMNEY SEAL OR THE ADAPTOR INC. EXTERNAL CHIMNEY SEAL.
8. MINIMUM DIAMETER (D) SHALL BE AS FOLLOWS:
   - 48" FOR 8" - 18" PIPE
   - 60" FOR 21" - 36" PIPE
   - 72" FOR 39" - 60" PIPE
9. APPROVED MANUFACTURER'S PRODUCT NUMBERS:
   - PAVED AREAS (SOLID LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A SOLID COVER
   - NON-PAVED AREAS (SOLID LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE A SOLID COVER
10. ADDITIONAL DETAILS FOR SANITARY FRAMES AND LIDS:
    - FRAMES AND COVERS FOR MANHOLES LOCATED WITHIN FLOODPLAIN AREAS AND HAVING A RIM ELEVATION BELOW THE FLOOD PROTECTION ELEVATION SHALL BE WATER TIGHT, LOCK TYPE COVERS - NEENAH NO. R-1755-B OR APPROVED EQUAL.
    - ALL SANITARY LIDS MUST BE GASKET TYPE WITH CONCEALED PICKHOLES.
    - SOLID LIDS FOR VILLAGE OWNED STRUCTURES MUST HAVE THE WORDS "VILLAGE OF MOUNT PROSPECT" AND HAVE THE NAME OF THE UTILITY (SANITARY) CAST INTO THE LID.

**Village of Mount Prospect**
Public Works Department
1700 W. Central Rd.

**SANITARY MANHOLE DETAIL**

Last Revised: 8-09

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NOTES:

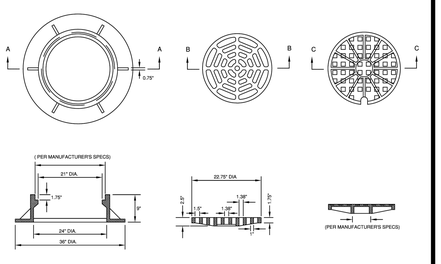
1. MATCH INVERT OF EXISTING PIPE LINING AND NEW SEGMENT OF PIPE.
2. IF EXISTING VCP PIPE SEGMENT IS CIPP LINED, A SUFFICIENT PORTION OF THE VCP SHALL BE REMOVED (3' MAX. LENGTH) TO ALLOW THE WYE FITTING TO BE ATTACHED TO THE PIPE LINER.

**Village of Mount Prospect**
Public Works Department
1700 W Central Rd

**SERVICE CONNECTION TO MAIN LINE SEWER W/ WYE DETAIL**

Scale: None | Last Revised: 05-11

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SECTION A-A CAST FRAME | SECTION B-B CAST OPEN LID | SECTION C-C CAST SOLID LID

NOTES:

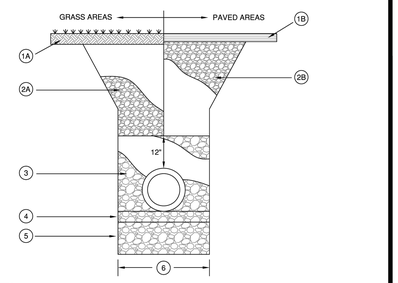
1. APPROVED MANUFACTURER'S PRODUCT NUMBERS FOR FRAMES AND LIDS:
   - PAVED AREAS (SOLID LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE A SOLID COVER
   - PAVED AREAS (OPEN LID): EAST JORDAN 1050, EXTRA HEAVY DUTY, TYPE 1020M1 GRATE
   - NON-PAVED AREAS (SOLID LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE A SOLID COVER
   - NON-PAVED AREAS (OPEN LID): EAST JORDAN 1050, MEDIUM DUTY, TYPE 01 BEEHIVE GRATE
2. SANITARY FRAMES AND COVERS FOR MANHOLES LOCATED WITHIN FLOODPLAIN AREAS AND HAVING A RIM ELEVATION BELOW THE FLOOD PROTECTION ELEVATION SHALL BE WATER TIGHT, LOCK TYPE COVERS- NEENAH NO. R-1755-B OR APPROVED EQUAL.
3. ALL SANITARY LIDS MUST BE GASKET TYPE WITH CONCEALED PICKHOLES.
4. SOLID LIDS FOR VILLAGE OWNED STRUCTURES MUST HAVE THE WORDS "VILLAGE OF MOUNT PROSPECT" AND HAVE THE NAME OF THE UTILITY (WATER-SANITARY-STORM) CAST INTO THE LID.
5. OPEN LIDS MUST HAVE THE WORDS "DUMP NO WASTE, DRAINS TO WATERWAYS" CAST INTO THE LID.
6. OTHER MANUFACTURER'S PRODUCTS OF EQUAL SPECIFICATION MAY BE SUBSTITUTED AT THE APPROVAL OF THE VILLAGE ENGINEER.

**Village of Mount Prospect**
Public Works Department
1700 W. Central Rd.

**FRAMES AND LIDS**

Last Revised: 8-09

H:\Engineering\Reference\Details\VillageStandards\FRAMES AND LIDS.dwg




NOTES:

(1A) GRASS AREAS IN R.O.W. MUST BE RESTORED WITH 4" OF TOP SOIL AND SOD

(1B) SEE PAVEMENT RESTORATION DETAIL FOR PATCHING REQUIREMENTS

(2A) UNDER GRASS AREAS BACKFILL WITH EXCAVATED MATERIAL PLACED AND COMPACTED IN 12" LIFTS

(2B) LINDER, AND WITHIN 2' OF PAVEMENT, CURB & GUTTER, AND SIDEWALK, BACKFILL WITH CA-6 MATERIAL IN 9" LIFTS COMPACTED TO 95% MAX. DENSITY

(3) CA-11 STONE BACKFILL PLACED AND COMPACTED IN 6" LIFTS

(4) CA-11 STONE BEDDING. MINIMUM THICKNESS = 1/4 OF THE OUTSIDE DIAMETER OF THE PIPE, BUT NO LESS THAN 4"

(5) UNSUITABLE MATERIAL TO BE REMOVED AT THE DIRECTION OF VILLAGE ENGINEER, AND REPLACED WITH COMPACTED CA-11 STONE

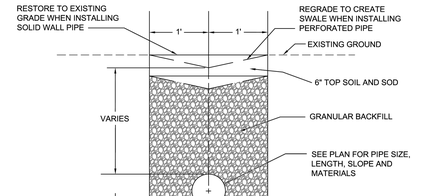
(6) THE TRENCH WIDTH SHALL BE AT LEAST 18" WIDER THAN THE OUTSIDE DIAMETER OF THE PIPE

**Village of Mount Prospect**
Public Works Department
1700 W. Central Rd.

**TRENCH SECTION DETAIL**

Last Revised: 8-09

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UNDERDRAIN DETAIL

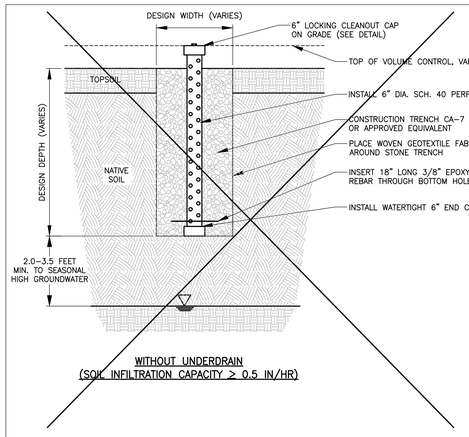
NOTE: THE HOLE FOR THE UNDERDRAIN MUST BE CORE DRILLED INTO THE STRUCTURE.

**Village of Mount Prospect**
Public Works Department
1700 W. Central Rd.

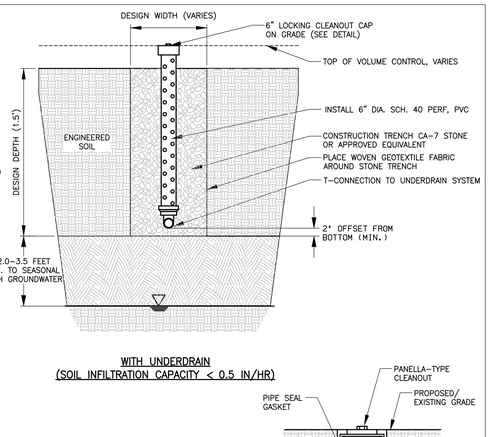
**UNDERDRAIN DETAIL**

Last Revised: 8-09

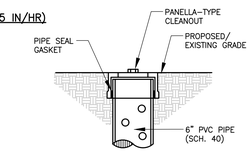
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WITHOUT UNDERDRAIN
(SOIL INFILTRATION CAPACITY > 0.5 IN/HR)




WITH UNDERDRAIN
(SOIL INFILTRATION CAPACITY < 0.5 IN/HR)



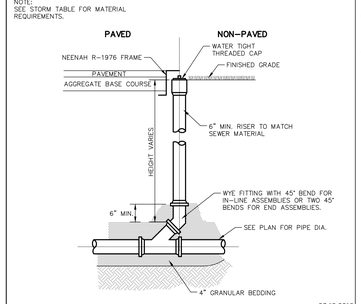

OBSERVATION WELL CLEANOUT CAP DETAIL

NOTES:
1) ONE OBSERVATION WELL SHALL BE INSTALLED PER 6,000 SQ. FT. OF SURFACE AREA.
2) PERFORATIONS SHALL BE 3/8" CIRCULAR HOLES, 4" ON CENTER, 90° AROUND PIPE.
3) OBSERVATION WELL FOR BIORETENTION FACILITIES SHALL EXTEND 6"-12" ABOVE GRADE AND CONTAIN AN OVERFLOW GRATE INSTEAD OF LOCKING CAP.
4) PIPES/FITTINGS SHALL BE SCHEDULE 40 PVC OR HIGHER QUALITY, 6" DIAMETER MINIMUM.

NOT TO SCALE

| | | |
|---|---|---|
| .\NWRD logo.jpg | TECHNICAL GUIDANCE MANUAL | 10/11/18 |
| | TYPICAL OBSERVATION WELL DETAIL | STD. DWG. NO.8 |
| | | PAGE NO. 9 |

NOTE:
SEE STORM TABLE FOR MATERIAL REQUIREMENTS.

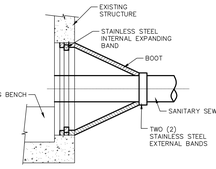



03.15.2016

STORM SEWER CLEAN-OUT DETAIL

NOTES:

1. MACHINE CORE CIRCULAR OPENING IN STRUCTURE WALL OF DIAMETER TO FIT THE REQUIRED BOOT SIZE PER MANUFACTURERS RECOMMENDATION.
2. CUT SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM/TO NEW CONNECTION.
3. CLEAN EXISTING STRUCTURE AND SEWER PIPE OF ANY DIRT CONCRETE OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.
4. RESILIENT WATERTIGHT SLEEVE WITH STAINLESS STEEL TRIM PER ASTM C-923.
5. FILL VOID BETWEEN BOOT AND PIPE WITH MORTAR



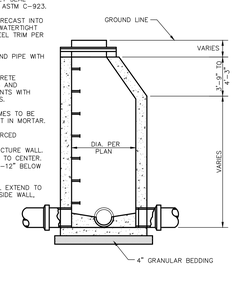

12.08.2018

SANITARY SEWER PIPE CONNECTION TO EXISTING STRUCTURE DETAIL

NOTES:

1. EXTERIOR NEOPRENE CHIMNEY SEAL. STAINLESS STEEL TRIM PER ASTM C-923.
2. PIPE OPENINGS SHALL BE PRECAST INTO WALLS, CAST IN RESILIENT WATERTIGHT SLEEVE WITH STAINLESS STEEL TRIM PER ASTM C-923.
3. FILL VOID BETWEEN BOOT AND PIPE WITH MORTAR
4. PRECAST REINFORCED CONCRETE SECTIONS PER ASTM C-478 AND PREFORMED BITUMINOUS JOINTS WITH INTEGRAL PRECAST BOTTOMS.
5. FINAL ADJUSTMENT TO FRAMES TO BE DONE WITH STEEL SHIMS SET IN MORTAR.
6. STEPS TO BE STEEL REINFORCED PLASTIC.
   A. IMBEDDED 3" INTO STRUCTURE WALL.
   B. SPACED AT 16" CENTER TO CENTER.
   C. FIRST STEP LOCATED 8"-12" BELOW FRAME.
6. PRECAST PCC BENCH SHALL EXTEND TO CROWN AND SLOPE TO OUTSIDE WALL, SMOOTH FINISH.
7. SEE SANITARY TABLE FOR FURTHER REQUIREMENTS.

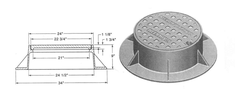
| DIM | MIN. THICKNESS |
|---|---|
| 48" | 4" |
| 60" | 5" |
| 72" | 6" |



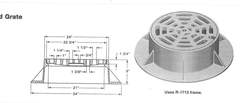

12.08.2018

SANITARY MANHOLE

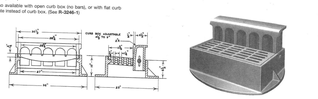
**R-1713**
**Manhole Frame, Solid Lid**
Heavy Duty



**R-2504**
**Catch Basin Frame and Grate**
Heavy Duty




**R-3281-A**
**Curb Inlet Frame, Grate and Curb Box**
Heavy Duty
Also available with open curb box (no bars), or with flat curb plate instead of curb box. (See R-3246-1)



CORGAN

kW Mission Critical Engineering
Member of WSP

PASE
408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

REVISIONS

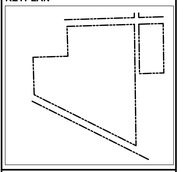
This Document was produced by or under the authority of Registered Engineer: Donald E. Dixon

This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

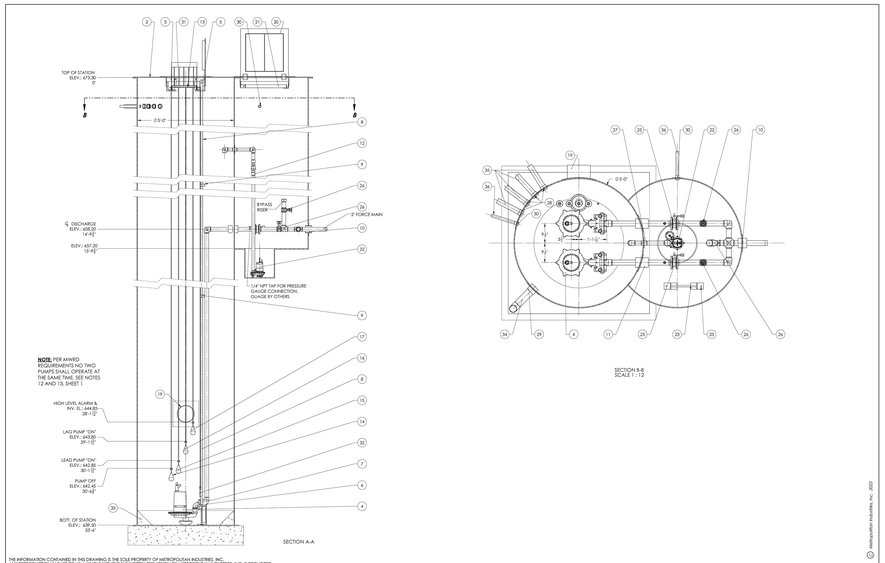
MOUNT PROSPECT TECHNOLOGY CAMPUS
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



DETAILS

JOB 5253.220
SHEET
C09-02




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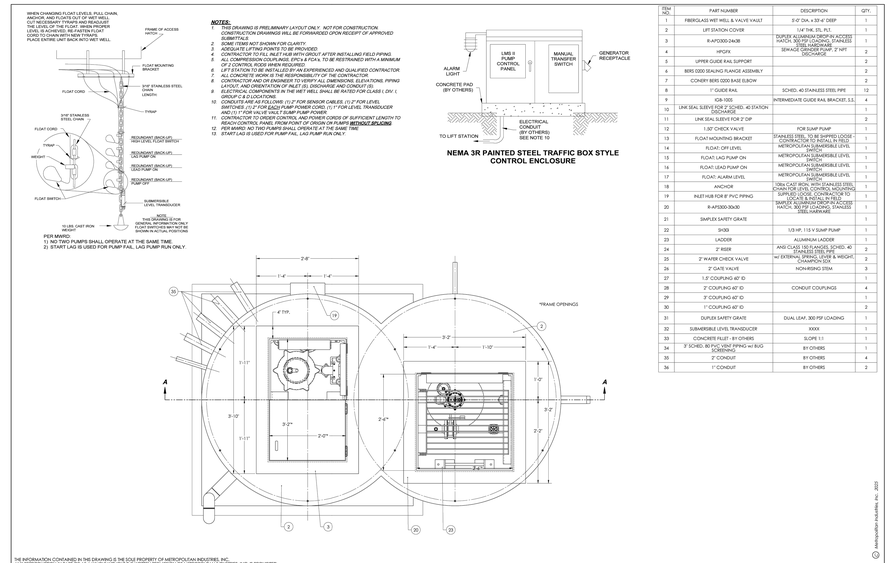
| DATE | BY | REVISION | DATE | BY | REVISION | SCALE: 1:16 |
|---|---|---|---|---|---|---|
| 6/6/2022 | R.J.E | MWRD CHANGES | | | | DRN. BY: F.U. |
| 9/15/2025 | F.U. | STATION DEPTH | | | | DATE: 8/16/2021 |
| | | | | | | APP. BY: |

**METROPOLITAN INDUSTRIES, INC.**
37 FORESTWOOD DR. ROMEOVILLE, ILLINOIS 60446
(815)886-9200 FAX (815)886-4573
PUMPS - CONTROLS - SYSTEMS

TITLE: *DUPLEX METRORAIL FIBERGLASS LIFT STATION*

PROJECT: *SANITARY LIFT STATION TECHNOLOGY SPECIAL PROJECT MOUNT PROSPECT, ILLINOIS*

SHEET 2 OF 2
DRAWING NAME:
2136-SKTCH.DWG




| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | FIBERGLASS WET WELL & VALVE VAULT | 2-0" DIA. x 33'-4" DEEP | 1 |
| 2 | LIFT STATION COVER | 1/4" THK. STL. PLT. | 1 |
| 3 | R-APD3000-2436 | DUPLEX ALUMINUM CHECK W/ ACCESS HATCH, 300 PSF LOADING, STAINLESS STEEL HARDWARE | 1 |
| 4 | HPGFX | SEWAGE GRINDER PUMP, 2" NPT DISCHARGE | 2 |
| 5 | UPPER GUIDE RAIL SUPPORT | | 3 |
| 6 | BERS 0200 SEALING FLANGE ASSEMBLY | | 2 |
| 7 | CONERT BERS 0200 BASE ELBOW | | 2 |
| 8 | 1" GUIDE RAIL | SCHED. 40 STAINLESS STEEL PIPE | 12 |
| 9 | IQB-1005 | INTERMEDIATE GUIDE RAIL BRACKET, S.S., | 4 |
| 10 | LINK SEAL SLEEVE 2" SCHED. 40 STATION ENCHANCED | | 1 |
| 11 | LINK SEAL SLEEVE FOR 2" DIP | | 2 |
| 12 | 1.50" CHECK VALVE | FOR SUMP PUMP | 1 |
| 13 | FLOAT MOUNTING BRACKET | STAINLESS STEEL, TO BE SHIPPED LOOSE FOR INSTALLATION BY OTHERS | 1 |
| 14 | FLOAT, LEAD PUMP ON | METROPOLITAN SUBMERSIBLE LEVEL SWITCH | 1 |
| 15 | FLOAT, LAG PUMP ON | METROPOLITAN SUBMERSIBLE LEVEL SWITCH | 1 |
| 16 | FLOAT, LEAD PUMP ON | METROPOLITAN SUBMERSIBLE LEVEL SWITCH | 1 |
| 17 | FLOAT, ALARM LEVEL | METROPOLITAN SUBMERSIBLE LEVEL SWITCH | 1 |
| 18 | ANCHOR | 10MM CAST IRON STAINLESS STEEL CHAIN FOR LEVEL CONTROL MOUNTING | 1 |
| 19 | INLET HUB FOR 8" PVC PIPING | SUPPLIED LOOSE, CONTRACTOR TO INSTALL IN FIELD | 1 |
| 20 | R-APS3000-3636 | DUPLEX ALUMINUM DROP ELECTRIC HATCH, 300 PSF LOADING, STAINLESS STEEL HARDWARE | 1 |
| 21 | SIMPLEX SAFETY GRATE | | 1 |
| 22 | SH30 | 1/3 HP, 115 V SUMP PUMP | 1 |
| 23 | LADDER | ALUMINUM LADDER | 1 |
| 24 | 2" RISER | 4X40 CLASS 150 FLANGED, SCHED. 40 STAINLESS STEEL PIPE | 2 |
| 25 | 2" WATER CHECK VALVE | W/ EXTERNAL LEVER, LEVER & WEIGHT, SWINGFOG 2000 | 3 |
| 26 | 2" GATE VALVE | NON-RISING STEM | 3 |
| 27 | 1.5" COUPLING 40" ID | | 1 |
| 28 | 2" COUPLING 40" ID | CONDUIT COUPLINGS | 4 |
| 29 | 3" COUPLING 40" ID | | 1 |
| 30 | 1" COUPLING 40" ID | | 2 |
| 31 | DUPLEX SAFETY GRATE | DUAL LEAF, 300 PSF LOADING | 1 |
| 32 | SUBMERSIBLE LEVEL TRANSDUCER | XXXX | 1 |
| 33 | CONCRETE FILLET - BY OTHERS | SLOPE 1:1 | 1 |
| 34 | 3" SCHED. 80 PVC VENT PIPING W/ BUG SCREEN | BY OTHERS | 1 |
| 35 | 2" CONDUIT | BY OTHERS | 4 |
| 36 | 1" CONDUIT | BY OTHERS | 2 |

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| DATE | BY | REVISION | DATE | BY | REVISION | SCALE: 1:8 |
|---|---|---|---|---|---|---|
| 6/6/2022 | R.J.E | MWRD CHANGES | | | | DRN. BY: F.U. |
| 9/15/2025 | F.U. | STATION DEPTH | | | | DATE: 8/16/2021 |
| | | | | | | APP. BY: |

**METROPOLITAN INDUSTRIES, INC.**
37 FORESTWOOD DR. ROMEOVILLE, ILLINOIS 60446
(815)886-9200 FAX (815)886-4573
PUMPS - CONTROLS - SYSTEMS

TITLE: *DUPLEX METRORAIL FIBERGLASS LIFT STATION*

PROJECT: *SANITARY LIFT STATION TECHNOLOGY SPECIAL PROJECT MOUNT PROSPECT, ILLINOIS*

SHEET 1 OF 2
DRAWING NAME:
2136-SKTCH.DWG

Antequisition Industries, Inc. 2020

CORGAN

kW Mission Critical Engineering
Member of WSP

PASE
408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS

## ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

## REVISIONS

This Document was produced by or under the authority of Registered Engineer: Donald E. Dixon

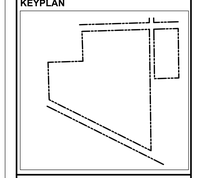
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



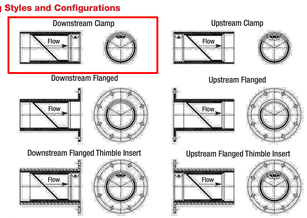
DETAILS

JOB 5253.220
SHEET

**C09-03**

# CHECKMATE® VALVE
*Designed for Inline Service*

**Mounting Styles and Configurations**




Flange shape and bolt pattern can be customized.
Flangeless thimble inserts are available.

| CHECKMATE® VALVE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NOMINAL PIPE SIZE I.D.* | | OVERALL LENGTH** | | NUMBER OF CLAMPS | CUFF DEPTH | | BACK PRESSURE RATING | |
| Inches | Millimeters | Inches | Millimeters | | Inches | Millimeters | Feet | Meters |
| 4 | 100 | 7.86 | 200 | 1 | 1.5 | 38 | 40 | 12 |
| 6 | 150 | 9 | 229 | 1 | 2 | 51 | 40 | 12 |
| 7 | 178 | 12.75 | 324 | 1 | 2 | 51 | 40 | 12 |
| 8 | 200 | 15.23 | 387 | 1 | 2 | 51 | 40 | 12 |
| 9 | 225 | 15.38 | 391 | 1 | 2 | 51 | 40 | 12 |
| 10 | 250 | 16.12 | 409 | 1 | 2 | 51 | 40 | 12 |
| 12 | 300 | 23 | 584 | 1 | 2 | 51 | 40 | 12 |
| 14 | 350 | 25.75 | 654 | 1 | 4 | 102 | 20 | 6 |
| 16 | 400 | 28.61 | 727 | 1 | 4 | 102 | 20 | 6 |
| 18 | 450 | 31 | 787 | 1 | 4 | 102 | 20 | 6 |
| 20 | 500 | 42.14 | 1070 | 2 | 8 | 203 | 20 | 6 |
| 24 | 600 | 47.5 | 1207 | 2 | 8 | 203 | 20 | 6 |
| 30 | 750 | 54.87 | 1394 | 2 | 8 | 203 | 20 | 6 |
| 36 | 900 | 62.25 | 1581 | 2 | 8 | 203 | 20 | 6 |
| 42 | 1050 | 70.62 | 1794 | 2 | 8 | 203 | 13 | 4 |
| 48 | 1200 | 79 | 2007 | 2 | 8 | 203 | 13 | 4 |
| 54 | 1350 | 86.37 | 2194 | 2 | 8 | 203 | 13 | 4 |
| 60 | 1500 | 102.5 | 2604 | 2 | 12 | 305 | 13 | 4 |
| 72 | 1829 | 119 | 3023 | 3 | 12 | 305 | 10 | 3 |

*Larger sizes available upon request. **Shorter lengths available.



# Lift Station Design - Duplex
**Calculations prepared by Metropolitan Pump Company**

**Project:** Special Project Development — 15-Sep-25
**City, State:**
**Engineer:** Gewalt hamilton
**Version:** 9/15/2025

## FLOW:

**CONDITIONS**

| | | |
|---|---|---|
| Population Equivalent (P.E.): | 101 | Equiv. |
| Ave. Flow per Person (GPD): | 100 | |
| Q average (GPD): | 10,100 | |
| Q average (GPM): | 7 | |
| Surge Factor (per IEPA) | 4.24 | |
| **Q peak - (GPM):** | **30** | |

Note: Flow Rate of 30 GPM is used in order to maintain a minimum velocity of 2.5ft./Second through the 2 inch forcemain.

## WET WELL ELEVATION/LEVELS

| | | | |
|---|---|---|---|
| Rim Elevation of Basin (ft): | 673.00 | Storage: | |
| Station Disch. Pipe Elev. (ft): | 658.20 | Duration (min): | 2 |
| Lowest Invert Elevation (ft): | 644.85 | Basin Dia. (ft): | 5 |
| Alarm Elevation (ft): | 644.85 | Storage Height (ft): | 0.40 |
| Dist. Between Levels (ft): | 1.00 | Storage Volume (gal): | 59.43 |
| Pump #2 "on" Level (ft): | 643.85 | Time/Cycle: | 11.09 |
| Pump #1 "on" Level (ft): | 642.85 | Starts per hour: | 5.41 |
| Pump "off" Level (ft): | 642.45 | | |
| Basin Bottom (ft): | 639.50 | Pump Discharge: | 2 |
| **Overall Basin Height (ft):** | **33.50** | | |

**NOTES:**

Elevations and flows provided by engineer.

Note: Flow Rate of 30 GPM is used in order to maintain a minimum velocity of 2.5ft./Second through the 2 inch forcemain.

Per MWRD Requirements, no two pumps shall operate at the same time.

## STATIC:

| | |
|---|---|
| Highest Point of F.M. (ft): | 666.30 |
| Pump "off" Level (ft): | 642.45 |
| **Static Head:** | **23.85** |

## STATION LOSSES:

| | |
|---|---|
| Station "C" Factor: | 100 |
| Dia. of Station Piping (in): | 2 |

| Number of Fittings | | |
|---|---|---|
| Items per Pump | Item | Eq. Length |
| 0 | Plug | 0.0 |
| 1 | Gate | 1.1 |
| 0 | 45 Bends | 0.0 |
| 0 | Long 90 | 0.0 |
| 1 | Std 90 | 5.2 |

| Number of Fittings | | |
|---|---|---|
| Items per Pump | Item | Eq. Length |
| 1 | Std Tee | 10.4 |
| 0 | Short 90 | 0.0 |
| 1 | Swing Ck | 13.4 |
| 0 | Angle Val | 0.0 |
| 0 | Globe Val | 0.0 |

| | |
|---|---|
| Eq. Lgth.due to Fittings (ft) | 30.1 |
| Length of Straight Pipe (ft) | 23.7 |
| Total Eq. Lgth. of Pipe (ft): | **53.8** |

| Flow (gpm) | 15 | 22 | 30 | 45 | 75 | 100 |
|---|---|---|---|---|---|---|
| Station Loss (ft) | 0.58 | 1.17 | 2.05 | 4.40 | 11.32 | 19.27 |
| Velocity (ft/sec) | 1.53 | 2.25 | 3.04 | 4.60 | 7.66 | 10.21 |

## FORCE MAIN LOSSES:

| | |
|---|---|
| Force Main "C" Factor: | 100 |
| Length of Force Main (ft.) | 860 |
| Diameter of Force Main (in) | 2.079 HDPE DR-17 |

| Flow (gpm) | 15 | 22 | 30 | 45 | 75 | 100 |
|---|---|---|---|---|---|---|
| F.M. Loss (ft) | 7.63 | 15.49 | 27.09 | 58.23 | 149.81 | 255.07 |
| Velocity (ft/sec) | 1.42 | 2.08 | 2.81 | 4.25 | 7.09 | 9.45 |

## SYSTEM HEAD CONDITIONS:

| Loss Type | Flow (gpm) | | | | | |
|---|---|---|---|---|---|---|
| | 15 | 22 | 30 | 45 | 75 | 100 |
| Static | 23.85 | 23.85 | 23.85 | 23.85 | 23.85 | 23.85 |
| Station | 0.58 | 1.17 | 2.05 | 4.40 | 11.32 | 19.27 |
| Force Main | 7.63 | 15.49 | 27.09 | 58.23 | 149.81 | 255.07 |
| **TDH (ft)** | **32.06** | **40.52** | **52.99** | **86.48** | **184.98** | **298.20** |

## PUMP DESIGN CONDITIONS:

**DUPLEX SYSTEM:**

Each pump to be rated at: 30 GPM, at a TDH o 53.0 (FT)

**Pump Selection:**

Recommended pump is See attached pump curve

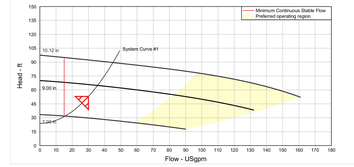
**PENTAIR**

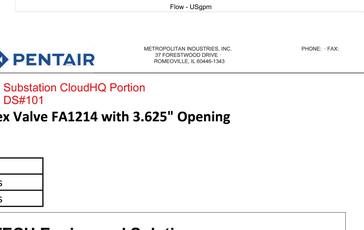
Customer :
Project name : Default

**Pump Performance Datasheet**
Encompass 3.0 - 25.3.0

| | | | |
|---|---|---|---|
| Item Number / Tags | : 001 | Size | : Hydromatic - HPGFH/HPGFHX-500 |
| Service | : - | Stages | : 1 |
| Quantity | : 1 | Based on curve number | : SUB_G_O_AH_00002_B_4 Rev 2012-03-23 |
| Quote number | : 321083 | Date last saved | : 15 Sep 2025 6:57 AM |

| | | | |
|---|---|---|---|
| **Operating Conditions** | | **Liquid** | |
| Flow, rated | : 30.00 USgpm | Liquid type | : Water |
| Differential head / pressure, rated (requested) | : 53.00 ft | Additional liquid description | : - |
| Differential head / pressure, rated (actual) | : 65.83 ft | Solids diameter, max | : 0.00 in |
| Suction pressure, rated / max | : 0.00 / 0.00 psi g | Solids diameter limit | : 0.00 in |
| NPSH available, rated | : Ample | Solids concentration, by volume | : 0.00 % |
| Site Supply Frequency | : 60 Hz | Temperature, max | : 68.00 deg F |
| **Performance** | | Fluid density, rated / max | : 1.000 / 1.000 SG |
| Speed criteria | : Synchronous | Viscosity, rated | : 1.00 cP |
| Speed, rated | : 1750 rpm | Vapor pressure, rated | : 0.34 psi.a |
| Impeller diameter, rated | : 9.00 in | **Material** | |
| Impeller diameter, maximum | : 10.12 in | Material selected | : Standard |
| Impeller diameter, minimum | : 7.00 in | **Pressure Data** | |
| Efficiency | : - | Maximum working pressure | : 30.35 psi.g |
| NPSH required / margin required | : - / 0.00 ft | Maximum allowable working pressure | : N/A |
| nq (imp. eye flow) / S (imp. eye flow) | : 18 / - Metric units | Maximum allowable suction pressure | : N/A |
| Minimum Continuous Stable Flow | : 15.00 USgpm | Hydrostatic test pressure | : N/A |
| Head, maximum, rated diameter | : 70.13 ft | **Driver & Power Data (@Max density)** | |
| Head rise to shutoff | : 6.53 % | Driver sizing specification | : Max Power |
| Flow, best eff. point | : - | Margin over specification | : 0.00 % |
| Flow ratio, rated / BEP | : - | Service factor | : 1.00 |
| Diameter ratio (rated / max) | : 88.89 % | Power, hydraulic | : 0.50 hp |
| Head ratio (rated dia / max dia) | : 71.30 % | Power, rated | : 4.89 hp |
| Cq/Ch/Ce/Cn (ANSI/HI 9.6.7-2010] | : 1.00 / 1.00 / 1.00 / 1.00 | Power, maximum, rated diameter | : 4.89 hp |
| Selection status | : Acceptable | Motor rating | : 5.00 hp / 3.73 kW (Fixed) |

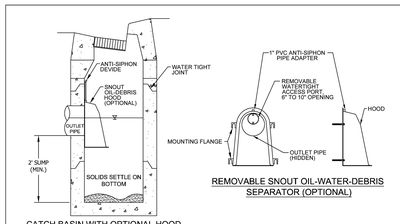



**PENTAIR**

METROPOLITAN INDUSTRIES, INC.
37 FORESTWOOD DRIVE
ROMEOVILLE, IL 60446-1343

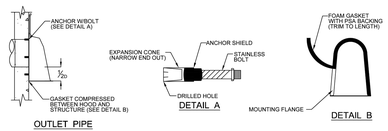
PHONE: FAX:




CATCH BASIN WITH OPTIONAL HOOD




REMOVABLE SNOUT OIL-WATER-DEBRIS SEPARATOR (OPTIONAL)



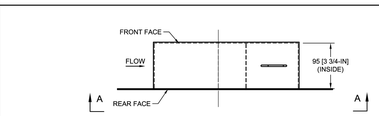

OUTLET PIPE

NOTES:

1. ALL HOODS SHALL BE CONSTRUCTED OF A FIBERGLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
2. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL).
3. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
4. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO ½ THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 9" FOR PIPES ≤ 12" I.D.
5. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
6. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
7. THE REMOVABLE HOOD SHALL BE ATTACHED TO THE STRUCTURE WITH THE SLOTTED TABS MOUNTED OVER ⅜" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKETS.
8. POSITION HOOD SUCH THAT BOTTOM FLANGE IS AT A DISTANCE OF ½" OUTLET PIPE DIAMETER (MIN.) BELOW THE OPEN INVERT. MINIMUM DISTANCE FOR FIRST INLET IS 15.6".
9. RESTRICTOR AND SNOUT WHEN PAIRED SHOULD BE INSTALLED IN SUCH A WAY THAT RESTRICTOR AND SNOUT REMAIN INSPECTABLE.
10. RESTRICTOR AND SNOUT HOOD SHALL BE CURVED TO INSIDE RADIUS OF STRUCTURE AND WATERTIGHT.

NOT TO SCALE

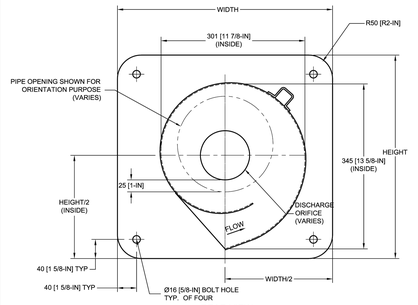
| | | |
|---|---|---|
| TECHNICAL GUIDANCE MANUAL | 7/1/15 | |
| REMOVABLE HOOD basin and water quality structure DETAIL | STD. DWG. NO.: | |
| | PAGE NO. 12 | |




TOP VIEW

NOTES

1. ALL WELDS CONTINUOUS, UNLESS OTHERWISE NOTED.
2. MATERIALS: 304L STAINLESS STEEL, 2 mm OR 3 mm THICK PER REQUIREMENTS OF SPECIFIER.
3. PLATE SIZE WILL VARY DEPENDENT UPON OUTLET PIPE SIZE.




REAR VIEW

This CADD file is for the purpose of specifying stormwater flow control equipment to be furnished by Contech Construction Products and may only be transferred to other documents exactly as provided by Contech Construction Products. Title block information, excluding the Contech Construction Products logo and the Fluidic-Amp or Fluidic-Cone designation and patent number, may be deleted if necessary. Revisions to any part of this CADD file without prior coordination with Contech Construction Products shall be considered unauthorized use of proprietary information.

**CONTECH ENGINEERED SOLUTIONS LLC**
www.contechES.com
200 Enterprise Drive, Scarborough, ME 04074
877-907-8676 207-885-9830 207-885-9825 FAX

STANDARD DETAIL - FLUIDIC-AMP VORTEX VALVE
MODEL FA1214 w/ PLATE ATTACHMENT

| DATE:09/14/10 | SCALE: 1:5 | FILE NAME: FA1214-STAND DETAIL | DRAWN: DWB | CHECKED: |
|---|---|---|---|---|

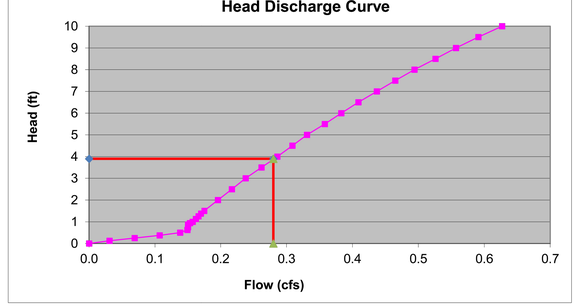
**CONTECH ENGINEERED SOLUTIONS**

Substation CloudHQ Portion
DS#101

**Vortex Valve FA1214 with 3.625" Opening**

| | |
|---|---|
| Target Head: | 3.9 ft |
| Target Flow: | 0.282 cfs |
| Achieved Flow: | 0.28 cfs |

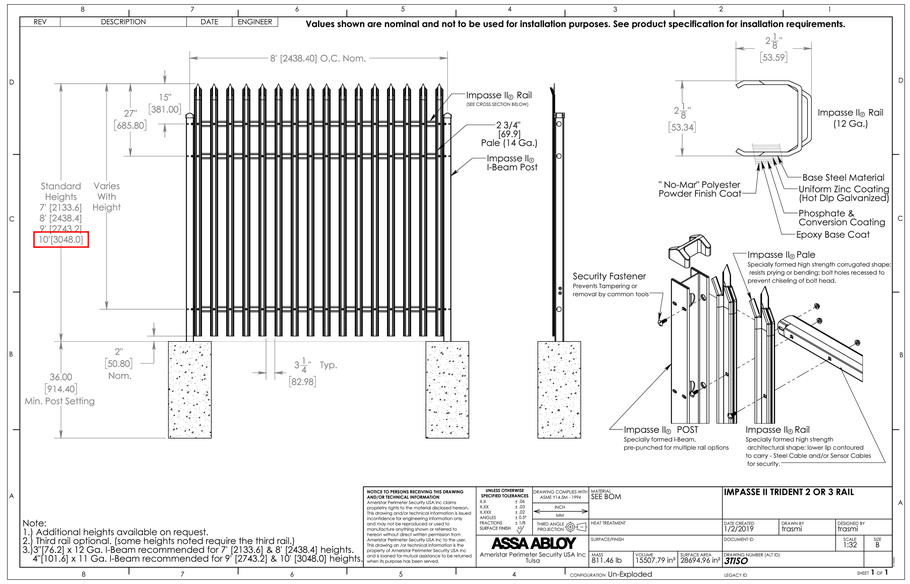
| Head (ft) | Flow (cfs) |
|---|---|
| 0 | 0 |
| 0.125 | 0.031 |
| 0.25 | 0.069 |
| 0.375 | 0.107 |
| 0.50 | 0.138 |
| 0.625 | 0.149 |
| 0.75 | 0.150 |
| 0.875 | 0.150 |
| 0.938 | 0.153 |
| 1.00 | 0.157 |
| 1.125 | 0.162 |
| 1.25 | 0.166 |
| 1.375 | 0.170 |
| 1.50 | 0.175 |
| 2.00 | 0.196 |
| 2.50 | 0.217 |
| 3.00 | 0.238 |
| 3.50 | 0.262 |
| 4.00 | 0.286 |
| 4.50 | 0.309 |
| 5.00 | 0.331 |
| 5.50 | 0.358 |
| 6.00 | 0.383 |
| 6.50 | 0.409 |
| 7.00 | 0.437 |
| 7.50 | 0.465 |
| 8.00 | 0.494 |
| 8.50 | 0.526 |
| 9.00 | 0.557 |
| 9.50 | 0.591 |
| 10.00 | 0.627 |



## OUTER PERIMETER SECURITY FENCE - FULL CAMPUS - OPTION #1

| REV | DESCRIPTION | DATE | ENGINEER |
|---|---|---|---|

**Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.**




Note:
1.) Additional heights available on request.
2.) Third rail optional. (some heights noted require the third rail.)
3.)7'[2133.6] x 12 Ga. I-Beam recommended for 7' [2133.6] & 8' [2438.4] heights.
4"[101.6] x 11 Ga. I-Beam recommended for 9' [2743.2] & 10' [3048.0] heights.


NOTICE TO PERSONS RECEIVING THIS DRAWING AND/OR TECHNICAL INFORMATION
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UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± .06; X.XX ± .03; X.XXX ± .02; ANGLES ± 1/2°; FRACTIONS ± 1/8; SURFACE FINISH 125

DRAWING COMPLIES WITH ASME Y14.5M - 1994

THIRD ANGLE PROJECTION

MATERIAL: SEE BOM

HEAT TREATMENT

SURFACE/FINISH

**ASSA ABLOY**
Ameristar Perimeter Security USA Inc
Tulsa

MASS: 811.46 lb | VOLUME: 13507.79 in³ | SURFACE AREA: 28694.76 in²

**IMPASSE II TRIDENT 2 OR 3 RAIL**

DATE CREATED: 1/2/2019 | DRAWN BY: trasmi | DESIGNED BY: trasmi

DOCUMENT ID | SCALE: 1:32 | SIZE: B

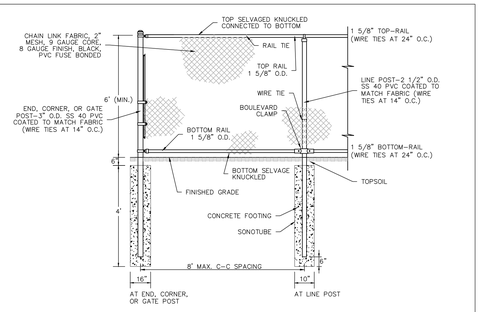
CUSTOMER PART NUMBER (ALT ID): 3115O

CONFIGURATION: Un-Exploded | LEGACY ID | SHEET 1 OF 1



## 6' VINYL COATED CHAINLINK SECURITY FENCE - EAST & SOUTH PROPERTY LINE AT SWITCHGEAR YARD DETENTION BASIN #9

NOTES:
1. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
2. ALL FENCING AND POSTS SHALL BE COATED WITH BLACK PVC AS NOTED IN THE SPECIFICATIONS.
3. BOTTOM RAIL ON ALL FENCING SHALL BE A MAX. OF 2" ABOVE THE FINISHED GRADE. VINYL COVER. #3 BRASS GROMMETS SHALL BE INSTALLED 12" C-C ALONG TOP, MIDDLE AND BOTTOM.
4. OWNER TO APPROVE FENCE COLOR COATING PRIOR TO CONSTRUCTION.




9.29.2023

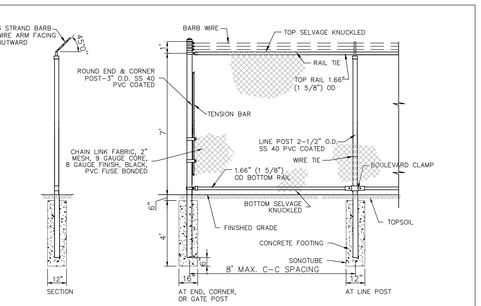
GHA GEWALT HAMILTON ASSOCIATES, INC.

6' VINYL COATED CHAINLINK FENCE DETAIL



## 7' VINYL COATED CHAINLINK SECURITY FENCE WITH 1' BARBED WIRE TOP (7+1)

NOTES:
1. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
2. ALL FENCING AND POSTS SHALL BE COATED WITH BLACK PVC AS NOTED IN THE SPECIFICATIONS.
3. BOTTOM RAIL ON ALL FENCING SHALL BE A MAX. OF 2" ABOVE THE FINISHED GRADE. VINYL COVER. #3 BRASS GROMMETS SHALL BE INSTALLED 12" C-C ALONG TOP, MIDDLE AND BOTTOM.
4. OWNER TO APPROVE FENCE COLOR COATING PRIOR TO CONSTRUCTION.




12.21.2023

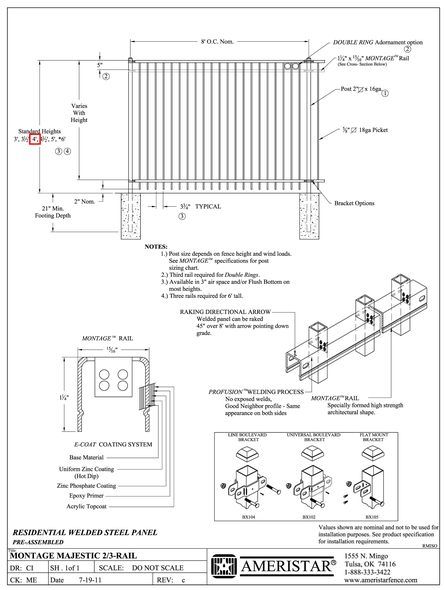
GHA GEWALT HAMILTON ASSOCIATES, INC.

7'+1 FENCE DETAIL



**PHOTO DOES NOT SHOW THE VINYL COATING.**
**VINYL COATING (BLACK) TO BE INCLUDED**

## WALLED BASINS - 4' PERIMETER SAFETY FENCE (3-RAIL)




*RESIDENTIAL WELDED STEEL PANEL*
*PRE-ASSEMBLED*

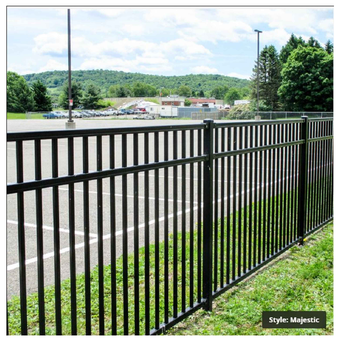
Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

RMS93

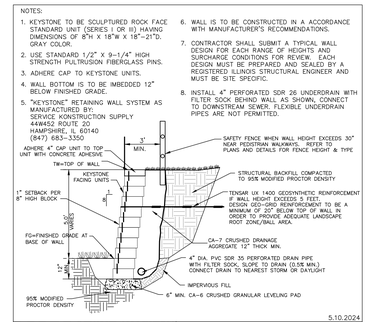
**MONTAGE MAJESTIC 2/3-RAIL**

DR: CI | SH: 1of 1 | SCALE: DO NOT SCALE | CK: ME | Date: 7-19-11 | REV: c

AMERISTAR®
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422
www.ameristarfence.com




NOTES:
1. KEYSTONE TO BE SCULPTURED ROCK FACE STANDARD UNIT (SERIES I OR II) HAVING DIMENSIONS OF 8"H X 18"W X 18"-21"D. GRAY COLOR.
2. USE STANDARD 1/2" X 9-1/4" HIGH STRENGTH PULTRUSION FIBERGLASS PINS.
3. ADHERE CAP TO KEYSTONE UNITS.
4. WALL BOTTOM IS TO BE IMBEDDED 12" BELOW FINISHED GRADE.
5. "KEYSTONE" RETAINING WALL SYSTEM AS MANUFACTURED BY:
SERVICE KONSTRUCTION SUPPLY
44W452 ROUTE 20
HAMPSHIRE, IL 60140
(847) 683-3350
6. WALL IS TO BE CONSTRUCTED IN A ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. CONTRACTOR SHALL SUBMIT A TYPICAL WALL DESIGN FOR EACH RANGE OF HEIGHTS AND SURCHARGE CONDITIONS FOR REVIEW. EACH DESIGN MUST BE PREPARED AND SEALED BY A REGISTERED ILLINOIS STRUCTURAL ENGINEER AND MUST BE SITE SPECIFIC.
8. INSTALL 4" PERFORATED SDR 26 UNDERDRAIN WITH FILTER SOCK BEHIND WALL AS SHOWN, CONNECT TO DOWNSTREAM SEWER. FLEXIBLE UNDERDRAIN PIPES ARE NOT PERMITTED.




5.10.2024

GHA GEWALT HAMILTON ASSOCIATES, INC.

KEYSTONE CONCRETE BLOCK RETAINING WALL

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

| | ISSUES | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
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| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

| △ | REVISIONS |
|---|---|

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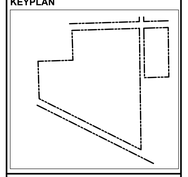
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

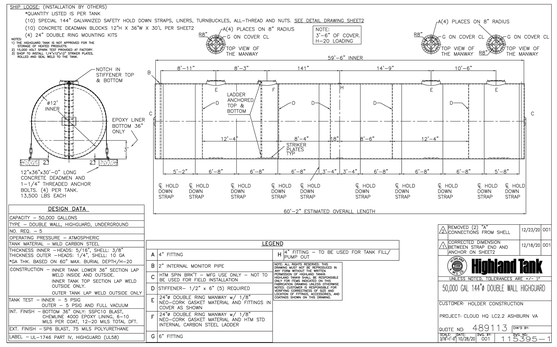
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

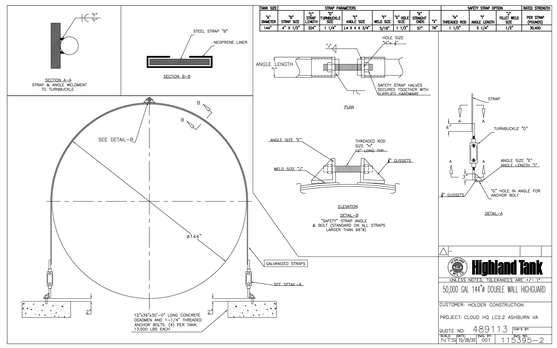
KEYPLAN

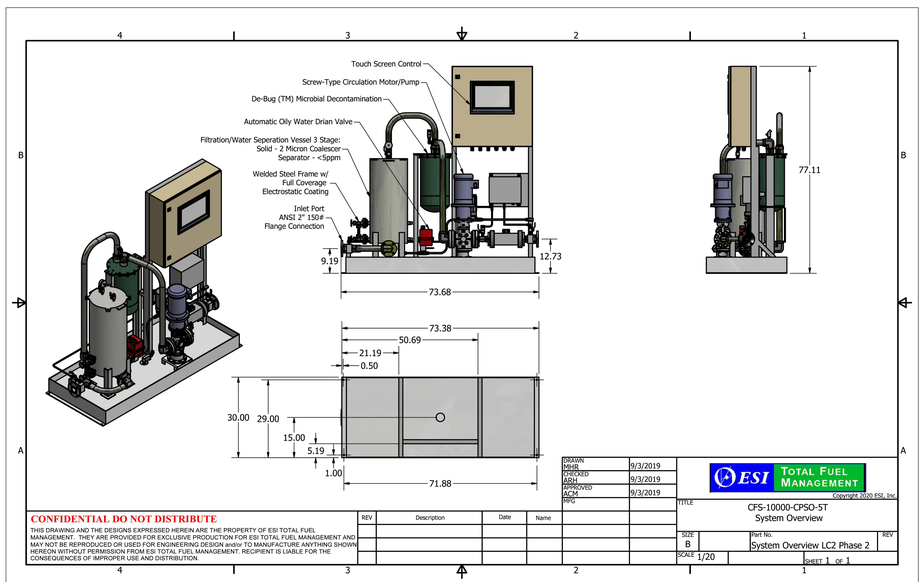


DETAILS

JOB 5253.220
SHEET
**C09-04**




| | | | |
|---|---|---|---|
| DRAWN | MHR | 9/3/2019 | |
| CHECKED | ARN | 9/3/2019 | |
| APPROVED | ACM | 9/3/2019 | |
| MFG | | | |

ESI TOTAL FUEL MANAGEMENT
Copyright 2020 ESI, Inc.

TITLE: CFS-10000-CPSO-5T
System Overview

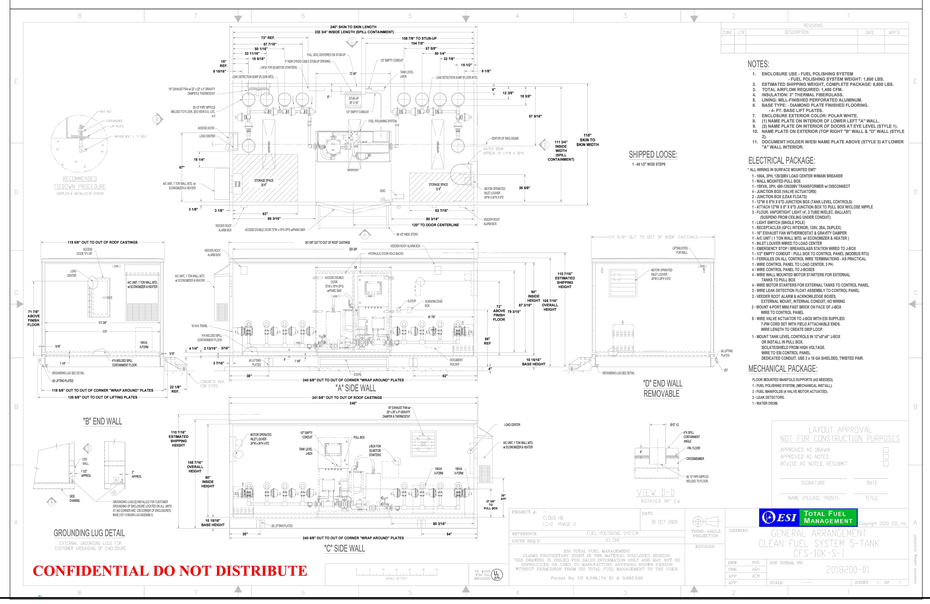
SIZE B | Part No. System Overview LC2 Phase 2 | REV

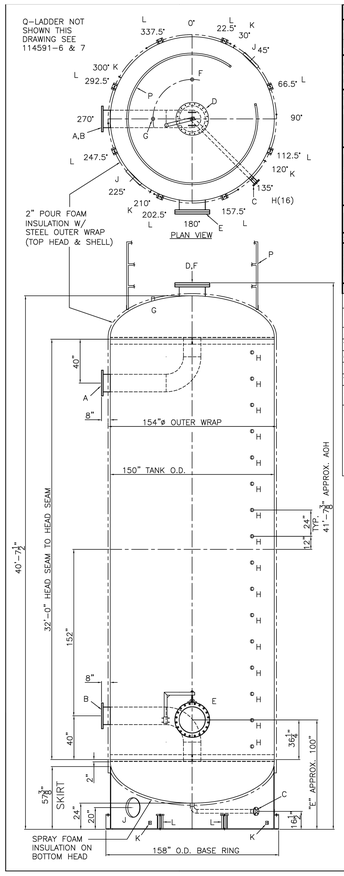
SCALE 1/20 | SHEET 1 OF 1

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| REV | Description | Date | Name |
|---|---|---|---|
| | | | |


240" SKIN TO SKIN LENGTH
235 3/4" INSIDE LENGTH (SPILL CONTAINMENT)
139 7/8" TO STUB-UP
134 7/16"
67 3/8"
66 1/4"
72" REF.
67 1/16"
32 11/16"
10 9/16"
FILL BOX (SHIPPED ON STAIR-UP
12" SPCC CHEMPUMP
FUEL POLISHING SYSTEM
13 3/4"
TANK LEVEL JACK
12 3/8"
10 3/8"
6" 9 1/8"
57 3/16"
9 1/8"
15 1/2"
10 1/2"
3 1/2"
LOW DETECTION SUMP (FLOOR MTD.)
6" SUMP CHEMPUMP
LOW DETECTION SUMP (FLOOR MTD.)
3 1/8"
42"
RECOMMENDED TIE-DOWN PROCEDURE
SUPPLIED & INSTALLED BY OTHERS
HOLD DOWN STRAP
ACCESS DOOR
LOAD CENTER
ACCESS DOOR
3 1/8"
3 1/8"
42"
80 3/16"
82 7/16"
120" TO DOOR CENTERLINE
111 3/4" INSIDE WIDTH (SPILL CONTAINMENT)
118" SKIN TO SKIN WIDTH
STORAGE PKG 24"
STORAGE PKG 24"
MOTOR STARTER/ DISCONNECT SPD (SPS-SPD)
MOTOR STARTER/ DISCONNECT SPD (SPS-SPD)
HEATER
HEATER
AC UNIT, 1 TON WALL MTD. w/ ECONOMIZER & HEATER
AC UNIT, 1 TON WALL MTD. w/ ECONOMIZER & HEATER
HEATER
HEATER




| DESIGN DATA |
|---|
| TOTAL CAPACITY – 33,000 GALLONS<br>WORKING CAPACITY – 28,600 GALLONS<br>TYPE – VERTICAL ASME PRESSURE VESSEL |
| NO. REQ. – TWO |
| MAX. ALLOW. WORKING PRES.– 80 PSIG @ 140 °F<br>MAX ALLOW. EXTERNAL W.P. – – PSIG @ – °F<br>MIN. DESIGN METAL TEMP – – –20°F @ 80 PSIG<br>HYDROSTATIC TEST PRESSURE – 104 PSIG |
| CORROSION ALLOWANCE– NONE<br>POSTWELD HEAT TREATED – NONE<br>RADIOGRAPHY – LONGITUDINAL SEAMS: FULL PER UW–11(b).<br>CIRCUMFERENTIAL SEAMS: SPOT PER UW–11(a)(5)(b) |
| HEADS – 0.3611" MIN., ⅜" NOM. SA516 GR 70 ASME 2:1 ELLIPTICAL<br>SHELL – ⅜" NOM. SA516 GR 70<br>SKIRT – 3/8"<br>BASE RING – 2" THK. SEE DRAWING 114591–2 FOR DETAILS |
| INT. FINISH – HIGHDROB LINER PLUS – INTERIOR COATING PER AWWA D–102 ICS 4 – 25 MILS |
| CONSTRUCTION – BUTT WELD INSIDE & OUTSIDE |
| ALL TANK FABRICATIONS TO BE IN ACCORDANCE WITH ASME SECTION VIII, DIVISION 1, 2019 EDITION, ALL SHELL, HEAD, FITTINGS AND MANWAYS TO BE WELDED TO BIGBEE STEEL WELD PROCEDURE PER DRAWING F11151 |
| HIGHLAND TANK SERIAL # – – |
| INSULATION WRAP DESIGN DATA |
| PURPOSE – TO CONTAIN THE INSULATION ONLY; NOT A TRUE DOUBLE WALL TANK |
| MATERIAL – ASTM A36 |
| THICKNESS – 1/4 MIN. |
| CONSTRUCTION – LAP WELD OUTSIDE ONLY |
| INSULATION – 2" THICK POURFOAM |
| TEST – NONE REQUIRED |
| **APPLY 2" SPRAY FOAM INSULATION TO THE BOTTOM HEAD** |
| EXT. FINISH – SP6 BLAST, THREE PART SYSTEM PER AWWA D–102 OCS 5. PRIMER: CHEMPRIME: 3001 (4–8 MILS DFT). INTERMEDIATE: CHEMPRIME 3001 (4–8 MILS DFT). TOP COAT: WHITE CHEMTANE 3300 (2–3 MILS DFT) |

NOTE: ALL RIGHTS RESERVED. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANKS. HIGHLAND TANKS SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS DRAWING. UNLESS OTHERWISE NOTED, CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE AND LOCATION OF FITTINGS, ACCESSORIES, AND COATINGS SHOWN ON THIS DRAWING.

TOUCH UP OF FINISHES PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

SHIPPING LUGS AS NEEDED

DRAWING 1 OF 7
114591–1 TANK LAYOUT
114591–2 LEGEND & BASE RING DETAIL.
114591–3 UPPER INLET DIFFUSER DETAIL.
114591–4 LOWER SUPPLY DIFFUSER DETAIL.
114591–5 SKIRT ACCESS & HOLD DOWN.
114591–6 HANDRAIL & LADDER DETAIL.
114591–7 FALL PROTECTION DETAILS.

| △ | ADD BASE RING HOLES | 8/7/20 | 003 |
|---|---|---|---|

Highland Tank

UNLESS NOTED, TOLERANCES ARE +/– 1"

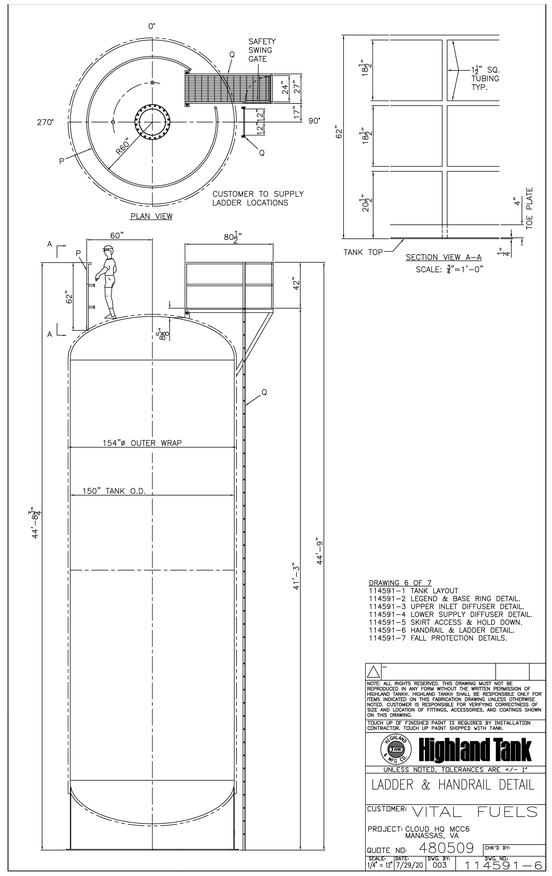
33,000 GAL 150"ø ASME VESSEL

CUSTOMER: VITAL FUELS

PROJECT: CLOUD HQ MCC6 MANASSAS, VA

QUOTE NO: 480509 DWG'S BY:

| SCALE: | DATE: | DWG. BY: | DWG. NO. |
|---|---|---|---|
| 1/4" = 1'-0" | 7/29/20 | 003 | 114591–1 |




DRAWING 6 OF 7
114591–1 TANK LAYOUT
114591–2 LEGEND & BASE RING DETAIL.
114591–3 UPPER INLET DIFFUSER DETAIL.
114591–4 LOWER SUPPLY DIFFUSER DETAIL.
114591–5 SKIRT ACCESS & HOLD DOWN.
114591–6 HANDRAIL & LADDER DETAIL.
114591–7 FALL PROTECTION DETAILS.

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TOUCH UP OF FINISHES PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

Highland Tank

UNLESS NOTED, TOLERANCES ARE +/– 1"

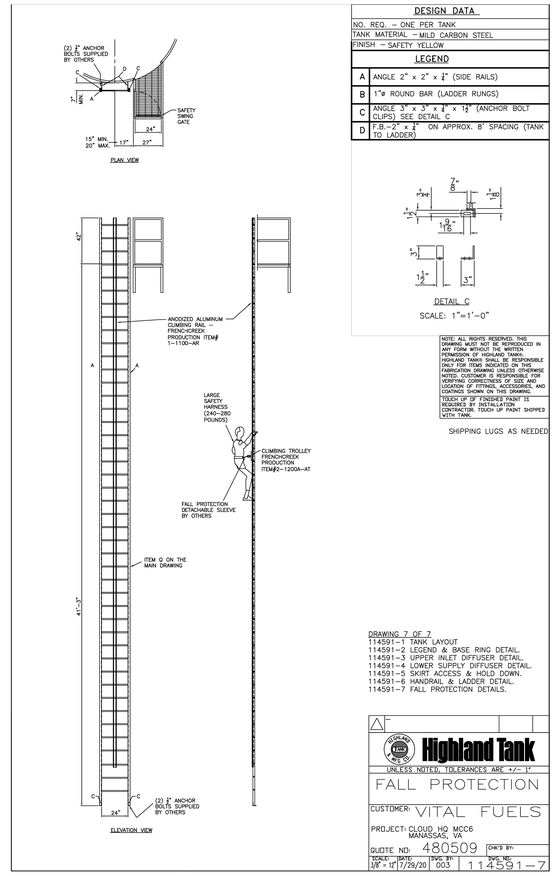
LADDER & HANDRAIL DETAIL

CUSTOMER: VITAL FUELS

PROJECT: CLOUD HQ MCC6 MANASSAS, VA

QUOTE NO: 480509 DWG'S BY:

| SCALE: | DATE: | DWG. BY: | DWG. NO. |
|---|---|---|---|
| 1/4" = 1'-0" | 7/29/20 | 003 | 114591–6 |




| DESIGN DATA |
|---|
| NO. REQ. – ONE PER TANK |
| TANK MATERIAL – MILD CARBON STEEL |
| FINISH – SAFETY YELLOW |

| LEGEND | |
|---|---|
| A | ANGLE 2" x 2" x ¼" (SIDE RAILS) |
| B | 1"ø ROUND BAR (LADDER RUNGS) |
| C | ANGLE 3" x 3" x ¼" x 12" (ANCHOR BOLT CLIPS) SEE DETAIL C |
| D | F.B.–2" x ¼" ON APPROX. 8" SPACING (TANK TO LADDER) |




NOTE: ALL RIGHTS RESERVED. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANKS. HIGHLAND TANKS SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS DRAWING. UNLESS OTHERWISE NOTED, CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE AND LOCATION OF FITTINGS, ACCESSORIES, AND COATINGS SHOWN ON THIS DRAWING.

TOUCH UP OF FINISHES PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

SHIPPING LUGS AS NEEDED

DRAWING 7 OF 7
114591–1 TANK LAYOUT
114591–2 LEGEND & BASE RING DETAIL.
114591–3 UPPER INLET DIFFUSER DETAIL.
114591–4 LOWER SUPPLY DIFFUSER DETAIL.
114591–5 SKIRT ACCESS & HOLD DOWN.
114591–6 HANDRAIL & LADDER DETAIL.
114591–7 FALL PROTECTION DETAILS.

Highland Tank

UNLESS NOTED, TOLERANCES ARE +/– 1"

FALL PROTECTION

CUSTOMER: VITAL FUELS

PROJECT: CLOUD HQ MCC6 MANASSAS, VA

QUOTE NO: 480509 DWG'S BY:

| SCALE: | DATE: | DWG. BY: | DWG. NO. |
|---|---|---|---|
| 1/8" = 1'-0" | 7/29/20 | 003 | 114591–7 |

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

REVISIONS

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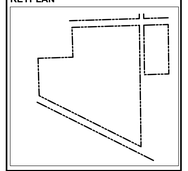
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



DETAILS

**JOB** 5253.220
**SHEET**

**C09-06**



C:\5253\5253.220 CORGAN – ARCH\C-DRAWINGS\ – 3RD SW REVISION\5253.220_R9.rvt (CME) 10/15/2025 1:13 PM

StormTrap
MODULAR CONCRETE STORMWATER MANAGEMENT

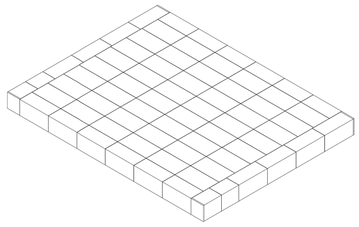
## SHEET INDEX


| PAGE | DESCRIPTION |
|---|---|
| 0.0 | COVER SHEET |
| 1.0 | GENERAL NOTES |
| 1.1 | SINGLETRAP DESIGN CRITERIA |
| 2.0 | SINGLETRAP SYSTEM LAYOUT |
| 3.0 | SINGLETRAP INSTALLATION SPECIFICATION |
| 3.1 | SINGLETRAP INSTALLATION SPECIFICATION |
| 4.0 | SINGLETRAP BACKFILL SPECIFICATION |
| 5.0 | PIPE/ACCESS OPENING SPECIFICATION |
| 6.0 | SPLASH PAD & GEOWEB DETAILS |
| 7.0 | SINGLETRAP MODULE TYPES |


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## STORMTRAP CONTACT INFORMATION


STORMTRAP SUPPLIER: STORMTRAP
CONTACT NAME: GREG MILLER
CELL PHONE: (614) 395-5878
SALES EMAIL: gmiller@stormtrap.com

# Mount Prospect Storage Project - 7-0 Alt
Mount Prospect , IL


StormTrap
PAVERS USED AS [HTTP://STORMTRAP.COM/PAVERS]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347


ENGINEER INFORMATION:
Gewalt Hamilton Associates
Vernon Hills, IL

PROJECT INFORMATION:
Mount Prospect Storage Project – 7-0 Alt
Mount Prospect, IL

CURRENT ISSUE DATE:
09/19/2025

ISSUED FOR:
PRELIMINARY

| REV. | DATE: | ISSUED FOR: | DWN BY: |
|---|---|---|---|
| 2 | 09/19/2025 | PRELIMINARY | EB |
| 1 | 09/17/2025 | PRELIMINARY | EB |

SCALE: NTS

SHEET TITLE: COVER SHEET

SHEET NUMBER: 0.0

## GENERAL NOTES:

1. STRUCTURE PROXIMITY LOADING DISCLAIMER:
   STORMTRAP MODULES AND FOUNDATION ARE NOT DESIGNED TO ACCEPT ANY ADDITIONAL LOADING FROM ANY NEARBY STRUCTURES NEXT TO OR OVER THE TOP OF STORMTRAP. EXAMPLES OF NEARBY STRUCTURES MAY INCLUDE BUT ARE NOT LIMITED TO BUILDINGS, FOUNDATION ELEMENTS, RETAINING WALLS, LIGHT POLES, BOLLAROS, SIGNPOSTS, FENCES. ADDITIONALLY, STORMTRAP IS NOT RESPONSIBLE FOR INSTALLATION CONFLICTS ARISING FROM ANY OF THESE NEARBY STRUCTURES. IF ADDITIONAL LOADING CONSIDERATIONS ARE REQUIRED FOR STRUCTURAL DESIGN OF STORMTRAP, PLEASE CONTACT STORMTRAP IMMEDIATELY. FOR LIGHT POLES SHOWN OVER THE TOP OF THE SYSTEM, STORMTRAP WILL PROVIDE A 5'-0" LATERAL DISTANCE CAVITY AROUND THE LIGHT POLE TO ACCOMMODATE IT. THE EOR TO TAKE RESPONSIBILITY FOR ENSURING THE LIGHT POLE IS NOT INFLICTING ANY LOADING ON THE STORMTRAP MODULES AND FOUNDATION.
2. TREE LOADING DISCLAIMER:
   THE NUMBER OF TREES OR WEIGHT OF TOTAL PLANT MATERIAL PRESENT ON TOP OF A SINGLE STORMTRAP MODULE SHALL NOT EXCEED 16,000 LBS. THE REQUIREMENTS LISTED HERE APPLY AT BOTH THE TIME OF INSTALLATION AND FOR THE LIFE OF THE TREES AND PLANTS IN QUESTION. THE EOR AND LANDSCAPE ARCHITECT ARE RESPONSIBLE FOR ENSURING THAT TREE AND OTHER PLANT ROOTS DO NOT INTERFERE WITH OR COMPROMISE THE FUNCTIONAL AND STRUCTURAL INTEGRITY OF STORMTRAP'S UNDERGROUND MODULES. APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ROOT GROWTH INTO THE STORMTRAP SYSTEM FROM ADJACENT OR OVERHEAD TREES. FURTHERMORE, THE ROOTS OF THE TREES MUST BE CONTAINED TO PREVENT FUTURE DAMAGE TO THE STORMTRAP SYSTEM. STORMTRAP ACCEPTS NO LIABILITY FOR DAMAGES CAUSED BY TREES OR OTHER VEGETATION PLACED AROUND OR ON TOP OF THE SYSTEM.
3. PRE-TREATMENT/SEDIMENT/FILTER CHAMBER DISCLAIMER:
   FOR SYSTEMS CONTAINING PRE-TREATMENT, SEDIMENTATION AND/OR FILTER CHAMBERS; IF REQUIRED TO BE SEALED TO PREVENT SAND AND/OR PRE-TREATED WATER FROM MIGRATING INTO ADJOINING MODULES, IT IS THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT THOSE MODULES ARE SEALED.
4. OUTLET CONTROL STRUCTURE DISCLAIMER (IF SHOWN ON THESE PLANS):
   IF A WATERTIGHT SOLUTION IS REQUIRED FOR AN OUTLET CONTROL STRUCTURE, ALL EXTERIOR COLD JOINTS, INCLUDING JOINT BETWEEN TOP AND BASE MODULES, BETWEEN TOP AND BASE OF ADJOINING SYMONS WALLS, AND JOINTS BETWEEN MODULE AND ADJACENT END PANELS WILL BE THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO PROVIDE AND INSTALL THE WATERTIGHT APPLICATION PER THE EOR'S SPECIFICATION.


StormTrap
PAVERS USED AS [HTTP://STORMTRAP.COM/PAVERS]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347
ENGINEER INFORMATION:
Gewalt Hamilton Associates
Vernon Hills, IL
PROJECT INFORMATION:
Mount Prospect Storage Project – 7-0 Alt
Mount Prospect, IL
CURRENT ISSUE DATE:
09/19/2025
ISSUED FOR:
PRELIMINARY


| REV. | DATE: | ISSUED FOR: | DWN BY: |
|---|---|---|---|
| 2 | 09/19/2025 | PRELIMINARY | EB |
| 1 | 09/17/2025 | PRELIMINARY | EB |

SCALE: NTS

SHEET TITLE: GENERAL NOTES

SHEET NUMBER: 1.0

## STRUCTURAL DESIGN LOADING CRITERIA

LIVE LOADING: AASHTO HS-20 HIGHWAY LOADING
GROUND WATER TABLE: BELOW INVERT OF SYSTEM
SOIL BEARING PRESSURE: 4000PSF
SOIL DENSITY: 120 PCF
EQUIVALENT UNSATURATED LATERAL ACTIVE EARTH PRESSURE: 35 PSF / FT.
EQUIVALENT SATURATED LATERAL ACTIVE EARTH PRESSURE: 80 PSF/FT. (IF WATER TABLE PRESENT)
APPLICABLE CODES: ASTM C857
ACI-318
BACKFILL TYPE: SEE SHEET 4.0 FOR BACKFILL OPTIONS

## STORMTRAP SYSTEM INFORMATION

UNIT HEADROOM: 7'-0" SINGLETRAP

## SITE SPECIFIC DESIGN CRITERIA

1. STORMTRAP UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/ OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 0.67' MAX. 2.67' CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW INVERT OF SYSTEM IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.

## VCBMP VOLUME CALCULATION

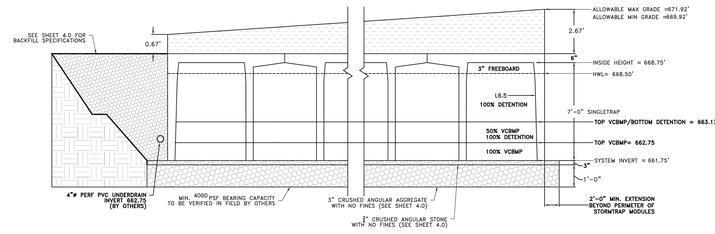
-TOTAL VCBMP STORAGE REQUIRED = 8,712.00 CUBIC FEET
-VCBMP STORAGE PROVIDED = 7,561.10 CUBIC FEET (ELEV 662.75 – ELEV 661.75, 100% IN SYSTEM)
-VCBMP STORAGE PROVIDED = 1,580.27 CUBIC FEET (ELEV 663.17 – ELEV 662.75, 50% IN SYSTEM)
-TOTAL VCBMP STORAGE PROVIDED = 9,141.37 CUBIC FEET

## DETENTION VOLUME CALCULATION

-TOTAL WATER STORAGE REQUIRED = 41,582.00 CUBIC FEET
-WATER STORAGE PROVIDED = 40,315.77 CUBIC FEET (ELEV 668.75 – ELEV 663.17, 100% IN SYSTEM)
-WATER STORAGE PROVIDED = 1,580.27 CUBIC FEET (ELEV 663.17 – ELEV 662.75, 50% VCBMP CREDIT)
-TOTAL WATER STORAGE PROVIDED = 41,896.04 CUBIC FEET

## SEASONAL HIGH WATER TABLE

-SHWT = _____' (ELEVATION)
*TO BE VERIFIED BY OTHERS
-VCBMP BOTTOM TO SHWT = _____' (DISTANCE)
-AMOUNT OF NATIVE SOIL ABOVE SHWT = _____' (DISTANCE)




7'-0" SINGLETRAP


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ROMEOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347
ENGINEER INFORMATION:
Gewalt Hamilton Associates
Vernon Hills, IL
PROJECT INFORMATION:
Mount Prospect Storage Project – 7-0 Alt
Mount Prospect, IL
CURRENT ISSUE DATE:
09/19/2025
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SCALE: NTS

SHEET TITLE: SINGLETRAP DESIGN CRITERIA

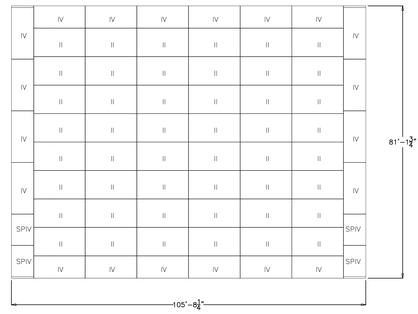
SHEET NUMBER: 1.1

## BILL OF MATERIALS

| QTY. | UNIT TYPE | DESCRIPTION | WEIGHT |
|---|---|---|---|
| 0 | I | 7'-0" SINGLETRAP | 0 |
| 48 | II | 7'-0" SINGLETRAP | 22754 |
| 0 | III | 7'-0" SINGLETRAP | 0 |
| 20 | IV | 7'-0" SINGLETRAP | 22267 |
| 0 | VII | 7'-0" SINGLETRAP | 0 |
| 0 | VII-1 | 7'-0" SINGLETRAP | 0 |
| 0 | VII-2 | 7'-0" SINGLETRAP | 0 |
| 0 | VII-3 | 7'-0" SINGLETRAP | 0 |
| 0 | VII-4 | 7'-0" SINGLETRAP | 0 |
| 0 | SPIV | 7'-0" SINGLETRAP | VARIES |
| 4 | SPIV | 7'-0" SINGLETRAP | VARIES |
| 0 | T2 PANEL | 6" THICK PANEL | 0 |
| 4 | T4 PANEL | 6" THICK PANEL | 3727 |
| 0 | T7 PANEL | 6" THICK PANEL | 0 |
| 14 | JOINTMAT | 150' PER ROLL | |
| 0 | JOINTTAPE | 14.5' PER ROLL | |
| TOTAL PIECES = 72 | | | |
| TOTAL PANELS = 4 | | | |
| HEAVIEST PICK WEIGHT = 22754 | | | |

DESIGN CRITERIA
ALLOWABLE MAX GRADE = 671.92'
ALLOWABLE MIN GRADE = 669.92'
INSIDE HEIGHT ELEVATION = 668.75'
SYSTEM INVERT =661.75'

NOTES:
1. DIMENSIONING OF STORMTRAP SYSTEM SHOWN BELOW ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
2. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
3. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.
4. SP – INDICATES A MODULE WITH MODIFICATIONS.
5. P – INDICATES A MODULE WITH A PANEL ATTACHMENT.
6. CONTRACTORS RESPONSIBILITY TO ENSURE CONSISTENCY/ACCURACY TO FINAL ENGINEER OF RECORD PLAN SET.
7. IN ORDER FOR STORMTRAP TO GENERATE APPROVAL DRAWINGS, CIVIL ENGINEERING DRAWINGS MUST BE PROVIDED TO STORMTRAP AND SHALL INCLUDE ALL PIPE SIZES, PIPE MATERIAL, PIPE INVERT ELEVATIONS, ACCESS OPENING SIZE AND SHAPE. IN ADDITION, FINAL GRADING PLANS SHALL ALSO INCLUDE MINIMUM AND MAXIMUM GRADES OVER THE TOP OF THE STORMTRAP SYSTEM.





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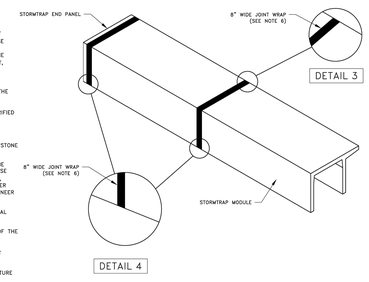
SCALE: NTS

SHEET TITLE: SINGLETRAP SYSTEM LAYOUT

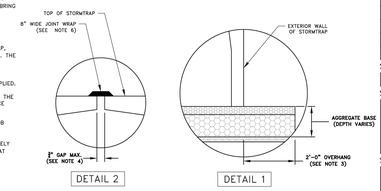
SHEET NUMBER: 2.0

## STORMTRAP INSTALLATION SPECIFICATION

1. STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891 (STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES). THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS ARE PROVIDED FOR EMPHASIS. THE MENTION OF THESE ITEMS DOES NOT PRECLUDE THE INSTALLING CONTRACTOR FROM FOLLOWING ASTM C891 IN ITS ENTIRETY AND IMPLEMENTING ALL APPROPRIATE MEASURES. THE INSTALLING CONTRACTOR OWNS AND IS RESPONSIBLE FOR THE STORMTRAP SYSTEM UPON REMOVAL OF THE MODULES FROM THE DELIVERY TRUCK THROUGH 'FINAL CONSTRUCTION'. FINAL CONSTRUCTION IS ACHIEVED WHEN ALL MODULES ARE SET, FULLY BACKFILLED, AND WHEN FINAL FINISHED GRADES ARE REACHED. THE CONTRACTOR IS RESPONSIBLE FOR ANY COUNTERMEASURES NECESSARY TO RESIST UPLIFT/BUOYANCY BEFORE 'FINAL CONSTRUCTION' IS ACHIEVED.
2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES.
3. THE AGGREGATE FOUNDATION HAS BEEN DESIGNED BASED ON THE FOLLOWING ASSUMPTIONS. THESE ASSUMPTIONS WILL NEED TO BE VERIFIED BY A GEOTECHNICAL ENGINEER WHICH WILL NEED TO BE EMPLOYED BY THE OWNER.
   3.1. A QUALIFIED GEOTECHNICAL ENGINEER WILL BE EMPLOYED, BY OWNER, TO PROVIDE ASSISTANCE IN EVALUATING THE EXISTING SOIL CONDITIONS BELOW THE PROPOSED ENGINEERED STONE FOUNDATION. IF A STONE FOUNDATION DESIGN IS TO BE USED, THE BEARING PRESSURE OF THE SOILS BELOW THE STONE WILL NEED TO MEET OR EXCEED ALLOWABLE CAPACITY. IF THIS IS NOT POSSIBLE, THE STONE FOUNDATION MAY NOT BE AN OPTION FOR THIS LOCATION.
   3.2. A QUALIFIED GEOTECHNICAL ENGINEER WILL BE EMPLOYED, BY OWNER, TO EVALUATE A SOURCE OF STONE AGGREGATES THAT WILL BE PLACED ON PROPERLY COMPACTED SOILS (SEE SHEET 1.1 FOR SOIL BEARING CAPACITY REQUIREMENTS). THE AGGREGATE BASE COURSE FOR WHICH THE STORMTRAP SYSTEM WILL BEAR DIRECTLY ON SHALL CONSIST OF A 3" THICK BED OF ¾" DIAMETER ANGULAR STONE, WELL COMPACTED AND SEATED, WITH NO FINES, AND A 1'-0" THICK BED OF 3" ANGULAR AGGREGATE (SEE SHEET 4.0 FOR FURTHER DESCRIPTION/EXPLANATION). PLEASE NOTE THAT THESE ARE ONLY MINIMUM RECOMMENDATIONS AND A QUALIFIED GEOTECHNICAL ENGINEER SHALL BE USED TO DETERMINE THE EXACT REQUIREMENTS FOR THE LOCATIONS THAT THE STORMTRAP SYSTEM IS TO BE LOCATED.
   3.3. THE CONTRACTOR SHALL REMOVE ANY AND ALL EXPANDABLE OR COLLAPSIBLE SOILS AT THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER.
   3.4. THE AGGREGATE FOUNDATION SHALL BE INSTALLED SUCH THAT THE AGGREGATE EXTENDS A MINIMUM OF 2'-0" PAST THE OUTSIDE OF THE SYSTEM (SEE DETAIL 1).
   3.5. THE ¾" AGGREGATE SHALL BE COMPACTED USING A VIBRATING ROLLER WITH ITS' FULL DYNAMIC FORCE APPLIED TO ACHIEVE A FLAT SURFACE.
   3.6. DISK, DRY AND COMPACT THE TOP 8" OF THE SUBGRADE SOILS TO 95% OF THE STANDARD DRY DENSITY AND 110% OPTIMUM MOISTURE CONTENT.
   3.7. AGGREGATE SHALL BE GRADED WITHIN +/– ½" OF THE GRADE SHOWN ON THE PLANS.
   3.8. MINIMUM SOIL BEARING CAPACITY LISTED ON SHEET 1.1 SHALL BE VERIFIED IN FIELD BY OTHERS.
4. THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADJACENT MODULES DOES NOT EXCEED 1" (SEE DETAIL 2). IF THE SPACE EXCEEDS 1", THE MODULES SHALL BE RESET WITH APPROPRIATE ADJUSTMENT MADE TO LINE AND GRADE TO BRING THE SPACE INTO SPECIFICATION.
5. STORMTRAP MODULES ARE NOT WATERTIGHT.
6. ALL EXTERIOR ROOF AND EXTERIOR VERTICAL WALL JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH 8" WIDE PRE-FORMED, COLD-APPLIED, SELF-ADHERING ELASTOMERIC RESIN, BONDED TO A WOVEN , HIGHLY PUNCTURE RESISTANT POLYMER WRAP, CONFORMING TO ASTM C891 AND SHALL BE INTEGRATED WITH PRIMER SEALANT AS APPROVED BY STORMTRAP (SEE DETAILS 2, 3, & 4). THE JOINT WRAP DOES NOT PROVIDE A WATERTIGHT SEAL. THE SOLE PURPOSE OF THE JOINT WRAP IS TO PROVIDE A SILT AND SOIL TIGHT SYSTEM. THE ADHESIVE EXTERIOR JOINT WRAP SHALL BE INSTALLED ACCORDING TO THE FOLLOWING INSTALLATION INSTRUCTIONS:
   6.1. USE A BRUSH OR WET CLOTH TO THOROUGHLY CLEAN THE OUTSIDE SURFACE AT THE POINT WHERE THE JOINT WRAP IS TO BE APPLIED.
   6.2. A RELEASE PAPER PROTECTS THE ADHESIVE SIDE OF THE JOINT WRAP. PLACE THE ADHESIVE TAPE (ADHESIVE SIDE DOWN) AROUND THE STRUCTURE, REMOVING THE RELEASE PAPER AS YOU GO. PRESS THE JOINT WRAP FIRMLY AGAINST THE STORMTRAP MODULE SURFACE WHEN APPLYING.
7. IF THE CONTRACTOR NEEDS TO CANCEL ANY SHIPMENTS, THEY MUST DO SO 48 HOURS PRIOR TO THEIR SCHEDULED ARRIVAL AT THE JOB SITE. IF CANCELED AFTER THAT TIME, PLEASE CONTACT THE PROJECT MANAGER.
8. IF THE STORMTRAP MODULE(S) IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP, MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND TO DETERMINE WHETHER OR NOT THE MODULE(S) WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT; CONTACT STORMTRAP, IMMEDIATELY. ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
9. STORMTRAP MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP.




DETAIL 4




DETAIL 2 DETAIL 1


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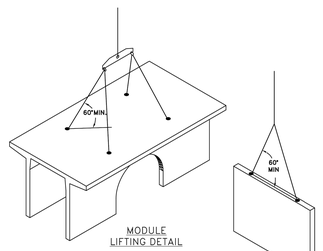
SCALE: NTS

SHEET TITLE: SINGLETRAP INSTALLATION SPECIFICATION

SHEET NUMBER: 3.0

## STORMTRAP MODULE LIFTING SPECIFICATION

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL (4) CHAINS/CABLES ARE SECURED PROPERLY TO THE LIFTING ANCHORS AND IN EQUAL TENSION WHEN LIFTING THE STORMTRAP MODULE.
2. MINIMUM 7'-0" CHAIN/CABLE LENGTH TO BE USED TO LIFT STORMTRAP MODULES (SUPPLIED BY CONTRACTOR).
3. CONTRACTOR TO ENSURE MINIMUM LIFTING ANGLE IS 60° FROM TOP SURFACE OF STORMTRAP MODULE. SEE DETAIL.
4. IT IS UNDERSTOOD AND AGREED THAT AT ALL TIMES DURING WHICH HOISTING AND RIGGING EQUIPMENT IS BEING SUPPLIED TO THE PURCHASER, OPERATOR OF SUCH EQUIPMENT SHALL BE IN CHARGE OF HIS ENTIRE EQUIPMENT AND SHALL AT ALL TIMES BE THE JUDGE OF THE SAFETY AND PROPERTY OF ANY SUGGESTION TO HIM FROM THE SELLER, ITS AGENTS OR EMPLOYEES. PURCHASER AGREES TO SAVE, INDEMNIFY AND HOLD HARMLESS SELLER FROM ALL LOSS, CLAIMS, DEMANDS OR CAUSES OF ACTION, WHICH MAY ARISE FROM THE EXISTENCE OR OPERATION OF SAID EQUIPMENT.



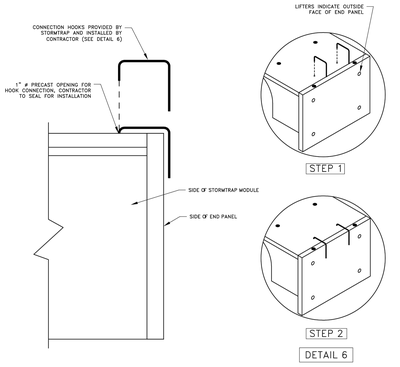

MODULE LIFTING DETAIL




END PANEL LIFTING DETAIL

## END PANEL ERECTION/INSTALLATION SPECIFICATION

1. END PANELS WILL BE SUPPLIED TO CLOSE OFF OPEN ENDS OF ROWS.
2. PANELS SHALL BE INSTALLED IN A TILT UP FASHION DIRECTLY ADJACENT TO OPEN END OF MODULE (REFER TO SHEET 2.0 FOR END PANEL LOCATIONS). SIDE WITH LIFTERS INDICATES OUTSIDE FACE.
3. CONNECTION HOOKS WILL BE SUPPLIED WITH END PANELS TO SECURELY CONNECT PANEL TO ADJACENT STORMTRAP MODULE (SEE PANEL CONNECTION ELEVATION VIEW).
4. ONCE CONNECTION HOOK IS ATTACHED, LIFTING CLUTCHES MAY BE REMOVED.
5. JOINT WRAP SHALL BE PLACED AROUND PERIMETER JOINT PANEL (SEE SHEET 3.0).




PANEL CONNECTION ELEVATION VIEW




STEP 1



STEP 2

DETAIL 6


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SCALE: NTS

SHEET TITLE: SINGLETRAP INSTALLATION SPECIFICATION

SHEET NUMBER: 3.1

CORGAN

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GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

## ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL/FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |
| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

## REVISIONS

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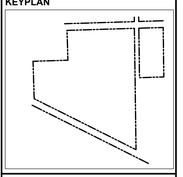
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



DETAILS - STORMTRAP DETENTION

JOB 5253.220
SHEET

C09-07

| ZONE CHART | | |
|---|---|---|
| ZONES | ZONE DESCRIPTIONS | REMARKS |
| ZONE 1A | FOUNDATION AGGREGATE | #5 (2") STONE ANGULAR AGGREGATE (SEE NOTE 4 FOR DESCRIPTION) |
| ZONE 1B | FOUNDATION AGGREGATE (INFILTRATION NOT ALLOWED) | 3" RECYCLED CRUSHED CONCRETE (SEE NOTES 5 & 6 FOR DESCRIPTION) |
| | FOUNDATION AGGREGATE (INFILTRATION ALLOWED) | 3" STONE AGGREGATE (SEE NOTE 5) |
| ZONE 2 | BACKFILL | UNIFIED SOILS CLASSIFICATION (GW, GP, SW, SP) OR SEE BELOW FOR APPROVED BACKFILL OPTIONS |
| ZONE 3 | FINAL COVER OVERTOP | MATERIALS NOT TO EXCEED 120 PCF |

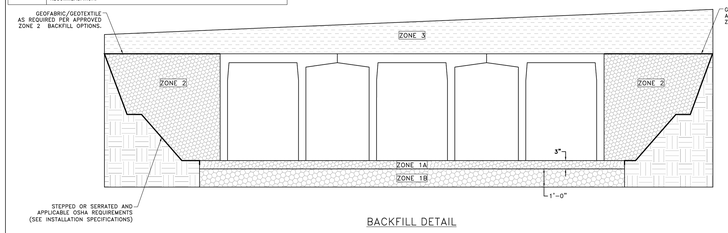
| APPROVED ZONE 2 BACKFILL OPTIONS | |
|---|---|
| OPTION | REMARKS |
| 2" STONE AGGREGATE | THE STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING ANGULAR MATERIAL. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH ON TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE BACKFILL (ASTM SIZE #57) AS DETERMINED BY THE GEOTECHNICAL ENGINEER. |
| SAND | IMPORTED PURE SAND IS PERMITTED TO BE USED AS BACKFILL IF IT IS CLEAN AND FREE DRAINING. THE SAND USED FOR BACKFILLING SHALL HAVE LESS THAN 40% PASSING #40 SIEVE AND LESS THAN 5% PASSING #200 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE SAND BACKFILL. |
| CRUSHED CONCRETE AGGREGATE | CLEAN, FREE DRAINING CRUSHED CONCRETE AGGREGATE MATERIAL CAN BE USED AS BACKFILL FOR STORMTRAP'S MODULES. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH ON TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE BACKFILL. |
| ROAD PACK | STONE AGGREGATE 100% PASSING THE 1-1/2" SIEVE WITH LESS THAN 12% PASSING THE #200 SIEVE (ASTM SIZE #467). GEOFABRIC AS PER GEOTECHNICAL ENGINEER RECOMMENDATION. |

| FILL DEPTH | TRACK WIDTH | MAX VEHICLE WEIGHT (KIPS) | MAX GROUND PRESSURE |
|---|---|---|---|
| 12" | 12" | 51.8 | 1690 psf |
| | 18" | 56.1 | 1219 psf |
| | 24" | 68.1 | 1111 psf |
| | 30" | 76.7 | 1000 psf |
| | 36" | 85.0 | 924 psf |

NOTE:
TRACK LENGTH NOT TO EXCEED 15'-4".
ONLY TWO TRACKS PER VEHICLE.

## STORMTRAP ZONE INSTALLATION SPECIFICATION/PROCEDURE

1. THE FILL PLACED AROUND THE STORMTRAP MODULES MUST BE DEPOSITED ON BOTH SIDES AT THE SAME TIME AND TO APPROXIMATELY THE SAME ELEVATION, AT NO TIME SHALL THE FILL BEHIND ONE SIDE WALL BE MORE THAN 2'-0" HIGHER THAN THE FILL ON THE OPPOSITE SIDE. BACKFILL SHALL EITHER BE COMPACTED AND/OR VIBRATED TO ENSURE THAT BACKFILL AGGREGATE/STONE MATERIAL IS WELL SEATED AND PROPERLY INTER LOCKED. CARE SHALL BE TAKEN TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE, AND ALL SLOPES WITHIN THE AREA TO BE BACKFILLED MUST BE STEPPED OR SERRATED TO PREVENT WEDGING ACTION. CARE SHALL ALSO BE TAKEN AS NOT TO DISRUPT THE JOINT WRAP FROM THE JOINT DURING THE BACKFILL PROCESS. BACKFILL MUST BE FREE-DRAINING MATERIAL. SEE ZONE 2 BACKFILL CHART ON THIS PAGE FOR APPROVED BACKFILL OPTIONS. IF NATIVE EARTH IS SUSCEPTIBLE TO MIGRATION, CONFIRM WITH GEOTECHNICAL ENGINEER AND PROVIDE PROTECTION AS REQUIRED (PROVIDED BY OTHERS). ALL MODULES MUST BE SET AND ALL SIDES MUST BE FULLY BACKFILLED BEFORE TRAVEL OVERTOP THE SYSTEM IS PERMITTED. SEE NOTE 2 FOR EXCEPTIONS AND LIMITATIONS.
2. THE FILL PLACED OVERTOP THE SYSTEM SHALL BE PLACED IN MINIMUM 6" LIFTS, AT NO TIME SHALL MACHINERY OR VEHICLES GREATER THAN THE DESIGN LOAD LISTED ON SHEET 1.1 TRAVEL OVERTOP THE SYSTEM. IF TRAVEL OVER THE SYSTEM OCCURS BEFORE THE MINIMUM DESIGN COVER IS ACHIEVED, IT MAY BE NECESSARY TO REDUCE THE ULTIMATE LOAD/BURDEN OF THE OPERATING MACHINERY SO AS TO NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM. VEHICLES AND MACHINERY USED TO PLACE FILL MATERIAL ON TOP OF THE SYSTEM SHALL TRAVEL PARALLEL TO THE LONGITUDINAL AXIS OF THE STORMTRAP MODULES WHENEVER POSSIBLE.
3. THE VIBRATORY FUNCTION OF ANY ROLLER, COMPACTOR, VEHICLE, ETC. SHALL NOT BE USED OVERTOP THE SYSTEM WITHOUT PRIOR APPROVAL FROM STORMTRAP. IN SOME CASES, HAND COMPACTION MAY BE NECESSARY TO ENSURE THAT THE ALLOWABLE DESIGN LOADING IS NOT EXCEEDED.
4. FREE DRAINING ANGULAR AGGREGATE – 80% AGGREGATE RETAINED ON ¾" SIEVE MAJORITY OF AGGREGATE SIZE BETWEEN ¾" AND 1" ONLY 5% OF MATERIAL PASSING #8 SIEVE.
5. FREE DRAINING, NO FINES, 3" ANGULAR AGGREGATE — MAJORITY OF STONE SIZE IN BETWEEN 1½" AND 3" – VERY SIMILAR TO AASHTO (#1, #2, #3, & #24) STONE AGGREGATE GRADATION.
6. CRUSHED CONCRETE AGGREGATE IS KNOWN TO REACT WITH WATER AND CAN INCREASE THE PH VALUE OF THE GROUND WATER. PRIOR TO USING CRUSHED CONCRETE AGGREGATE IN ZONE 1B IT IS IMPERATIVE THAT THE USE OF SUCH MATERIAL SHALL BE VERIFIED BY THE EOR AND/OR THE PROJECT GEOTECHNICAL ENGINEER.




BACKFILL DETAIL


StormTrap
PATENTS LISTED AT: [HTTPS://STORMTRAP.COM/PATENTS]
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SCALE: NTS

SHEET TITLE: SINGLETRAP BACKFILL SPECIFICATION

SHEET NUMBER: 4.0

## GEOWEB AND SPLASH PAD INSTALLATION SPECIFICATION

1. THE APPROVED GEOWEB SHALL BE PRESTO GEOWEB (GW30V3). THE GEOWEB NOMINAL DIMENSIONS SHALL BE 9'-11" x 25'-11".
2. THE CONCRETE SPLASH PAD AND GEOWEB SHALL BE INSTALLED PRIOR TO INSTALLATION OF THE STORMTRAP MODULES.
3. THE GEOWEB INFILL MATERIAL SHALL BE #5 AGGREGATE.
4. THE CONCRETE SPLASH PAD SHALL BE INSTALLED WITHIN THE GEOWEB AND IS REQUIRED AT ALL PIPE ENTRY LOCATIONS.
5. THE GEOWEB EDGE SHALL BE INSTALLED 1'-0"FT BEYOND THE OUTER PERIMETER OF THE STORMTRAP SYSTEM.
6. THE GEOWEB LONGITUDINAL DIMENSION (25'-11") SHALL BE INSTALLED PARALLEL TO THE STORMTRAP LEGS.
7. THE CONCRETE SPLASH PAD AND GEOWEB SHALL BE CENTERED AT THE PIPE PENETRATION.
8. REFER TO SPLASH PAD LAYOUT FOR CONCRETE SPLASH PAD DIMENSIONS.
9. IF ANY PRODUCT OTHER THAN PRESTO GEOWEB IS TO BE INSTALLED, THE PRODUCT MANUFACTURER IS REQUIRED TO SUBMIT A LETTER STATING THAT THE PRODUCT IS EQUAL OR BETTER THEN PRESTO GEOWEB, BOTH IN PERFORMANCE AND IN STRUCTURAL CAPACITY.
10. ALL GEOWEB AND SPLASH PADS TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
11. A CONCRETE SPLASH PAD IS REQUIRED AT ANY ACCESS OPENING THAT HAS AN OPEN GRATE FOR DRAINAGE. THE CONCRETE SPLASH PAD SHALL EXTEND BETWEEN THE UNIT WALLS AND 1'-0" BEYOND THE OUTER PERIMETER OF THE OPENING ON BOTH SIDES UNLESS OTHERWISE SHOWN ON THE SPLASH PAD LAYOUT. GEOWEB IS NOT REQUIRED UNDER ACCESS OPENINGS.

### SPLASH PAD CONFIGURATION







SPLASH PAD & GEOWEB PLAN VIEW – SIDE WALL




SPLASH PAD & GEOWEB PLAN VIEW – END PANEL




SPLASH PAD DETAIL




SPLASH PAD ELEVATION


StormTrap
PATENTS LISTED AT: [HTTPS://STORMTRAP.COM/PATENTS]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347


ENGINEER INFORMATION:
Gewalt Hamilton Associates
Vernon Hills, IL

PROJECT INFORMATION:
Mount Prospect Storage Project – 7–0 Alt
Mount Prospect, IL

CURRENT ISSUE DATE:
09/19/2025

ISSUED FOR:
PRELIMINARY

| REV. | DATE: | ISSUED FOR: | DWN BY: |
|---|---|---|---|
| 2 | 09/19/2025 | PRELIMINARY | EB |
| 1 | 09/17/2025 | PRELIMINARY | EB |

SCALE: NTS

SHEET TITLE: SPLASH PAD & GEOWEB DETAILS

SHEET NUMBER: 6.0

## ACCESS OPENING SPECIFICATION

1. A TYPICAL ACCESS OPENING FOR THE STORMTRAP SYSTEM ARE 2'-0" IN DIAMETER. ACCESS OPENINGS LARGER THAN 4'-0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL OPENINGS MUST RETAIN AT LEAST 2'-0" OF CLEARANCE FROM THE END OF THE STORMTRAP MODULE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED ON INSIDE LEG UNLESS OTHERWISE SPECIFIED. SEE SHEET 3.0 FOR SIZES AND LOCATIONS.
2. UNLESS OTHERWISE SPECIFIED, PLASTIC COATED STEPS ARE PROVIDED INSIDE ANY MODULE WHERE DEEMED NECESSARY. THE HIGHEST STEP IN THE MODULE IS TO BE PLACED A DISTANCE OF 1'-0" FROM THE INSIDE EDGE OF THE STORMTRAP MODULES. ALL ENSUING STEPS SHALL BE PLACED AT A DISTANCE BETWEEN 10" MIN AND 14" MAX BETWEEN THEM. STEPS MAY BE MOVED OR ALTERED TO AVOID OPENINGS OR OTHER IRREGULARITIES IN THE MODULE.
3. STORMTRAP LIFTING INSERTS MAY BE RELOCATED TO AVOID INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
4. STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO AVOID INTERFERENCE WITH INLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
5. ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
6. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHERS)

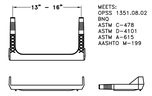
## PIPE OPENING SPECIFICATION

1. MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0".
2. CONNECTING PIPES MAY BE INSTALLED WITH A 1'-0" CONCRETE COLLAR AND AN AGGREGATE CRADLE (AS REQUIRED) FOR AT LEAST ONE PIPE LENGTH (SEE PIPE CONNECTION DETAIL). A STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MAY BE USED.
3. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

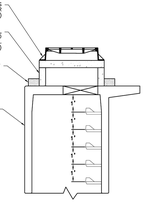
## PIPE INSTALLATION INSTRUCTIONS

1. CLEAN AND LIGHTLY LUBRICATE ALL OF THE PIPE TO BE INSERTED INTO STORMTRAP.
2. IF PIPE IS CUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES. BEVEL AND LUBRICATE LEAD END OF PIPE.
3. ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

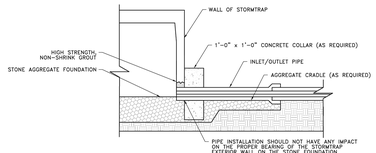
NOTE: ALL ANCILLARY PRODUCTS/SPECIFICATIONS RECOMMENDED AND SHOWN ON THIS SHEET INCLUDING BUT NOT LIMITED TO CONCRETE COLLARS, AGGREGATE CRADLES, GRADE RINGS, RISER SECTIONS, ETC., ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR AND/OR PER LOCAL MUNICIPAL CODE/REQUIREMENTS.




STEP DETAIL




RISER/STAIR DETAIL




PIPE CONNECTION DETAIL
WHEN PIPE INVERT IS AT INVERT OF STORMTRAP SYSTEM


StormTrap
PATENTS LISTED AT: [HTTPS://STORMTRAP.COM/PATENTS]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347


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SCALE: NTS

SHEET TITLE: PIPE / ACCESS OPENING SPECIFICATION

SHEET NUMBER: 5.0

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GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

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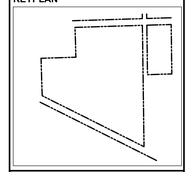
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DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

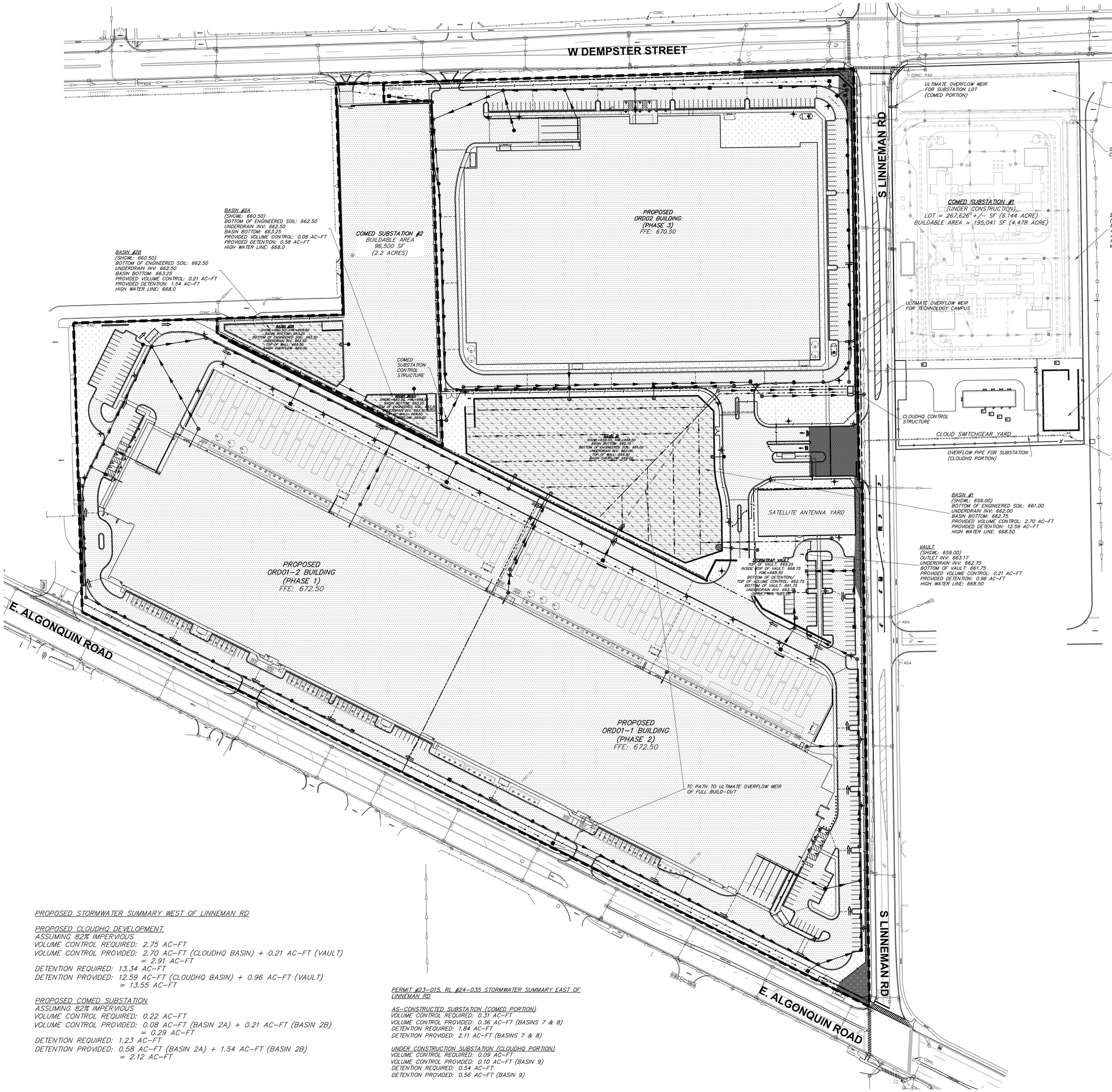


DETAILS - STORMTRAP DETENTION

JOB 5253.220
SHEET
C9-08



J:\5253\5253.220 CAD\Dwg - MOUNT PROSPECT - MAIN.dwg [PLOTTED] - 10/16/2025 1:13 PM




GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60ft.

## LEGEND

### CLOUDHQ DEVELOPMENT

- PROPERTY AREA (40.26 AC)
- PROJECT LIMITS (40.26 AC)
- IMPERVIOUS AREAS (33.01 AC*)
- DETENTION BASIN AREA NATIVE PLANTINGS (2.46 AC)
- PERVIOUS AREA (4.79 AC)
- UNRESTRICTED AREA (0.61 AC)

*31.8 AC HATCHED AS IMPERVIOUS (79% IMPERVIOUS) BUT 33.01 AC USED IN STORMWATER CALCULATIONS (82% IMPERVIOUS)

### SUBSTATION - COMED

- PROPERTY AREA (3.20 AC)
- PROJECT LIMITS (3.20 AC)
- IMPERVIOUS AREAS / COMPACTED GRAVEL (2.62 AC*)
- DETENTION BASIN AREA NATIVE PLANTINGS (0.48 AC)
- PERVIOUS AREA (0.10 AC)

*2.59 AC HATCHED AS IMPERVIOUS (81% IMPERVIOUS) BUT 2.62 AC USED IN STORMWATER CALCULATIONS (82% IMPERVIOUS)

⇒ OVERLAND FLOW ROUTE

*PROPOSED STORMWATER SUMMARY WEST OF LINNEMAN RD*

*PROPOSED CLOUDHQ DEVELOPMENT*
ASSUMING 82% IMPERVIOUS
VOLUME CONTROL REQUIRED: 2.75 AC-FT
VOLUME CONTROL PROVIDED: 2.70 AC-FT (CLOUDHQ BASIN) + 0.21 AC-FT (VAULT) = 2.91 AC-FT
DETENTION REQUIRED: 13.34 AC-FT
DETENTION PROVIDED: 12.59 AC-FT (CLOUDHQ BASIN) + 0.96 AC-FT (VAULT) = 13.55 AC-FT

*PROPOSED COMED SUBSTATION*
ASSUMING 82% IMPERVIOUS
VOLUME CONTROL REQUIRED: 0.22 AC-FT
VOLUME CONTROL PROVIDED: 0.08 AC-FT (BASIN 2A) + 0.21 AC-FT (BASIN 2B) = 0.29 AC-FT
DETENTION REQUIRED: 1.23 AC-FT
DETENTION PROVIDED: 0.58 AC-FT (BASIN 2A) + 1.54 AC-FT (BASIN 2B) = 2.12 AC-FT

*PERMIT #23-015, RL #24-035 STORMWATER SUMMARY EAST OF LINNEMAN RD*

*AS-CONSTRUCTED SUBSTATION (COMED PORTION)*
VOLUME CONTROL REQUIRED: 0.31 AC-FT
VOLUME CONTROL PROVIDED: 0.36 AC-FT (BASINS 7 & 8)
DETENTION REQUIRED: 1.84 AC-FT
DETENTION PROVIDED: 2.11 AC-FT (BASINS 7 & 8)

*UNDER CONSTRUCTION SUBSTATION (CLOUDHQ PORTION)*
VOLUME CONTROL REQUIRED: 0.09 AC-FT
VOLUME CONTROL PROVIDED: 0.10 AC-FT (BASIN 9)
DETENTION REQUIRED: 0.54 AC-FT
DETENTION PROVIDED: 0.56 AC-FT (BASIN 9)

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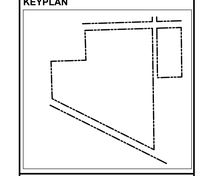
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

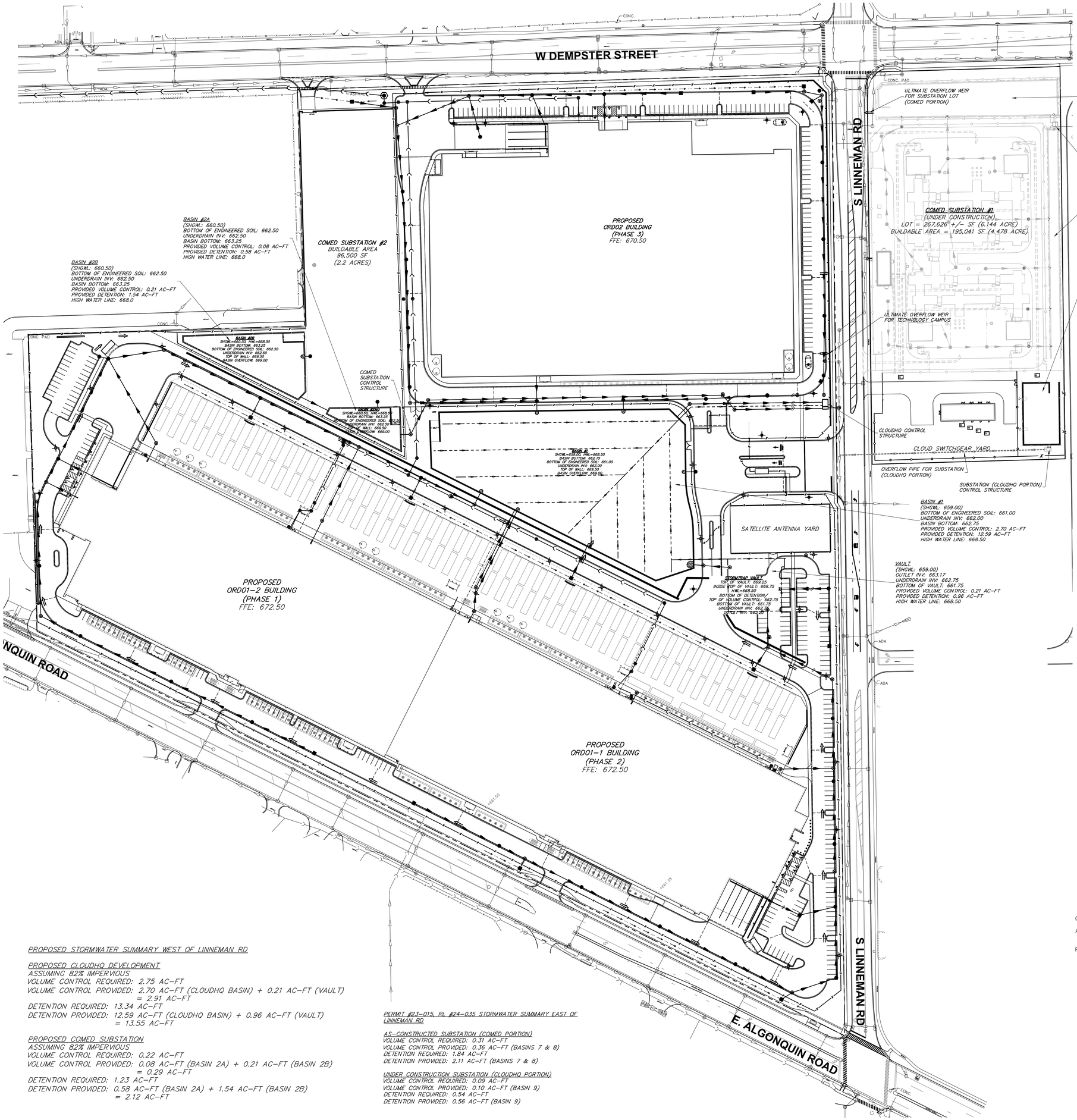
KEYPLAN



PROPOSED DRAINAGE EXHIBIT - FULL BUILD-OUT CONCEPT

**JOB** 5253.220
**SHEET**

**C10-00**




**PROPERTY LEGAL DESCRIPTION**

PARCEL 1:

LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

PARCEL 3:

THE NORTH 120.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

**PROJECT SITE SUMMARY**

**PROPERTY ADDRESS:** 1200 E. ALGONQUIN RD & 1200 DEMPSTER STREET, MOUNT PROSPECT, ILLINOIS

**PROPERTY INDEX NUMBER(S)**
- **08-23-100-018-0000**
- **08-23-200-052-0000**

**TOTAL CONTIGUOUS OWNERSHIP: 49.61 ACRES**

**MAINTENANCE PLAN FOR MOUNT PROSPECT TECHNOLOGY CAMPUS & SUBSTATION LOTS**

Tur Ventures LLC with facilities as shown on this exhibit shall assume responsibility for the following perpetual maintenance activities:

**1. General**
Regular inspections and routine maintenance of general areas shall be performed on a quarterly or as-needed basis. Specific items of concern include:
- Litter and debris shall be controlled
- Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations'
- Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- Roads shall be swept, vacumed and/or washed on a regular basis

**2. Stormwater Management Facilities**
All components of the stormwater management facilities shall be checked quarterly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items would be conducted quarterly between March and November.

Vegetated Areas
- Regular mowing to control vegetation, no cutting of native vegetation
- Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established
- Evidence of grazing, motorbikes or other vehicles, repair
- Check for invasive vegetation, remove where possible
- All vegetation must be maintained per the approved planting plan

Outlet Control Structure
- Inspect restrictor and remove debris if clogged or discharge reduced
- Remove accumulated sediment at outlet
- Any ice damage to outlet of pipe, repair if necessary

Detention Volume
- Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

**3. Volume Control Facility**
Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:
- Facility shall be inspected yearly to verify the system is functioning properly.

**4. Stormwater Collection System**
The Owner shall perform two inspections per year of all components of the stormwater collection system. The inspections shall occur in the spring and fall of each year and include the following specific areas of concern.

Storm Inlets/Manholes
- Remove accumulated leaves and other debris from grates
- Reset covers/lids on as-needed basis
- Remove accumulated sediment from manhole bottom when 50% of sump is filled

Storm Sewers
- Visually inspect pipes by removing manhole lids, make repairs as necessary
- Storm sewers shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- Restore riprap at outfalls
- Replant and reseed any eroded areas

**5. Vegetated Areas**
- Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
- Evidence of grazing, motorbikes, or other vehicles, repair
- Check for invasive vegetation, remove when possible
- Regular mowing to control vegetation; it is recommended that native vegetation remain uncut
- Dead or damaged non-native grassy areas - repair with seeding with fertilization or seeding with mulch

**6. Qualified Sewer Construction**
- Perform manhole inspections once every five years, make repairs as necessary
- Perform sewer inspections once every five years, make repairs as necessary
- Perform regular cleaning so that each sewer segment is cleaned once every 5 years

OWNER: TUR VENTURES LLC

ADDRESS: 1212 NEW YORK AVENUE, #1000
WASHINGTON, DC 20005

PHONE#: 541-447-7255

SIGNATURE

NAME: KEITH HARNEY

TITLE: COO

DATE:

*PROPOSED STORMWATER SUMMARY WEST OF LINNEMAN RD*

*PROPOSED CLOUDHQ DEVELOPMENT*
*ASSUMING 82% IMPERVIOUS*
*VOLUME CONTROL REQUIRED: 2.75 AC-FT*
*VOLUME CONTROL PROVIDED: 2.70 AC-FT (CLOUDHQ BASIN) + 0.21 AC-FT (VAULT) = 2.91 AC-FT*
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*PROPOSED COMED SUBSTATION*
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N

GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60ft.

**PLAN LEGEND**
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED FORCEMAIN

CORGAN

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MOUNT PROSPECT, IL

KEYPLAN

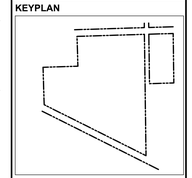


EXHIBIT R

JOB 5253.220
SHEET
**EX R**

EMERGENCY VEHICLE ENTRANCE
FIRE TRUCK DEMPSTER ST ENTRANCE
SEE DETAIL SHEET EX AT-02

DEMPSTER ST

WB-67
VEHICLE TURNING MOVEMENT
ORD02 BUILDING (PHASE 2)
LOADING DOCK
SEE DETAIL SHEET EX AT-03

WB-67
VEHICLE TURNING MOVEMENT
ORD01 BUILDING (PHASE 2)
LOADING DOCK
SEE DETAIL SHEET EX AT-03

LINEMAN RD

WB-67
VEHICLE TURNING MOVEMENT
LINEMAN RD ENTRANCE
SEE DETAIL SHEET EX AT-02

ALGONQUIN RD

WB-67
VEHICLE TURNING MOVEMENT
ORD01 BUILDING (PHASE 1)
LOADING DOCK
SEE DETAIL SHEET EX AT-03

EMERGENCY VEHICLE ENTRANCE
FIRE TRUCK VEHICLE TURNING MOVEMENT
ALGONQUIN RD WEST ENTRANCE
SEE DETAIL SHEET EX AT-02

EMERGENCY VEHICLE ENTRANCE
FIRE TRUCK VEHICLE TURNING MOVEMENT
ALGONQUIN RD EAST ENTRANCE
SEE DETAIL SHEET EX AT-02

DETENTION BASIN #1

DETENTION BASIN #2A

DETENTION BASIN #2

DETENTION BASIN #3

GRAVEL

CONC

N

GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

CORGAN

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GHA GEWALT HAMILTON ASSOCIATES, INC.
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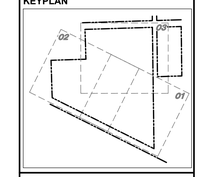
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1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

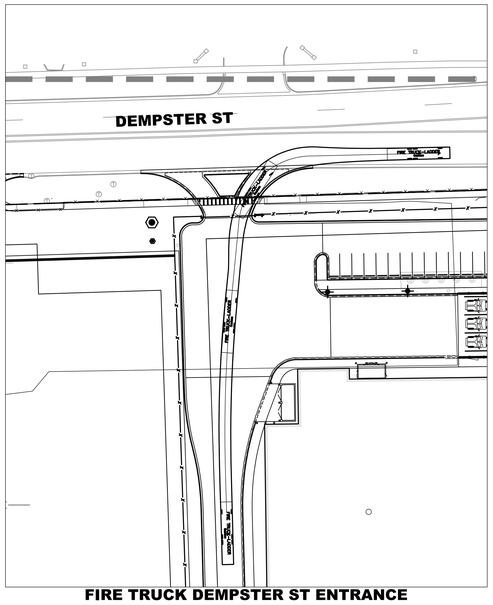
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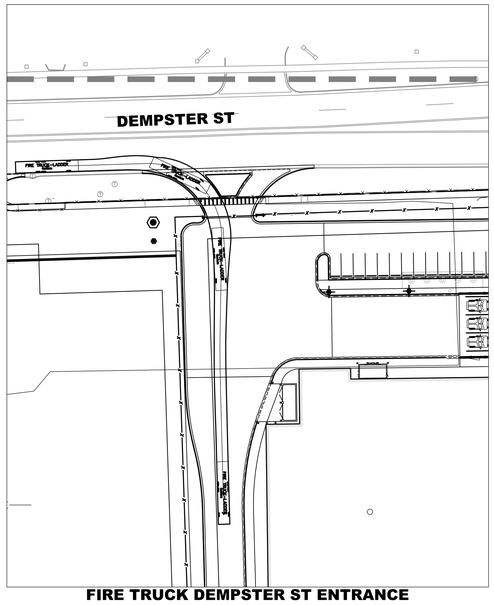

VEHICLE TURNING MOVEMENTS EXHIBIT

JOB 5253.220
SHEET

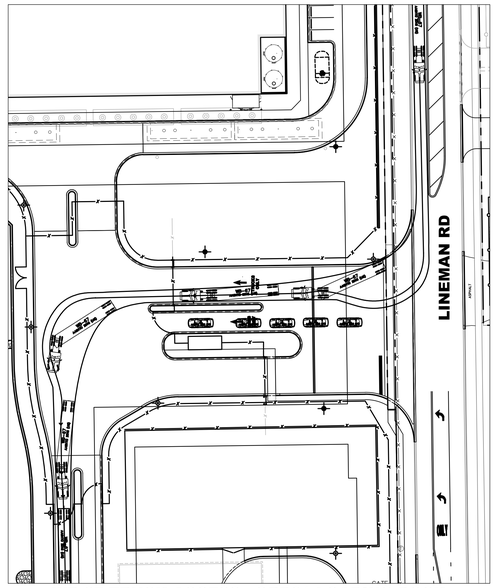
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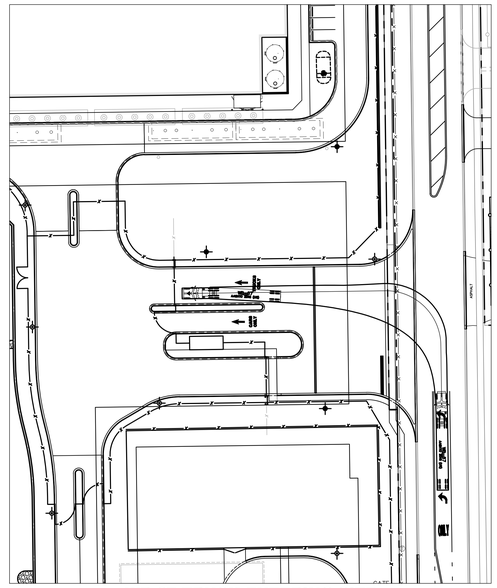

FIRE TRUCK DEMPSTER ST ENTRANCE
LEAVING SITE



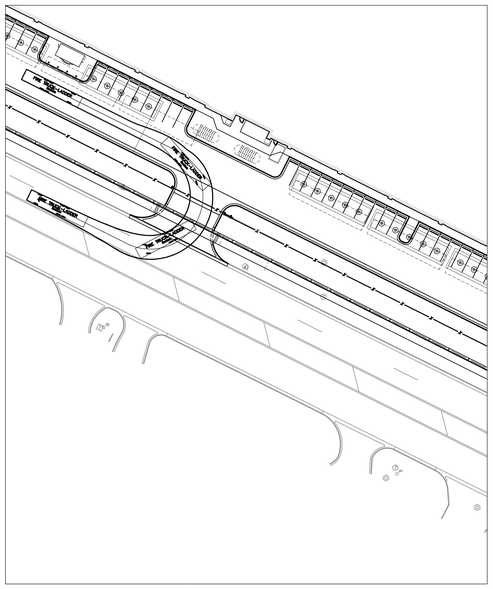

FIRE TRUCK DEMPSTER ST ENTRANCE
ENTERING SITE



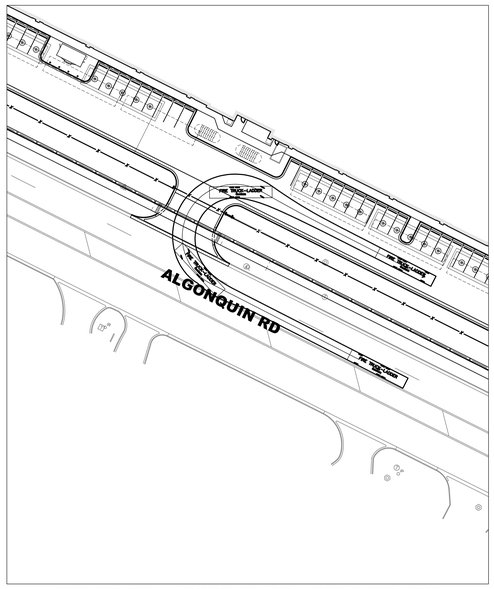

WB-67 TRUCK ACCESS - ORD01 LOADING DOCK
AND ENTERING SITE FROM SOUTHBOUND LINEMAN RD



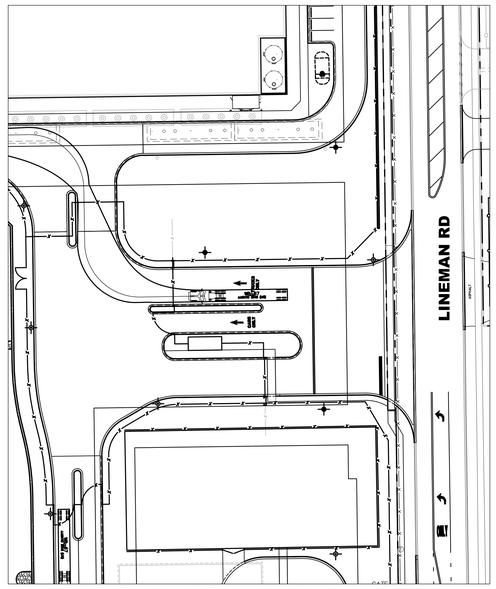
WB-67 TRUCK ENTERING SITE
FROM NORTHBOUND LINEMAN RD



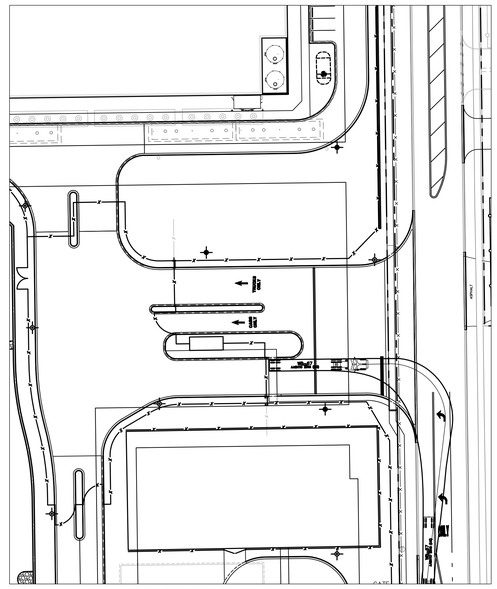

FIRE TRUCK ALGONQUIN RD WEST ENTRANCE
LEAVING SITE



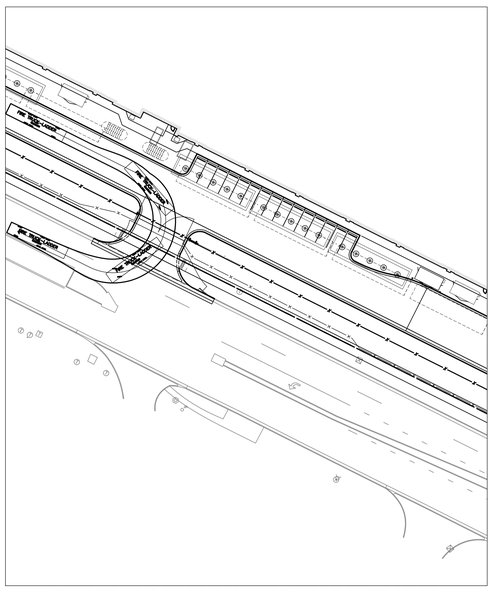

FIRE TRUCK ALGONQUIN RD WEST ENTRANCE
ENTERING SITE



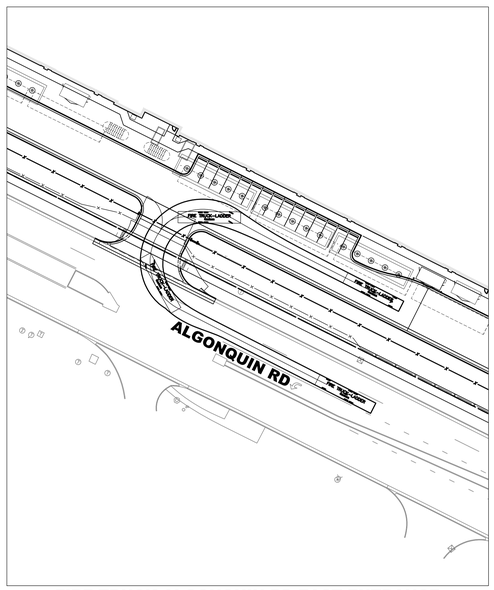

WB-67 TRUCK ACCESS - ORD02 LOADING DOCK



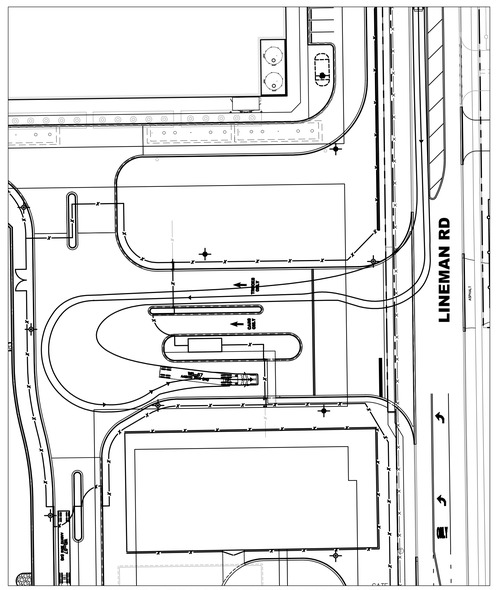
WB-67 TRUCK LEAVING SITE
TO SOUTH BOUND LINEMAN RD



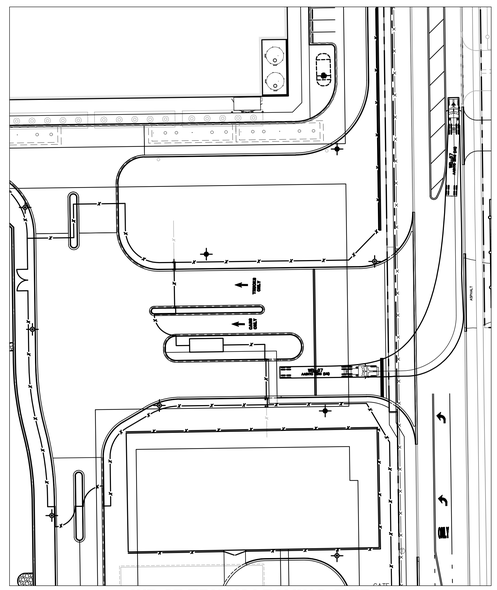

FIRE TRUCK ALGONQUIN RD EAST ENTRANCE
LEAVING SITE




FIRE TRUCK ALGONQUIN RD EAST ENTRANCE
ENTERING SITE




WB-67 TRUCK REJECTION ROUTE



WB-67 TRUCK LEAVING SITE
TO NORTH BOUND LINEMAN RD

N

GRAPHIC SCALE
40 0 20 40
( IN FEET )
1 inch = 40 ft.

CORGAN

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CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
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| 8 | 10.09.2025 | PUD PREL/FINAL SUB #3 |
| 9 | 10.15.2025 | PUD PREL/FINAL SUB #4 |

REVISIONS

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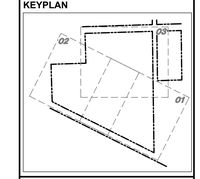
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: _____ P.E.
DONALD E. DIXON
Date: 10.15.2025

MOUNT PROSPECT
TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

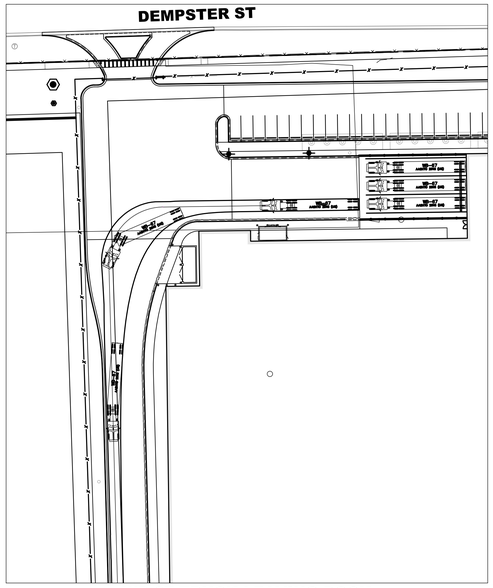



VEHICLE
TURNING
MOVEMENTS
EXHIBIT DETAILS

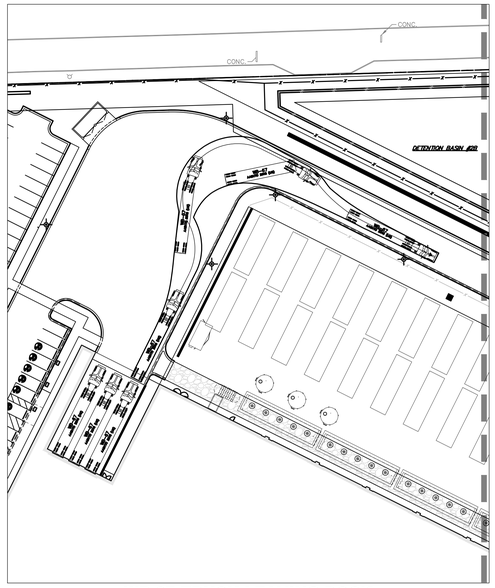
JOB 5253.220
SHEET

EX AT-02

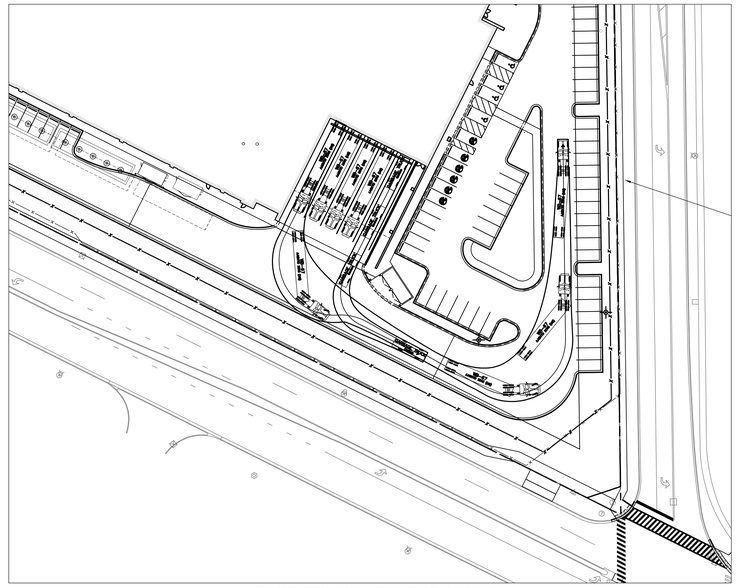
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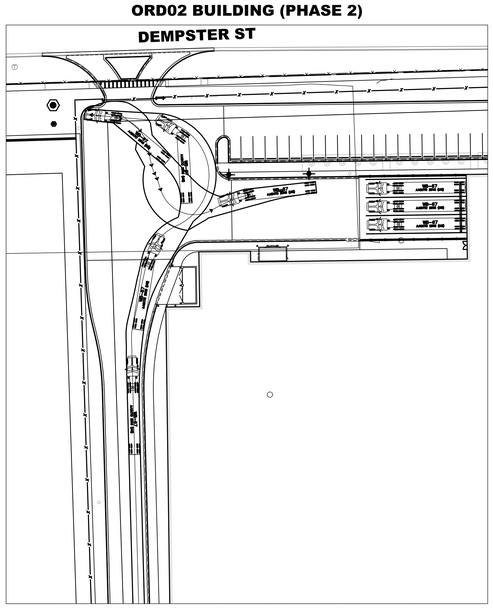

WB-67 TRUCK LEAVING DOCK
ORD02 BUILDING (PHASE 2)



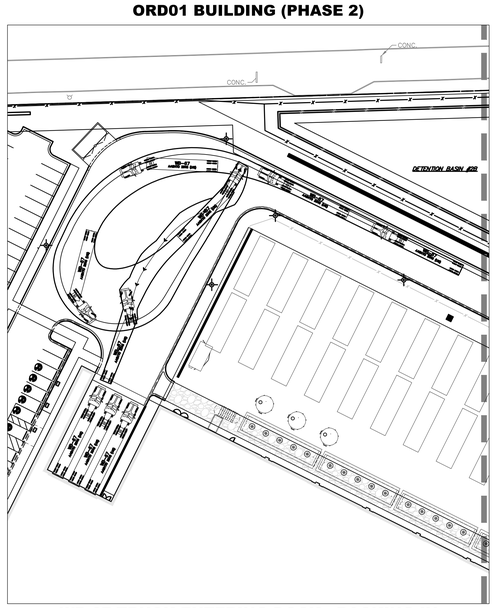

WB-67 TRUCK LEAVING DOCK
ORD01 BUILDING (PHASE 2)



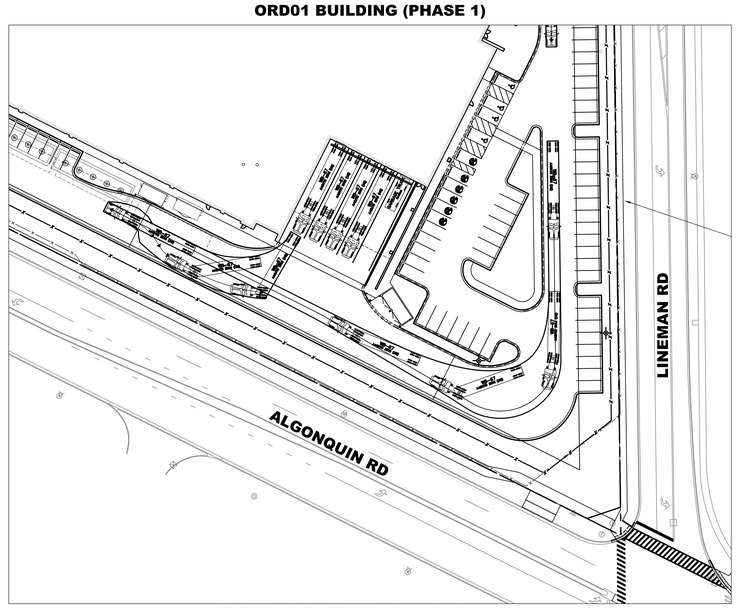
WB-67 TRUCK LEAVING DOCK
ORD01 BUILDING (PHASE 1)




WB-67 TRUCK ENTERING DOCK - BACKING IN
ORD02 BUILDING (PHASE 2)




WB-67 TRUCK ENTERING DOCK - BACKING IN
ORD01 BUILDING (PHASE 2)




WB-67 TRUCK ENTERING DOCK - BACKING IN
ORD01 BUILDING (PHASE 1)

N

GRAPHIC SCALE
40 0 20 40
( IN FEET )
1 inch = 40 ft.

CORGAN

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ISSUES

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REVISIONS

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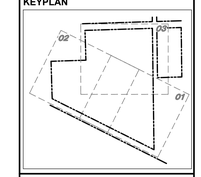
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DONALD E. DIXON
Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

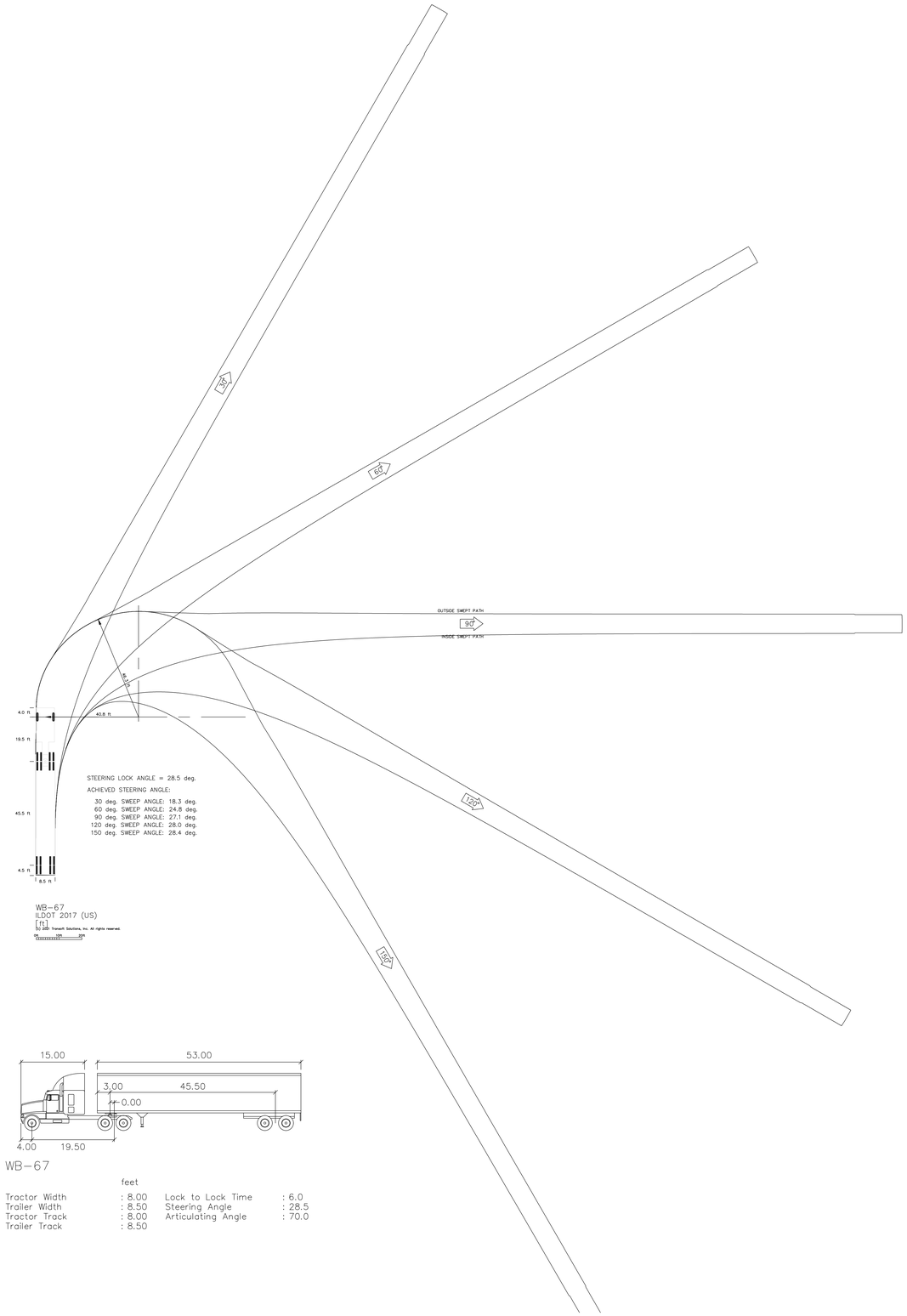
KEYPLAN




VEHICLE TURNING MOVEMENTS EXHIBIT DETAILS

JOB 5253.220
SHEET

EX AT-03

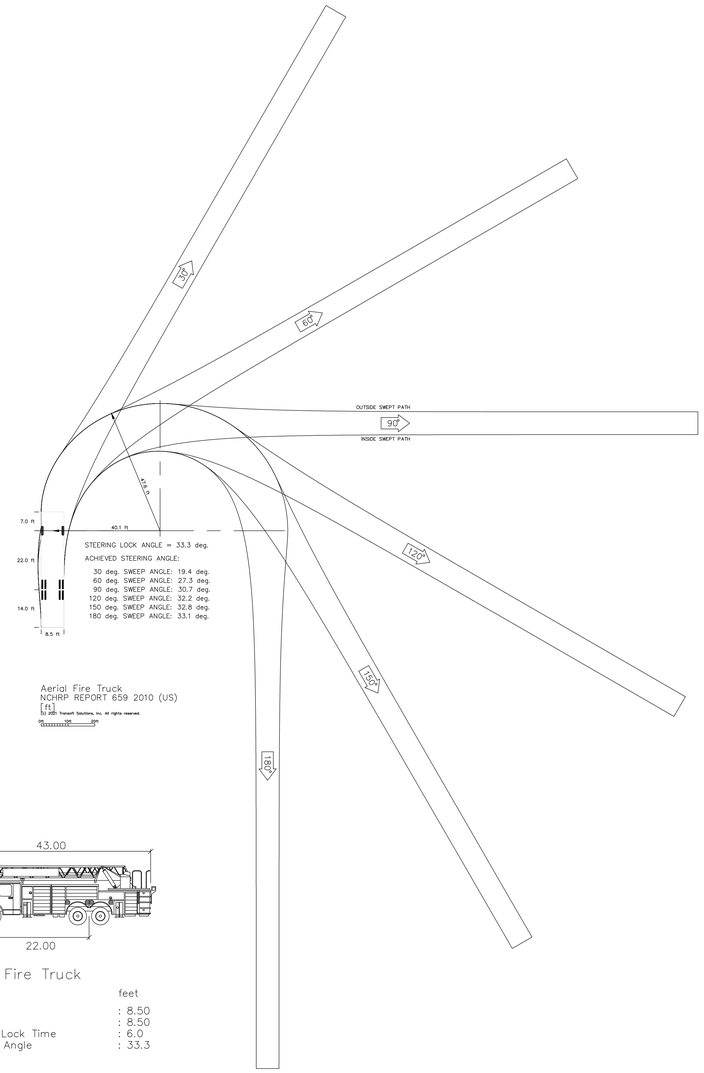



WB-67
ILDOT 2017 (US)
[ft]
(c) 2021 Transoft Solutions, Inc. All rights reserved.




WB-67

| feet | | | |
|---|---|---|---|
| Tractor Width | : 8.00 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 8.50 | Steering Angle | : 28.5 |
| Tractor Track | : 8.00 | Articulating Angle | : 70.0 |
| Trailer Track | : 8.50 | | |




Aerial Fire Truck
NCHRP REPORT 659 2010 (US)
[ft]
(c) 2021 Transoft Solutions, Inc. All rights reserved.




Aerial Fire Truck

| feet | |
|---|---|
| Width | : 8.50 |
| Track | : 8.50 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 33.3 |

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ISSUES

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REVISIONS

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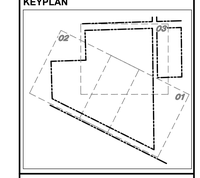
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Date: 10.15.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN

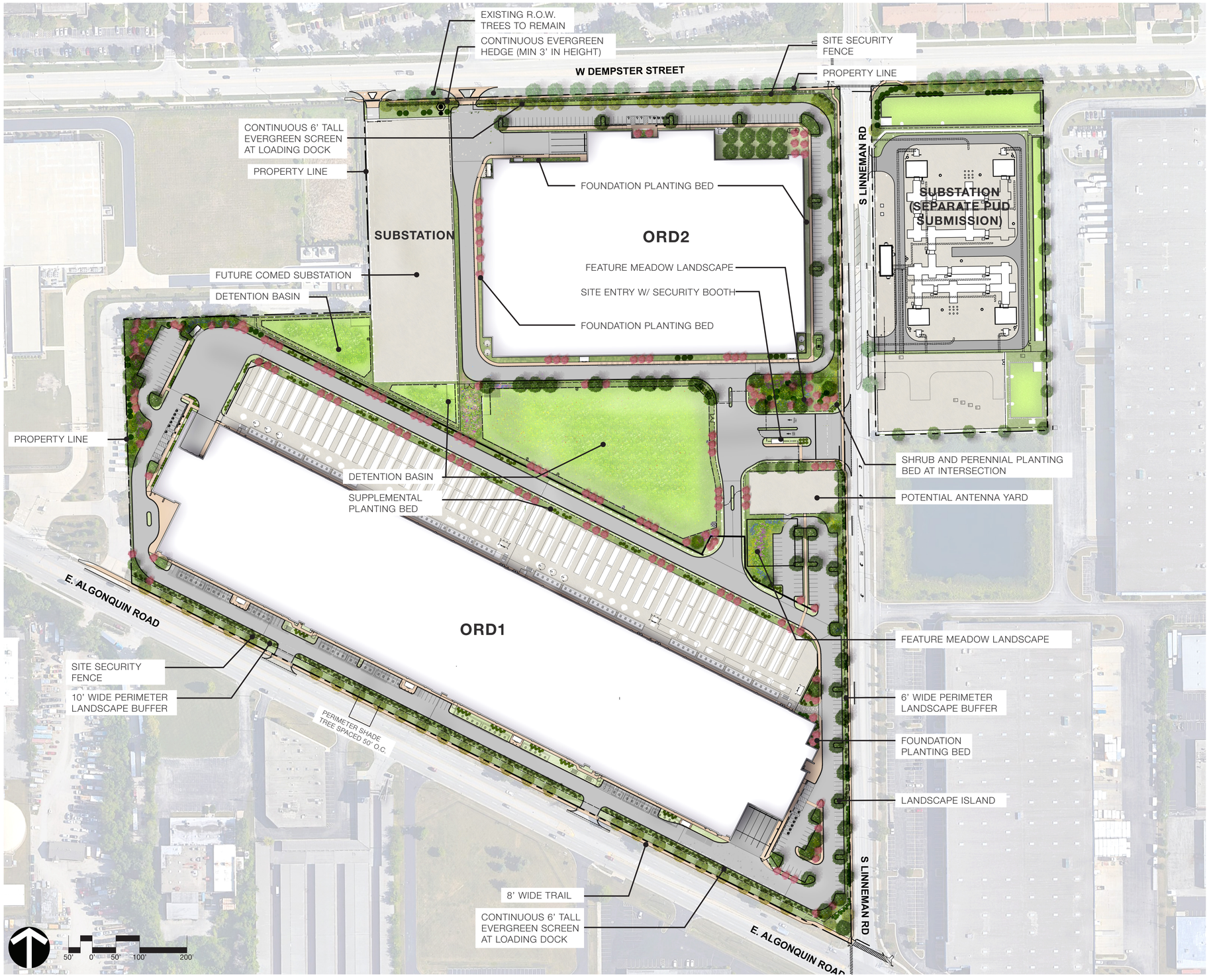



VEHICLE TURNING MOVEMENTS EXHIBIT DETAILS

**JOB** 5253.220
**SHEET**

EX AT-04

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## CONCEPT PLANT SCHEDULE

**PERIMETER SHADE TREE - 52 PROV.**
2.5" cal. (minimum)

**PARKING LOT ISLAND SHADE TREE - 37 PROV.**
2.5" cal. (minimum)

**DECIDUOUS / EVERGREEN TREE - 85 PROV.**
Deciduous: 2.5" cal. (minimum)
Evergreen: 6 feet in height (minimum)

**ORNAMENTAL TREE - 106 PROV.**
1.5"-2" cal. or 5-6 feet in height for multi-stem (minimum)

**PERIMETER PLANTINGS - 1,303 SHRUBS REQ.**
Mix of shrubs (3 feet in height min.), perennials, and groundcovers

**FOUNDATION PLANTINGS**
4 feet wide plant bed with mix of shrubs, perennials, and groundcovers

**MEADOW SEED MIX - +/-500,000 SF PROV.**
Native meadow seed mixes with varying flower color palette

**DETENTION BASIN PLANTINGS - 129,239 SF**
Bottom of basin to be planted with native species tolerant of wet conditions; perimeter to be planted with meadow seed mix, trees, shrubs and perennials. Basins to be maintained by property owner(s).

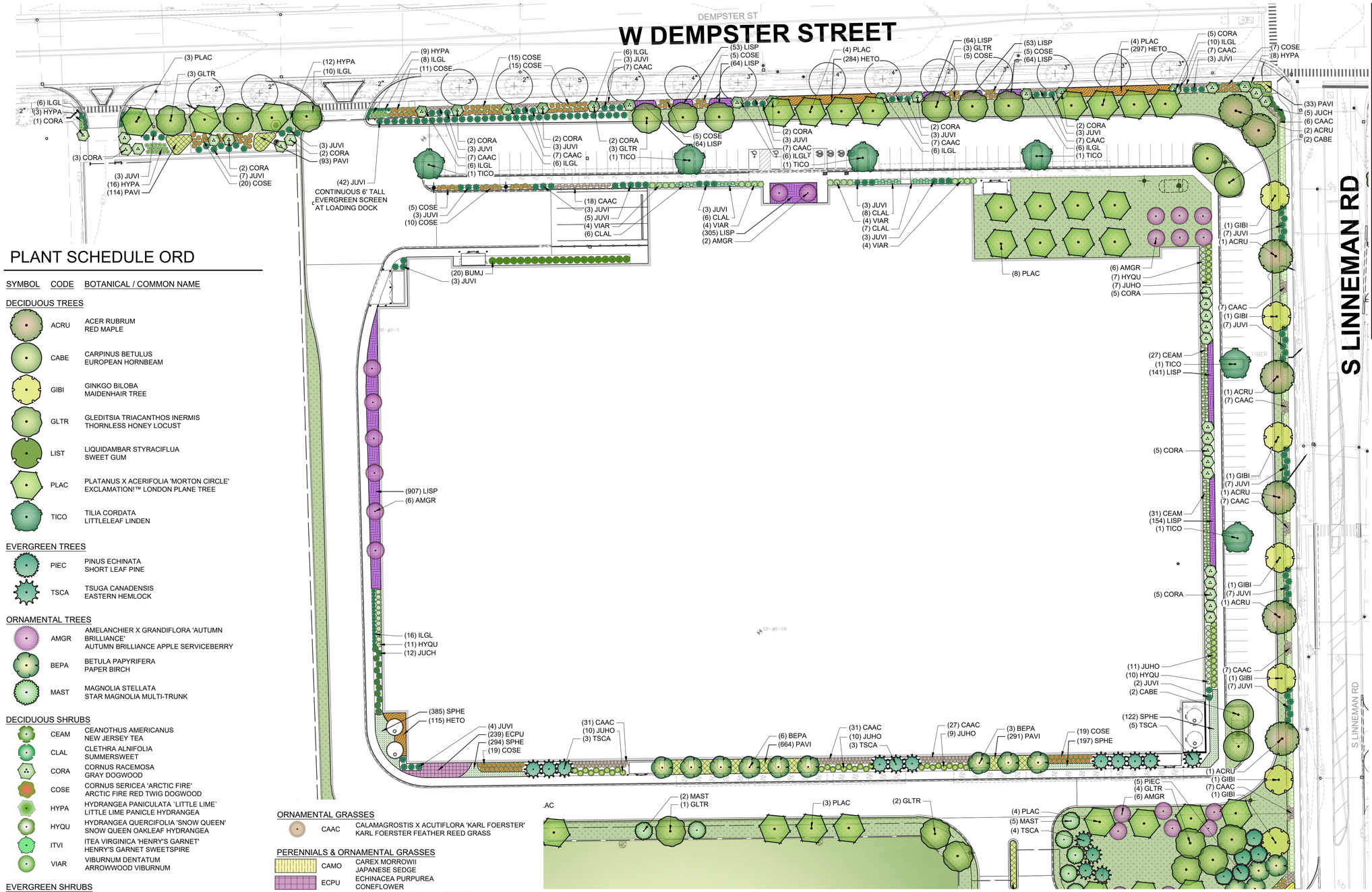
**NOTES:**
- Plant species selection is preliminary and subject to change but will comply to the Village landscape standards.
- All parkway trees shown on plan are existing to remain and the property owner shall provide planting fees as required based on Forest Division calculations.
- For all planting areas - Shrubs to be 50% evergreen & 50% deciduous. Shrubs less than 5' mature ht shall be installed at 2' ht and shrubs greater than 5' mature ht shall be installed at 3' ht
- All disturbed parkway areas shall be restored with sod.

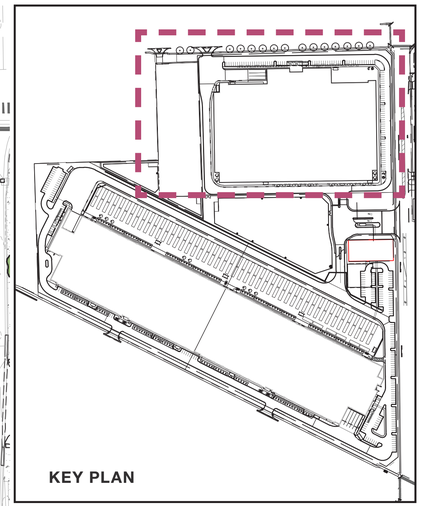
**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - OVERALL ILLUSTRATIVE PLAN

PN 2021056 | 10.15.2025 | CLOUDHQ

**L001**

LandDesign. CloudHQ Where data lives.




## PLANT SCHEDULE ORD

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| **DECIDUOUS TREES** | | |
| | ACRU | ACER RUBRUM<br>RED MAPLE |
| | CABE | CARPINUS BETULUS<br>EUROPEAN HORNBEAM |
| | GIBI | GINKGO BILOBA<br>MAIDENHAIR TREE |
| | GLTR | GLEDITSIA TRIACANTHOS INERMIS<br>THORNLESS HONEY LOCUST |
| | LIST | LIQUIDAMBAR STYRACIFLUA<br>SWEET GUM |
| | PLAC | PLATANUS X ACERIFOLIA 'MORTON CIRCLE'<br>EXCLAMATION!™ LONDON PLANE TREE |
| | TICO | TILIA CORDATA<br>LITTLELEAF LINDEN |
| **EVERGREEN TREES** | | |
| | PIEC | PINUS ECHINATA<br>SHORT LEAF PINE |
| | TSCA | TSUGA CANADENSIS<br>EASTERN HEMLOCK |
| **ORNAMENTAL TREES** | | |
| | AMGR | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'<br>AUTUMN BRILLIANCE APPLE SERVICEBERRY |
| | BEPA | BETULA PAPYRIFERA<br>PAPER BIRCH |
| | MAST | MAGNOLIA STELLATA<br>STAR MAGNOLIA MULTI-TRUNK |
| **DECIDUOUS SHRUBS** | | |
| | CEAM | CEANOTHUS AMERICANUS<br>NEW JERSEY TEA |
| | CLAL | CLETHRA ALNIFOLIA<br>SUMMERSWEET |
| | CORA | CORNUS RACEMOSA<br>GRAY DOGWOOD |
| | COSE | CORNUS SERICEA 'ARCTIC FIRE'<br>ARCTIC FIRE RED TWIG DOGWOOD |
| | HYPA | HYDRANGEA PANICULATA `LITTLE LIME'<br>LITTLE LIME PANICLE HYDRANGEA |
| | HYQU | HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'<br>SNOW QUEEN OAKLEAF HYDRANGEA |
| | ITVI | ITEA VIRGINICA 'HENRY'S GARNET'<br>HENRY'S GARNET SWEETSPIRE |
| | VIAR | VIBURNUM DENTATUM<br>ARROWWOOD VIBURNUM |
| **EVERGREEN SHRUBS** | | |
| | BUMJ | BUXUS MICROPHYLLA JAPONICA<br>JAPANESE BOXWOOD |
| | ILGL | ILEX GLABRA 'SHAMROCK'<br>SHAMROCK INKBERRY HOLLY |
| | JUCH | JUNIPERUS CHINENSIS `KALLAYS COMPACT'<br>KALLAY COMPACT PFITZER JUNIPER |
| | JUHO | JUNIPERUS HORIZONTALIS<br>CREEPING JUNIPER |
| | JUVI | JUNIPERUS VIRGINIANA 'TAYLOR'<br>TAYLOR EASTERN REDCEDAR |

| | | |
|---|---|---|
| **ORNAMENTAL GRASSES** | | |
| | CAAC | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'<br>KARL FOERSTER FEATHER REED GRASS |
| **PERENNIALS & ORNAMENTAL GRASSES** | | |
| | CAMO | CAREX MORROWII<br>JAPANESE SEDGE |
| | ECPU | ECHINACEA PURPUREA<br>CONEFLOWER |
| | HEST | HEMEROCALLIS X 'STELLA DE ORO'<br>STELLA DE ORO DAYLILY |
| | HETO | HEUCHERA X 'TOFFEE TART'<br>DOLCE® TOFFEE TART CORAL BELLS |
| | LISP | LIRIOPE SPICATA<br>CREEPING LILYTURF |
| | PAVI | PANICUM VIRGATUM `SHENANDOAH'<br>SHENANDOAH SWITCH GRASS |
| | RUFG | RUDBECKIA FULGIDA GOLDSTURM<br>BLACK-EYED SUSAN |
| | SPHE | SPOROBOLUS HETEROLEPIS<br>PRAIRIE DROPSEED |

DISTURBED AREA TO BE SEEDED

DISTURBED AREA TO BE SODDED (S. LINNEMAN RD & E. ALGONQUIN RD R.O.W.)

**NOTES:**

- Plant species selection is preliminary and subject to change, but will comply to the Village landscape standards.
- All parkway trees shown on plan are existing to remain and the property owner shall provide planting fees as required based on Forest Division calculations.
- Interior deciduous and evergreen tree locations are preliminary and shown for reference only. Final location is subject to change based on final conditions at time of construction.
- All landscape/planting areas to receive 3" of continuous mulch beds or rings upon installation.
- All areas not designated for planting are to be seeded, see plan and legend for locations.

20' 0' 20' 40' 80'

**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

PN 2021056 | 10.15.2025 | CLOUDHQ

**L002**

LandDesign. CloudHQ Where data lives.

# PLANT SCHEDULE ORD

SYMBOL | CODE | BOTANICAL / COMMON NAME

## DECIDUOUS TREES

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| ACRU | ACER RUBRUM<br>RED MAPLE |
| CABE | CARPINUS BETULUS<br>EUROPEAN HORNBEAM |
| GIBI | GINKGO BILOBA<br>MAIDENHAIR TREE |
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| PLAC | PLATANUS X ACERIFOLIA 'MORTON CIRCLE'<br>EXCLAMATION!™ LONDON PLANE TREE |
| TICO | TILIA CORDATA<br>LITTLELEAF LINDEN |

## EVERGREEN TREES

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| PIEC | PINUS ECHINATA<br>SHORT LEAF PINE |
| TSCA | TSUGA CANADENSIS<br>EASTERN HEMLOCK |

## ORNAMENTAL TREES

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| AMGR | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'<br>AUTUMN BRILLIANCE APPLE SERVICEBERRY |
| BEPA | BETULA PAPYRIFERA<br>PAPER BIRCH |
| MAST | MAGNOLIA STELLATA<br>STAR MAGNOLIA MULTI-TRUNK |

## DECIDUOUS SHRUBS

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| CEAM | CEANOTHUS AMERICANUS<br>NEW JERSEY TEA |
| CLAL | CLETHRA ALNIFOLIA<br>SUMMERSWEET |
| CORA | CORNUS RACEMOSA<br>GRAY DOGWOOD |
| COSE | CORNUS SERICEA 'ARCTIC FIRE'<br>ARCTIC FIRE RED TWIG DOGWOOD |
| HYPA | HYDRANGEA PANICULATA `LITTLE LIME`<br>LITTLE LIME PANICLE HYDRANGEA |
| HYQU | HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'<br>SNOW QUEEN OAKLEAF HYDRANGEA |
| ITVI | ITEA VIRGINICA 'HENRY'S GARNET'<br>HENRY'S GARNET SWEETSPIRE |
| VIAR | VIBURNUM DENTATUM<br>ARROWWOOD VIBURNUM |

## EVERGREEN SHRUBS

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| BUMJ | BUXUS MICROPHYLLA JAPONICA<br>JAPANESE BOXWOOD |
| ILGL | ILEX GLABRA 'SHAMROCK'<br>SHAMROCK INKBERRY HOLLY |
| JUCH | JUNIPERUS CHINENSIS `KALLAYS COMPACT`<br>KALLAY COMPACT PFITZER JUNIPER |
| JUHO | JUNIPERUS HORIZONTALIS<br>CREEPING JUNIPER |
| JUVI | JUNIPERUS VIRGINIANA 'TAYLOR'<br>TAYLOR EASTERN REDCEDAR |

## ORNAMENTAL GRASSES

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| CAAC | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'<br>KARL FOERSTER FEATHER REED GRASS |

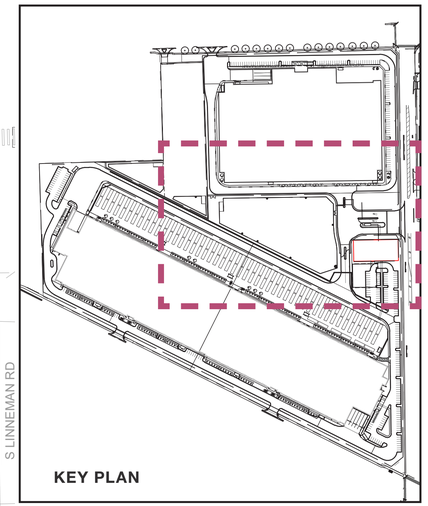
## PERENNIALS & ORNAMENTAL GRASSES

| CODE | BOTANICAL / COMMON NAME |
|---|---|
| CAMO | CAREX MORROWII<br>JAPANESE SEDGE |
| ECPU | ECHINACEA PURPUREA<br>CONEFLOWER |
| HEST | HEMEROCALLIS X 'STELLA DE ORO'<br>STELLA DE ORO DAYLILY |
| HETO | HEUCHERA X 'TOFFEE TART'<br>DOLCE® TOFFEE TART CORAL BELLS |
| LISP | LIRIOPE SPICATA<br>CREEPING LILYTURF |
| PAVI | PANICUM VIRGATUM `SHENANDOAH`<br>SHENANDOAH SWITCH GRASS |
| RUFG | RUDBECKIA FULGIDA GOLDSTURM<br>BLACK-EYED SUSAN |
| SPHE | SPOROBOLUS HETEROLEPIS<br>PRAIRIE DROPSEED |

DISTURBED AREA TO BE SEEDED

DISTURBED AREA TO BE SODDED
(S. LINNEMAN RD & E. ALGONQUIN RD R.O.W.)




**NOTES:**

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- All parkway trees shown on plan are existing to remain and the property owner shall provide planting fees as required based on Forest Division calculations.
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20' 0' 20' 40' 80'

**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

PN 2021056 | 10.15.2025 | CLOUDHQ

**L003**

LandDesign. CloudHQ Where data lives.







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## PLANT SCHEDULE ORD

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| **DECIDUOUS TREES** | | |
| | ACRU | ACER RUBRUM<br>RED MAPLE |
| | CABE | CARPINUS BETULUS<br>EUROPEAN HORNBEAM |
| | GIBI | GINKGO BILOBA<br>MAIDENHAIR TREE |
| | GLTR | GLEDITSIA TRIACANTHOS INERMIS<br>THORNLESS HONEY LOCUST |
| | LIST | LIQUIDAMBAR STYRACIFLUA<br>SWEET GUM |
| | PLAC | PLATANUS X ACERIFOLIA 'MORTON CIRCLE'<br>EXCLAMATION!™ LONDON PLANE TREE |
| | TICO | TILIA CORDATA<br>LITTLELEAF LINDEN |
| **EVERGREEN TREES** | | |
| | PIEC | PINUS ECHINATA<br>SHORT LEAF PINE |
| | TSCA | TSUGA CANADENSIS<br>EASTERN HEMLOCK |
| **ORNAMENTAL TREES** | | |
| | AMGR | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'<br>AUTUMN BRILLIANCE APPLE SERVICEBERRY |
| | BEPA | BETULA PAPYRIFERA<br>PAPER BIRCH |
| | MAST | MAGNOLIA STELLATA<br>STAR MAGNOLIA MULTI-TRUNK |

| | | |
|---|---|---|
| **DECIDUOUS SHRUBS** | | |
| | CEAM | CEANOTHUS AMERICANUS<br>NEW JERSEY TEA |
| | CLAL | CLETHRA ALNIFOLIA<br>SUMMERSWEET |
| | CORA | CORNUS RACEMOSA<br>GRAY DOGWOOD |
| | COSE | CORNUS SERICEA 'ARCTIC FIRE'<br>ARCTIC FIRE RED TWIG DOGWOOD |
| | HYPA | HYDRANGEA PANICULATA `LITTLE LIME`<br>LITTLE LIME PANICLE HYDRANGEA |
| | HYQU | HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'<br>SNOW QUEEN OAKLEAF HYDRANGEA |
| | ITVI | ITEA VIRGINICA 'HENRY'S GARNET'<br>HENRY'S GARNET SWEETSPIRE |
| | VIAR | VIBURNUM DENTATUM<br>ARROWWOOD VIBURNUM |
| **EVERGREEN SHRUBS** | | |
| | BUMJ | BUXUS MICROPHYLLA JAPONICA<br>JAPANESE BOXWOOD |
| | ILGL | ILEX GLABRA 'SHAMROCK'<br>SHAMROCK INKBERRY HOLLY |
| | JUCH | JUNIPERUS CHINENSIS `KALLAYS COMPACT`<br>KALLAY COMPACT PFITZER JUNIPER |
| | JUHO | JUNIPERUS HORIZONTALIS<br>CREEPING JUNIPER |
| | JUVI | JUNIPERUS VIRGINIANA 'TAYLOR'<br>TAYLOR EASTERN REDCEDAR |
| **ORNAMENTAL GRASSES** | | |
| | CAAC | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'<br>KARL FOERSTER FEATHER REED GRASS |

| | | |
|---|---|---|
| **PERENNIALS & ORNAMENTAL GRASSES** | | |
| | CAMO | CAREX MORROWII<br>JAPANESE SEDGE |
| | ECPU | ECHINACEA PURPUREA<br>CONEFLOWER |
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20' 0' 20' 40' 80'

# MOUNT PROSPECT TECHNOLOGY CAMPUS VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

PN 2021056 | 10.15.2025 | CLOUDHQ

**L004**

LandDesign. CloudHQ Where data lives.

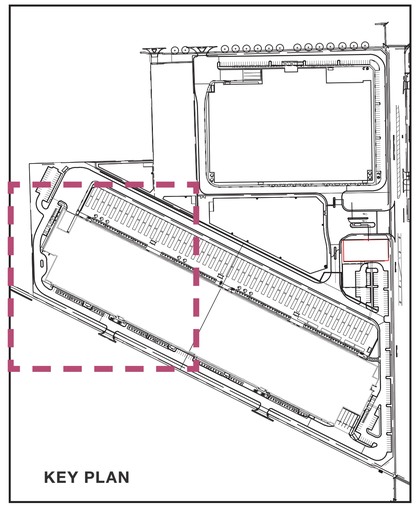
# PLANT SCHEDULE ORD

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| **DECIDUOUS TREES** | | |
| | ACRU | ACER RUBRUM<br>RED MAPLE |
| | CABE | CARPINUS BETULUS<br>EUROPEAN HORNBEAM |
| | GIBI | GINKGO BILOBA<br>MAIDENHAIR TREE |
| | GLTR | GLEDITSIA TRIACANTHOS INERMIS<br>THORNLESS HONEY LOCUST |
| | LIST | LIQUIDAMBAR STYRACIFLUA<br>SWEET GUM |
| | PLAC | PLATANUS X ACERIFOLIA 'MORTON CIRCLE'<br>EXCLAMATION!™ LONDON PLANE TREE |
| | TICO | TILIA CORDATA<br>LITTLELEAF LINDEN |
| **EVERGREEN TREES** | | |
| | PIEC | PINUS ECHINATA<br>SHORT LEAF PINE |
| | TSCA | TSUGA CANADENSIS<br>EASTERN HEMLOCK |
| **ORNAMENTAL TREES** | | |
| | AMGR | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'<br>AUTUMN BRILLIANCE APPLE SERVICEBERRY |
| | BEPA | BETULA PAPYRIFERA<br>PAPER BIRCH |
| | MAST | MAGNOLIA STELLATA<br>STAR MAGNOLIA MULTI-TRUNK |
| **DECIDUOUS SHRUBS** | | |
| | CEAM | CEANOTHUS AMERICANUS<br>NEW JERSEY TEA |
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PN 2021056 | 10.15.2025 | CLOUDHQ

**L005**

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# PLANT SCHEDULE ORD

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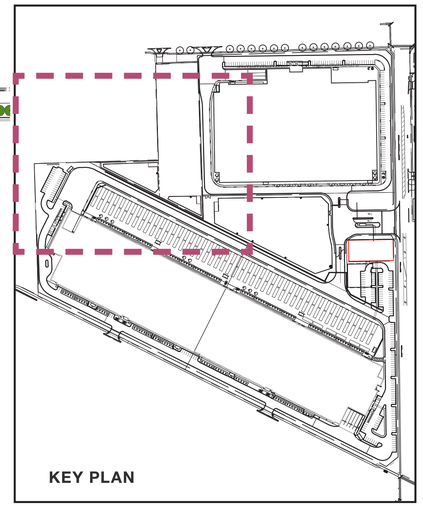
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PN 2021056 | 10.15.2025 | CLOUDHQ

**L006**

LandDesign. CloudHQ Where data lives.

# PLANT SCHEDULE ORD

| SYMBOL | CODE | QTY | BOTANICAL / COMMON NAME | CONTAINER | CAL | HT. | REMARKS |
|---|---|---|---|---|---|---|---|
| **DECIDUOUS TREES** | | | | | | | |
| | ACRU | 22 | ACER RUBRUM / RED MAPLE | B & B | 2.5" CAL. MIN. | | PERIMETER TREE |
| | CABE | 14 | CARPINUS BETULUS / EUROPEAN HORNBEAM | B & B | 2.5" CAL. MIN. | | PARKING LOT TREE |
| | GIBI | 23 | GINKGO BILOBA / MAIDENHAIR TREE | B & B | 2.5" CAL. MIN. | | PERIMETER TREE |
| | GLTR | 33 | GLEDITSIA TRIACANTHOS INERMIS / THORNLESS HONEY LOCUST | B & B | 2.5" CAL. MIN. | | PERIMETER TREE, SITE TREE |
| | LIST | 11 | LIQUIDAMBAR STYRACIFLUA / SWEET GUM | B & B | 2.5" CAL. MIN. | | PARKING LOT TREE |
| | PLAC | 51 | PLATANUS X ACERIFOLIA 'MORTON CIRCLE' / EXCLAMATION!™ LONDON PLANE TREE | B & B | 2.5" CAL. MIN. | | PERIMETER TREE, SITE TREE |
| | TICO | 12 | TILIA CORDATA / LITTLELEAF LINDEN | B & B | 2.5" CAL. MIN. | | PARKING LOT TREE |
| **EVERGREEN TREES** | | | | | | | |
| | PIEC | 10 | PINUS ECHINATA / SHORT LEAF PINE | B & B | | 6` MIN | SITE TREE |
| | TSCA | 15 | TSUGA CANADENSIS / EASTERN HEMLOCK | B & B | | 6` MIN | SITE TREE |
| **ORNAMENTAL TREES** | | | | | | | |
| | AMGR | 38 | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY | B & B | 1.5" - 2" MIN. CAL. PER STEM | | SITE TREE |
| | BEPA | 55 | BETULA PAPYRIFERA / PAPER BIRCH | B & B | 1.5" - 2" MIN. CAL. PER STEM | | SITE TREE |
| | MAST | 37 | MAGNOLIA STELLATA / STAR MAGNOLIA MULTI-TRUNK | B & B | 1.5" - 2" MIN. CAL. PER STEM | | SITE TREE |

| SYMBOL | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | HEIGHT | SPREAD | REMARKS |
|---|---|---|---|---|---|---|---|
| **DECIDUOUS SHRUBS** | | | | | | | |
| | CEAM | 58 | CEANOTHUS AMERICANUS / NEW JERSEY TEA | #3 | 2` | | 3'-4' HT. AT MATURITY |
| | CLAL | 27 | CLETHRA ALNIFOLIA / SUMMERSWEET | #3 | 2` | | 4'-5' HT. AT MATURITY |
| | CORA | 50 | CORNUS RACEMOSA / GRAY DOGWOOD | 15 GAL | 5` | | 10'-12' HT. AT MATURITY |
| | COSE | 372 | CORNUS SERICEA 'ARCTIC FIRE' / ARCTIC FIRE RED TWIG DOGWOOD | #3 | 2` | | 4'-5' HT. AT MATURITY |
| | HYPA | 213 | HYDRANGEA PANICULATA `LITTLE LIME` / LITTLE LIME PANICLE HYDRANGEA | #3 | 2` | | 4'-5' HT. AT MATURITY |
| | HYQU | 72 | HYDRANGEA QUERCIFOLIA 'SNOW QUEEN' / SNOW QUEEN OAKLEAF HYDRANGEA | #3 | 2` | | 5' HT. AT MATURITY |
| | ITVI | 66 | ITEA VIRGINICA 'HENRY'S GARNET' / HENRY'S GARNET SWEETSPIRE | #3 | 2` | | 3'-4' HT. AT MATURITY |
| | VIAR | 16 | VIBURNUM DENTATUM / ARROWWOOD VIBURNUM | #5 | 3` | | 6'-8' HT. AT MATURITY |
| **EVERGREEN SHRUBS** | | | | | | | |
| | BUMJ | 20 | BUXUS MICROPHYLLA JAPONICA / JAPANESE BOXWOOD | #5 | 3` | | 6'-8' HT. AT MATURITY |
| | ILGL | 155 | ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY | #3 | 2` | | 3'-4' HT. AT MATURITY |
| | JUCH | 111 | JUNIPERUS CHINENSIS `KALLAYS COMPACT` / KALLAY COMPACT PFITZER JUNIPER | #5 | 2` | 2` - 3` | 2'-3' HT. AT MATURITY |
| | JUHO | 91 | JUNIPERUS HORIZONTALIS / CREEPING JUNIPER | #3 | .5` - .75` | 1` - 3` | 1' HT. AT MATURITY |
| | JUVI | 270 | JUNIPERUS VIRGINIANA 'TAYLOR' / TAYLOR EASTERN REDCEDAR | 15 GAL | 6`-8` | | 15' HT. AT MATURITY |
| **ORNAMENTAL GRASSES** | | | | | | | |
| | CAAC | 503 | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS | #3 | 2` | | 3'-5' HT. AT MATURITY |

| SYMBOL | CODE | QTY | BOTANICAL / COMMON NAME | CONT | HEIGHT | SPREAD | SPACING | REMARKS |
|---|---|---|---|---|---|---|---|---|
| **PERENNIALS & ORNAMENTAL GRASSES** | | | | | | | | |
| | CAMO | 810 | CAREX MORROWII / JAPANESE SEDGE | #1 | 6"-9" | | 18" o.c. | 1' HT. AT MATURITY |
| | ECPU | 301 | ECHINACEA PURPUREA / CONEFLOWER | #2 | 24" - 30" | | 24" o.c. | 3'-4' HT. AT MATURITY |
| | HEST | 234 | HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY | #1 | 8" - 12" | | 12" o.c. | 1' HT. AT MATURITY |
| | HETO | 696 | HEUCHERA X 'TOFFEE TART' / DOLCE® TOFFEE TART CORAL BELLS | #1 | 8" - 12" | | 18" o.c. | 1' HT. AT MATURITY |
| | LISP | 5,198 | LIRIOPE SPICATA / CREEPING LILYTURF | #1 | 8" - 12" | | 12" o.c. | 1' HT. AT MATURITY |
| | PAVI | 1,219 | PANICUM VIRGATUM `SHENANDOAH` / SHENANDOAH SWITCH GRASS | #2 | 24" - 30" | | 24" o.c. | 3'-4' HT. AT MATURITY |
| | RUFG | 533 | RUDBECKIA FULGIDA GOLDSTURM / BLACK-EYED SUSAN | #2 | 24" - 30" | | 24" o.c. | 3'-4' HT. AT MATURITY |
| | SPHE | 432 | SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED | #2 | 18" - 24" | | 24" o.c. | 2'-3' HT. AT MATURITY |

## PERIMETER LANDSCAPING TABULATIONS

| LOT LINE | DISTANCE | ADJACENT LAND USE | TREES REQUIRED | TREES PROVIDED | SHRUBS REQUIRED | SHRUBS PROVIDED |
|---|---|---|---|---|---|---|
| NORTH (along W. Dempster Street) | 1,013' | Residential | 1 tree / 50' = 20 trees | **20 trees** | continuous landscape | **319 shrubs** |
| EAST (along S. Linneman Road) | 1,760' | Non-Residential | 1 tree / 75' = 23 trees | **28 trees** | 176 shrubs (cluster of 7 / 35' apart / 50% of lot line) | **300 shrubs** |
| SOUTH (along E. Algonquin Road) | 1,696' | Non-Residential | 1 tree / 75' = 23 trees | **26 trees** | 170 shrubs (cluster of 7 / 35' apart / 50% of lot line) | **321 shrubs** |
| WEST (adjacent to non-residential) | 1,523' | Non-Residential | 1 tree / 75' = 20 trees | **20 trees** | 152 shrubs (cluster of 7 / 35' apart / 50% of lot line) | **165 shrubs** |

## DETENTION POND PLANTING SELECTION

- Calamagrostis canadensis | Bluejoint Grass
- Carex cristatella | Crested Oval Sedge
- Carex lurida | Bottlebrush Sedge
- Carex spp. | Prairie Sedge species
- Carex stipata | Common Fox Sedge
- Elymus canadensis | Canada Wild Rye
- Elymus virginicus | Virginia Wild Rye
- Glyceria striata | Fowl Manna Grass
- Juncus effusus |Common Rush
- Juncus tenuis | Path Rush
- Alisma subcordatum | Common Water Plantain
- Euthamia graminifolia | Common Grass-leaved Goldenrod
- Iris spp. | Blue Flag species
- Liatris spicata | Marsh Blazing Star
- Lobelia siphilitica | Great Blue Lobelia
- Lycopus americanus | Common Water Horehound
- Minimus ringens | Monkey Flower
- Pycnanthemum virginianum | Common Mountain Mint
- Rudbeckia hirta | Black-eyed Susan
- Rudbeckia triloba | Bown-eyed Susan
- Zizia aurea | Golden Alexander

## DETENTION POND MAINTENANCE NOTES:

Below is a general outline for the maintenance of meadow plantings within the detention ponds; a detailed maintenance schedule shall be coordinated between the property owner and approved landscape contractor:

- Year 1:
  - Plantings shall be mowed every 4-6 weeks, to a height of 4-6 inches to encourage root development and seedling establishment
  - Regularly inspect for and remove invasive weeds by hand; invasive species shall be removed with their root system to the best of the contractor's ability
- Year 2 and beyond:
  - Plantings shall be mowed twice per year, once in the Spring and once in the Fall; Spring mowing shall only occur once daytime temperatures are consistently around 50 degrees F to allow pollinators and insects to emerge, Fall mowing shall only occur in late fall to prepare for winter after wildflowers have set seed
  - Regularly inspect for and remove invasive weeds by hand; invasive species shall be removed with their root system to the best of the contractor's ability

**PLANT SCHEDULE NOTE:**

- Schedule only represents perimeter & foundation landscape requirements, and does not show the full proposed landscape.
- Final plant selection subject to change at time of construction/installation based on price, availability, and selection

## TREES



**EUROPEAN HORNBEAM**
*CARPINUS BETULUS*



**LITTLE LEAF LINDEN**
*TILIA CORDATA*



**RED MAPLE**
*ACER RUBRUM*



**GINKGO**
*GINKGO BILOBA*



**EXCLAMATION LONDON PLANE TREE**
*PLATANUS X ACERFOLIA 'MORTON CIRCLE'*



**WHITE BIRCH**
*BETULA PLATYPHYLLA*



**SWEET GUM**
*LIQUIDANBAR STYRACIFLUA*



**CANADIAN HEMLOCK**
*TSUGA CANADENSIS*



**SERVICEBERRY**
*AMALANCHIER X GRANDIFLORA*



**STAR MAGNOLIA**
*MAGNOLIA STELLATA*



**THORNLESS HONEYLOCUST**
*GLEDITSIA TRIACANTHOS VAR. INERMIS*

## SHRUBS/EVERGREENS



**SHAMROCK INKBERRY HOLLY**
*ILEX GLABRA 'SHAMROCK'*



**ARROWOOD VIBURNUM**
*VIBURNUM DENTATUM*



**GRAY DOGWOOD**
*CORNUS RACEMOSA*



**ARCTIC FIRE RED TWIG DOGWOOD**
*CORNUS SERICEA 'ARCTIC FIRE'*



**DENSE YEW**
*TAXUS MEDIA*



**TAYLOR EASTERN RED CEDAR**
*JUNIPERUS VIRGINIANA 'TAYLOR'*



**LITTLE LIME PANICLE HYDRANGEA**
*HYDRANGEA PANICULATA 'LITTLE LIME'*



**HENRY'S GARNET VIRGINIA SWEETSPIRE**
*ITEA VIRGINIAN 'HENRY'S GARNET'*



**SNOW QUEEN OAKLEAF HYDRANGEA**
*HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'*



**SMOOTH SUMAC**
*RHUS GLABRA*



**COMMON WINTERBERRY**
*MYRICA PENNSYLVANICA*



**KALLAY COMPACT PFITZER JUNIPER**
*JUNIPERUS CHINENSIS 'KALLAYS COMPACT'*

# PERENNIALS/GROUNDCOVER



**COMMON WATER PLANTAIN**
*ALISMA SUBCORDATUM*



**BOTTLEBRUSH SEDGE**
*CAREX LURIDA*



**COMMON FOX SEDGE**
*CAREX STIPATA*



**GOLDEN ALEXANDER**
*ZIZIA AUREA*



**CANADA WILD RYE**
*ELYMUS CANADENSIS*



**HEUCHERA**
*HEUCHERA SPP*



**PATH RUSH**
*JUNCUS TENUIS*



**MARSH BLAZING STAR**
*LIATRIS SPICATA*



**CREEPING LILYTURF**
*LIRIOPE SPICATA*



**SHENANDOAH SWITCH GRASS**
*PANICUM VIRGATUM 'SHENANDOAH'*



**COMMON WATER HOREHOUND**
*LYCOPUS AMERICANUS*



**BLACK-EYED SUSAN**
*RUDBECKIA HIRTA*



**BOTTLEBRUSH SEDGE**
*CAREX LURIDA*



**BLUEJOINT GRASS**
*CALAMAGROSTIS CANADENSIS*



**BLUE FLAG IRIS**
*IRIS SPP*



**CRESTED OVAL SEDGE**
*CAREX CRISTATELLA*



**BROWN-EYED SUSAN**
*RUDBECKIA TRILOBA*



**JAPANESE SEDGE**
*CAREX MOROWWII*



**PRARIE SEDGE SPECIES**
*CAREX SPP*



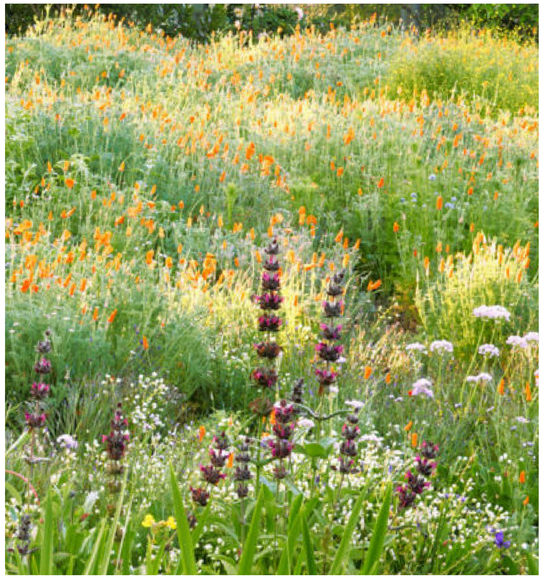
**SUMMER SWEET CLETHRA**
*CLETHRA ALNIFOLIA*



**COMMON MOUNTAIN MINT**
*PYCANTHEMUM VIRGINIANUM*



**FOWL MANNA GRASS**
*GLYCERIA STRIATA*



**NATIVE MEADOW SEED MIX**
VARYING FLOWER COLOR PALETTE



**KARL FOERSTER FEATHER REED GRASS**
*CALAMAGROSTIS X ACUTIFLORA*



**COMMON RUSH**
*JUNCUS EFFUSUS*



**COMMON GRASS-LEAVED GOLDENROD**
*EUTHAMIA GRAMINIFOLIA*



**MONKEY FLOWER**
*MINIMUS RINGENS*



**GREAT BLUE LOBELIA**
*LOBELIA SIPHILITICA*



**STELLA DE ORO DAYLILY**
*HEMEROCALLIS X 'STELLA DE ORO'*




AREA TO BE IRRIGATED

**NOTES:**

- Irrigation areas are preliminary and subject to change based on final design and construction.
- Irrigation shall be design-build through a licensed irrigation contractor
- Irrigation system shall be drip, unless otherwise recommended by the irrigation contractor
- All road frontages along W. Dempster Street, S. Linnemann Road, and E. Algonquin Road shall be irrigated.
- Additional irrigation measures (drip, spray heads, hand-watering schedule) may be specified at time of construction as recommended by irrigation contractor and approved by property owner.

**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - IRRIGATION AREAS PLAN

PN 2021056 | 10.15.2025 | CLOUDHQ

**L010**

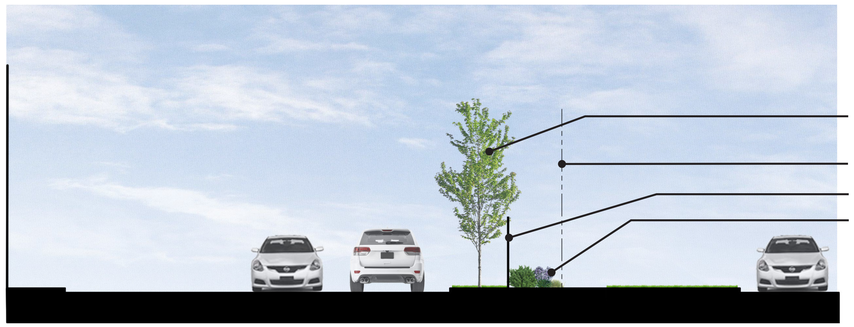
LandDesign. CloudHQ Where data lives.




| 4'-0" PLANT BED | 7'-0" WALK | DRIVE AISLE & PARKING | TREE ZONE (WIDTH VARIES) | 8'-0" BUFFER | 7'-0" WALK | ± 14'-0" TREE ZONE | DEMPSTER STREET |
|---|---|---|---|---|---|---|---|

## SECTION 1
DEMPSTER STREET

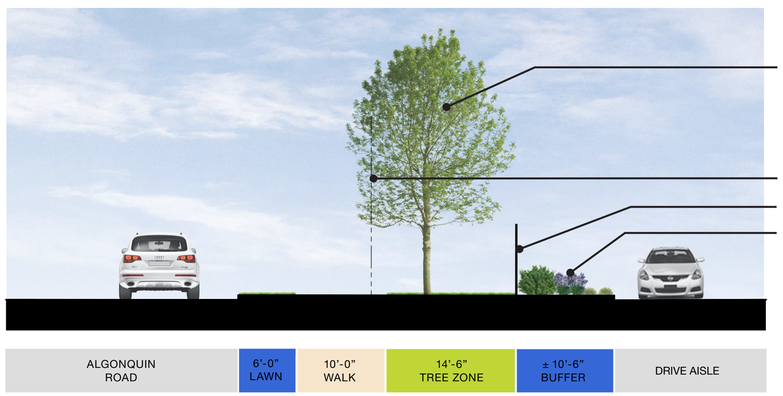
**SCALE**
1/8" = 1'-0"




| 6'-0" WALK | DRIVE AISLE & PARKING | TREE ZONE (WIDTH VARIES) | 6'-0" BUFFER | 5'-0" WALK | ± 15'-0"LAWN | LINNEMAN ROAD |
|---|---|---|---|---|---|---|

## SECTION 2
LINNEMAN ROAD

**SCALE**
1/8" = 1'-0"




| ALGONQUIN ROAD | 6'-0" LAWN | 10'-0" WALK | 14'-6" TREE ZONE | ± 10'-6" BUFFER | DRIVE AISLE |
|---|---|---|---|---|---|

## SECTION 3
IL62 - ALGONQUIN ROAD

**SCALE**
1/8" = 1'-0"




## KEY PLAN

**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - TYP. STREET SECTIONS

PN 2021056 | 10.15.2025 | CLOUDHQ

**L011**

LandDesign. CloudHQ Where data lives.

# PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2

BEING A SUBDIVISION IN THE NORTHEAST QUARTER AND NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

## AFFIDAVIT OF OWNERSHIP CERTIRCATE

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AS SHOWN ON THIS PLAT, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATE THIS _____ DAY OF _____A.D., 2025.

_____
OWNER

## NOTARY CERTIFICATE

_____ )
STATE )
)
_____ ) S.S.
COUNTY )

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING CERTIFICATE OF OWNERSHIP, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) OWNERSHIP OF THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 2025.

_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

## SCHOOL DISTRICT STATEMENT

TO THE BEST KNOWLEDGE OF THE OWNER(S), THE PROPERTY IS LOCATED WITHIN THE COMMUNITY CONSOLIDATED SCHOOL DISTRICT #59, AND LOCATED WITHIN THE TOWNSHIP HIGH SCHOOL DISTRICT #214.

_____
OWNER(S) SIGNATURE

## VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

I FIND NO DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS DUE AGAINST ANY OF THE LAND INCLUDED IN THE ABOVE PLAT.

DATED THIS DAY _____ OF _____, 2025.

_____
VILLAGE COLLECTOR

## VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED BY THE VILLAGE ENGINEER OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 2025.

_____
VILLAGE ENGINEER

## PLANNING & ZONING COMMISSION CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED BY THE PLANNING AND ZONING COMMISSION OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 2025.

_____ _____
CHAIRPERSON ATTEST: VICE CHAIRPERSON

## PRESIDENT AND BOARD OF TRUSTEES CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED AND ACCEPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 2025.

_____ _____
VILLAGE PRESIDENT ATTEST: VILLAGE CLERK

## MORTGAGEE CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF COOK )

_____ _____ AS MORTGAGEE, UNDER THE PROVISIONS OF A CERTAIN MORTGAGE
PRINT MORTGAGEE NAME
DATED _____ DAY _____ A.D. 20__ AND RECORDED IN THE RECORDER'S OF DEEDS OFFICE

OF COOK COUNTY, ILLINOIS ON THE _____DAY OF _____ A.D., 20__

AS DOCUMENT NO._____ HEREBY CONSENTS TO AND APPROVES THE SUBDIVISION OF THE LAND AND THE GRANTING OF THE EASEMENT(S) DEPICTED HEREON.

DATED THIS _____DAY OF_____ A.D., 20__

BY_____ ATTEST:_____

BY ITS:_____

## NOTARY CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON(S) WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING MORTGAGEE CERTIFICATE, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) HOLDER OF A MORTGAGE ON THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 2025.

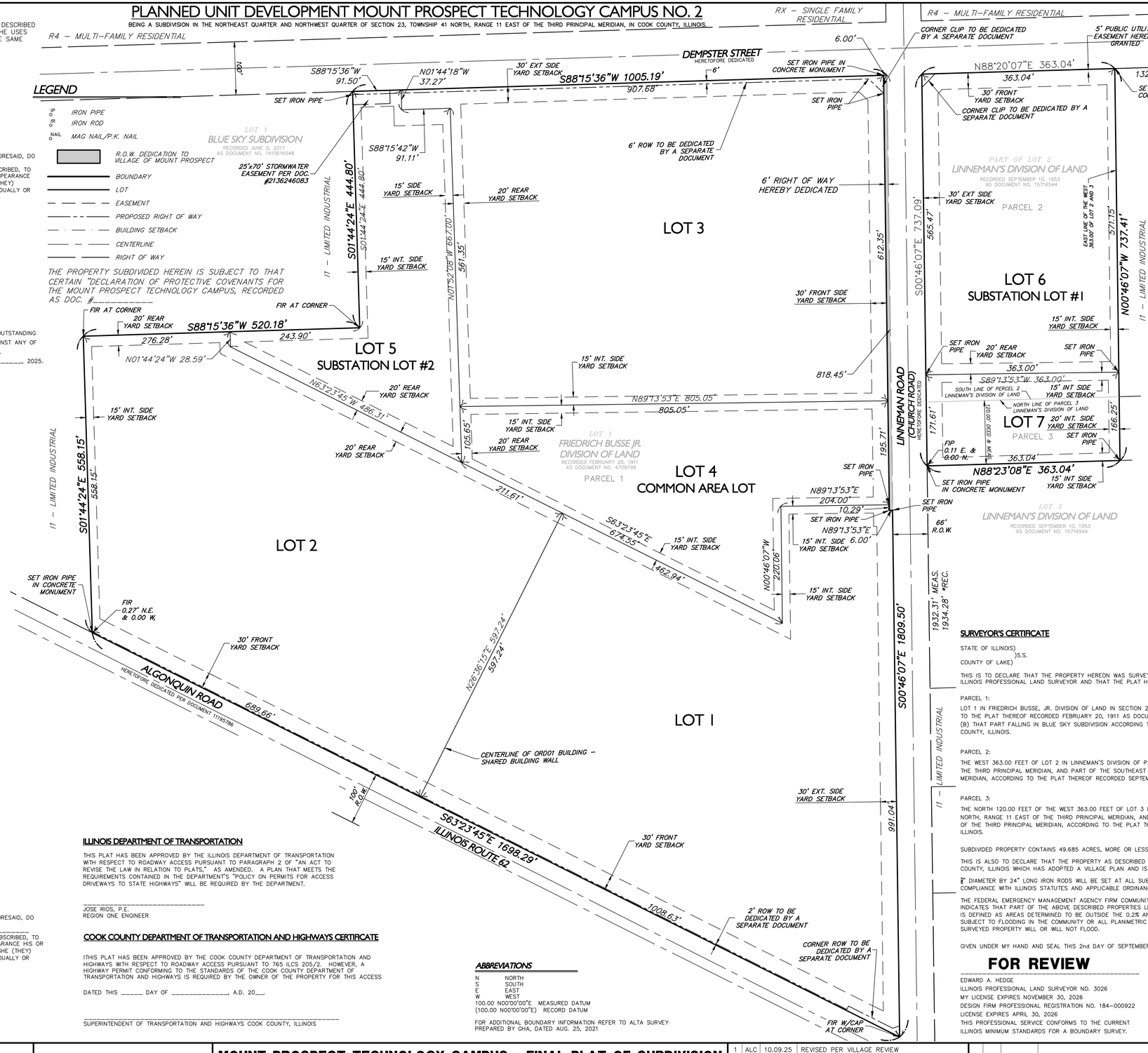
_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

## LEGEND

- IRON PIPE
- IRON ROD
- MAG NAIL/P.K. NAIL
- R.O.W. DEDICATION TO VILLAGE OF MOUNT PROSPECT
- BOUNDARY
- LOT
- EASEMENT
- PROPOSED RIGHT OF WAY
- BUILDING SETBACK
- CENTERLINE
- RIGHT OF WAY

THE PROPERTY SUBDIVIDED HEREIN IS SUBJECT TO THAT CERTAIN "DECLARATION OF PROTECTIVE COVENANTS FOR THE MOUNT PROSPECT TECHNOLOGY CAMPUS, RECORDED AS DOC. #_____"




OWNER: TUR VENTURES LLC
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

PROPERTY: 1200 E. ALGONQUIN ROAD
PIN: 08-23-100-018-0000, PARCEL 1
43.55 ACRES (1,896,981 SF)

1200 DEMPSTER STREET
PIN: 08-23-200-052-0000, PARCEL 2 & 3
6.14 ACRES (267,308 SF)

EXISTING ZONING – I1 LIMITED INDUSTRIAL
PROPOSED ZONING – PLANNED UNIT DEVELOPMENT (PUD)

SURVEYORS NOTE: REFER TO ALTA/NSPS LAND TITLE SURVEY PREPARED BY G.H.A. AUGUST 25, 2021
JOB NO. 5253.100

SEE ALTA FOR LEGEND AND ABBREVIATIONS

NOTE:

THERE SHALL BE AT MOST TWO (2) DIRECT VEHICLE ACCESS BETWEEN THE PLATTED LANDS AND ILLINOIS ROUTE 62 (ALGONQUIN ROAD) FROM LOTS 1 & 2, AS DEPICTED HEREIN.

THERE SHALL BE NO DIRECT VEHICULAR ACCESS TO ILLINOIS ROUTE 62 (ALGONQUIN ROAD) FROM LOTS 3, 4, OR 5.

ALL OTHER ACCESS SHALL BE FROM LINNEMAN ROAD & DEMPSTER STREET.

| | AREA (SF) | AREA (ACRE) |
|---|---|---|
| LOT 1 | 567,625.79 | 13.03 |
| LOT 2 | 495,411.88 | 11.37 |
| LOT 3 | 494,314.09 | 11.35 |
| LOT 4 | 196,199.65 | 4.50 |
| LOT 5 | 139,584.12 | 3.20 |
| LOT 6 | 206,297.37 | 4.74 |
| LOT 7 | 61,323.03 | 1.41 |
| DEDICATED ROW | | |
| LINNEMAN RD | 4,910.41 | 0.11 |
| TOTAL | 2,165,666.34 | 49.72 |

**PLAT OF SUBDIVISION PREPARED BY:**

GEWALT HAMILTON ASSOCIATES, INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061

**AFTER RECORDING RETURN PLAT TO:**

GEWALT HAMILTON ASSOC., INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061

**FUTURE TAX BILLS, TO BE FORWARDED TO:**

TUR VENTURES, LLC:
ATTN.: PETE HOLM, VICE PRESIDENT – DEVELOPMENT
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

## ILLINOIS DEPARTMENT OF TRANSPORTATION

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT TO PARAGRAPH 2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

_____
JOSE RIOS, P.E.
REGION ONE ENGINEER

## COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

ITHIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT CONFORMING TO THE STANDARDS OF THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS

DATED THIS _____ DAY OF _____, A.D. 20__.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

## ABBREVIATIONS

| | |
|---|---|
| N | NORTH |
| S | SOUTH |
| E | EAST |
| W | WEST |
| 100.00 N00°00'00"E | MEASURED DATUM |
| (100.00 N00°00'00"E) | RECORD DATUM |

FOR ADDITIONAL BOUNDARY INFORMATION REFER TO ALTA SURVEY PREPARED BY GHA, DATED AUG. 25, 2021

## SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)S.S.
COUNTY OF LAKE)

THIS IS TO DECLARE THAT THE PROPERTY HEREON WAS SURVEYED AND SUBDIVIDED BY GEWALT HAMILTON ASSOC. INC., UNDER THE SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION:

PARCEL 1:

LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

PARCEL 3:

THE NORTH 120.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

SUBDIVIDED PROPERTY CONTAINS 49.685 ACRES, MORE OR LESS AND ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

THIS IS ALSO TO DECLARE THAT THE PROPERTY AS DESCRIBED ON THE ANNEXED PLAT LIES WITHIN THE CORPORATE LIMITS OF MT. PROSPECT, COOK COUNTY, ILLINOIS WHICH HAS ADOPTED A VILLAGE PLAN AND IS EXERCISING THE SPECIAL POWER AUTHORIZED BY 65 ILCS 5, SECTION 11–12–6.

⅝" DIAMETER BY 24" LONG IRON RODS WILL BE SET AT ALL SUBDIVISION CORNERS, LOT CORNERS, POINTS OF CURVATURE AND POINTS OF TANGENCY IN COMPLIANCE WITH ILLINOIS STATUTES AND APPLICABLE ORDINANCES, UNLESS OTHERWISE NOTED.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM COMMUNITY PANEL NUMBER 17031C0212J WITH AN EFFECTIVE DATE OF AUGUST 19, 2008 INDICATES THAT PART OF THE ABOVE DESCRIBED PROPERTIES LIES WITHIN AN AREA DESIGNATED AS ZONE "X" (NO SHADING). ZONE "X" (NO SHADING) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THIS MAP DOES NOT NECESSARILY SHOW ALL AREAS SUBJECT TO FLOODING IN THE COMMUNITY OR ALL PLANIMETRIC FEATURES OUTSIDE FLOOD HAZARD AREAS. THIS DOES NOT GUARANTEE THAT THE SURVEYED PROPERTY WILL OR WILL NOT FLOOD.

GIVEN UNDER MY HAND AND SEAL THIS 2nd DAY OF SEPTEMBER, A.D. 2025.

**FOR REVIEW**

_____
EDWARD A. HEDGE
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3026
MY LICENSE EXPIRES NOVEMBER 30, 2026
DESIGN FIRM PROFESSIONAL REGISTRATION NO. 184–000922
LICENSE EXPIRES APRIL 30, 2026
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

STATE OF ILLINOIS · Vernon Hills · EDWARD A. HEDGE · 035-003026 · PROFESSIONAL LAND SURVEYOR


GHA GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive ■ Vernon Hills, IL. 60061
TEL 847.478.9700 ■ FAX 847.478.9701



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**MOUNT PROSPECT TECHNOLOGY CAMPUS - FINAL PLAT OF SUBDIVISION**

**MOUNT PROSPECT TECHNOLOGY CAMPUS**
**1200 E. ALGONQUIN RD & 1200 DEMPSTER ST**
**MOUNT PROSPECT, ILLINOIS**

| NO. | BY | DATE | REVISION |
|---|---|---|---|
| 1 | ALC | 10.09.25 | REVISED PER VILLAGE REVIEW |

FILE: 5253.220_SUB_2025_.dwg
DRAWN BY: ALC
DATE: 10.09.25
GHA PROJECT # 5253.220
CHECKED BY: EAH
DATE: 10.09.25
SCALE: 1"=100'
SHEET NUMBER: 1
OF 1 SHEETS

J:\2022\5253.220 MOUNT PROSPECT - 2025 PLANNING\5253.220_SUB_2025_DWG 10/9/2025 12:33 PM

## PROPOSED LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PUD LOT BOUNDARY
- HEAVY DUTY BITUMINOUS PAVEMENT
- NORMAL DUTY BITUMINOUS PAVEMENT
- PCC DRIVEWAY PAVEMENT
- PCC PAVEMENT
- PCC SIDEWALK
- STONE RIP RAP, CLASS A1
- AGGREGATE CA-6 – COMED SUBSTATION AREA
- PERVIOUS AREA (TURF GRASS, LANDSCAPING OR NATURALIZED BASIN BOTTOM)
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- PAVEMENT SAWCUT
- FENCE
- RETAINING WALLS
- PROPOSED TREE

EMERGENCY ACCESS DRIVE
35' CANTILEVERED GATE

GRAVEL

W DEMPSTER STREET

15' SOLID SCREEN WALL

64.56'

30' CANTILEVERED GATE

15' SOLID SCREEN WALL

COMED SUBSTATION #2
BUILDABLE AREA = 96,500 SF
(2.2 ACRES)

AMERISTAR IMPASSE II – 10' SECURITY FENCE
FULL PERIMETER OF CAMPUS
(TYP)

CONC

7+1 COMED CHAINLINK FENCE
W/BARBED-WIRE TOP
(TYP)

DETENTION BASIN #2B

DETENTION BASIN #2A

PROPOSED ORD02 BUILDING
(PHASE 3)
FFE: 670.50
TENANT #1 ADMIN.
102 STD STALLS,
4 HC STALLS,
4 EV STALLS

ORD02 SECURITY GATE

AMERISTAR MONTAGE II – 4' SAFTEY FENCE
(TYP)

AMERISTAR IMPASSE II – BIFOLD SECURITY GATE

DETENTION BASIN #1

AMIRISTAR IMPASSE II – BIFOLD SECURITY GATE

TENANT #2
SECURITY GATE

GUARD SHACK

SATELLITE ANTENNA YARD

16' WIDE ACCESS GATE

6' WIDE PEDESTRIAN GATE

AMERISTAR IMPASSE II – 10' SECURITY FENCE
FULL PERIMETER OF CAMPUS
(TYP)

S LINNEMAN RD

COMED SUBSTATION #1
(UNDER CONSTRUCTION)
LOT = 267,626 +/- SF (6.144 ACRE)
BUILDABLE AREA = 195,041 SF (4.478 ACRE)

DETENTION BASIN

CLOUD SWITCHGEAR YARD

6' BLACK VINYL COATED CHAINLINK FENCE
(MATCH FENCE TO NORTH)

7+1 COMED CHAINLINK FENCE
W/BARBED-WIRE TOP (TYP)
(MATCH COMED FENCE TO NORTH)

AMERISTAR IMPASSE II – BIFOLD SECURITY GATE

8' SOLID SCREEN WALL

PROPOSED ORD01-2 BUILDING
(PHASE 1)
FFE: 672.50

PHASE 2

PHASE 1

TENANT #1
SECURITY GATE

E. ALGONQUIN ROAD

BIFOLD SECURITY GATE FOR
PHASE 1 & 2 TENANTS
W/KNOX BOX FOR
FIRE DEPARTMENT ACCESS

EMERGENCY ACCESS DRIVE
40' CANTILEVERED GATE

AMERISTAR IMPASSE II – 8' SECURITY FENCE
FULL PERIMETER OF CAMPUS
(TYP)

PROPOSED ORD01-1 BUILDING
(PHASE 2)
FFE: 672.50

EMERGENCY ACCESS DRIVE
40' CANTILEVERED GATE

S LINNEMAN RD

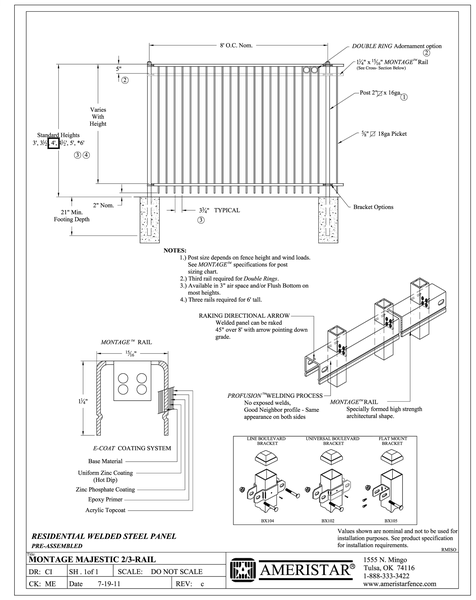
E. ALGONQUIN ROAD

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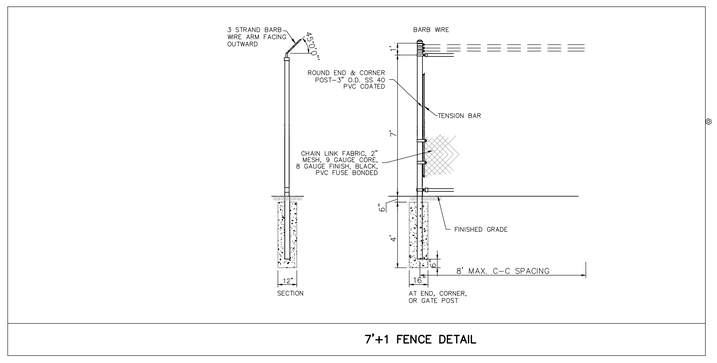
GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

## LEGEND

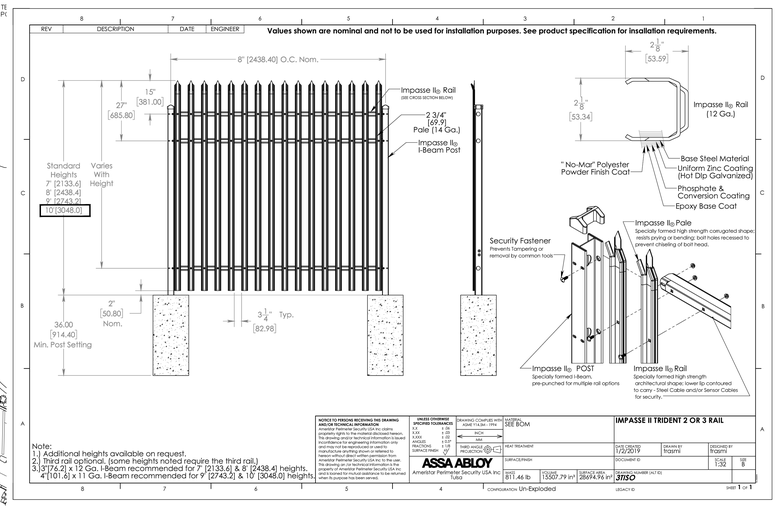
- AMERISTAR IMPASSE II – 10' SECURITY FENCE
- 15' SOLID SCREEN WALL
- 8' SOLID SCREEN WALL
- 7+1 COMED BLACK VINYL COATED CHAINLINK FENCE W/BARBED-WIRE TOP
- AMERISTAR MONTAGE II – 4' SAFTEY FENCE
- 6' BLACK VINYL COATED CHAINLINK FENCE




## 7' VINYL COATED CHAINLINK SECURITY FENCE WITH 1' BARBED WIRE TOP




7'+1 FENCE DETAIL




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### ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |
| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |

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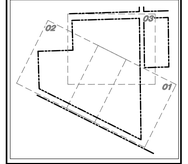
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 08.29.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

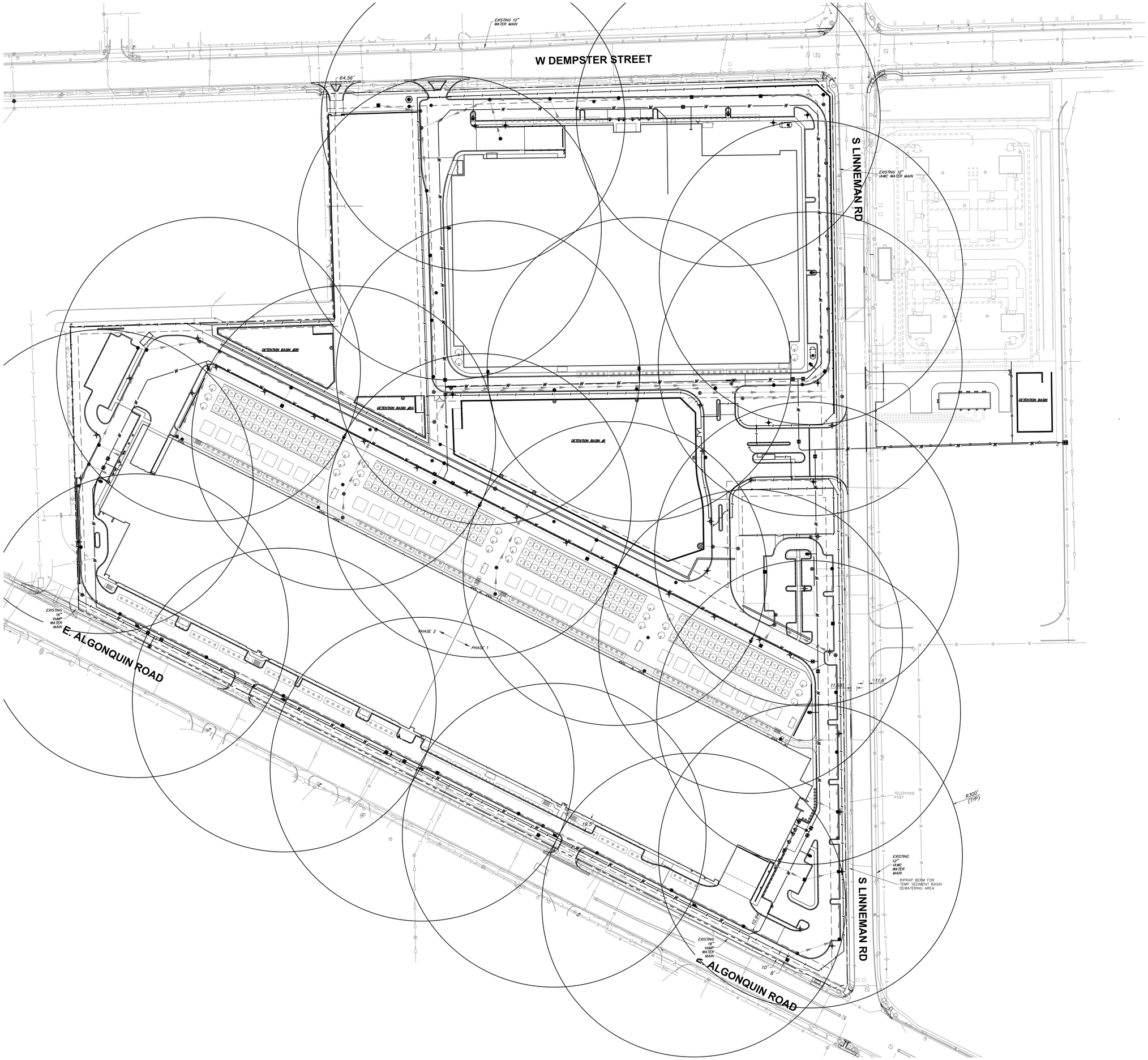
1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




SITE PLAN - FENCE EXHIBIT

JOB 5253.220
SHEET E01-01




N

GRAPHIC SCALE

60 0 30 60

( IN FEET )

1 inch = 60 ft.

## UTILITY PLAN LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN

| EXISTING | PROPOSED | |
|---|---|---|
| ◎ | ◉ | STORM MANHOLE |
| ○ | ● | STORM CATCHBASIN |
| □ | ■ | STORM INLET |
| ▭ | ▬ | FLARED END SECTION |
| ◎ | ● | SANITARY MANHOLE |
| ⊠ | ■ | VALVE VAULT |
| ⊗ | ● | VALVE BOX |
| ♉ | ♉ | FIRE HYDRANT |
| ⊕ | ● | BUFFALO BOX |
| ☼ | ☼ | STREET LIGHT |
| ⊸ | ⊸ | POWER POLE |
| ⫞ | ⫞ | SIGN |

*300' RADII SHOWN FOR FIRE HYDRANT COVERAGE (TYP)*

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ISSUES

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| 7 | 09.22.2025 | PUD PREL/FINAL SUB #2 |

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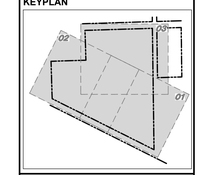
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SIGNED: _____ P.E.
DONALD E. DIXON
Date: 09.22.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

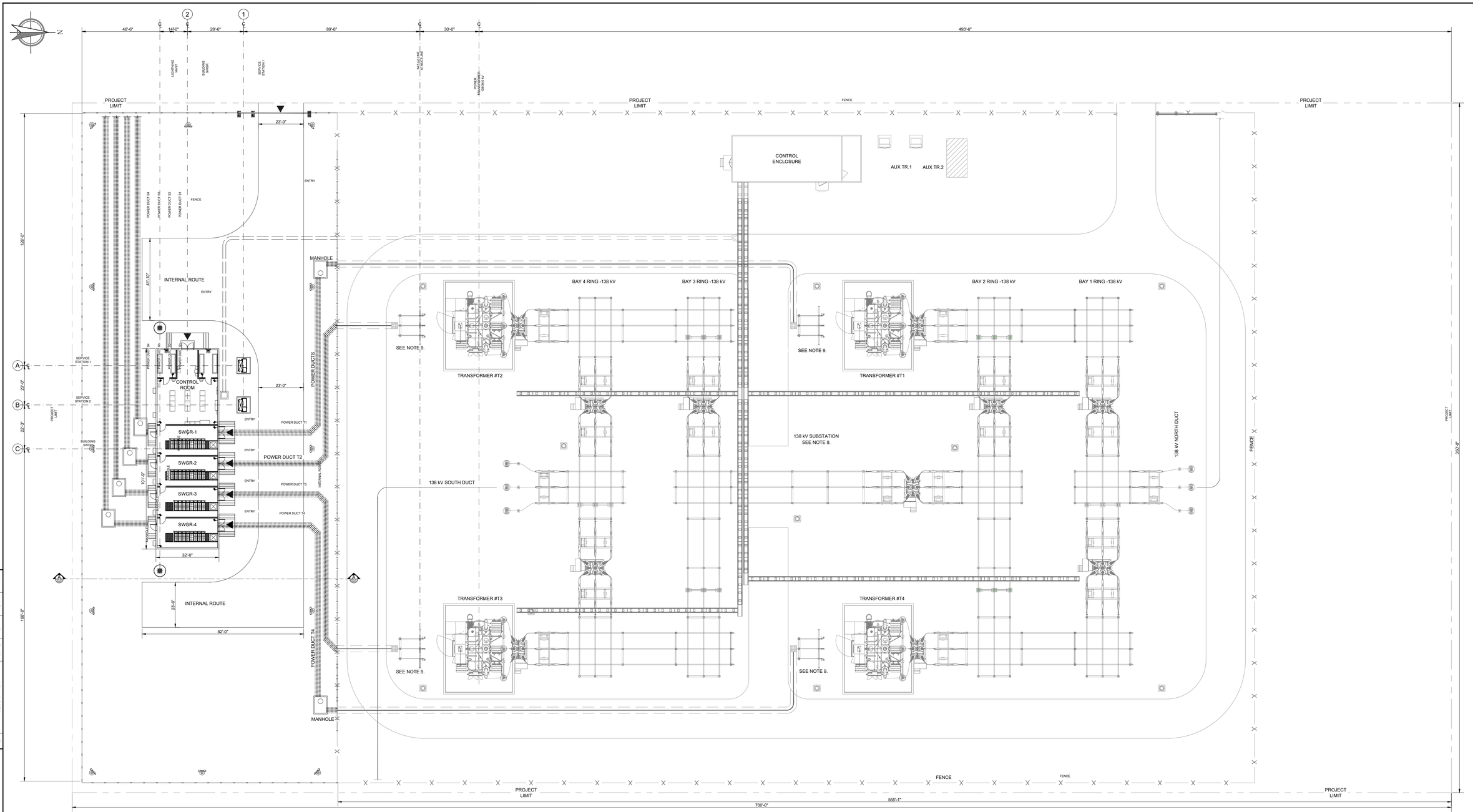
KEYPLAN




FIRE HYDRANT COVERAGE PLAN

**JOB** 5253.220
**SHEET**

**FH**




| REV | DESCRIPTION | DATE | BY | CK | APP |
|---|---|---|---|---|---|
| 0-0E | ISSUED FOR REVIEW | 05/10/2022 | AH | ER | ZO |
| 0-0D | ISSUED FOR REVIEW | 01/11/2022 | EG | ER | ZO |
| 0-0C | ISSUED FOR REVIEW | 11/22/2021 | EG | ER | ZO |
| 0-0A | FIRST ISSUE | 09/29/2021 | EG | ER | ZO |


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## REFERENCE DOCUMENTS

1. A-ORD-SPEC-001 Rev 0-0A DESIGN CRITERIA

## REFERENCE DRAWINGS

1. D-ORD-0001-001 SH001 Rev 0-0A Single Line Diagram

## NOTES:

1. THIS DRAWING IS INDICATIVE AND INTENDED FOR TENDER PURPOSE ONLY.
2. LAYOUT AND DIMENSIONS OF SUBSTATION FENCE WILL BE DETERMINED PER PROJECT.
3. GIS BUILDING LAYOUT & DESIGN IS INDICATIVE ONLY.
4. PHASING FOR NEW CONSTRUCTION SHALL BE A,B,C.
5. YARD LIGHTING SHOWN IS A REPRESENTATION ONLY. A LIGHTING STUDY SHALL BE CONDUCTED DURING DETAILED DESIGN.
6. LIGHTNING MASTS SHOWN ARE REPRESENTATIVE ONLY. A DIRECT STROKE PROTECTION STUDY SHALL BE CONDUCTED DURING DETAILED DESIGN TO DETERMINE HEIGHT AND LOCATION OF MAST.
7. MV UNDERGROUND FEEDERS ROUTES ARE ILLUSTRATIVE. FINAL ROUTE WILL BE DEFINED IN DETAILED ENGINEERING IN COORDINATION WITH OWNER.
8. THE DESIGN OF THE 138 kV RING AND THE 138/34,5 kV TRANSFORMER ARE NOT PART OF THIS PROJECT.
9. CHQ CONTRACTOR IS RESPONSIBLE OF THE CABLE AND THE TERMINATIONS OF MEDIUM VOLTAGE SIDE OF THE TRANSFORMERS. CABLE TRENCHES WITHIN THE COMED SUBSTATION BOUNDARIES AND STRUCTURES FOR THE MEDIUM VOLTAGE SIDE OF THE TRANSFORMERS WILL BE COMED RESPONSIBILITY.

PE STAMP

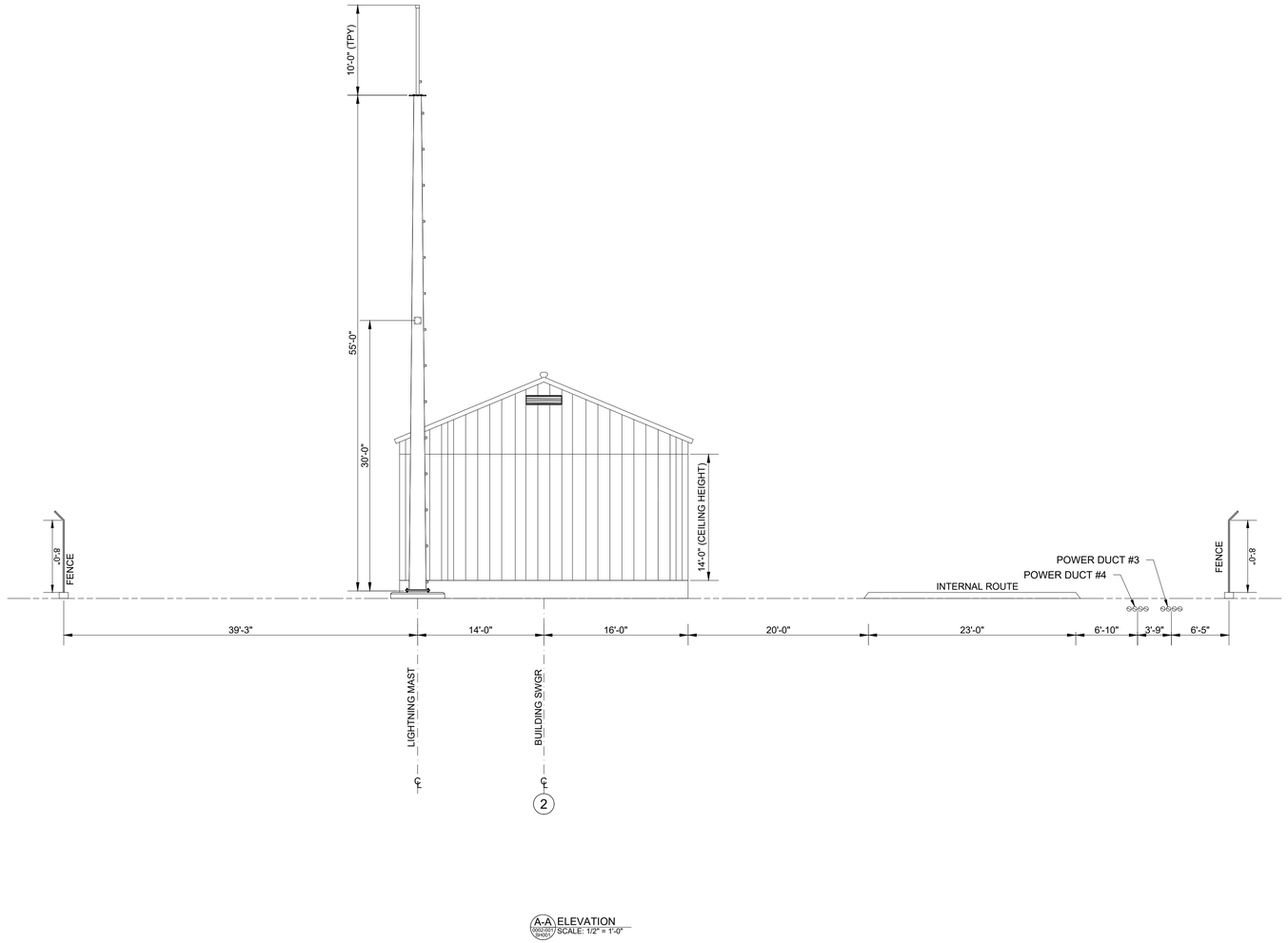
OWNER: CloudHQ

| REV | DESCRIPTION | DATE | BY | CK | APP |
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| 0-0D | ISSUED FOR REVIEW | 01/11/2022 | EG | ER | ZO |
| 0-0C | ISSUED FOR REVIEW | 11/22/2021 | EG | ER | ZO |
| 0-0A | FIRST ISSUE | 09/29/2021 | EG | ER | ZO |

# PROJECT MEDITERRANEAN GENERAL ARRANGEMENT PLAN 138KV/34.5KV

MEDITERRANEAN SUBSTATION

| BY | AH | SCALE: 1/2" = 1'-0" | FILE: D-ORD-0002-001 SH001 |
|---|---|---|---|
| CK | ER | NO. | REV |
| APP | ZO | D-ORD-0002-001 SH001 | 0-0E |
| DATE | 01/11/2022 | | |




A-A ELEVATION
SCALE: 1/2" = 1'-0"

| REV | DESCRIPTION | DATE | BY | CK | APP |
|---|---|---|---|---|---|
| 0-0D | ISSUED FOR REVIEW | 05/12/2022 | AH | ER | 2D |
| 0-0C | ISSUED FOR REVIEW | 01/11/2022 | AH | ER | 2D |
| 0-0B | ISSUED FOR REVIEW | 11/22/2021 | EG | ER | 2D |
| 0-0A | FIRST ISSUE | 10/19/2021 | EG | CK | APP |

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## REFERENCE DOCUMENTS
1. A-ORD-SPEC-001 Rev 0-0A DESIGN CRITERIA

## REFERENCE DRAWINGS
1. D-ORD-0001-001 SH001 Rev 0-0A Single Line Diagram
2. D-ORD-0002-001 SH001 Rev 0-0A General Arrangement Plan

## NOTES:
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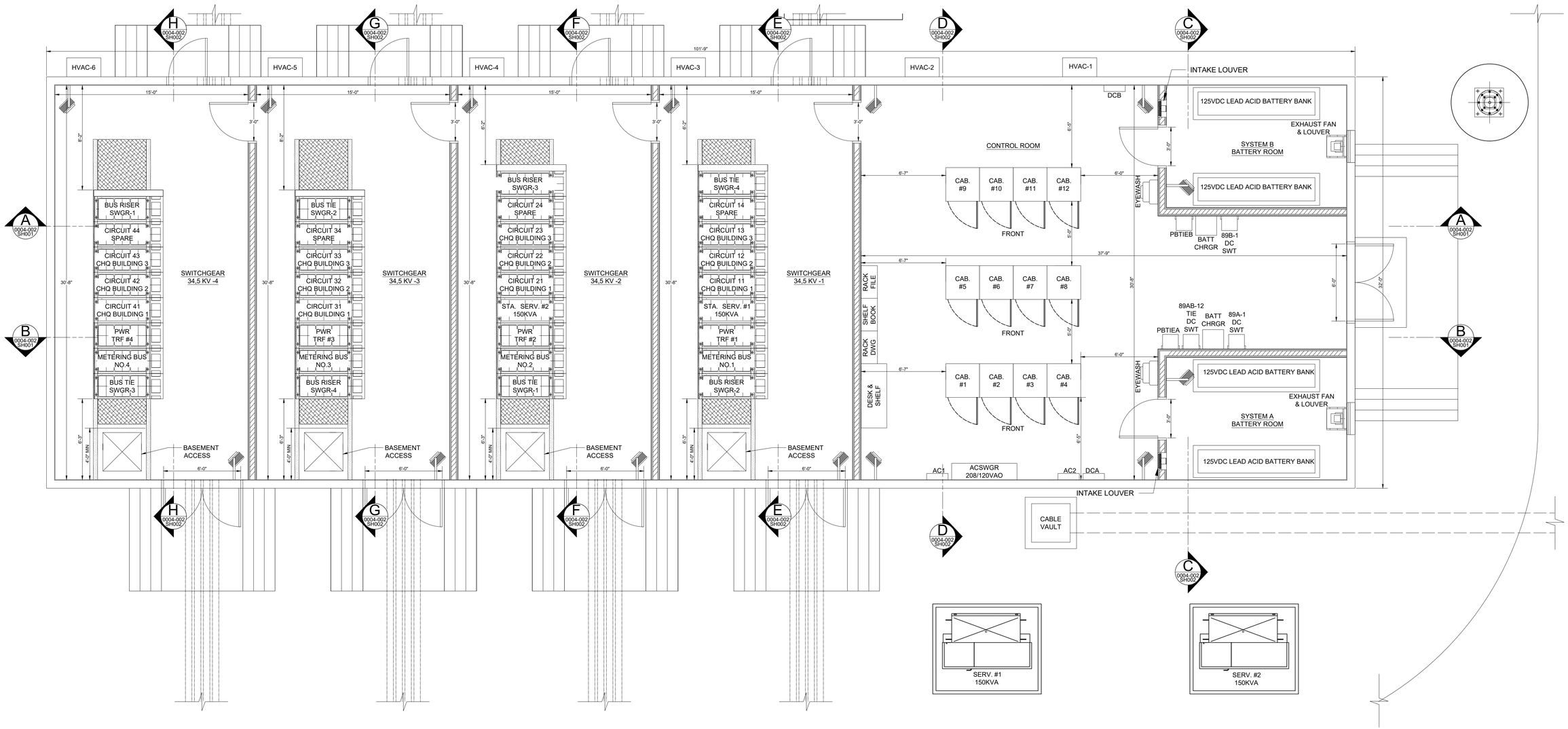
PE STAMP

OWNER: CloudHQ

# PROJECT MEDITERRANEAN
## GENERAL ARRANGEMENT ELEVATIONS 138KV/34.5KV

MEDITERRANEAN SUBSTATION

| BY | EG | SCALE: 1/2" = 1'-0" | FILE: D-ORD-0002-002 SH001 |
|---|---|---|---|
| CK | ER | NO. | REV |
| APP | AH | D-ORD-0002-002 SH001 | 0-0D |
| DATE | 01/11/2022 | | |




| CONTROL AND PROTECTION PANELS | |
|---|---|
| PANEL No. | EQUIPMENT |
| 1 | LAN-A PANEL |
| 2 | LAN-B PANEL |
| 3 | HMI PANEL |
| 4 | SPARE |
| 5 | SWG1 REVENUE METER PANEL |
| 6 | SWG2 REVENUE METER PANEL |
| 7 | SWG3 REVENUE METER PANEL |
| 8 | SWG4 REVENUE METER PANEL |
| 9 | LV BUS1 PANEL |
| 10 | LV BUS2 PANEL |
| 11 | LV BUS3 PANEL |
| 12 | LV BUS4 PANEL |

## REFERENCE DOCUMENTS

1. A-ORD-SPEC-001 Rev 0-0A DESIGN CRITERIA
2. A-ORD-SPEC-003 SYSTEM PROTECTION REQUIREMENTS

## REFERENCE DRAWINGS

1. D-ORD-0001-001 SH001 Rev 0-0A Single Line Diagram
2. D-ORD-0002-001 SH001 Rev 0-0A General Arrangement Plan

| REV | DESCRIPTION | DATE | BY | CK | APP |
|---|---|---|---|---|---|
| 0OC | ISSUED FOR REVIEW | 05/10/2022 | AH | ER | ZO |
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PE STAMP

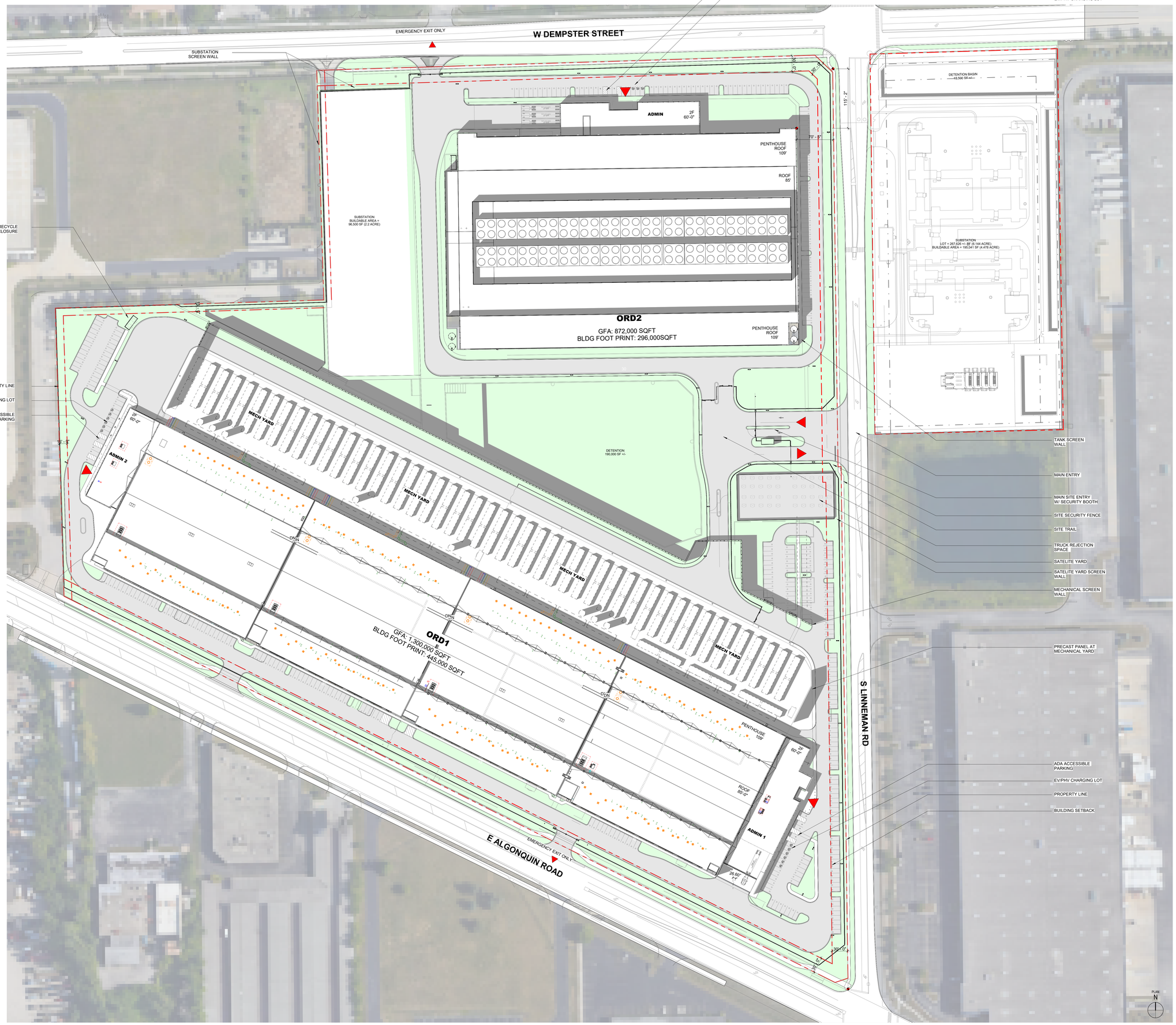
OWNER: CloudHQ

# PROJECT MEDITERRANEAN GIS CONTROL HOUSE BUILDING LAYOUT

MEDITERRANEAN SUBSTATION

| BY | AH | SCALE: 3" = 1'-0" | FILE: D-ORD-0004-001 SH001 |
|---|---|---|---|
| CK | ER | NO. | REV |
| APP | ZO | D-ORD-0004-001 SH001 | 0-0C |
| DATE | 01/11/2022 | | |

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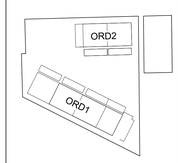
| | | |
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| 4 | 09.19.2025 | IN PROGRESS PRINT |
| 5 | 10.09.2025 | PROGRESS PRINT |
| 6 | 10.09.2025 | UNDERGROUND PACKAGE |
| 7 | 11.05.2025 | ISSUE FOR PERMIT |

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CHQ ORD1




SITE PLAN

**JOB** 24492
**SHEET** A01-01

10/16/2025 4:07:52 PM A01-01 SITE PLAN

## MATERIAL LEGEND

1. Dark Precast



2. Medium Precast



3. Light Precast



4. Glazing



5. Spandrel Glazing



6. Stainless Steel



7. White Composite Metal Panel



8. Anodized Aluminum



9. Dark Anodized Aluminum Louver



10. Light Anodized Aluminum Louver

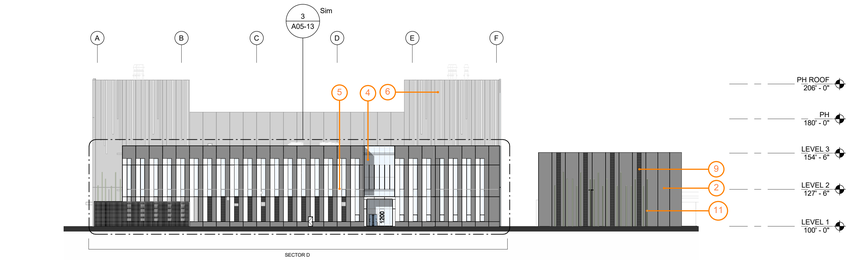


11. Cable and Vine Climbing Vegetation

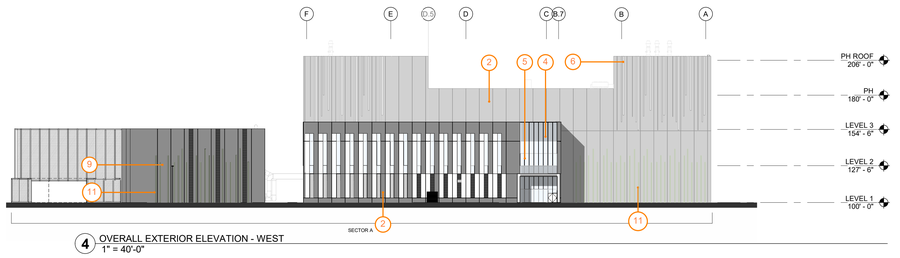


12. Light Accent Precast





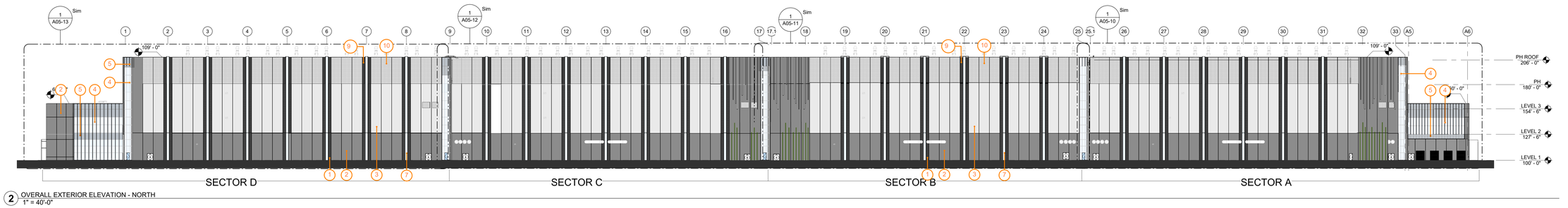

5 OVERALL EXTERIOR ELEVATION - EAST
1" = 40'-0"



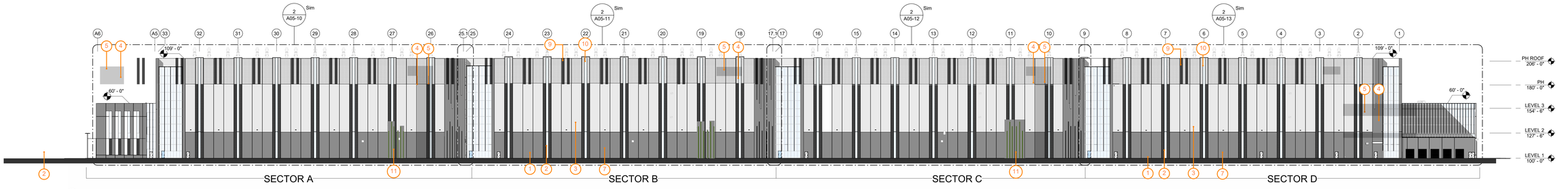

4 OVERALL EXTERIOR ELEVATION - WEST
1" = 40'-0"




3 OVERALL EXTERIOR ELEVATION - NORTH WITH MECH SCREEN
1" = 40'-0"




2 OVERALL EXTERIOR ELEVATION - NORTH
1" = 40'-0"




1 OVERALL EXTERIOR ELEVATION - SOUTH
1" = 40'-0"

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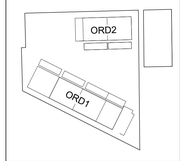
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CHQ ORD1




EXTERIOR ELEVATIONS - OVERALL

**JOB** 24492
**SHEET**

A05-01

10/15/2025 8:29:47 PM A05-01 EXTERIOR ELEVATIONS - OVERALL

## MATERIAL LEGEND

1. Dark Precast



2. Medium Precast



3. Light Precast



4. Glazing



5. Spandrel Glazing



6. Stainless Steel



7. White Composite Metal Panel



8. Anodized Aluminum



9. Dark Anodized Aluminum Louver



10. Light Anodized Aluminum Louver

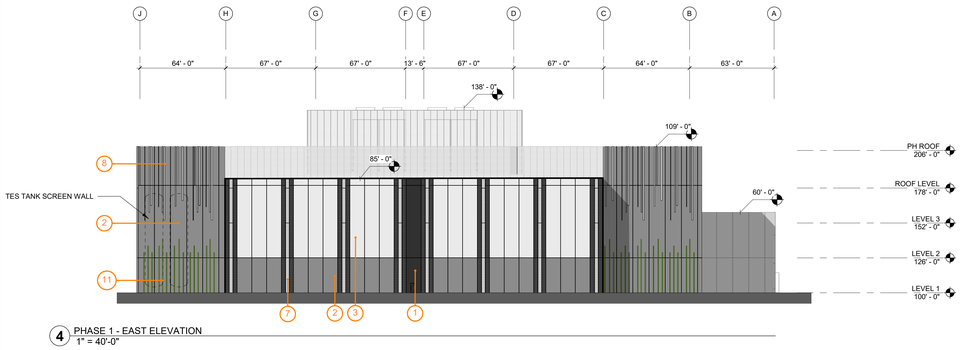


11. Cable and Vine Climbing Vegetation

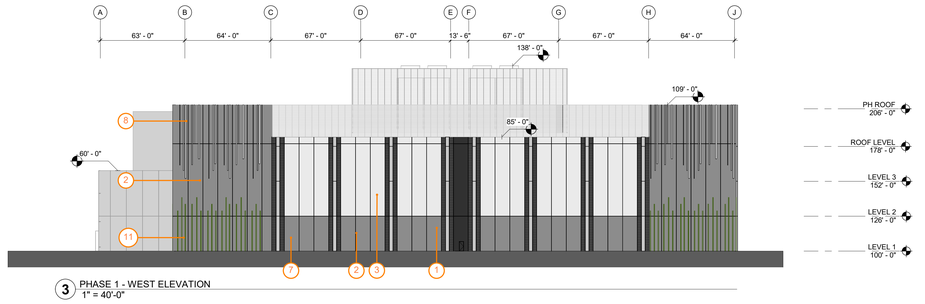


12. Light Accent Precast

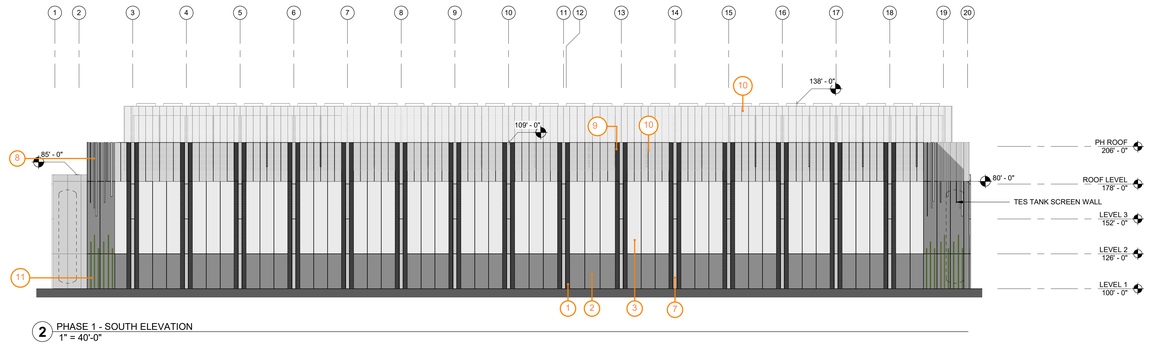




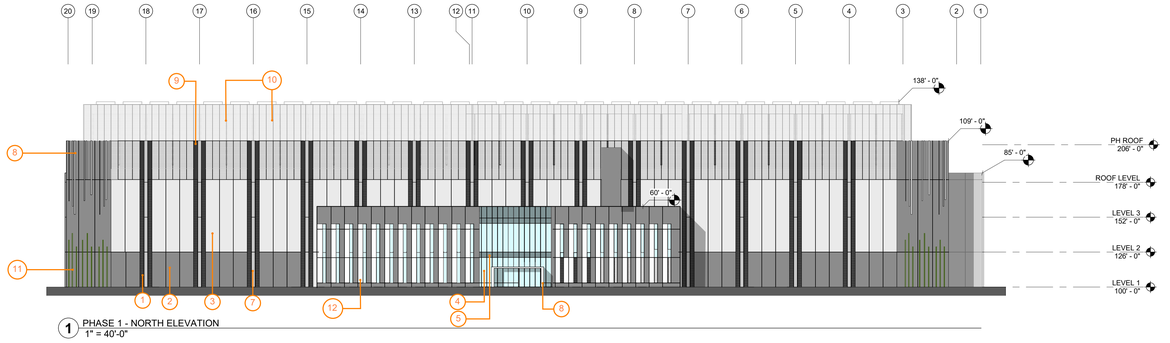

4 PHASE 1 - EAST ELEVATION
1" = 40'-0"




3 PHASE 1 - WEST ELEVATION
1" = 40'-0"




2 PHASE 1 - SOUTH ELEVATION
1" = 40'-0"




1 PHASE 1 - NORTH ELEVATION
1" = 40'-0"

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ISSUES

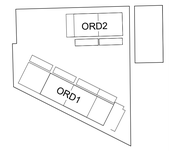
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|---|---|
| 1 | |
| 2 | |
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REVISIONS

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CHQ ORD 2

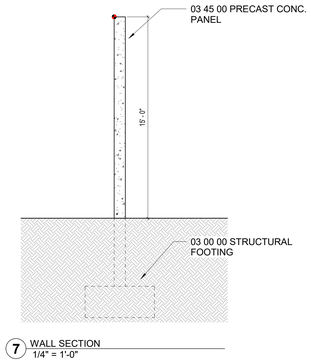



EXTERIOR ELEVATIONS

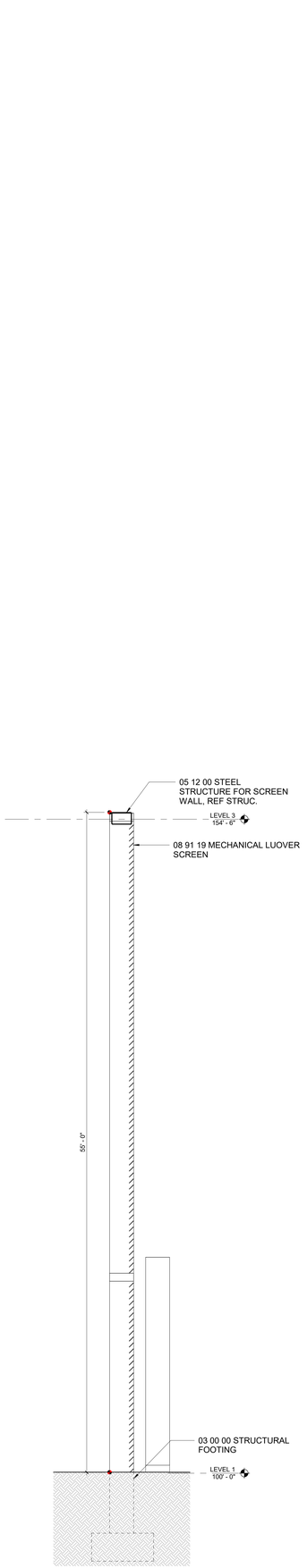
**JOB** 24492
**SHEET**

A05-02

10/14/2025 9:41:34 PM A05-02 EXTERIOR ELEVATIONS



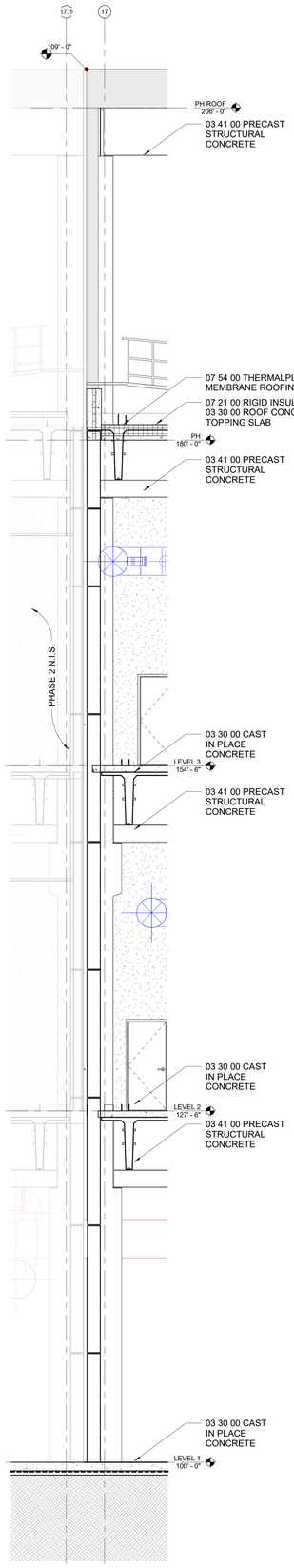

7 WALL SECTION
1/4" = 1'-0"



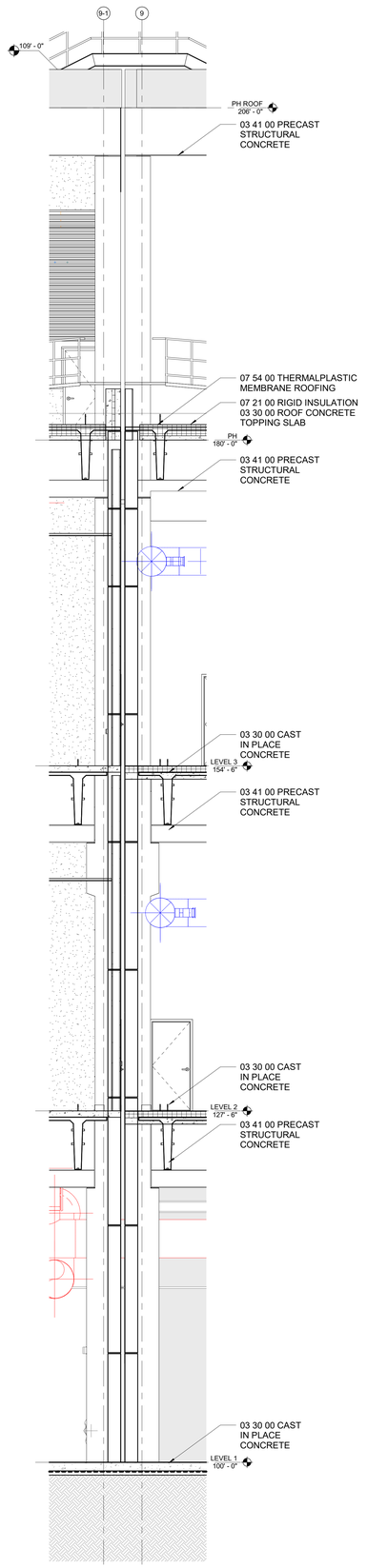

8 WALL SECTION - LOUVERED SCREEN WALL
1/4" = 1'-0"



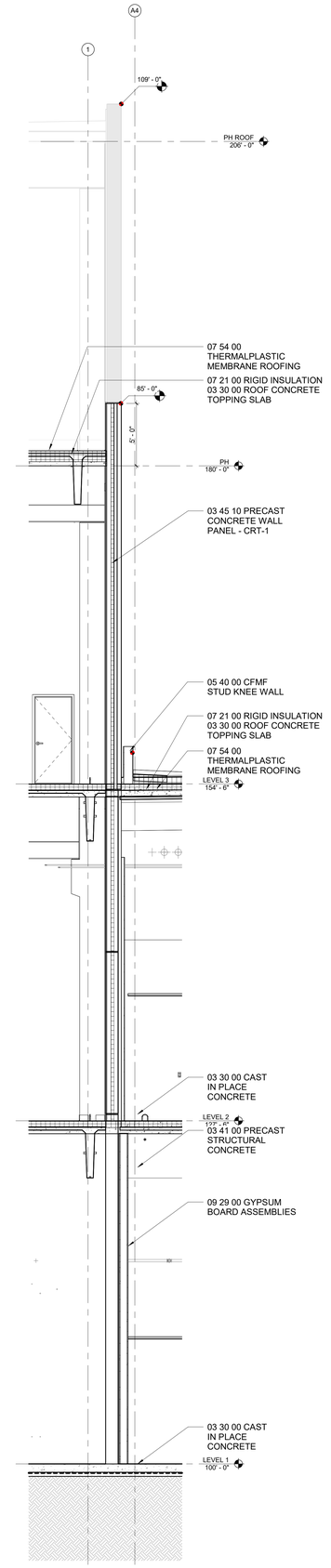

6 WALL SECTION - PRECAST SCREEN WALL
1/4" = 1'-0"



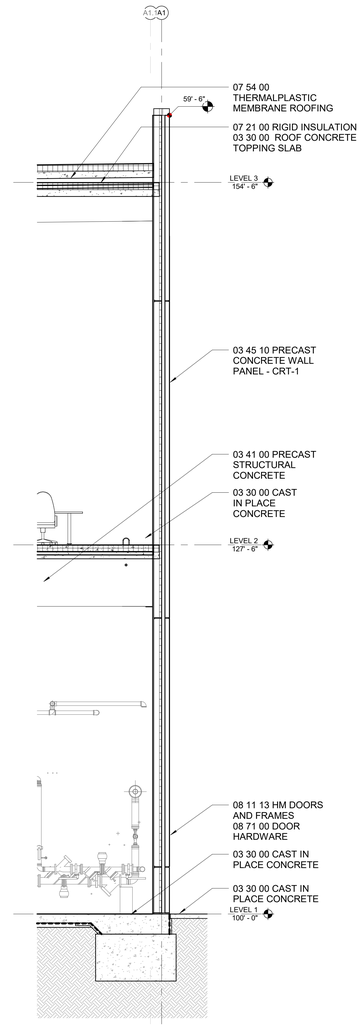

4 WALL SECTION
1/4" = 1'-0"




3 WALL SECTION
1/4" = 1'-0"




2 WALL SECTION
1/4" = 1'-0"




1 WALL SECTION
1/4" = 1'-0"

10/15/2025 8:39:14 PM A06-22 WALL SECTIONS

CORGAN

kW Mission Critical Engineering Member of WSP

PASE
408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS

THESEUS PROFESSIONAL SERVICES
Results Through Service Excellence

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | 100% DESIGN DEVELOPMENT |
| 4 | 09.19.2025 | IN PROGRESS PRINT |
| 5 | 10.09.2025 | PROGRESS PRINT |
| | 10.09.2025 | UNDERGROUND PACKAGE |
| | 11.05.2025 | ISSUE FOR PERMIT |

REVISIONS

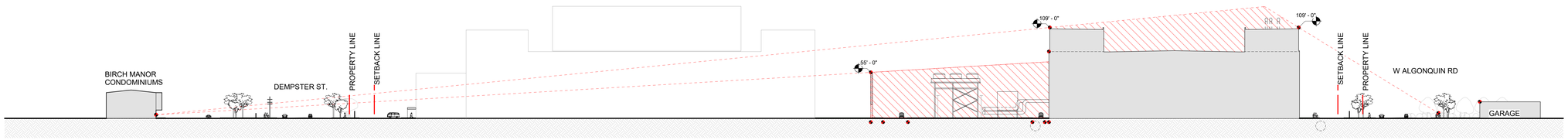
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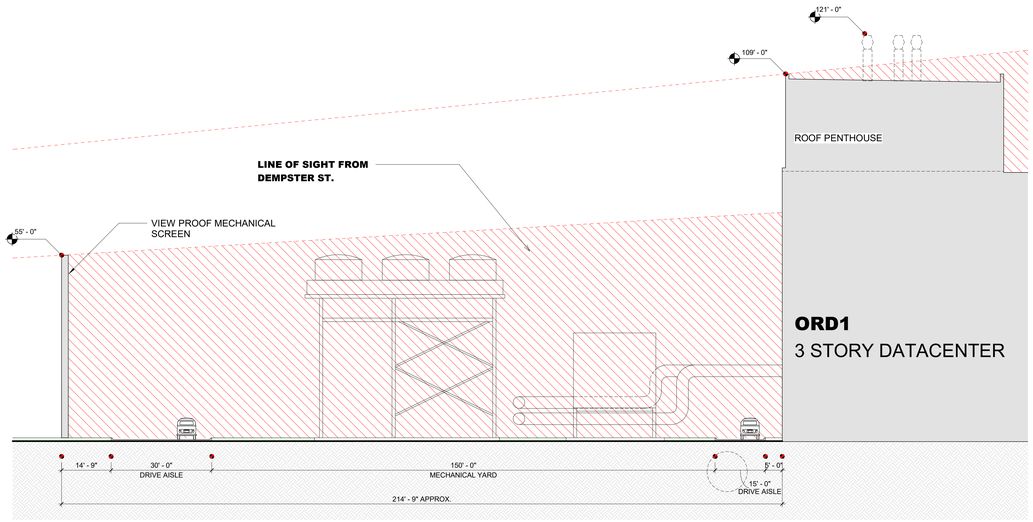
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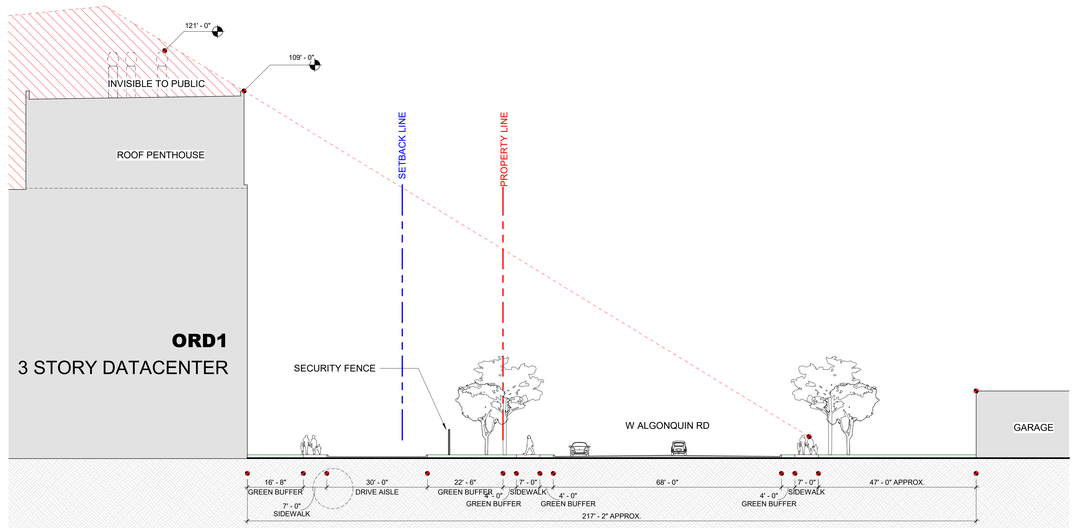
CHQ ORD1

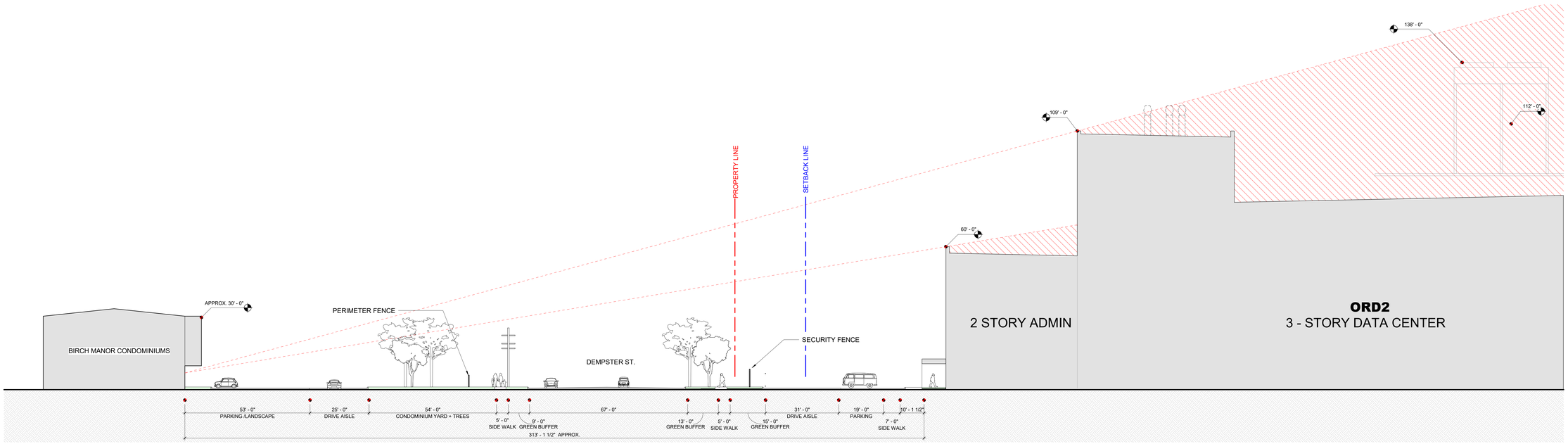
WALL SECTIONS

JOB 24492
SHEET
A06-22




CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

THESEUS PROFESSIONAL SERVICES Results Through Service Excellence

ISSUES

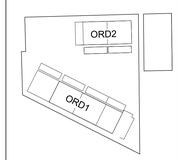
| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
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| 7 | 11.05.2025 | ISSUE FOR PERMIT |

REVISIONS

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CHQ ORD1




SITE SECTION 01

JOB 24492
SHEET PRE-01

10/15/2025 8:42:46 PM PRE-01 SITE SECTION 01




1200



# PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2

BEING A SUBDIVISION IN THE NORTHEAST QUARTER AND NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

## AFFIDAVIT OF OWNERSHIP CERTIFICATE

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AS SHOWN ON THIS PLAT, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATE THIS _____ DAY OF _____A.D., 2025.

_____
OWNER

## NOTARY CERTIFICATE

_____ )
STATE )
)
_____ ) S.S.
COUNTY )

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING CERTIFICATE OF OWNERSHIP, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) OWNERSHIP OF THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 2025.

_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

## SCHOOL DISTRICT STATEMENT

TO THE BEST KNOWLEDGE OF THE OWNER(S), THE PROPERTY IS LOCATED WITHIN THE COMMUNITY CONSOLIDATED SCHOOL DISTRICT #59, AND LOCATED WITHIN THE TOWNSHIP HIGH SCHOOL DISTRICT #214.

_____
OWNER(S) SIGNATURE

## VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

I FIND NO DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS DUE AGAINST ANY OF THE LAND INCLUDED IN THE ABOVE PLAT.

DATED THIS DAY _____ OF _____, 2025.

_____
VILLAGE COLLECTOR

## VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED BY THE VILLAGE ENGINEER OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 2025.

_____
VILLAGE ENGINEER

## PLANNING & ZONING COMMISSION CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED BY THE PLANNING AND ZONING COMMISSION OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 2025.

_____ _____
CHAIRPERSON ATTEST: VICE CHAIRPERSON

## PRESIDENT AND BOARD OF TRUSTEES CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED AND ACCEPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 2025.

_____ _____
VILLAGE PRESIDENT ATTEST: VILLAGE CLERK

## MORTGAGEE CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF COOK )

_____ _____ AS MORTGAGEE, UNDER THE PROVISIONS OF A CERTAIN MORTGAGE
PRINT MORTGAGEE NAME
DATED _____ DAY _____ A.D. 20__ AND RECORDED IN THE RECORDER'S OF DEEDS OFFICE

OF COOK COUNTY, ILLINOIS ON THE _____DAY OF _____ A.D., 20__

AS DOCUMENT NO._____ HEREBY CONSENTS TO AND APPROVES THE SUBDIVISION OF THE LAND AND THE GRANTING OF THE EASEMENT(S) DEPICTED HEREON.

DATED THIS _____DAY OF_____ A.D., 20__

BY_____ ATTEST:_____

BY ITS:_____

## NOTARY CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON(S) WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING MORTGAGEE CERTIFICATE, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) HOLDER OF A MORTGAGE ON THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 2025.

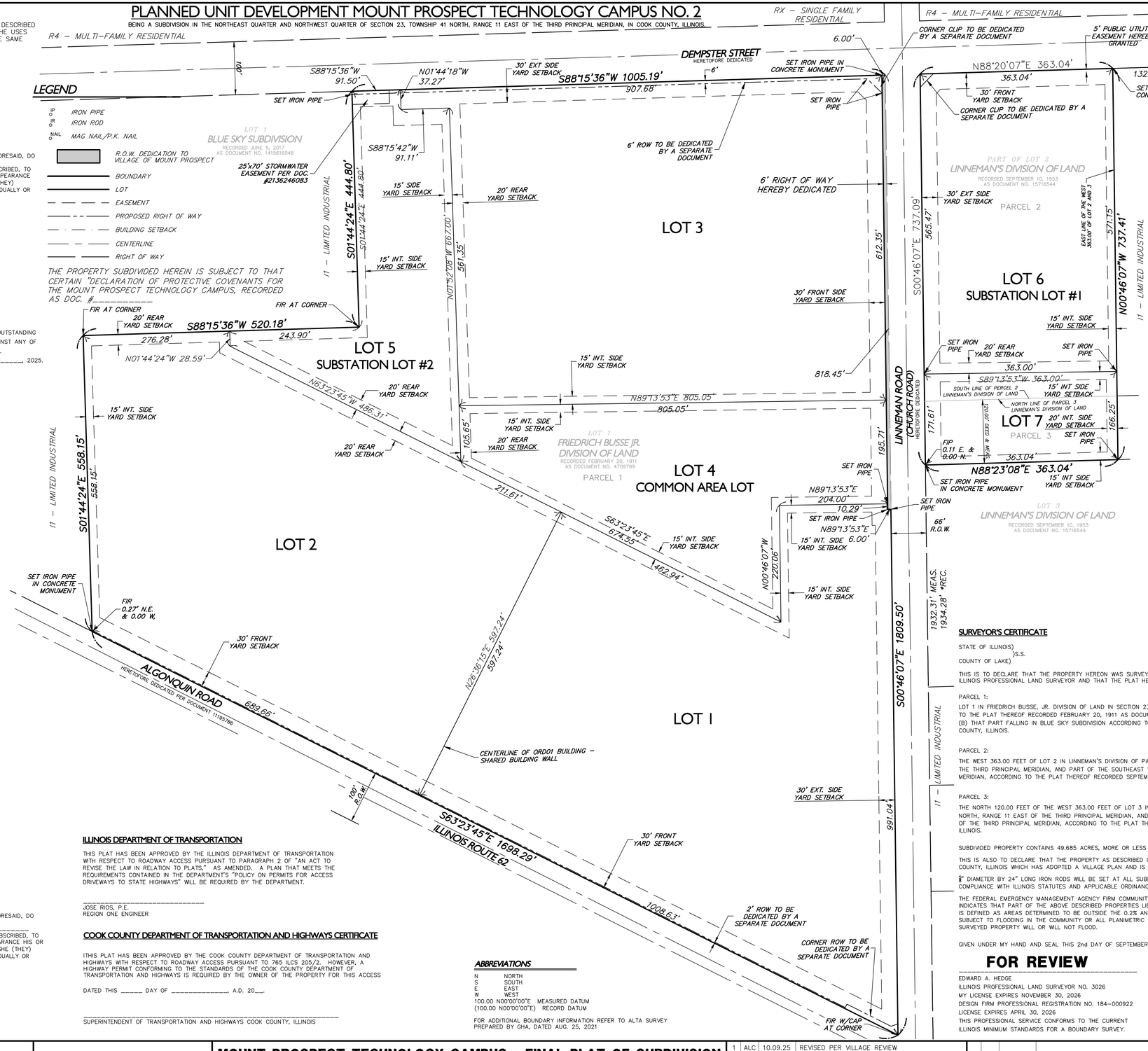
_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

## LEGEND

- IRON PIPE
- IRON ROD
- MAG NAIL/P.K. NAIL
- R.O.W. DEDICATION TO VILLAGE OF MOUNT PROSPECT
- BOUNDARY
- LOT
- EASEMENT
- PROPOSED RIGHT OF WAY
- BUILDING SETBACK
- CENTERLINE
- RIGHT OF WAY

THE PROPERTY SUBDIVIDED HEREIN IS SUBJECT TO THAT CERTAIN "DECLARATION OF PROTECTIVE COVENANTS FOR THE MOUNT PROSPECT TECHNOLOGY CAMPUS, RECORDED AS DOC. #_____"




## GRAPHIC SCALE

100 0 50 100
( IN FEET )
1 inch =100 ft.

N

OWNER: TUR VENTURES LLC
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

PROPERTY: 1200 E. ALGONQUIN ROAD
PIN: 08-23-100-018-0000, PARCEL 1
43.55 ACRES (1,896,981 SF)

1200 DEMPSTER STREET
PIN: 08-23-200-052-0000, PARCEL 2 & 3
6.14 ACRES (267,308 SF)

EXISTING ZONING – I1 LIMITED INDUSTRIAL
PROPOSED ZONING – PLANNED UNIT DEVELOPMENT (PUD)

SURVEYORS NOTE: REFER TO ALTA/NSPS LAND TITLE SURVEY PREPARED BY G.H.A. AUGUST 25, 2021
JOB NO. 5253.100

SEE ALTA FOR LEGEND AND ABBREVIATIONS

NOTE:

THERE SHALL BE AT MOST TWO (2) DIRECT VEHICLE ACCESS BETWEEN THE PLATTED LANDS AND ILLINOIS ROUTE 62 (ALGONQUIN ROAD) FROM LOTS 1 & 2, AS DEPICTED HEREIN.

THERE SHALL BE NO DIRECT VEHICULAR ACCESS TO ILLINOIS ROUTE 62 (ALGONQUIN ROAD) FROM LOTS 3, 4, OR 5.

ALL OTHER ACCESS SHALL BE FROM LINNEMAN ROAD & DEMPSTER STREET.

| | AREA (SF) | AREA (ACRE) |
|---|---|---|
| LOT 1 | 567,625.79 | 13.03 |
| LOT 2 | 495,411.88 | 11.37 |
| LOT 3 | 494,314.09 | 11.35 |
| LOT 4 | 196,199.65 | 4.50 |
| LOT 5 | 139,584.12 | 3.20 |
| LOT 6 | 206,297.37 | 4.74 |
| LOT 7 | 61,323.03 | 1.41 |
| DEDICATED ROW | | |
| LINNEMAN RD | 4,910.41 | 0.11 |
| TOTAL | 2,165,666.34 | 49.72 |

## ILLINOIS DEPARTMENT OF TRANSPORTATION

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT TO PARAGRAPH 2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

_____
JOSE RIOS, P.E.
REGION ONE ENGINEER

## COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

ITHIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT CONFORMING TO THE STANDARDS OF THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS

DATED THIS _____ DAY OF _____, A.D. 20__.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

## ABBREVIATIONS

| | |
|---|---|
| N | NORTH |
| S | SOUTH |
| E | EAST |
| W | WEST |
| 100.00 N00°00'00"E | MEASURED DATUM |
| (100.00 N00°00'00"E) | RECORD DATUM |

FOR ADDITIONAL BOUNDARY INFORMATION REFER TO ALTA SURVEY PREPARED BY GHA, DATED AUG. 25, 2021

**PLAT OF SUBDIVISION PREPARED BY:**

GEWALT HAMILTON ASSOCIATES, INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061

**AFTER RECORDING RETURN PLAT TO:**

GEWALT HAMILTON ASSOC., INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061

**FUTURE TAX BILLS, TO BE FORWARDED TO:**

TUR VENTURES, LLC:
ATTN.: PETE HOLM, VICE PRESIDENT – DEVELOPMENT
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

## SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS.
COUNTY OF LAKE)

THIS IS TO DECLARE THAT THE PROPERTY HEREON WAS SURVEYED AND SUBDIVIDED BY GEWALT HAMILTON ASSOC. INC., UNDER THE SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION:

PARCEL 1:

LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

PARCEL 3:

THE NORTH 120.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

SUBDIVIDED PROPERTY CONTAINS 49.685 ACRES, MORE OR LESS AND ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

THIS IS ALSO TO DECLARE THAT THE PROPERTY AS DESCRIBED ON THE ANNEXED PLAT LIES WITHIN THE CORPORATE LIMITS OF MT. PROSPECT, COOK COUNTY, ILLINOIS WHICH HAS ADOPTED A VILLAGE PLAN AND IS EXERCISING THE SPECIAL POWER AUTHORIZED BY 65 ILCS 5, SECTION 11–12–6.

⅝" DIAMETER BY 24" LONG IRON RODS WILL BE SET AT ALL SUBDIVISION CORNERS, LOT CORNERS, POINTS OF CURVATURE AND POINTS OF TANGENCY IN COMPLIANCE WITH ILLINOIS STATUTES AND APPLICABLE ORDINANCES, UNLESS OTHERWISE NOTED.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM COMMUNITY PANEL NUMBER 17031C0212J WITH AN EFFECTIVE DATE OF AUGUST 19, 2008 INDICATES THAT PART OF THE ABOVE DESCRIBED PROPERTIES LIES WITHIN AN AREA DESIGNATED AS ZONE "X" (NO SHADING). ZONE "X" (NO SHADING) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THIS MAP DOES NOT NECESSARILY SHOW ALL AREAS SUBJECT TO FLOODING IN THE COMMUNITY OR ALL PLANIMETRIC FEATURES OUTSIDE FLOOD HAZARD AREAS. THIS DOES NOT GUARANTEE THAT THE SURVEYED PROPERTY WILL OR WILL NOT FLOOD.

GIVEN UNDER MY HAND AND SEAL THIS 2nd DAY OF SEPTEMBER, A.D. 2025.

**FOR REVIEW**

_____
EDWARD A. HEDGE
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3026
MY LICENSE EXPIRES NOVEMBER 30, 2026
DESIGN FIRM PROFESSIONAL REGISTRATION NO. 184–000922
LICENSE EXPIRES APRIL 30, 2026
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

STATE OF ILLINOIS
Vernon Hills
EDWARD A. HEDGE
035-003026
PROFESSIONAL LAND SURVEYOR


GHA GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive ■ Vernon Hills, IL. 60061
TEL 847.478.9700 ■ FAX 847.478.9701



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**MOUNT PROSPECT TECHNOLOGY CAMPUS - FINAL PLAT OF SUBDIVISION**

**MOUNT PROSPECT TECHNOLOGY CAMPUS**
**1200 E. ALGONQUIN RD & 1200 DEMPSTER ST**
**MOUNT PROSPECT, ILLINOIS**

| NO. | BY | DATE | REVISION |
|---|---|---|---|
| 1 | ALC | 10.09.25 | REVISED PER VILLAGE REVIEW |

FILE: 5253.220_SUB_2025_.dwg
DRAWN BY: ALC
DATE: 10.09.25
GHA PROJECT # 5253.220
CHECKED BY: EAH
DATE: 10.09.25
SCALE: 1"=100'
SHEET NUMBER: 1
OF 1 SHEETS

J:\2022\5253.220 (MOUNT PROSPECT - 2ND GEN PERSON DEVELOPMENT)\2025 PLATS\5253.220_SUB_2025.DWG 10/9/2025 12:36 PM

# PLAT OF DEDICATION

## TO THE

## ILLINOIS DEPARTMENT OF TRANSPORTATION

THAT PART OF LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS THE INTERSECTION OF THE NORTH RIGHT OF WAY LINE OF ALGONQUIN ROAD AND THE WEST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE NORTH 63 DEGREES 23 MINUTES 45 SECONDS WEST ALONG THE NORTH LINE OF SAID ALGONQUIN ROAD FOR 1698.29 FEET TO THE SOUTHEAST CORNER OF BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048; THENCE NORTH 01 DEGREES 44 MINUTES 24 SECONDS WEST ALONG THE EAST LINE OF LAST SAID BLUE SKY SUBDIVISION FOR 2.27 FEET TO A LINE BEING 2.00 FEET NORTHERLY FROM AND PARALLEL WITH THE NORTH RIGHT OF WAY LINE OF ALGONQUIN ROAD; THENCE SOUTH 63 DEGREES 23 MINUTES 45 SECONDS EAST ALONG LAST SAID PARALLEL LINE FOR 1,587.29 FEET; THENCE NORTH 26 DEGREES 36 MINUTES 15 SECONDS EAST FOR 7.00 FEET; THENCE SOUTH 63 DEGREES 23 MINUTES 45 SECONDS EAST FOR 92.78 FEET; THENCE NORTH 71 DEGREES 35 MINUTES 52 SECONDS EAST FOR 13.64 FEET TO SAID WEST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST FOR 21.00 FEET TO THE POINT OF BEGINNING IN COOK COUNTY, ILLINOIS.

AREA TO BE DEDICATED = 4,231.92 SQ.FT. = 0.097 ACRE

PIN 08-23-100-018

### LEGEND

- RIGHT OF WAY LINE
- RIGHT OF WAY LINE
- LOT LINE
- BOUNDARY LINE
- EASEMENT
- HEREBY DEDICATED
- IRON PIPE

### ABBREVIATIONS

| | |
|---|---|
| N | NORTH |
| S | SOUTH |
| E | EAST |
| W | WEST |
| 100.00 N00°00'00"E | MEASURED DATUM |
| (100.00 N00°00'00"E) | RECORD DATUM |

N

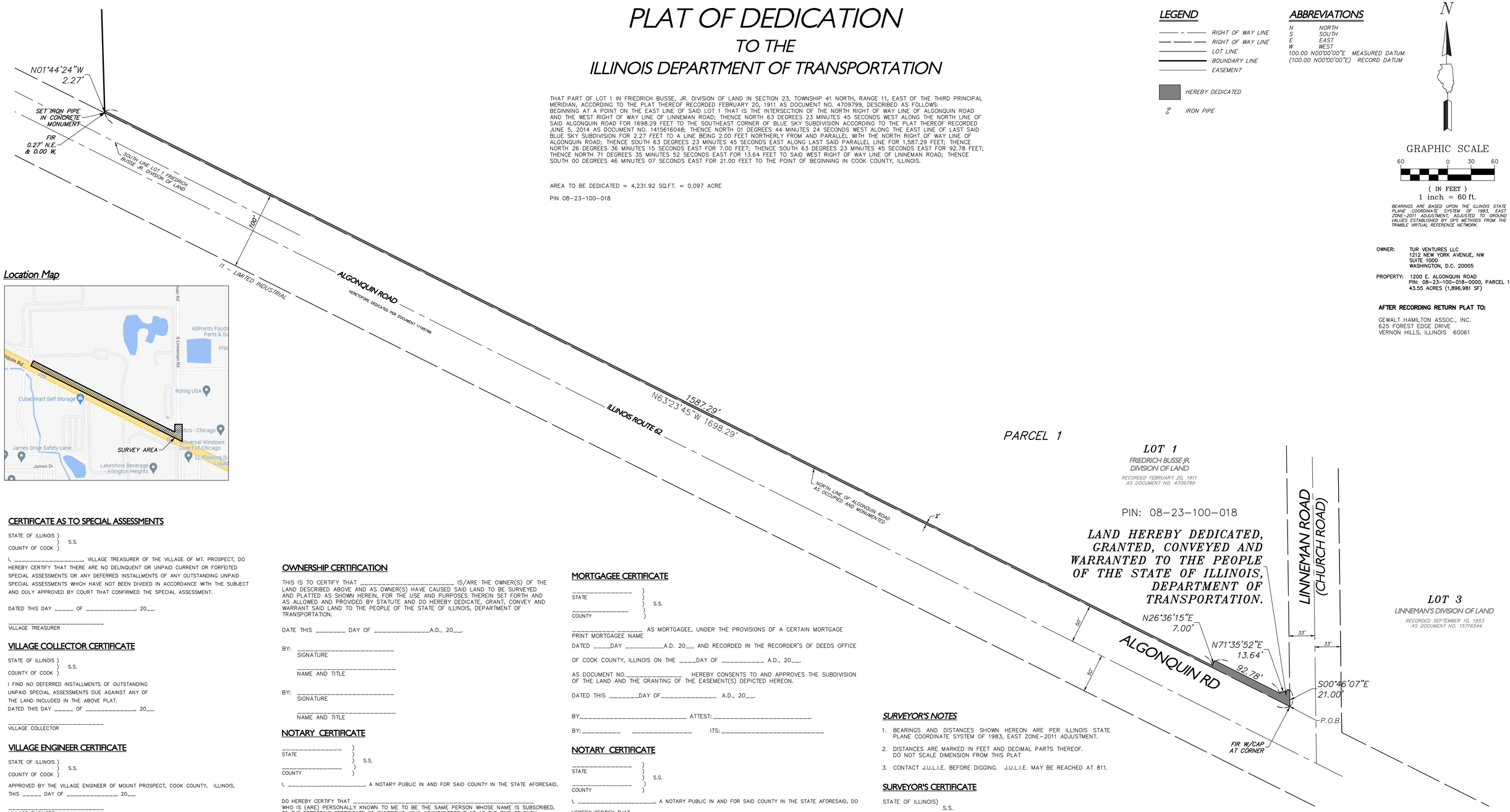
GRAPHIC SCALE

60 0 30 60

( IN FEET )

1 inch = 60 ft.

BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM OF 1983, EAST ZONE-2011 ADJUSTMENT, ADJUSTED TO GROUND VALUES ESTABLISHED BY GPS METHODS FROM THE TRIMBLE VIRTUAL REFERENCE NETWORK.




OWNER: TUR VENTURES LLC
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

PROPERTY: 1200 E. ALGONQUIN ROAD
PIN: 08-23-100-018-0000, PARCEL 1
43.55 ACRES (1,896,981 SF)

**AFTER RECORDING RETURN PLAT TO:**

GEWALT HAMILTON ASSOC., INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061

### Location Map




### CERTIFICATE AS TO SPECIAL ASSESSMENTS

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

I, _____, VILLAGE TREASURER OF THE VILLAGE OF MT. PROSPECT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE SUBJECT AND DULY APPROVED BY COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED THIS DAY _____ OF _____, 20__.

_____
VILLAGE TREASURER

### VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

I FIND NO DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS DUE AGAINST ANY OF THE LAND INCLUDED IN THE ABOVE PLAT.
DATED THIS DAY _____ OF _____, 20__.

_____
VILLAGE COLLECTOR

### VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED BY THE VILLAGE ENGINEER OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 20__.

_____
VILLAGE ENGINEER

### PRESIDENT AND BOARD OF TRUSTEES CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED AND ACCEPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 20__.

_____ _____
VILLAGE PRESIDENT ATTEST: VILLAGE CLERK

### OWNERSHIP CERTIFICATION

THIS IS TO CERTIFY THAT _____ IS/ARE THE OWNER(S) OF THE LAND DESCRIBED ABOVE AND AS OWNER(S) HAVE CAUSED SAID LAND TO BE SURVEYED AND PLATTED AS SHOWN HEREIN, FOR THE USE AND PURPOSES THEREIN SET FORTH AND AS ALLOWED AND PROVIDED BY STATUTE AND DO HEREBY DEDICATE, GRANT, CONVEY AND WARRANT SAID LAND TO THE PEOPLE OF THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION.

DATE THIS _____ DAY OF _____A.D., 20__.

BY: _____
SIGNATURE

_____
NAME AND TITLE

BY: _____
SIGNATURE

_____
NAME AND TITLE

### NOTARY CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID,

DO HEREBY CERTIFY THAT _____
WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING CERTIFICATE OF OWNERSHIP, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) OWNERSHIP OF THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 20__.

_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

### MORTGAGEE CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

_____ AS MORTGAGEE, UNDER THE PROVISIONS OF A CERTAIN MORTGAGE
PRINT MORTGAGEE NAME
DATED _____DAY _____A.D. 20__ AND RECORDED IN THE RECORDER'S OF DEEDS OFFICE

OF COOK COUNTY, ILLINOIS ON THE _____DAY OF _____ A.D., 20__.

AS DOCUMENT NO._____ HEREBY CONSENTS TO AND APPROVES THE SUBDIVISION OF THE LAND AND THE GRANTING OF THE EASEMENT(S) DEPICTED HEREON.

DATED THIS _____DAY OF_____ A.D., 20__.

BY_____ ATTEST: _____

BY: _____ _____ ITS: _____

### NOTARY CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO

HEREBY CERTIFY THAT _____
WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON(S) WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING MORTGAGEE CERTIFICATE, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) HOLDER OF A MORTGAGE ON THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.
WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 20__.

_____NOTARY PUBLIC

_____
COMMISSION EXPIRES

### SURVEYOR'S NOTES

1. BEARINGS AND DISTANCES SHOWN HEREON ARE PER ILLINOIS STATE PLANE COORDINATE SYSTEM OF 1983, EAST ZONE-2011 ADJUSTMENT.
2. DISTANCES ARE MARKED IN FEET AND DECIMAL PARTS THEREOF. DO NOT SCALE DIMENSION FROM THIS PLAT
3. CONTACT J.U.L.I.E. BEFORE DIGGING. J.U.L.I.E. MAY BE REACHED AT 811.

### SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
S.S.
COUNTY OF LAKE)

GEWALT HAMILTON ASSOCIATES INC. DO HEREBY CERTIFY THAT WE HAVE PREPARED THIS PLAT FROM OFFICIAL PLATS AND RECORDS FOR THE PURPOSE OF DEDICATING THE PROPERTY HEREON DESCRIBED AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID PROPERTY. ALL DISTANCES SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED THIS _____ DAY OF _____ 20__.

GEWALT HAMILTON ASSOCIATES, INC.
PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000922

**FOR REVIEW**

EDWARD A. HEDGE
PROFESSIONAL ILLINOIS LAND SURVEYOR NO. 3026
MY LICENSE EXPIRES NOVEMBER 30, 2026

STATE OF ILLINOIS
Vernon Hills
EDWARD A. HEDGE
035-003026
PROFESSIONAL LAND SURVEYOR

### ILLINOIS DEPARTMENT OF TRANSPORTATION ACCEPTANCE

THE PROPOSED DEDICATION TO THE PEOPLE OF THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION IS HEREBY ACCEPTED.

BY: _____ DATE: _____
JOSE RIOS, P.E.
REGION ONE ENGINEER

PLAT OF DEDICATION PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061
DATED: OCT 9TH, 2025

**RETURN PLAT TO**
ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 1
BUREAU OF LAND ACQUISITION
201 WEST CENTER COURT
SCHAUMBURG, IL 60196


GHA GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive ■ Vernon Hills, IL. 60061
TEL 847.478.9700 ■ FAX 847.478.9701



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| NO. | BY | DATE | REVISION |
|---|---|---|---|
| | | | |

FILE: 5253.220_IDOT_POD 2025.dwg
DRAWN BY: ALC
DATE: 10.07.25
GHA PROJECT #: 5253.220
CHECKED BY: EAH
DATE: 10.07.25
SCALE: 1"=60'
SHEET NUMBER: 1
OF 1 SHEETS

# PLAT OF DEDICATION
## TO THE
## COOK COUNTY DEPARTMENT
## OF TRANSPORTATION AND HIGHWAY

**LEGEND**

- RIGHT OF WAY LINE
- RIGHT OF WAY LINE
- LOT LINE
- BOUNDARY LINE
- EASEMENT
- HEREBY DEDICATED
- IRON PIPE

**ABBREVIATIONS**

| | |
|---|---|
| N | NORTH |
| S | SOUTH |
| E | EAST |
| W | WEST |
| 100.00 N00°00'00"E | MEASURED DATUM |
| (100.00 N00°00'00"E) | RECORD DATUM |

OWNER: TUR VENTURES LLC
1212 NEW YORK AVENUE, NW
SUITE 1000
WASHINGTON, D.C. 20005

PROPERTY: 1200 E. ALGONQUIN ROAD
PIN: 08-23-100-018-0000, PARCEL 1
43.55 ACRES (1,896,981 SF)

1200 DEMPSTER STREET
PIN: 08-23-200-052-0000, PARCEL 2 & 3
6.14 ACRES (267,308 SF)

**AFTER RECORDING RETURN PLAT TO:**

GEWALT HAMILTON ASSOC., INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061

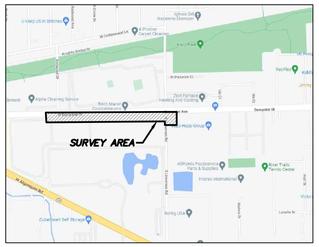
PARCEL 1:
THAT PART OF LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, DESCRIBED AS FOLLOWS: COMMENCING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS 50 FEET SOUTH OF THE NORTHEAST CORNER OF SAID LOT 1 BEING THE INTERSECTION OF THE SOUTH RIGHT OF WAY LINE OF DEMPSTER STREET AND THE WEST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE SOUTH 88 DEGREES 15 MINUTES 36 SECONDS WEST ALONG A LINE 50.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 1 FOR 6.00 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST ALONG A LINE 6.00 FEET WEST OF AND PARALLEL WITH THE ORIGINAL WEST LINE OF LINNEMAN ROAD (66.00 FEET) FOR 34.00 FEET; THENCE NORTH 46 DEGREES 15 MINUTES 15 SECONDS WEST FOR 39.27 FEET TO A LINE 56.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 1; THENCE SOUTH 88 DEGREES 15 MINUTES 36 SECONDS WEST FOR 971.08 FEET TO THE EAST LINE OF BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048; THENCE NORTH 01 DEGREES 44 MINUTES 24 SECONDS WEST FOR 6.00 FEET TO THE NORTHEAST CORNER OF SAID BLUE SKY SUBDIVISION; THENCE NORTH 88 DEGREES 15 MINUTES 36 SECONDS EAST FOR 999.19 FEET TO THE POINT OF BEGINNING IN COOK COUNTY, ILLINOIS.

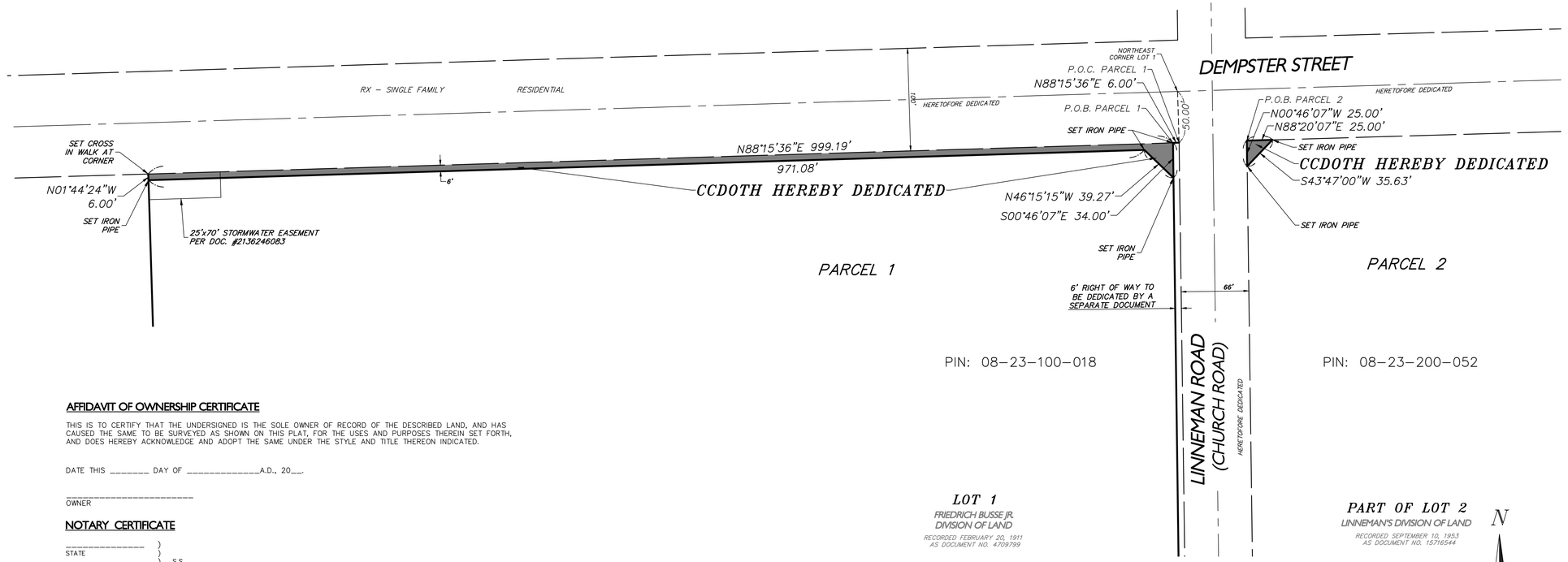
PARCEL 2:
THAT PART OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 2 BEING THE INTERSECTION OF THE SOUTH RIGHT OF WAY LINE OF DEMPSTER STREET AND THE EAST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE NORTH 88 DEGREES 20 MINUTES 07 SECONDS EAST ALONG THE NORTH LINE OF SAID LOT 2 FOR 25.00; THENCE SOUTH 43 DEGREES 47 MINUTES 00 SECONDS WEST FOR 35.63 FEET TO THE WEST LINE OF SAID LOT 2; THENCE NORTH 00 DEGREES 46 MINUTES 07 SECONDS WEST FOR 25.00 FEET TO THE POINT OF BEGINNING IN COOK COUNTY, ILLINOIS.

PARCEL 1 AREA TO BE DEDICATED = 6,386.88 SQ.FT. = 0.147 ACRES
PARCEL 2 AREA TO BE DEDICATED = 312.46 SQ.FT. = 0.007 ACRES

PARCEL 1 PIN 08-23-100-018
PARCLE 2 PIN 08-23-200-052

**Location Map**




BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM OF 1983, EAST ZONE–2011 ADJUSTMENT, ADJUSTED TO GROUND VALUES ESTABLISHED BY GPS METHODS FROM THE TRIMBLE VIRTUAL REFERENCE NETWORK.

## CERTIFICATE AS TO SPECIAL ASSESSMENTS

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

I, _____, VILLAGE TREASURER OF THE VILLAGE OF MT. PROSPECT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE SUBJECT AND DULY APPROVED BY COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED THIS DAY _____ OF _____, 20__.

_____
VILLAGE TREASURER

## VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

I FIND NO DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS DUE AGAINST ANY OF THE LAND INCLUDED IN THE ABOVE PLAT.
DATED THIS DAY _____ OF _____, 20__.

_____
VILLAGE COLLECTOR

## VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED BY THE VILLAGE ENGINEER OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 20__.

_____
VILLAGE ENGINEER

## PRESIDENT AND BOARD OF TRUSTEES CERTIFICATE

STATE OF ILLINOIS )
) S.S.
COUNTY OF COOK )

APPROVED AND ACCEPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, 20__.

_____ _____
VILLAGE PRESIDENT ATTEST: VILLAGE CLERK

## COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

ITHIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT CONFORMING TO THE STANDARDS OF THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS

DATED THIS _____ DAY OF _____, A.D. 20__.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

## AFFIDAVIT OF OWNERSHIP CERTIFICATE

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AS SHOWN ON THIS PLAT, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATE THIS _____ DAY OF _____A.D., 20__.

_____
OWNER

## NOTARY CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

I, _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____
WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING CERTIFICATE OF OWNERSHIP, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) OWNERSHIP OF THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 20__.

_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

## MORTGAGEE CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF COOK )

_____ AS MORTGAGEE, UNDER THE PROVISIONS OF A CERTAIN MORTGAGE
PRINT MORTGAGEE NAME
DATED _____DAY _____A.D. 20___ AND RECORDED IN THE RECORDER'S OF DEEDS OFFICE

OF COOK COUNTY, ILLINOIS ON THE _____DAY OF _____ A.D., 20___.

AS DOCUMENT NO._____ HEREBY CONSENTS TO AND APPROVES THE SUBDIVISION OF THE LAND AND THE GRANTING OF THE EASEMENT(S) DEPICTED HEREON.

DATED THIS _____DAY OF_____ A.D., 20___.

BY_____ ATTEST: _____

BY: _____ _____ ITS: _____

## NOTARY CERTIFICATE

_____ )
STATE )
) S.S.
_____ )
COUNTY )

I, _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____
WHO IS (ARE) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON(S) WHOSE NAME IS SUBSCRIBED, TO THE FOREGOING MORTGAGEE CERTIFICATE, WHO ACKNOWLEDGE THAT AT THE TIME OF SUCH APPEARANCE HIS OR HER (THEIR) HOLDER OF A MORTGAGE ON THE PROPERTY DESCRIBED HEREON AND THAT HE OR SHE (THEY) SIGNED SAID CERTIFICATE AS HIS OR HER (THEIR) OWN FREE AND VOLUNTARY ACT AND DEED INDIVIDUALLY OR JOINTLY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

WITNESS BY HAND AND NOTARIAL SEAL,

THIS _____ DAY OF _____, 20__.

_____
NOTARY PUBLIC

_____
COMMISSION EXPIRES

## SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) S.S.
COUNTY OF LAKE)

GEWALT HAMILTON ASSOCIATES INC. DO HEREBY CERTIFY THAT WE HAVE PREPARED THIS PLAT FROM OFFICIAL PLATS AND RECORDS FOR THE PURPOSE OF DEDICATING THE PROPERTY HEREON DESCRIBED AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID PROPERTY. ALL DISTANCES SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED THIS _____ DAY OF _____ 20___.

GEWALT HAMILTON ASSOCIATES, INC.
PROFESSIONAL DESIGN FIRM LICENSE NO. 184–000922

**FOR REVIEW**

_____
EDWARD A. HEDGE
PROFESSIONAL ILLINOIS LAND SURVEYOR NO. 3026
MY LICENSE EXPIRES NOVEMBER 30, 2026

STATE OF ILLINOIS – Vernon Hills – EDWARD A. HEDGE – 035-003026 – PROFESSIONAL LAND SURVEYOR

## SURVEYOR'S NOTES

1. BEARINGS AND DISTANCES SHOWN HEREON ARE PER ILLINOIS STATE PLANE COORDINATE SYSTEM OF 1983, EAST ZONE–2011 ADJUSTMENT.
2. DISTANCES ARE MARKED IN FEET AND DECIMAL PARTS THEREOF. DO NOT SCALE DIMENSION FROM THIS PLAT
3. CONTACT J.U.L.I.E. BEFORE DIGGING. J.U.L.I.E. MAY BE REACHED AT 811.

PLAT OF DEDICATION PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
625 FOREST EDGE DRIVE
VERNON HILLS, ILLINOIS 60061
DATED: NOVEMBER 3RD, 2022

GHA GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive ■ Vernon Hills, IL. 60061
TEL 847.478.9700 ■ FAX 847.478.9701

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| NO. | BY | DATE | REVISION |
|---|---|---|---|

FILE: 5253.200_CCDOTH_POD 2025.dwg
DRAWN BY: ALC
DATE: 10.09.25
GHA PROJECT # 5253.220
CHECKED BY: EAH
DATE: 10.09.25
SCALE: 1"=50'
SHEET NUMBER: 1 OF 1 SHEETS

**VILLAGE OF MOUNT PROSPECT** 50 S. Emerson Street, Mount Prospect, IL 60056

**STAFF REPORT FROM THE DEPARTMENT OF** Community Development

Jason C Shallcross, AICP, CEcD
Director of Community Development

Ann Choi
Development Planner

**DATE:** October 16, 2025

**CASE NUMBER**
PZ-21-25

**APPLICANT/PROPERTY OWNER**
TUR Ventures, LLC

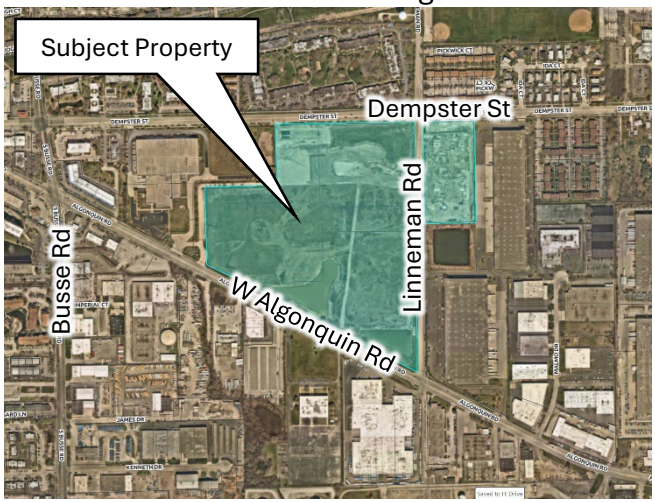
**PUBLIC HEARING DATE**
October 23, 2025

**PROPERTY ADDRESS/LOCATION**
1200 E. Algonquin Rd, 1200 Dempster St

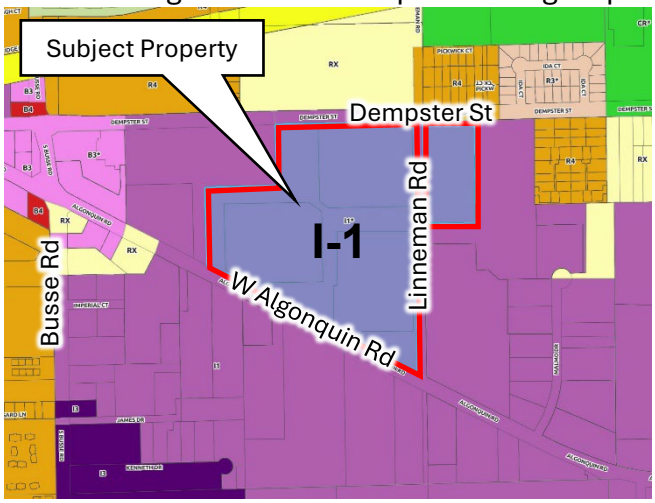
**BRIEF SUMMARY OF REQUEST**

TUR Ventures, LLC ("Petitioner"), received conditional use approval for a final planned unit development and final plat of subdivision approval on June 21, 2022 (Ord. 6634) to construct three (3) data centers and a new electrical substation in conjunction with Commonwealth Edison ("ComEd"). The Petitioner now proposes an amendment to the approved planned unit development and is seeking a final plat of subdivision and conditional use approval for a final planned unit development as a major change for the construction of a two-building data center campus, a second electrical substation, a mechanical yard, a satellite antenna yard, and related site modifications at 1200 East Algonquin Road and 1200 Dempster Street ("Subject Property"). The proposal requires Village Board approval for final plat and conditional use approval for the final planned unit development as a major change. The proposal meets the requirements and standards related to the Village Code, and staff is supportive of the requests.

2024 Aerial Image




2025 Village of Mount Prospect Zoning Map




| EXISTING ZONING | EXISTING LAND USE/ SITE IMPROVEMENTS | SURROUNDING ZONING & LAND USE | SIZE OF PROPERTY |
|---|---|---|---|
| I-1 Limited Industrial | Vacated site of the Mount Prospect Technology Campus and former United Airlines headquarters | North: R-X Single Family Residential, R-4 Multi-Family Residential<br>East: I-1 Limited Industrial<br>South: I-1 Limited Industrial<br>West: I-1 Limited Industrial, data center | 49.72 acres |

**STAFF RECOMMENDATION** APPROVE **APPROVE WITH CONDITIONS** DENY

## DISCUSSION OF PROPOSAL

### BACKGROUND / PROPERTY HISTORY

The Subject Property, formerly the United Airlines world headquarters, was annexed into the Village in 2017. United Airlines occupied the campus for several decades until 2007, when portions of its operations moved to downtown Chicago (77 West Wacker Drive). In 2012, United Airlines relocated all headquarter operations to Willis Tower (233 South Wacker Drive). Following this relocation, the campus in Mount Prospect shifted to Information Technology and limited training operations. In 2013, United Airlines constructed a 172,000 square foot data center west of the Subject Property; this facility is not part of the planned unit development (PUD) discussed below.

In 2021 and 2022, the Village of Mount Prospect approved a final PUD and a final plat of subdivision at the Subject Property for the development of three (3) 84 MW data center buildings (each totaling 566,767 gross square feet), an electrical substation (Substation #1), and related site improvements. Demolition of the former United Airlines campus has since been completed. Additionally, sediment basins west of Linneman Road and site improvements for the electrical substation have been constructed, and Substation #1 is nearing completion.

Per the Petitioner, since the approval of the final PUD, the data center industry has experienced significant changes. Legislative changes that impact data center operations and rapid acceleration of artificial intelligence have increased the demand for data infrastructure. In response, the Petitioner is requesting approval of an amendment to the original PUD ordinance to make modifications that address these evolving industry needs.

### PROPOSAL

The Petitioner proposes to modify the original PUD to construct a two-building data center campus, a second electrical substation (“Substation #2”), mechanical yard, a satellite antenna yard, and related site improvements. The amended plans consolidate two of the previously approved data center buildings into a single, larger building separated by a party wall (“ORD1”) and propose to construct a second, smaller data center building (“ORD2”). Both buildings are increased to three (3) stories in height, as compared to the two-story buildings that were previously approved. The Petitioner has entered into an easement agreement with ComEd for Substation #1 and will enter into a similar agreement for Substation #2, under which ComEd would construct and operate the substations. The data centers and Substation #2 would occupy the former United Airlines campus (1200 E. Algonquin Road or the “Data Center Parcel”), while Substation #1 is nearing completion at 1200 Dempster Street.

The Data Center Parcel consists of approximately 43.31 acres of land, and is bound by Algonquin Road to the south, Linneman Road to the east, and Dempster Street to the north. The Substation #1 Parcel is approximately 6.14 acres in size and is located at the southeast corner of Dempster Street and Linneman Road.

**Site Plan:** The revised site plan proposes a substantial departure from the previously approved PUD, most notably through the introduction of the two new data center buildings that are vastly larger in scale and massing. The two data center buildings are positioned at opposite ends of the Data Center Parcel. ORD1 is located along the length of Algonquin Road on the south side of the Subject Property. ORD1 is designed to allow occupancy by two separate tenants with a “zero lot line” subdivision at the mid-point of ORD1. ORD1 will have a footprint of approximately 445,000 square feet and a gross floor area of approximately 1.3 million square feet, with approximately 240 MW of data center capacity. ORD1 spans more than 1,500 feet in length— over a quarter mile that takes up nearly the entire length

of the Algonquin Road frontage— and reaches a height of 85 feet, increasing to 109 feet when counting the mechanical penthouse, and up to 121 feet when including the rooftop units. ORD2 is designed to be a single occupancy building and is located at the southwest corner of Dempster Street and Linneman Road. ORD2 is proposed to have a footprint of approximately 296,000 square feet and a gross floor area of approximately 872,000 square feet, with approximately 105 MW of data center capacity. ORD2 reaches a height of 138 feet when including the rooftop units. Additional height is required for ORD2 due to the mechanical equipment's location on the rooftop, whereas ORD1 located the majority of its mechanical equipment in an outdoor yard behind the building. ORD2 will have its own administrative / office space, off-street parking, loading docks, and utility connections. Of the gross floor area, ORD1 proposes 56,725 square feet of office space, and ORD2 proposes 32,500 square feet of office space. Ancillary improvements associated with each building include internal security gates and fencing, underground fuel storage for generators, fuel polishing equipment, other support equipment and structures, and underground utilities, including electric, fiber optic, sanitary sewer, water, and storm drainage collection and conveyance.

By comparison, the prior PUD limited the building heights to 52 feet, with parapets and penthouses reaching a maximum of 81 and 79 feet, respectively. The scale of the current proposal results in prominent structures along the Algonquin Road and Dempster Street frontages. **Table 1** below provides a comparison of the bulk standards between the proposal and the previously approved PUD.

| **Table 1: Comparison of Bulk Standards** | | |
|---|---|---|
| | **2022 Final PUD Ordinance** | **2025 Amended Plans** |
| Number of Buildings | 3 (84 MW each) | 2 (ORD 1: 240 MW & ORD 2:105 MW) |
| Building Floor Area | Each building: 566,767 SF<br>(Footprint: 271,017 SF)<br>Total: 1,700,301 SF | ORD1: 1,300,000 SF<br>(Footprint: 445,000 SF)<br>ORD2: 872,000 SF<br>(Footprint: 296,000 SF)<br>Total: 2,172,000 SF<br>(+471,699 SF) |
| Max. Building Height (50') | Height of Building: 52' (to parapet)<br>Equipment Penthouse 81'<br>Administrative Block: 52' | Height of Building: 85' (to parapet)<br>Equipment Penthouse: 109'<br>Mechanicals: 121' (ORD1)<br>Mechanicals: 138' (ORD2)<br>Administrative Block (offices):<br>60' (to parapet) |
| Lot Coverage (75%) | 68.1% | **82%** |
| Interior Side Yard Setback (15') | N/A | **Zero feet (0') between proposed Lots 1 and 2** |
| Transitional Setbacks for buildings, parking lots, and structures (40') | 15' (parking lot)<br>71' (ORD3) | **17.8' for parking lot** (Dempster Street)<br>82' setback (ORD2) |

Due to the larger building footprints and extensive mechanical and accessory structures required for data centers, the project cannot meet the current building height, lot coverage, and transitional setback requirements applicable to traditional light industrial uses. However, given the increased height of the new buildings, the new buildings are set back 10 feet further (from a 71 feet setback to 82.04 feet) than was originally approved along Dempster Street and more than 20 feet further (from a

64.25-foot setback to 82.44 feet) along Algonquin Road.

Located between the two data center buildings, just north of ORD1, is a mechanical yard containing dry coolers, thermal energy storage (TES) tanks and fuel polishing sheds that will be fully screened via a fully opaque acoustically louvered screen wall that serves ORD1; a central, walled surface stormwater basin located north of the mechanical yard; a satellite antenna yard; and Substation #2, located at the northwest portion of the Subject Property, just west of ORD2, that is served by two separate surface storm water basins.

Access to the Data Center Parcel will include two gated emergency only right-in/right-out access on Dempster Street (one existing and one proposed), a new full movement access on Linneman Road, and two new full movement gated emergency accesses on Algonquin Road. All truck traffic and primary vehicular access is proposed on Linneman Road and will be required to use the main entrance on Linneman Road for both ingress and egress. Manned security guard booths and gates will be provided at this entrance. An internal roadway system provides access around the entire perimeter of both data center buildings and serves as a fire lane connecting both sites. Sidewalks and other bicycle/pedestrian improvements that provide pedestrian access around the Subject Property will also be provided.

Substation #1 is located on the east side of Linneman Road. After Substation #1 is complete, a switchgear yard will be constructed on the southern portion of the Substation #1 Parcel to feed electric service under Linneman Road to the Data Center Parcel. The switchgear yard will include a non-occupied GIS-control enclosure proposed at a height of 30 feet which requires relief from the height requirement of 20 feet for accessory structures in an industrial district.

**Parking:** The Petitioner proposes a total of 365 parking spaces, including 16 electric vehicle (EV) spaces and 12 accessible ADA spaces. In accordance with the Village's off-street parking requirements, one parking space per 1.5 employees plus one space per company vehicle is required, with office areas calculated separately. ORD1 includes 89,225 square feet of office space, while ORD2 includes 32,500 square feet. At full buildout, the Petitioner anticipates between 225 and 450 permanent employees, with no company vehicles proposed. Based on this employment range and the total office area, the zoning code requires between 507 and 657 parking spaces. The Petitioner projects that approximately 240 employees will occupy the campus within a 24-hour period, with most (not exceeding 180 employees) working during standard daytime hours. The current plan proposes an additional 20 parking stalls when compared to the 2022 Final PUD approval. Because employee shifts are staggered, staff finds the proposed 365 parking spaces to be adequate to accommodate the anticipated demand.

Similarly, the 2022 Final PUD anticipated anywhere between 75 to 150 permanent employees per building or a total of 225-450 permanent employees. Given the employment range, it was estimated that anywhere between 474 and 586 parking stalls would be required by Code. Only up to 75% of the total number of employees were considered as working during daytime hours. At the highest employment projection of 150 employees per building (or 450 employees total), peak daytime operation was projected to require 338 employees or 338 total parking stalls. The 2022 Final PUD provided a total of 345 parking spaces.

| Table 2: Parking Comparison | | |
|---|---|---|
| | **2022 Final PUD Ordinance** | **2025 Amended Plans** |
| Office Gross Floor Area (SF) | ORD1: 26,600 SF<br>ORD2: 31,360 SF<br>ORD3: 31,360 SF<br>**Total: 89,320 SF** | ORD 1: 56,725 SF<br>ORD 2: 32,500 SF<br>**Total: 89,225 SF** |
| No. of Employees | 75-150 per building<br>Total: 225-450 employees | Total: 225-450 employees<br>180 employees (during standard daytime hours)<br>240 employees (within a 24-hour period) |
| Parking Required | Based on office + number of employees:<br>**474-586 parking stalls** | Based on office + number of employees:<br>**507-657 parking stalls** |
| | Based on 75% of total number of employees or 450 * 0.75 = **338 parking stalls** | Based on:<br>Total number of employees during standard daytime hours: **180 stalls**<br>Total number of employees within a 24-hour period = **240 parking stalls** |
| Parking Provided | **345 parking stalls** (including accessible stalls) | **365 parking stalls** (including 16 EV and 12 accessible stalls) |

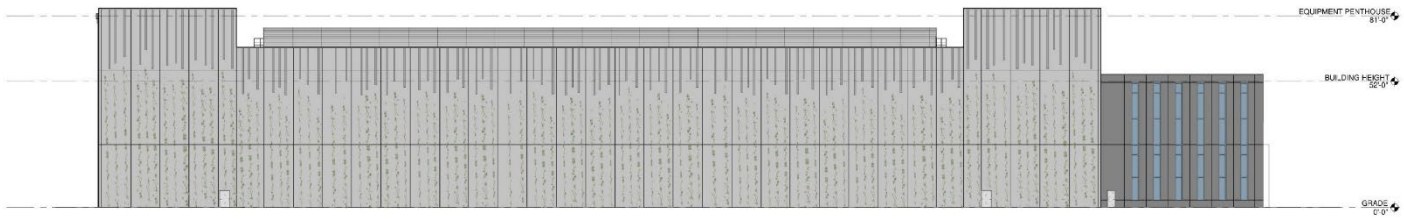
**Building Elevations:** The 2022 Final PUD approved elevations that were composed primarily of flat cement walls accented with climbing vines and exposed roof drains have been improved with the 2025 amended plans. The Petitioner worked diligently with planning staff through multiple iterations of building elevations to improve the architectural design of the data center buildings. The challenge was in breaking down the mass and scale of the new buildings, to reduce repetition, and to create sufficient modulation and articulation of the building facades through meaningful recesses, projections, and variations in form and material. Per the Petitioner, the proposed elevations pay tribute to the Chicago School of architecture using multiple layers of detail and variation in materials and color to articulate the individual buildings. The glazed areas were significantly increased; staircases, office spaces, and breakrooms feature full glazing, and the stair tower roof forms were lowered to reduce the overall massing. The façades are articulated through changes in plane, material transitions, and patterns to help break up the overall massing.

ORD2 is the only data center building that is adjacent to the residential uses to the north of the Subject Property; ORD2 is located approximately 313 feet from the closest residential buildings on the north side of Dempster Street. The Petitioner worked to mitigate the height of ORD2 by strategically placing the shorter, two-story “administrative block” (height of 60 feet to parapet) closest to the Dempster Street frontage and locating the tallest portion of ORD2 further back from the closest residential buildings.

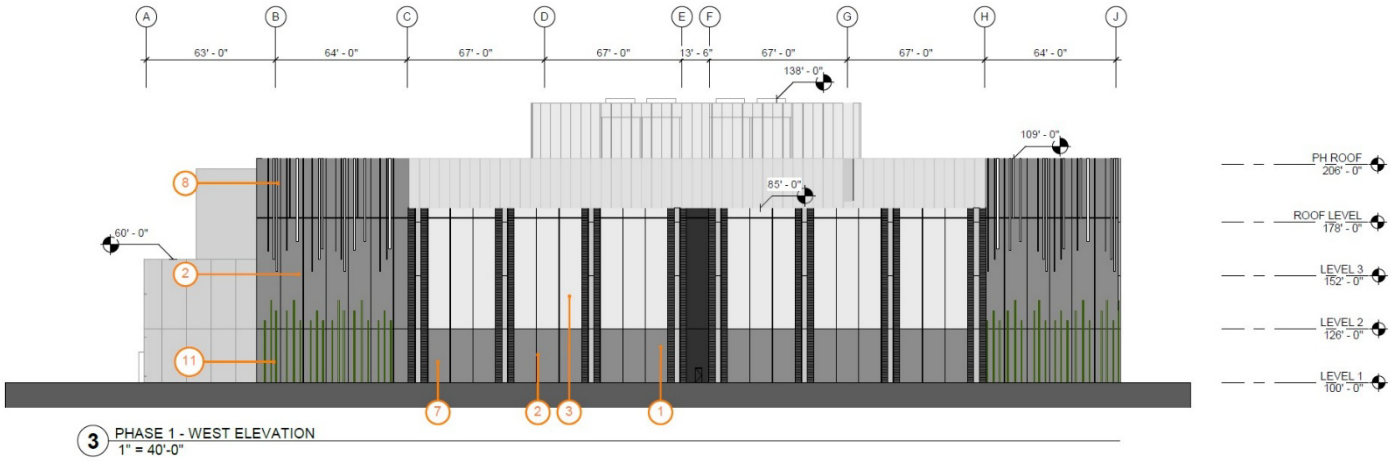
Cable and vine climbing vegetation, stainless steel icicles, and architectural louvers are also key architectural elements of the building facades. The color scheme consists of cool, muted tones appropriate for industrial buildings of this scale and all rooftop mechanical units will be screened from public view. The proposed design is appropriately scaled to the surrounding industrial neighborhood.

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**2022 Final PUD Proposal (Typical Side Elevation)**




**Current 2025 Proposal (ORD2 West Elevation)**




**Mechanical Equipment:** The current 2025 proposal introduces a significant design change from the 2022 Final PUD approval by relocating the majority of the heat rejection equipment from the rooftops to a new at-grade mechanical yard. For ORD1, the Petitioner proposes 17 chillers (inside the building) and 102 dry cooler units within an at-grade mechanical yard. Locating the equipment at grade provides several advantages over the previously approved roof-mounted configuration. Performance is improved as the equipment draws in cooler air from ground level and is not affected by the hot exhaust emitted by the rooftop generators. The at-grade location also reduces the structural load of the building, eliminating the need for additional support to accommodate the equipment's weight. The mechanical yard will be fully enclosed by a 55-foot-tall acoustical louvered screen to provide complete visual screening and sound attenuation. ORD1 also includes 137 diesel-driven generators (including 8 Tomball Controls enclosed units) located within rooftop penthouses.

ORD2 proposes 10 chillers (inside the building) and 62 diesel-driven generators, also housed within rooftop penthouses. A total of 199 generators are proposed across both buildings to operate the data center under normal and emergency conditions. The rooftop chillers will be screened from view by a 28-foot-tall sound barrier/parapet wall.

By comparison, the 2022 Final PUD placed all mechanical equipment on the rooftops of both buildings, including 82 chillers and 49 generators per building. The generators were to be housed in penthouses on two sides of each building, with two units located in shared concrete rooms. Table 3 provides a comparison of the mechanical equipment between the 2022 Final PUD and the amended proposal.

Several equipment quantities have been updated since the modeling and calculations for the sound assessment were completed. The Petitioner states that the original sound study dated October 2, 2025, evaluated 96 dry cooler units for ORD1. An updated study dated October 16, 2025, now reflects

102 dry cooler units to provide redundancy, though the total heat rejection remains unchanged. Because the load is distributed among more units operating at lower fan speeds, the overall sound levels are not expected to increase. As stated in the updated sound assessment report ("October 16th Update," page 9), these revisions result in only minor changes and do not affect the study's conclusions.

**Accessory Structures:** Several accessory structures are proposed on the roof of each building, at grade level, and below grade in the event of an emergency or power outage to keep the data centers and electrical infrastructure operating. A total of 12 thermal energy storage tanks and 10 fuel oil polisher sheds are proposed at grade level, and a total of 40 diesel fuel storage tanks are proposed underground. Each underground tank will be between 15' and 20' below grade.

Thermal energy storage (TES) tanks: The TES tanks are designed to mitigate chilled water (CHW) temperature fluctuations and spikes resulting from sudden increases in IT load. They also provide additional thermal capacity during power outages, helping to maintain rack conditions while the chillers are brought back online. In the event of an outage, the pumps utilize water and a 32% propylene glycol solution within the tanks to cool the systems until the backup generators can run the chillers that ordinarily cool the system. Each TES tank is 60 feet tall and located above grade within the mechanical equipment yard. To preserve visual aesthetics, an 80-foot-tall screen wall is provided to conceal a pair of TES tanks that are located at the southeast corner of ORD2.

Fuel oil polisher sheds: The fuel oil polisher sheds are a supplement to the rooftop generators in case of a power outage. During a power outage, the backup generators provide electricity to the system. As the generators run on diesel fuel, and outages are rare, the fuel must be periodically polished to remove water (that naturally accumulates from humidity) and prevent sediments from settling. Within each shed are mechanical pumps, valves, and a fuel oil polisher. The pumps periodically cycle the fuel from the underground fuel tanks to the fuel oil polisher to remove the water from the fuel.

Underground fuel tanks: Below-grade storage tanks hold diesel fuel in the event of a power outage. Total fuel storage accounts for up to a 48-hour power outage. The underground tanks will have double-wall construction and leak detection systems. Each tank is approximately 12'-6" tall, with a minimum 3' cover, with the exact depth depending on topography and coordination with other site utilities.

Adiabatic dry coolers: Adiabatic dry coolers use a "closed loop" heat rejection system that normally uses zero water to cool the servers. This system uses internal "fan walls" in the server halls that pull in hot air generated by the servers, and liquid-filled coils that then reject the heat. The system also includes the transfer of heated air, via similar liquid-filled coils, from the servers to outdoor chillers and coolers that then reject the heat to the ambient air. The liquid in the coils is water and food-grade (non-toxic) propylene glycol. Once a building's system is filled with water upon commencement of building operations, the system, when operated and maintained properly, does not require any additional water, unless the outdoor temperature reaches 92+ degrees Fahrenheit, at which time the system uses sprayers to further cool some of the cooler's elements.

The following table summarizes the type and number of mechanical units and storage tanks between the previously approved PUD and the current proposal.

**Table 3:**
**Comparison of the No. and Types of Mechanical Equipment / Accessory Structures**

| | Previous PUD 2022 | | | 2025 Amended Plans | |
|---|---|---|---|---|---|
| **Types of Equipment / Storage Tanks** | ORD1 | ORD2 | ORD3 | ORD1 | ORD2 |
| Underground diesel fuel tanks | 10 | 10 | 11 | 27 | 13 |
| Thermal energy storage (TES) tanks | 6 | 6 | 6 | 8 | 4 |
| Fuel oil polisher sheds | 2 | 2 | 2 | 8 | 2 |
| Underground urea tanks | 2 | 2 | 2 | 8 | 2 |
| Dry coolers | None | None | None | 102 (mech yard) | 30 (rooftop) |
| Generators | 49 (rooftop) | 49 (rooftop) | 49 (rooftop) | 137 (rooftop) | 62 (rooftop) |
| Chillers | 82 (rooftop) | 82 (rooftop) | 82 (rooftop) | 17 (interior,1st fl) | 10 (interior,1st fl) |

**Satellite Antenna Yard:** As part of the amendment request, a new satellite antenna yard is proposed that will provide an 8-foot-tall antenna and a total of 40 satellite receivers that are between 4 feet to 6 feet tall. Since the zoning code restricts the number of ground mounted dishes to one per zoning lot, relief is required to permit more than one dish antenna on the property and staff is supportive of the request. A condition of approval will require the installation of an 8-foot-tall fully opaque screen wall around the north, south and east sides of the antenna yard to fully screen all antenna yard elements from public view. The public facing side of the solid 8-foot-tall wall shall incorporate a form-liner design, subject to the approval of the Community Development Director.

**ComEd Substation #2:** To power each of the buildings and to meet current market capacity demands, it is necessary to install a second electrical substation with accessory improvements that satisfy ComEd requirements. An additional substation will be constructed on an approximately 3.2-acre parcel in the northwest corner of the campus. This second substation will be constructed and operated by ComEd at the northwest corner of the Data Center Parcel and access to this substation will use the existing right-in/right-out access drive on Dempster Street for emergency purposes only.

Drawings that contain specifics on the number and height of the different substation elements for Substation #2 are not yet available, but it is expected that these elements will be similar in number and scale to the elements that were provided for Substation #1. For reference, the tallest equipment in Substation #1 includes 12 skinny static masts that are approximately 86' in height, and the majority of the equipment is below 30' in height. Other notable equipment that were provided in Substation #1 included high busses, transformers, and a prefabricated metal control enclosure. In response to discussions with the Village, the north and west perimeter fences along the substation frontage have been revised to a 15-foot-tall solid wall that will be located along the north and west sides of the new substation. Additionally, Substation #2 will be screened by several layers of landscape plantings including the existing right-of-way trees, a row of deciduous trees, a mix of deciduous and evergreen shrubs, and a combination of perennials and ornamental grasses, along the north wall of the substation. Relief will be required to permit the 15-foot-tall wall as code only permits an 8-foot-tall fence in industrial districts. Staff is supportive of the request, and a condition has been added that will require the public facing side of the solid 15-foot-tall wall to incorporate a form-liner design, subject to the approval of the Community Development Director.

Due to reconfiguration of the data center buildings and Substation #2, the stormwater basins on the Data Center Parcel will be relocated as shown in the plans. A central, walled surface stormwater basin is proposed north of the mechanical yard ORD1, with supplemental underground stormwater storage below the parking area northeast of ORD1. Separate surface storm water basins will serve Substation #2.

**Landscaping:** The Petitioner submitted a landscape plan which is intended to screen the proposed buildings, Substation #2, mechanical yard, and satellite antenna yard from public view as much as feasible. In total, 321 new trees, 1,521 new shrubs, over 500,000 square feet of sod (meadow seed mix), and over 129,000 square feet of detention basin plantings are proposed for the Subject Property. The project proposes continuous 6-foot-tall evergreen shrubs to screen the loading docks located at the northwest corner of ORD2, a combination of deciduous shrubs and evergreen shrubs that range from 3 feet to 15 feet, clusters of deciduous trees, and additional landscaping along the Dempster Street frontage to minimize ORD2's visual impact to the residential uses to the north. The Linneman Road street frontage (along the east side of ORD2 and the satellite antenna yard) is lined with deciduous trees that are spaced less than 75 feet apart with clusters containing 7 shrubs or ornamental grasses per cluster spaced at intervals of 35 feet or less to meet code. Continuing further south along the Linneman Road street frontage (along the east side of ORD1), clusters containing 7 shrubs or ornamental grasses per cluster are spaced at intervals of 35 feet or less are to meet code; and shade trees will be provided within the parking lot landscape islands and within the landscape butter along Linneman Road.

A 24-foot-wide landscape buffer will be provided along the Algonquin Road frontage. A continuous 6-foot-tall evergreen hedge and additional landscaping will also be provided along the Algonquin Road frontage to screen the parking, trash enclosure and loading area of ORD1 from public view.

The petitioner is requesting relief from strict conformance of the foundation and perimeter landscaping requirements. Foundation landscaping will not be provided along the north, south and east elevation of ORD1 due to site constraints. While a 3-foot-tall screen/buffer and shade trees spaced 50 feet apart are required when an exterior side yard is located across the street from a residential use (north side of ORD2), there are gaps in the screen/buffer, and shade trees are not provided along the entire length of ORD2. Code also requires an even 50/50 distribution of evergreen shrubs and deciduous shrubs. The petitioner requests a mix of 43/57 mix of evergreen shrubs and deciduous shrubs as a precisely even ratio of evergreen and deciduous shrubs was not achievable in light of site constraints and design goals. These noncompliant items require relief from the landscaping requirements.

As previously discussed, the project is requesting relief from the lot coverage requirement. A related but separate PUD standard requires that the area of open space provided in a planned unit development shall be at least that required in the I-1 zoning district. The project is requesting an exception to permit a reduction in the area of open space from 25% to 18% and staff is supportive of the request.

**Traffic:** The proposed use generally has a much lower employee count compared to other uses that utilize the same amount of gross floor area. Site access is clear and will be well defined by signage. Primary access is proposed on Linneman Road via two inbound lanes (one for auto traffic and a second for trucks) and a single outbound lane. Two right-in/right-out accesses are proposed on Dempster Street (one existing and one proposed) and two new full movement accesses are proposed on Algonquin Road. Algonquin Road and Dempster Street will be gated and used for emergency

purposes only. At its peak, the previous United Airlines headquarters accommodated over 3,500 employees. Per the traffic study, data centers are relatively low generators of traffic and will have a considerably lower impact on traffic in the surrounding area.

The Petitioner also prepared a revised traffic impact study to evaluate the proposed use's impact on the areas roadways. The traffic study suggests the project will have little effect on the operations of the area roadway network. The study also proposes the following recommendations:

- Stop signs will be installed for exiting traffic at all the proposed access driveways.
- The Linneman Road access will provide two inbound lanes (one for auto traffic and a second for trucks) and a single outbound lane.
- Access to Algonquin Road and Dempster Street will be gated and for emergency use only.

**Public Improvements:** Public sidewalks will be constructed on all three frontages of the Subject Property, which will connect pedestrians to the retail uses at the intersection of Algonquin Road, Dempster Street and Busse Road, to Kopp Park and the trail within the ComEd right-of-way adjacent to Kopp Park. In addition, the development will provide direct or indirect pedestrian connections to several Pace bus stops for routes running southbound along Linneman Road and eastbound/westbound along Algonquin Road. These improved connections would directly impact Route 230 (southbound along Linneman Road), and Route 606 (eastbound/westbound along Algonquin Road).

**Lighting:** The Petitioner provided a photometric plan for the existing site. Staff noted there are areas that exceeded the maximum illumination of 5 foot-candles. A fully compliant photometric plan will be required as part of the building permit submittal and will be included as a condition of approval.

**Signage:** The Petitioner has stated in their response letters that no signage other than the building address is anticipated. Staff has added a condition of approval to ensure that any future signage relief shall be reviewed and approved as an administrative amendment to the PUD.

**Phasing:** Mass grading of the site is anticipated to start in November 2025. Construction of ORD1 is anticipated to begin in November of 2025, with completion targeted for the end of March 2027. Construction of ORD2 is anticipated to begin in June 2029, with completion targeted for December of 2030. The Petitioner submitted a Construction Phasing and Logistics Plan for Phase 1 and 2. Phase 1 will consist of the early earthwork grading for the pond and the ORD1 pad, foundation and vertical construction, and fire apparatus access drive circulating ORD1. Foundation and vertical construction for ORD1 will begin on the west side of ORD1 and work east. Phase 2 will construct ORD2 along with Substation #2. The walled ComEd and data center detention basins will be constructed during Phase 2 along with the fire apparatus access road circulation for ORD2. After the walled basins and ORD2 fire lanes are constructed, ORD1 and ORD2 parking lots and loading dock pavement will be installed.

**Economic Impact:** The Petitioner provided an "Economic Impact Analysis" which is included in the agenda packet. As stated in the analysis, the project is expected to generate a range of community benefits for the Village and other local governmental entities, including additional municipal utility tax revenue, higher property tax contributions, and new employment opportunities.

Village Electricity Consumption Tax: New consumption tax revenues to the Village are estimated to exceed $5.4 million annually within 5 years and exceed $8.46 million annually within 8 years.

SMP TIF Impact: On May 3, 2022, the Village Board voted to approve a new Tax Increment Financing (TIF) District in South Mount Prospect which includes the Subject Property. The project and request would not be possible but for TIF funds, and therefore the TIF area can benefit from the additional increment created from the project in the future. The site will generate $484,000 in increment annually after ORD1 is completed, increasing to $2.3 million in annual increment generation after ORD2 is completed. Even with the Class 6B incentive already granted for the project, staff estimates the project will generate $104.8 million in TIF revenues over the remaining life of the SMP TIF.

Anticipated improvements to the TIF area, which are due in part to the proposed development, include infrastructure upgrades to stormwater and sanitary sewers, conversion of previously unincorporated properties from septic and well to Village water, and utility upgrades to accommodate the proposed development and future growth and redevelopment in the area. Other improvements include park district facility upgrades, sidewalk and multi-use path connection enhancements, and streetscape improvements which can be financed by the increased property tax revenue discussed below. The Petitioner is not currently seeking any tax increment finance incentives from the Village.

Job Creation: The Petitioner anticipates that full build-out of both data center buildings will generate a comparable or slightly greater number of construction and permanent jobs than the 2022 PUD. For reference, the 2022 PUD projected between 75 and 150 permanent positions across three buildings (approximately 225 to 450 total) and a total of 900 to 1,000 temporary construction jobs. With the increase in scale, the Petitioner estimates that the revised project will create 225 to 450 permanent jobs across both buildings. Approximately 80 percent of these positions will be skilled, high-earning roles with an average annual salary exceeding $78,500. Anticipated positions include mechanical, electrical, and computer engineers, as well as security staff, maintenance personnel, and property management professionals. The economic analysis further projects that each building's construction phase will employ approximately 900 to 1,000 construction workers on-site.

Additional Revenues: Both construction personnel employed during the construction phase and permanent operational staff will contribute to economic development and revenue growth within the Village. The Petitioner anticipates that a portion of the permanent workforce will reside in close proximity to the Subject Property. Employees, business travelers, and visitors associated with the facility are also anticipated to generate additional sales tax revenue through patronage of nearby restaurants, hotels, and retail businesses.

Parks Improvements Donation: The Petitioner's agreement to make a park contribution in the amount of $2,000,000 to the Village will continue with the current proposal. The Petitioner will make the donation in two payments, with a payment to be made prior to issuance of a building permit for each building as contemplated in a Memorandum of Understanding (MOU). The monies will be used to create a new splash pad at RecPlex. Each payment will be proportional to the square footage of the building for which the building permit is issued divided by the total square footage of both buildings.

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| Table 4: Economic Impact Impacts Comparison | | |
|---|---|---|
| | **2022 Final PUD Ordinance** | **2025 Amended Plans** |
| Electricity Consumption Tax | $1-$2 million annually at full build-out | >$5.4 million per year within 5 years &<br>>$8.46 million per year within 8 years (full build-out) |
| SMP TIF Increment Generated | | ORD1 (completion 2027): $484,000 (annual)<br>ORD2 (completion 2031): $2,300,000 (annual)<br>$104.8 million total increment generated by 2045 |
| Job Creation | 225-450 full-time jobs ($70,000+) | 225-450 full-time jobs ($78,500+ salary) |
| | 900-1,000 construction jobs over 6 years | No change |
| Park Donation | $2 million park contribution | No change |

**Impacts on Adjacent Properties:** Overall, the Petitioner has demonstrated a commitment to fully abide by, and meet all regulations set forth by local, state, and federal entities. Below is an assessment on the proposed impacts:

Noise: The Petitioner submitted an updated sound assessment based on changes to the building designs, most notably a shift to two buildings, with the larger ORD1 building moving equipment to an outdoor mechanical yard and the smaller ORD2 building that proposes different equipment on the roof. Village Code allows sound frequencies at ten different octave band frequencies, measured in decibels (dB). dB sound pressure levels are unweighted. dBA levels are "A" weighted according to the weighting curves to approximate the way humans hear sound or noise. To properly attribute weighted decibel levels to Village Code standards, logarithmically, limits are weighted to a daytime dBA of 56, and a nighttime dBA of 52. Village Code also restricts any noise level within any I-1 Limited Industrial property from exceeding 71 dBA. For reference, 52-56 dBA sound is similar in intensity to an electric fan, hair dryer, or a running refrigerator. Similar to the 2022 PUD, the Petitioner has not requested to waive any noise requirement set forth by Village Code.

The Petitioner has proposed the following noise muffling measures: an acoustical louvered screen wall for the mechanical yard of ORD1, acoustical louvered wall for certain walls on the roof of ORD1, noise barrier panels for the rooftop of ORD2, a 28-foot-tall metal panel wall system extending between penthouses of ORD2, noise barriers for the coolers on ORD2, "hospital-grade" silencers for the generator exhaust pipes, parallel baffle silencers within the penthouses, and absorption panels for the interior of the generator rooms. The following table compares the noise levels from the original 2022 PUD with the current 2025 amended proposal:

**Table 5: Comparison of Noise Levels**

| | | | | | Previous PUD 2022 | | | 2025 Amended Plans | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Receiver Home | Receiver Number | Day Limit dB(A) | Night Limit dB(A) | Emergency Limit dB(A) | Day dB(A) | Night dB(A) | Emergency dB(A) | Day dB(A) | Night dB(A) | Emergency dB(A) |
| Crystal Towers Condos | 1 | 56 | 52 | 71 | 49 | 48 | 63 | 51 | 47 | 67 |
| Myers Place | 2 | 56 | 52 | 71 | 48 | 48 | 61 | 51 | 47 | 65 |
| 1510 Dempster St | 3 | 56 | 52 | 71 | 51 | 50 | 66 | 53 | 49 | 68 |
| Birch Manor Condos Northeast | 4 | 56 | 52 | 71 | 49 | 48 | 64 | 50 | 46 | 65 |
| Birch Manor Condos Southeast | 5 | 56 | 52 | 71 | 52 | 51 | 69 | 54 | 50 | 70 |
| Birch Manor Condos - North | 6 | 56 | 52 | 71 | 47 | 46 | 64 | 49 | 46 | 65 |
| Birch Manor Condos - South | 7 | 56 | 52 | 71 | 50 | 48 | 69 | 53 | 51 | 70 |
| 636 Pickwick | 8 | 56 | 52 | 71 | 44 | 43 | 60 | 47 | 45 | 60 |
| 648 Dempster St | 9 | 56 | 52 | 71 | 52 | 51 | 67 | 53 | 51 | 66 |

The project will meet the Village's daytime and nighttime noise limits during routine operations and will meet the Village's maximum sound level of 71 dBA during emergency operations. Emergency operations would occur only in rare circumstances, such as a full utility outage. The Village will require that periodic testing be performed. A restriction will also be placed so that generators will not be used as a primary power source and will only operate during emergency situations.

Emissions: The proposed generators are diesel powered that emit particulate matter (PM) when operable. The Petitioner provided a gap analysis addressing the changes in the I-1 Limited Industrial zoning district's performance standards between the final PUD approved in 2022 and the current proposal and is included as part of the agenda packet. The gap analysis states that the proposed development will meet all performance standards for airborne emissions, and the current proposal will significantly reduce emissions of particulate matter and other air pollutants as compared to the 2022 Final PUD. The gap analysis also states that improved diesel engine generators and additional pollution controls are expected to reduce emissions per MW for Nox (nitrogen oxides), CO (carbon monoxide), VOCs (volatile organic compounds), and PM (particulate matter) by 15% to 98% annually. For more details, an Emissions Comparison is provided on page 4 of the gap analysis. The Petitioner has also responded that PM emissions typically will not exceed the 0.85 lb/1,000 lb gas at 12% $CO_2$ content limit required by Village Code. Village Code also prohibits the emission, from all sources within any zoning lot, of particulate matter containing more than 10% by weight of particles having a particulate diameter larger than forty four (44) microns. The Petitioner also maintains that no PM emissions meeting said criteria is expected.

Additionally, the Petitioner will use a 32.5% concentrated urea solution (urea is a non-hazardous substance stored in underground tanks) to remove nitrous oxide from the exhaust. To accomplish this, 10 underground urea tanks are proposed. The generators are only used in the event of an emergency or power outage, however each generator will be periodically run for testing 5-8 hours per year. The Petitioner is also required to obtain a permit from the Illinois Environmental Protection Agency (IEPA) and will have to meet all of their established criteria for allowable emissions from the generators.

In order to meet the I-1 Limited Industrial District's performance standards related to noise, vibration, smoke and particulate matter, fire and explosion hazards, toxic matter, odorous matter, and glare, the Petitioner shall be required to submit testing and data to the Village within 90 days of the issuance of a temporary Certificate of Occupancy for each building. Staff has included a condition of approval that will also restrict the use of generators for emergency power generation only and not as a primary or continuous source of energy for the data center development. Furthermore, the Petitioner will be required to submit quarterly compliance reports to the Village's Community Development Department summarizing generator operation logs, including dates, times, duration, and number of generators operated, to demonstrate adherence to this condition. Documentation and performance of all special inspections and testing shall be performed at the Petitioner's or contractor's expense.

**Sustainability:** The amended plans propose an increase in the overall size and capacity of the data center facilities on the Subject Property, yet the current proposal is expected to result in a reduced environmental impact compared to the 2022 Final PUD plans. The revised design incorporates advancements in building technology and operational efficiency that allow the development to achieve greater capacity while minimizing its overall effect on the environment and natural resources. These improvements include reduced airborne emissions (as discussed above) and decreased water consumption.

Water and Sanitary Service Demands: According to the gap analysis, each data center building will implement the use of Adiabatic Dry Coolers. The Petitioner estimates that due to advances in data center design, the estimated annual water usage will be reduced from the originally approved design at 38 million gallons per year to 5.95 million gallons per year, a reduction of 84%. Similarly, estimated annual water sewer discharge for the project is reduced from its initially estimated 2.8 million gallons to 1.4 million gallons, a reduction of 50%.

The Village's utility modeling consultant incorporated this information into its hydraulic model of the existing Village water and sanitary systems and confirmed that these existing systems are sufficient to accommodate the anticipated demands. The Public Works Department conducted flow testing and further confirmed that these results are accurate. Per these results, no upgrades to the Village systems will be necessary to accommodate the proposed data center development.

Energy Usage: ORD1 has up to 240 MWs of data center capacity and will be serviced by Substation #1 (300 MWs) that will be in service by November 2025. ORD2 has up to 105 MWs of data center capacity (this may be higher depending on tenant rack density requirements) and will be powered by the future Substation #2 (up to 300 MWs).

**Revised Final Plat of Subdivision and Plats of Dedication:** The original PUD ordinance approved a final plat of subdivision for the Subject Property which divided the Property into five lots – three buildable lots (one for each data center building), one common area lot within the Data Center Parcel, and one lot for the Substation #1 parcel. The 2022 final plat was never recorded due to legislative changes happening at the state level.

In connection with the requested PUD amendment, the Petitioner is seeking approval of a revised final plat that reflects the proposed reconfiguration of the data center buildings and Substation #2. The Data Center Parcel would be subdivided into five lots—three buildable lots, one common area lot, and one lot for Substation #2. Additionally, the Substation #1 lot would be subdivided into two lots, separating the ComEd substation improvements (northern portion) from the switch yard improvements (southern portion). The Petitioner has also submitted two plats of dedication dedicating land for the construction of public sidewalks as part of an ongoing Village/IDOT road improvement project. One plat will dedicate a narrow strip of land within the Subject Property containing a portion of the public sidewalk and bus shelter along the Algonquin Road frontage to the Illinois Department of Transportation (IDOT). The second plat will similarly dedicate a narrow strip of land and two corner clips at the southwest and southeast corners of Dempster Street and Linneman Road containing public sidewalks to the Cook County Department of Transportation. Both plats of dedication will be required to be recorded prior to the recording of the final plat of subdivision.

Additionally, as a requirement of the amended PUD approval, a covenants/rights and easements agreement must be recorded to provide for cross access and perpetual maintenance of common improvements, and to ensure that the campus functions cohesively.

Staff acknowledges that the Petitioner shall reserve the right to modify the dimensions of the Substation #2 site, if required to do so by ComEd. Any changes to the substation site configuration (area dedicated to the substation) shall be reviewed and approved as an administrative amendment to the PUD. A revised final plat will be required if the dimensions of the Substation #2 site are modified and the revised final plat shall be recorded prior to issuance of a final Certificate of Occupancy for ORD2.

**List of Exceptions:** A comprehensive list of exceptions from the zoning and subdivision codes are provided in **Exhibit B** of this staff report.

**Long Range Planning:** The reuse or redevelopment of the United Airlines campus has been a priority for the Village since the property was annexed in 2017. The 2017 Comprehensive Plan, which is a guiding document for future development for the Village, notes this property as a 'mixed use district' within the future land use map. The primary uses under that category include heavy industrial, manufacturing, and warehousing. Further, the 2017 Comprehensive Plan promotes minimizing the impact on traffic congestion, enhancing walkability, and including streetscape, safe connections, landscape features, and pedestrian amenities for any new development. The amended proposal meets all of these goals.

The 2020 Connect South Mount Prospect Sub-Area Plan offers an opportunity sites map that prioritizes development sites in the study area. The plan prioritizes the Subject Property as the number one opportunity site and recommends warehousing or an industrial park, and notes the existing property is underutilized. The proposal meets all of the plans recommendations for the redevelopment of the Subject Property.

Finally, the Village's 2025-2026 Strategic Plan is a working document that is approved by the Village Board and provides staff with a collection of goals, policies, and priorities to adhere to and complete for the specified calendar year. The plan identifies "Cloud HQ Project: PUD Amendments and Construction Monitoring" as a high priority management agenda item.

**STANDARDS AND FINDINGS**

The Planning and Zoning Commission shall review the standards and findings of fact outlined in **Exhibit A** and 1) accept them without changes, 2) accept them with changes, or 3) reject the findings. The Planning and Zoning Commission shall use the findings of fact to guide their recommendation to the Village Board.

## STAFF RECOMMENDATION

Staff finds that the proposed conditional use and final plat meets the applicable standards contained in the Mount Prospect Zoning Ordinance. Staff requests that the Planning and Zoning Commission make a motion to adopt staff's findings as the findings of the Planning and Zoning Commission and recommend **approval** of the following motion:

"Motion to approve:

1. A final plat of subdivision titled "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2" prepared by Gewalt Hamilton Associates, Inc. and dated 10.09.2025, attached as **Exhibit A**, subject to the following conditions:
    a. A plat of dedication conveying land to the Illinois Department of Transportation for public sidewalks shall be recorded with Cook County prior to the recording of the final plat of subdivision.
    b. A plat of dedication conveying land to the Cook County Department of Transportation and Highways for public sidewalks shall be recorded with Cook County prior to the recording of the final plat of subdivision.

2. A conditional use to amend the planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of 2,172,000 square feet, including three hundred sixty-five (365) parking spaces, two (2) electrical substations, mechanical yard, satellite antenna yard, and related site improvements, as identified on the Petitioner's plans, subject to the following conditions of approval:
    a. Development in general conformance with the approved development plans which will consist of the following:
        i. PUD Site Improvement Plans (77 sheets) containing civil and landscape plans, titled "Mount Prospect Technology Campus PUD Site Improvements" prepared by Gewalt Hamilton Associates, Inc., Corgan, kW Mission Critical Engineering, and PASE, bearing the latest revision date of 10.15.2025, and extracted pages attached as **Exhibit B**.
        ii. Architectural drawings (8 sheets) containing floor plans, elevations, and sections, prepared by Gewalt Hamilton Associates, Inc., Corgan, kW Mission Critical Engineering, PASE, and Theseus Professional Services, bearing the latest revision date of 11.05.2025, attached as **Exhibit C**.
        iii. The Petitioner shall address all comments included in the Village review letter dated October 17, 2025 (PZ-21-25) attached as **Exhibit D**.

    b. <u>The following conditions shall be satisfied PRIOR TO THE ISSUANCE OF A BUILDING PERMIT</u>:
        i. The Petitioner shall submit permit drawings and documentation demonstrating compliance with all applicable Village-adopted building and fire codes, including local amendments. Such submittal shall include a complete code analysis and life safety analysis addressing use, height, area, and occupancy classifications in accordance with the adopted codes. The required submittal shall, at a minimum, include the following:
            i. A full code analysis identifying building use, construction type, building height and area, penthouse and high-rise definitions, mixed-use classification (separated/non-separated), fire-resistance ratings of structural elements, fire separations, walls, partitions, smoke partitions, and protection of openings.
            ii. Identification of all electrical vaults, electrical loads, electric vehicle (EV) charging systems, solar systems, and electrical room locations.
            iii. Complete architectural, structural, mechanical, electrical, plumbing, and fuel gas drawings, including supporting documentation such as structural and electrical load calculations, solar design information, grounding and bonding diagrams (including concrete-encased electrodes), and bonding/grounding details for exterior or rooftop elements.
            iv. Foundation and structural details adequate to review and construct the building, including soils information, foundations, footings, pads, reinforcing, rebar, supports, anchorage, phasing, and access/bridging details.
            v. Documentation and performance of all special inspections and testing as required by the International Building Code shall be performed at the Petitioner's or contractor's expense, including, but not limited to, concrete testing (including slump), steel reinforcing, welding, bolting, bonding, high-

rise/limited aerial access areas, pressure testing, mechanical testing and balancing, and stack or pressure tests as required by code.

vi. Demonstration of compliance with the Illinois Accessibility Code and Illinois Barrier-Free Design Act.

vii. Submittal of all required lift and elevator design documents.

No Certificate of Occupancy shall be issued until the Code Official verifies that all such analyses, drawings, and inspections have been reviewed and accepted as compliant with applicable Village codes and standards.

ii. The Petitioner shall obtain all necessary permits for other entities including, but not limited to, IDOT, IEPA, Metropolitan Water Reclamation District (MWRD), Cook County, Army Corps of Engineers, and the Illinois Department of Natural Resources.

iii. The Petitioner and the Village shall enter into a Memorandum of Understanding delineating the costs and installation responsibilities of the off-site and public improvements (including, but not limited to, the $2,000,000 contribution to the Village toward the splash pad project at RecPlex, multi-use path, sidewalks, streetlights, signalization improvements, etc.) related to the proposed development prior to the issuance of a building permit.

i. The Petitioner shall make a contribution to the Village in the amount of $2,000,000 toward the splash pad project at the RecPlex. The donation shall be made on a pro-rata basis upon issuance of a building permit for each of the two data center buildings.

iv. All signs shall be submitted, reviewed, and approved during the permitting process. All signs shall conform to Village Code. Any future relief requested for signage shall require an application for a minor amendment to the PUD.

v. Submittal of irrigation and photometric plans that comply with Village codes and regulations.

vi. Compliance with all applicable development, fire, and other Village Codes and regulations.

c. The Petitioner shall submit any covenants/rights and easements agreement (REA) for staff review and approval prior to a temporary Certificate of Occupancy for each building. The covenants/REA shall provide for cross access and perpetual maintenance of common improvements, and to otherwise ensure that the campus functions cohesively as necessary.

d. The Village reserves the right to require testing and data to be supplied to the Village within ninety (90) days of the issuance of a temporary Certificate of Occupancy of each building verifying that the performance standards of the I-1 Limited Industrial District are met. Once satisfied, the Village shall issue a final Certificate of Occupancy. Within ninety (90) days of the issuance of a temporary Certificate of Occupancy of each building:

i. The facility will assess the outdoor light intensity using a light intensity meter around the parcel boundary. A report summarizing the findings will be shared for review and any corrective action if needed. Compliance with glare limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect.

ii. The facility will utilize the services of a contractor trained and qualified to collect both daytime and nighttime sound levels with instruments and methods implemented in accordance with the guidelines pursuant to Mount Prospect

Administrative Code (MPAC) Section 14.2104.G.1 which applies to the I-1 Limited Industrial District. The report summarizing the findings will be submitted for review. Compliance with noise limitations will be considered satisfied upon review and acceptance by the Village of Mount Prospect.

1. Substitutions of the noise-mitigation products (acoustical louvered walls, rooftop noise barriers, Titan cooler noise barriers, hospital grade silencers, parallel baffle silencers) identified in the Updated Sound Assessment of Cloud HQ Data Center Report, prepared by Thunder Hearing & Sound LLC, and dated September 24, 2025, shall be acceptable as long as the new models have noise reduction values (per octave band) that are equal to or greater than the units specified in said report.

iii. The facility will acquire vibration data collected in accordance of the guidelines pursuant to Mount Prospect Administrative Code (MPAC) Section 14.2104.G.1 which applies to I-1 Limited Industrial District. The report summarizing the findings will be submitted for review. Compliance with vibration limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect.

iv. The facility will acquire air toxics' concentrations at the parcel boundary through the use of a photoionization detector (PID), which will measure the concentrations at the parcel boundary. A summary of the findings will be shared for review and follow up actions. Compliance with toxic matter limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect.

v. Within ninety (90) days of the creation of the toxics' report, using the data generated by the PID, comparisons with odor limitations will be conducted and a report summarizing the findings will be shared for review and any corrective actions if required. Compliance with odorous matter limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect.

Documentation and performance of all special inspections and testing to determine compliance with the I-1 Limited Industrial District's performance standards shall be performed at the Petitioner's or contractor's expense.

e. The following conditions shall be satisfied <u>PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY</u>:

i. The covenants/REA shall be recorded prior to a final Certificate of Occupancy for ORD2.

ii. The Petitioner shall reserve the right to modify the dimensions of the Substation #2 site, if required to do so by ComEd. Any changes to the substation site configuration (area dedicated to the substation) shall be reviewed and approved as an administrative amendment to the PUD. If the dimensions of the substation lot are modified, a revised final plat of subdivision shall be submitted, reviewed, approved and recorded prior to a final Certificate of Occupancy for ORD2. The proposed privacy screen wall and landscaping shall be modified to reflect any changes in dimensions of Substation #2.

iii. All rooftop mechanical equipment shall be completely hidden from view from adjacent right-of-way. If, at time of final inspection, any rooftop mechanical equipment is visible from ground level as viewed from the public right-of-way, screening shall be required, and it shall be a continuous, permanent, sound attenuating, and noncombustible screen of a color compatible with the principal

structure. Corrective measures will be required if any rooftop mechanical equipment is visible from ground level as viewed from the public right-of-way.

iv. A fifteen-foot-tall (15'-0") fully opaque precast concrete wall shall be required along the north and west property lines adjacent to Substation #2. The public facing side of said wall shall incorporate a form-liner design, subject to the approval of the Community Development Director.

v. An eight-foot-tall (8'-0") fully opaque precast concrete wall shall be located along the north, south and east sides of the satellite antenna yard. The public facing side of said wall shall incorporate a form-liner design, subject to the approval of the Community Development Director.

vi. The proposed 7' + 1' chain link fence with barb wire atop along the southwest and east sides of Substation #2 shall be a black vinyl-coated chain link fence.

vii. Parking lot lighting shall be on a steel pole with a black finish and shall be directed toward the lot and not adjacent properties.

viii. All fuel sheds shall be black. Vehicle protection/bollards shall be provided around the fuel polishing sheds if installed in the parking lot. Bollards shall be black;

ix. Solid screening in the form of a precast concrete panel that is consistent with the building's architectural design shall be provided for the thermal energy storage (TES) tank located at the southeast corner of ORD2.

x. A maintenance plan for the climbing green vines on the building facades shall be provided prior to the issuance of a final Certificate of Occupancy for ORD1.

xi. The Petitioner shall make every reasonable and good-faith effort to coordinate with the owner(s) of the adjacent parcel(s) under common ownership to facilitate the following improvements, as generally depicted in **Exhibit E**, subject to all required Village, state, and other agency permits and approvals:

    1. **Removal of Driveway within IDOT Right-of-Way:** The Petitioner shall depict removal of the existing ingress/egress drive located within the Illinois Department of Transportation (IDOT) right-of-way on the permit plans submitted to IDOT for review and approval in conjunction with the Petitioner's own driveway work.
        a. If IDOT concurs and directs removal of the driveway, such removal shall be included as part of the approved scope of work.
        b. If IDOT requires consent of the adjacent property owner, the Petitioner shall make a good-faith effort to obtain such consent and provide documentation to the Village demonstrating the efforts made.
    2. **Decommissioning of Lift Station:** Removal and proper decommissioning of the unused sanitary lift station located on the adjacent parcel, in accordance with all applicable agency requirements (including MWRD and IEPA, as applicable).
    3. **Removal and Restoration of Private Drive:** Removal and restoration of the private drive located on the adjacent parcel that is no longer in use.

The Petitioner shall provide documentation to the Village demonstrating its good-faith efforts to obtain all necessary permissions and approvals to complete the above work. In the event that any of the improvements cannot be completed, the Petitioner shall submit written evidence, to the satisfaction of the Village, detailing the steps taken and the reasons such work could not be performed.

f. ON-GOING TESTING AND MAINTENANCE:

i. **Generator Use, Limitation, and Compliance Reporting:** The use of generators on the Subject Property shall not serve as a primary or continuous source of energy for the data center facility and shall be limited to emergency power generation only. Routine testing and maintenance of generators shall comply with the noise limitations set forth in Section 14.2104(G)(1) of the Village Code and shall occur only during daytime hours between 8:00 a.m. and 7:00 p.m., Monday through Friday. For testing or maintenance purposes, the Petitioner shall coordinate generator operation such that the noise generated does not exceed the maximum allowable daytime noise levels, unless otherwise approved by the Village Manager. The Petitioner shall submit quarterly Generator use, limitation, and compliance reports to the Village's Community Development Department summarizing generator operation logs, including dates, times, duration, and number of generators operated, to demonstrate adherence to this condition.

The Village Board's decision is final for this case.

**ATTACHMENTS:**

**ADMINISTRATIVE CONTENT**
(Zoning Request Application, Responses to Standards, etc...)

**PLANS**
(Plat of Survey, Site Plan, etc.)

**OTHER**
(Supplemental Information, Public Comments Received, etc...)

I concur:

Jason C. Shallcross, AICP, CEcD
Director of Community Development

**Exhibit A**
Standards and Findings of Fact

**CONDITIONAL USE STANDARDS**
Section 14.203.F.8 of the Village of Mount Prospect Zoning Ordinance provides that a Conditional Use shall conform to the following requirements:

1. That the establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare;
2. That the conditional use will not be injurious to the uses and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood in which it is to be located;
3. That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district;
4. That adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided;
5. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets;
6. That the proposed conditional use is not contrary to the objectives of the current comprehensive plan for the village; and
7. That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the planning and zoning commission.

Petitioner's Findings: The Petitioner states that the proposed conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare. The Village has previously approved a Final PUD Ordinance for a data center campus on the Subject Property, and the current request seeks only to adjust the size and configuration of the data center buildings and related site improvements. According to the Petitioner, these revisions will not create any adverse impacts on the public. Per the Petitioner, the conditional use will not adversely impact the value or use of any other property because the development is a light industrial use, within an area already zoned I-1 and will be surrounded on three sides by other industrial uses, ORD2 will be separated from the closest residential buildings on the north side of Dempster Street by over 313 feet, data centers are a permitted use in the underlying I-1 zoning district, and the Village previously approved data center development for this site. The Petitioner has responded that the surrounding properties in the I-1 district are already developed, so the conditional use will not impede the development of that surrounding property and will generate a relatively low volume of traffic. The Petitioner also states that the project satisfies all perimeter building setbacks and includes appropriate screening and buffering. The Petitioner further states that adequate public utilities, access roads, drainage and/or necessary facilities are already in place or will be installed. Per the Petitioner, the proposed ingresses and egresses to and from the development will have a relatively minimal incremental impact on traffic congestion as established by the proposed plans and the traffic study. The Petitioner states that the conditional use is in keeping with several of the objectives and goals articulated in the Comprehensive Plan and South Mount Prospect Sub-Area Plan by redeveloping the former United Airlines campus into a modern, employment-oriented use that supports reinvestment and economic growth in the area. The project aligns with long-range planning goals promoting adaptive reuse, sustainability, and high-quality design, while enhancing pedestrian connectivity and providing extensive landscaping and buffering. The Petitioner also states that the conditional use conforms to the applicable regulations of the district in which it is located except as

modified via PUD.

Staff's Findings: Staff has reviewed the petitioner's request for conditional use approval for an amendment to the previously approved planned unit development and finds that the applicable standards have been met. The conditional use is aligned with the Village's Comprehensive Plan's Future Land Use Plan's designation of the subject property within the Mixed-Use District. The development will generate between 225 and 450 permanent skilled jobs and additional construction employment, while incorporating high-quality architectural design, sustainable stormwater management practices, and extensive landscaping and buffering. Public sidewalks and streetscape improvements will be constructed along all street frontages, improving pedestrian connectivity and accessibility to nearby transit stops, parks, and commercial areas. Building orientation and façade treatments are designed to complement the surrounding context while providing appropriate transitions and screening from adjacent uses.

The project is also consistent with the goals of the Connect South Mount Prospect Plan (South Sub-Area Plan), which identifies the Subject Property as the Village's largest redevelopment opportunity site. The proposed data center campus fulfills the Plan's vision for new industrial employment uses that strengthen the local tax base, increase job opportunities, and utilize underperforming land without generating significant traffic impacts. Overall, the proposed redevelopment aligns with the Village's long-range planning objectives by promoting economic growth, sustainable design, and reinvestment in the southern area of Mount Prospect. Based on the information submitted, the surrounding uses, and the proposed development's consistency with the Village's long-range planning documents, staff recommends approval of the conditional use request to amend the previously approved PUD.

**GENERAL STANDARDS FOR PLANNED UNIT DEVELOPMENTS**

Section 14.504.A of the Village of Mount Prospect Zoning Ordinance provides that a Planned Development (PUD) shall conform to the following requirements:

1. Except as modified by and approved in the final Planned Unit Development plan, the proposed development complies with the regulations of the district or districts in which it is to be located.
2. The principal use in the proposed Planned Unit Development is consistent with the recommendations of the Comprehensive Plan of the Village for the area containing the subject site.
3. The proposed Planned Unit Development is in the public interest and is consistent with the purposes of this zoning ordinance.
4. The streets have been designed to avoid:
    a. Inconvenient or unsafe access to the Planned Unit Development;
    b. Traffic congestion in the streets which adjoin the Planned Unit Development;
    c. An excessive burden on public parks, recreation areas, schools, and other public facilities which serve or are proposed to serve the Planned Unit Development.

Petitioner's Findings: The Petitioner states that the proposed development complies with the regulations of the I-1 district except as modified by the approved planned unit development. As outlined in the Petitioner's responses to Zoning Standards, the Petitioner states that the principal use in the proposed planned unit development is consistent with the recommendations of the Comprehensive Plan by redeveloping the former United Airlines campus into a modern, large-scale employment facility that will generate new jobs, and will support reinvestment and economic growth in the area. The project aligns with long-range planning goals promoting adaptive reuse, sustainability, and high-quality design, while

enhancing pedestrian connectivity and providing extensive landscaping and buffering. The Petitioner maintains that the proposed development presents an opportunity for the Village to replace a vacated corporate campus property with a comprehensive data center development to better meet current market demands and customer needs. Per the Petitioner, the project will serve the public interest by addressing the changing needs of business and the national and local economies, bringing redevelopment and economic growth to an opportunity site in South Mount Prospect, and will significantly increase the Village's tax base. Additionally, the Petitioner states that the proposed development will not include any new streets, will be a low traffic generator, and access improvements will provide safe and efficient access to the development.

Staff's Findings: The development will conform to the allowed uses in the I-1 zoning district, provide sufficient off-street parking, adhere to the Village's Comprehensive Plan and Future Land Use Plan designating the subject property as a 'mixed-use district' and industrial use, is in the public interest to adaptively reuse an underutilized site and provide several economic benefits to the Village, and will not create inconvenient or unsafe access, traffic congestion in the streets, or excessively burden public parks, recreation areas, schools, and other public facilities which serve the planned unit development.

**STANDARDS FOR PLANNED UNIT DEVELOPMENTS WITH OTHER EXCEPTIONS**

Section 14.504.C of the Village of Mount Prospect Zoning Ordinance provides that a Planned Development which does not comply with the requirements of the underlying zoning district's regulations governing lot area, lot width, bulk regulations, parking and sign regulations, or which require modification of the subdivision design standards shall conform to the following requirements:

1. Any reduction in the requirements of this chapter is in the public interest.
2. The proposed exceptions would not adversely impact the value or use of any other property.
3. Such exceptions are solely for the purpose of promoting better development which will be beneficial to the residents or occupants of the planned unit development as well as those of the surrounding properties.
4. In residential planned unit developments the maximum number of dwelling units allowed per acre shall not exceed forty eight (48) units per acre for developments incorporating senior housing or assisted living facilities.
5. All buildings are to be located within the planned unit development in such a way as to dissipate any adverse impact on adjoining buildings and shall not invade the privacy of the occupants of such buildings and shall conform to the following:
    a. The front, side or rear yard setbacks on the perimeter of the development shall not be less than that required in the abutting zoning district(s) or the zoning district underlying the subject site, whichever is greater.
    b. All transitional yards and transitional landscape yards of the underlying zoning district are complied with.
    c. If required transitional yards and transitional landscape yards are not adequate to protect the privacy and enjoyment of property adjacent to the development, the Planning and Zoning Commission shall recommend either or both of the following requirements:
        i. All structures located on the perimeter of the planned unit development must be set back by a distance sufficient to protect the privacy and amenity of adjacent existing uses;
        ii. All structures located along the entire perimeter of the planned unit development must be permanently screened with sight proof screening in a manner which is sufficient to protect the privacy and amenity of adjacent existing uses.

d. The area of open space provided in a planned unit development shall be at least that required in the underlying zoning district.

Petitioner's Findings: The Petitioner provides that the requested exceptions are necessary and appropriate for the development of an emerging use that is vital to the continued growth of the local and national economies. The Project will serve the public interest by addressing changing business and economic needs, bringing redevelopment, quality jobs, and economic growth to a target opportunity site, and significantly enhancing the Village's tax base. The Petitioner also states that the exceptions will not adversely impact the value or use of any other property and points out that the development is a light industrial use, within an area already zoned I-1 and will be surrounded on three sides by other industrial uses. The Petitioner asserts that while the exceptions allow a greater building height, the northern portion of ORD2 that is closest to residential uses will be only 10 feet taller (including parapet wall) than the otherwise permitted height of 50 feet and will be separated from the closest residential buildings on the north side of Dempster Street by 313 feet, demonstrating that the height exception will not adversely impact the value of the residential properties to the north. Per the Petitioner, the exceptions are necessary for the project to be developed in a functional and cohesive manner that meets the needs of the market and end users. The Subject Property is currently a large vacant site, and its redevelopment with a state-of-the-art facility will be beneficial to surrounding properties and the community as a whole. Aside from the exceptions requested, the Petitioner asserts that the proposed development otherwise complies with all applicable perimeter front, side, and rear yard setback requirements.

The Petitioner is requesting an exception from the transitional yard requirement along Dempster Street due to the site's irregular shape creating unique and specific challenges in the design and configuration of the improvements required to develop a data center campus that meets current market demands, including size and capacity of the facilities. The Petitioner states that the project proposes extensive landscaping and screening, which is concentrated on the perimeter of the Subject Property, and particularly the northern yard adjacent to Dempster Street, which mitigates any potential adverse impacts on residential properties on the north side of Dempster. The Petitioner provides that the reduced transitional yard along the Dempster Street frontage incorporates a continuous evergreen hedge, supplemented by new plantings and existing mature trees, which together provide effective and appropriate screening and buffering.

Per the Petitioner, the proposed transitional yards, landscaping, and screening measures are sufficient to protect the privacy and enjoyment of adjacent properties. Only ORD2 is adjacent to residential uses, and its impact is minimized by its substantial setback—over 313 feet from the nearest homes on Dempster Street—and by orienting the shorter, two-story, "administrative block" closes to the street, with the taller portion of the building positioned to the rear of the building. ORD1 is surrounded by industrial uses on the east, south, and west sides and therefore does not present compatibility concerns. All accessory structures and equipment are situated within the interior of the site and will be appropriately screened both visually and acoustically.

Staff's Findings: Staff finds that the requested relief serves the public interest and supports the goal of promoting better development that will benefit the Village as a whole. Staff finds that the Petitioner has demonstrated good faith by developing strategies to mitigate potential impacts associated with the amended plans. Steps have been taken to minimize visual, acoustic, and air quality impacts produced by the data center development. The project will provide sufficient screening via substantial landscaping and screen walls to protect the livability and quality of life for adjacent residential and businesses. Additionally, the Petitioner will provide noise muffling measures and will be required to produce

documentation and special testing to verify compliance with all performance standards required by the I-1 Limited Industrial District. The Petitioner has also worked extensively with staff to improve the buildings' architectural elevations by breaking down the mass and scale of the buildings, reducing repetition, and creating sufficient modulation and articulation to further visual minimize impacts on neighboring properties.

**Exhibit B**

List of Exceptions from the Zoning and Subdivision Codes

**Exceptions from the Zoning Code:**

1. An exception from Section 14.305(B)(1) to permit an increase in the maximum number of ground mounted antenna towers or dishes located on a zoning lot from one to more than one.
2. An exception from Section 14.306(A)(3)(b) to permit an increase in the maximum height of accessory structures in the I-1 zoning district from twenty feet (20') to:
    a. Fifty-five feet (55'-0") for the acoustical screen provided at the mechanical yard;
    b. Sixty feet (60'-0") for the above-ground TES tanks;
    c. Not to exceed thirty feet (30'-0") for the non-occupied GIS-control enclosure in the switchgear yard.
3. An exception from Section 14.306(A)(5) to permit an increase in the maximum number of accessory structures from two accessory structures to ten (10) fuel polishing sheds and twelve (12) screened thermal energy storage tanks.
4. An exception from Section 14.309(A)(2) to allow temporary trailers or facilities to be located within the applicable setback requirements of the zoning ordinance.
5. An exception from Section 14.318(B)(7)(a) to permit an increase in the maximum height of a fence permitted in the I-1 zoning district from eight feet (8'-0") to fifty-five feet (55'-0") for the mechanical yard screening structure.
6. An exception from Section 14.318(B)(7)(a) to permit an increase in the maximum height of a fence permitted in the I-1 zoning district from eight feet (8'-0") to ten feet (10'-0") for perimeter security fencing.
7. An exception from Section 14.318(B)(7)(a) to permit an increase in the maximum height of a fence permitted in the I-1 zoning district from eight feet (8'-0") to fifteen feet (15'-0") for a solid style screening fence on the north and west sides of substation #2 (Lot 5).
8. An exception from Section 14.318(C)(2) to permit the barbed wire on top of the internal substation #2 fence to extend outward of the Property (Lot 5).
9. An exception from Section 14.2104 (C) to permit an increase in the maximum building height from fifty feet (50'-0") to eighty-five feet (85') to parapet (60' to parapet of administrative blocks); penthouse to one hundred nine feet (109'); and mechanicals to one hundred twenty-one feet (121') for ORD1 and one hundred thirty-eight feet (138') for ORD2.
10. An exception from Section 14.2206(E)(1)(a) to permit parking lot setbacks of less than 10 feet (10') from the property line.
11. An exception from Section 14.2304(B)(2) to permit a 43%/57% ratio of evergreen shrubs to deciduous shrubs.
12. An exception from Section 14.2306(B) to waive the perimeter landscaping requirements as illustrated in the proposed landscape plans.
13. An exception from Section 14.2307 to waive the foundation landscaping requirements as illustrated in the proposed landscape plans.
14. An exception from 14.504(C)(5)(d) to permit a reduction in the area of open space within the PUD from 25% (as required in the underlying I-1 zoning district) to 18%.
15. An exception from Section 14.2104(D) to permit an increase in the maximum lot coverage requirement in the I-1 zoning district from 75% to 82%.
16. An exception from Section 14.2104(B) to permit a reduction in the minimum side yard requirement from fifteen feet (15') to zero feet (0') for the lot line between Lots 1 and 2.
17. An exception from Section 14.2104(E) to permit a reduction in the minimum transitional setback requirement for parking lots from forty feet (40') to 17.8 feet along Dempster Street.

18. An exception from Section 14.2207 to permit development of the Project with a total of 365 off-street parking spaces (including 12 accessible spaces and 16 EV spaces).
19. Any other Zoning Code exceptions required to permit development of the Property with the Project as depicted on the approved final PUD plans.

**Exceptions from the Subdivision Code:**

20. An exception from Section 15.305(B)(2) to allow access to the arterial street for corner lots abutting an arterial street. Lots 1 and 2 each have an emergency access driveway on Algonquin Road, and Lot 3 has an emergency access driveway on Dempster Street.
21. An exception from Section 15.305(B)(6) to allow the depth-to-width ratio to exceed two and one-half to one (2.5:1) for Lot 4 (irregularly shaped) and Lot 5 (ratio is approximately 3.07:1).
22. Any other Subdivision Code exceptions required to permit development of the Property with the Project as depicted on the approved final PUD plans.

Village of Mount Prospect
Community Development Department
50 S. Emerson Street
Mount Prospect, Illinois 60056
Phone: (847) 818-5328

# Zoning Request Application

**Official Use Only (To be completed by Village Staff)**

Case Number: PZZ25-000023 PZ-21-25 Date of Submission: 09/03/2025 Hearing Date: 10/23/25

Project Name/Address: PZ-21-25: CU: Major PUD Amendment, Final Plat of Subdivision (1200 E. Algonquin Road, 1200 Dempster Street) for a 43.33 AC Data Center Campus

## I. Subject Property

Address(es): 1200 E Algonquin Rd

Zoning District(s): I1* Property Area (SqFt and/or Acreage):

Parcel Index (PIN(s): 08-23-100-018-0000

## II. Zoning Request(s) (Check all that apply)

- [x] Conditional Use: For PUD Amendment (Major)
- [ ] Variation(s): To
- [ ] Zoning Map Amendment: Rezone From To
- [ ] Zoning Text Amendment: Section(s)
- [ ] Other:

## III. Summary of Proposal (use separate sheet if necessary)

reference attached project narrative foir full summary of proposal.

CHQ proposes to modify the Original PUD Plans to provide for a two-building data center campus, rather than a three-building campus. The Original Plans included three data center buildings, each having a total gross square footage of approximately 566,767 square feet, with two buildings fronting on Algonquin Road, and one building at the southwest corner of Dempster Street and Linneman Road. The Amended Plans consolidate the two buildings on Algonquin Road into a single, larger building (that may include two separate saleable/ leasable spaces separated by a party wall) ("Building 1"). The building at Dempster/ Linneman ("Building 2") will be reconfigured slightly but has a similar footprint to that shown on the Original Plans. Both Building 1 and Building 2 are increased to three stories in height, as compared to the two-story buildings depicted on the Original Plans. Building 1 and Building 2 are referred to collectively herein as the "Data Center Buildings."
Building 1 is proposed to have a footprint of approximately 445,000 square feet and a gross floor area of approximately 1.3 million square feet, with up to 240 MW of data center capacity. Building 1 is designed to allow occupancy by two separate tenants with a "zero lot line" subdivision at the mid-point of Building 1. Each half of Building 1 will have its own administrative/ office space, off-street parking, loading docks, and utility connections. Ancillary improvements associated with Building 1 include internal security gates and fencing, underground fuel storage for generators, ground-level fuel polishing equipment (discussed further below), other support equipment and structures, and underground utilities, including electric, fiber optic, sanitary sewer, water, and storm drainage collection and conveyance.

Building 2 is proposed to have a footprint of approximately 296,000 square feet and a gross floor area of approximately 872,000 square feet, with approximately 105MW of data center capacity. Building 2 is designed to be a single-occupancy building. Building 2 will have its own administrative/ office space, off-street parking, loading docks, and utility connections. Ancillary improvements associated with Building 2 include internal security gates and fencing, underground fuel storage for generators, fuel polishing equipment (discussed further below), other support equipment and structures, and underground utilities, including electric, fiber optic, sanitary sewer, water, and storm drainage collection and

conveyance.

Additionally, CHQ has determined that a second ComEd electrical substation is needed to meet the capacity demands of the reconfigured Data Cente

**IV. Applicant (all correspondence will be sent to the applicant)**

| | | | |
|---|---|---|---|
| Name: | Don Dixon | Corporation: | Gewalt Hamilton Associates |
| Address: | | | |
| City, State, ZIP Code: | | | |
| Phone: | [redacted] | Email: | [redacted] |
| Interest in Property: | | | |

**V. Property Owner**

☐ Check if Same as Applicant

| | | | |
|---|---|---|---|
| Name: | TUR VENTURES LLC | Corporation: | |
| Address: | 1212 New York Ave NW Suite 1000 | | |
| City, State, ZIP Code: | Washington, DC 20005-6127 | | |
| Phone: | | Email: | |

**In consideration of the information contained in this petition as well as all supporting documentation, it is requested that approval be given to this request. The applicant is the owner or authorized representative of the owner of the property. The petitioner and the owner of the property grant employees of the Village of Mount Prospect and their agent's permission to enter on the property during reasonable hours for visual inspection of the subject property.**

**I hereby affirm that all information provided herein and in all materials submitted in association with this application are true and accurate to the best of my knowledge.**

**Applicant:** Date:



(Print or Type Name) Don Dixon

If applicant is not property owner:

I hereby designate the applicant to act as my agent for the purpose of seeking the zoning request(s) described in this application and the associated supporting material.

**Property Owner:** Date:

(Print or Type Name)

Village of Mount Prospect
Community Development Department
50 S. Emerson Street
Mount Prospect, Illinois 60056
Phone: (847) 818-5328

| Property Owner | | | |
|---|---|---|---|
| ☐ Check if Same as Applicant | | | |
| Name: | Keith P. Harney, Authorized Signatory | Corporation: | Tur Ventures LLC |
| Address: | 1212 NEW YORK AVE NW, Suite 1000 | | |
| City, State, ZIP Code: | WASHINGTON, DC 20005 | | |
| Phone: | [redacted] | Email: | [redacted] |

**In consideration of the information contained in this petition as well as all supporting documentation, it is requested that approval be given to this request. The applicant is the owner or authorized representative of the owner of the property. The petitioner and the owner of the property grant employees of the Village of Mount Prospect and their agent's permission to enter on the property during reasonable hours for visual inspection of the subject property.**

**I hereby affirm that all information provided herein and in all materials submitted in association with this application are true and accurate to the best of my knowledge.**

**Applicant:** _____ Date: 8/26/2025
(Signature)

Brian Spencer
(Print or Type Name)

If applicant is not property owner:

I hereby designate the applicant to act as my agent for the purpose of seeking the zoning request(s) described in this application and the associated supporting material.

**Property Owner:** _____ Date: 8/26/2025
(Signature)

Keith P. Harney, Authorized Signatory for Tur Ventures LLC
(Print or Type Name)

Village of Mount Prospect
Community Development Department
50 S. Emerson Street
Mount Prospect, Illinois 60056
Phone: (847) 818-5328

## Affidavit of Ownership

~~COUNTY OF COOK~~ )
DISTRICT OF COLUMBIA )
~~STATE OF ILLINOIS~~ )

I, Keith P. Harney, under oath, state that I am
(print name)

- ☐ the sole owner of the property
- ☐ an owner of the property
- ☑ an authorized officer for the owner of the property

commonly described as 1200 E Algonquin Rd, Mount Prospect, IL 60056
(property address and PIN) PIN 08-23-100-018-0000

and that such property is owned by Tur Ventures LLC as of this date.
(print name)

Signature

KIRSTEN BARROW
NOTARY PUBLIC
MY COMMISSION EXPIRES 9/14/2029
DISTRICT OF COLUMBIA

Subscribed and sworn to before
me this 27th day of
August, 2025.

Notary Public

Kirsten Barrow
Notary Public, District of Columbia
My Commission Expires 9/14/2029

*2136246082D*

Doc# 2136246082 Fee $88.00

RHSP FEE:$9.00 RPRF FEE: $1.00

KAREN A. YARBROUGH

COOK COUNTY CLERK

DATE: 12/28/2021 01:45 PM PG: 1 OF 5

This Instrument Prepared By:

Erin Felchner
Sidley Austin LLP
One South Dearborn
Chicago, IL 60603

When Recorded Return To:

Tur Ventures LLC
c/o CloudHQ LLC
1212 New York Avenue NW
Suite 1000
Washington, D.C., 20005
Attn: Hossein Fateh

**SPECIAL WARRANTY DEED**

THIS SPECIAL WARRANTY DEED is made as of the 21st day of December, 2021, by **UNITED AIRLINES, INC.**, a Delaware corporation (the "Grantor"), with an office located at 233 South Wacker Drive, HDQOU, Chicago, Illinois 60606, to and in favor of **TUR VENTURES LLC**, a Delaware limited liability company, with an office located at 1212 New York Avenue NW, Suite 1000, Washington, D.C. 20005 (the "Grantee").

WITNESSETH, that Grantor, for and in consideration of the sum of Ten and no/100 Dollars ($10.00) and other good and valuable consideration, in hand paid by Grantee, the receipt and sufficiency whereof is hereby acknowledged, by these presents does hereby GRANT, SELL, ALIEN, REMISE, RELEASE AND CONVEY unto Grantee, and to its successors and assigns, FOREVER, all of that land legally described on Exhibit A attached hereto and made a part hereof (the "Land"), which Land is situated in the County of Cook and State of Illinois, together with all of Grantor's right, title, interest and estate in and to: (i) all buildings, structures, improvements and fixtures located at the Land, (ii) all privileges, rights, easements, hereditaments, and appurtenances belonging to the Land, and (iii) all streets, alleys, passages and other rights-of-way included in the Land or adjacent thereto (the Land, together with the items included in clauses (i) through (iii) (inclusive) above is collectively referred to herein as, the "Transferred Property").

TO HAVE AND TO HOLD the Transferred Property unto Grantee and its successors and assigns forever.

And Grantor does hereby covenant, promise and agree to and with the Grantee, and its successors and assigns, that the Grantor has not done or suffered to be done anything whereby the Transferred Property hereby granted and conveyed hereby is or may be, in any manner, encumbered or charged, except as reflected on Exhibit B attached hereto and made a part hereof (the "Permitted Exceptions"), and that Grantor will WARRANT AND FOREVER DEFEND the Transferred Property unto Grantee and its successors and assigns, against all persons or entities making any claims or demands concerning the Transferred Property by, through or under the Grantor (but not otherwise), subject, however, to the Permitted Exceptions.

VILLAGE OF MOUNT PROSPECT
REAL ESTATE TRANSFER TAX
DEC 23 2021
51223 $62,426.00

FCHI2000834LT
1 of 7

EDGE NATIONAL TITLE

IN WITNESS WHEREOF, Grantor has caused its name to be signed to this Special Warranty Deed as of the day and year first above written.

**GRANTOR:**

**UNITED AIRLINES, INC.**, a Delaware corporation

By: _____
Name: Nathan Lopp
Title: Vice President Corporate Real Estate

STATE OF ILLINOIS )
) SS.
COUNTY OF ~~COOK~~ DU PAGE)

I Laura A. Asmussen, a Notary Public in and for the said County, in the State aforesaid, do hereby certify that Nathan Lopp, personally known to me (or proved to me on the basis of sufficient evidence) to be the Vice President Corporate Real Estate of United Airlines, Inc., a Delaware corporation, and personally known to me to be the same person whose name is subscribed to the within instrument, appeared before me this day in person, and acknowledged to me that he/she executed the said instrument as his/her free and voluntary act as such Vice President Corporate Real Estate of said corporation, and as the free and voluntary act of said United Airlines, Inc., for the uses and purposes set forth therein.

Given under my hand and official seal this 16th day of December, 2021.

_____
Notary Public

Commission Expires: 08/08/2023

OFFICIAL SEAL
LAURA A. ASMUSSEN
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 08-08-2023

| REAL ESTATE TRANSFER TAX | | 22-Dec-2021 |
|---|---|---|
| | COUNTY: | 27,071.00 |
| | ILLINOIS: | 54,142.00 |
| | TOTAL: | 81,213.00 |

08-23-100-018-0000 | 20211201675029 | 1-493-457-552

Send Future Tax Bills to:

Tur Ventures LLC
c/o CloudHQ LLC
1212 New York Avenue NW
Suite 1000
Washington, D.C. 20005
Attn: Hossein Fateh

COOK COUNTY RECORDER OFFICE
RECORDING DIVISION
118 N CLARK ST ROOM 120
CHICAGO, IL 60602-1387

**EXHIBIT A TO SPECIAL WARRANTY DEED**

**THE LAND**

Parcel 1:

Lot 1 in Friedrich Busse, Jr. Division of Land in Section 23, Township 41 North, Range 11, East of the Third Principal Meridian, according to the plat thereof recorded February 20, 1911 as Document No. 4709799, except (A) that part of said Lot 1 taken for highways, and (B) that part falling in Blue Sky Subdivision according to the plat thereof recorded June 5, 2014 as Document No. 1415616048, in Cook County, Illinois.

Parcel 2:

The West 363.00 feet of Lot 2 in Linneman's Division of part of the Northeast 1/4 of Section 23, Township 41 North, Range 11 East of the Third Principal Meridian, and part of the Southeast 1/4 of Section 14, Township 41 North, Range 11 East of the Third Principal Meridian, according to the plat thereof recorded September 10, 1953 as Document No. 15716544, in Cook County, Illinois.

Parcel 3:

The North 120.00 feet of the West 363.00 feet of Lot 3 in Linneman's Division of part of the Northeast 1/4 of Section 23, Township 41 North, Range 11 East of the Third Principal Meridian, and part of the Southeast 1/4 of Section 14, Township 41 North, Range 11 East of the Third Principal Meridian, according to the plat thereof recorded September 10, 1953 as Document No. 15716544, in Cook County, Illinois.

| | |
|---|---|
| Property Address: | 1200 East Algonquin Road, Mount Prospect, Illinois 60056, and 1200 Dempster St., Mount Prospect, Illinois 60056 |
| PIN: | 08-23-100-018-0000; 08-23-200-052-0000 |

Excluding all right, title and interest to that certain 30-foot and 35-foot easement set forth on the plat recorded with the Cook County Recorder of Deeds on June 5, 2014 as Document Number 1415616048 described as the "Private Sanitary & ComEd Easement".

**EXHIBIT B TO SPECIAL WARRANTY DEED**

**PERMITTED EXCEPTIONS**

All covenants, restrictions, conditions, easements, reservations, agreements and other matters of record.

COOK COUNTY CLERK OFFICE
RECORDING DIVISION
118 N. CLARK ST. ROOM 120
CHICAGO, IL 60602-1387

**PROJECT NARRATIVE**

**MOUNT PROSPECT TECHNOLOGY CAMPUS PLANNED UNIT DEVELOPMENT**

**PUD AMENDMENT APPLICATION**

## INTRODUCTION

Tur Ventures LLC ("Tur") owns the eastern portion of the former United Airlines Operations Center site located at 1200 E. Algonquin Road and 1200 Dempster Street (the "Data Center Parcel"). Tur, with its affiliates, including CloudHQ LLC (Tur and its affiliates are, collectively, "CHQ"), proposes to redevelop the Data Center Parcel as a data center campus (the "Project"). Additionally, CHQ owns a smaller parcel located at the southeast corner of the intersection of Dempster Street and Linneman Road (the "Substation #1 Parcel"), which is currently being developed for an electrical substation to serve the Data Center Parcel ("Substation #1"). The Data Center Parcel and the Substation #1 Parcel are, collectively, the "Property."

On June 21, 2022, the Village of Mount Prospect Board of Trustees approved Ordinance No. 6634, "An Ordinance Granting a Conditional Use for a Final Planned Unit Development and a Final Plat of Subdivision" for the Property (the "PUD Ordinance"). The PUD Ordinance granted final zoning and subdivision approvals for development of the Data Center Parcel with three data center buildings (each totaling approximately 566,767 gross square feet), off-street parking, and other ancillary site improvements as shown on the approved final plans (the "Original Plans"). The PUD Ordinance also approved development of the Substation #1 Parcel with Substation #1.

To date, CHQ has completed demolition of the former United Airlines campus improvements on the Property and constructed sediment basins west of Linneman Road. CHQ also has constructed site improvements for Substation #1, including stormwater basins, drainage outfall, underground utilities, and foundations. Substation #1 is currently in the final stages of construction.

Since approval of the PUD Ordinance, the data center industry has significantly evolved, including legislative changes that impact data center operations and rapid acceleration of artificial intelligence that has increased the demand for data. CHQ has determined that certain modifications should be made to the Original Plans to better meet the evolving needs of the data center industry. CHQ is requesting approval of an amendment to the PUD Ordinance to permit development of the Property in accordance with the amended plans and specifications (the "Amended Plans") set forth in this PUD amendment application.

## THE PROPERTY

The Data Center Parcel consists of approximately 43.31 acres of land, and is bounded by Algonquin Road to the south, Linneman Road to the east, and Dempster Street to the north. The Data Center Parcel is currently vacant, with the exception of temporary construction trailers at the northwest corner of the site. Sediment basins with diversion swales and temporary drainage pipes have been installed to direct and manage stormwater runoff. All necessary utilities including

electric, telecommunications, fiber optic, gas, water, and sanitary sewer, are available to the Data Center Parcel.

The Substation #1 Parcel is approximately 6.14 acres in size and is located at the southeast corner of Dempster Street and Linneman Road. Substation #1 is currently in the final stages of construction and, once completed, will be operated by ComEd. After Substation #1 is complete, CHQ will construct a switchgear yard on the southern portion of the Substation #1 Parcel to feed electric service under Linneman Road to the Data Center Parcel. The switchgear yard will include a non-occupied GIS-control enclosure.

**PROJECT SUMMARY**

CHQ proposes to modify the Original Plans to provide for a two-building data center campus, rather than a three-building campus. The Original Plans included three data center buildings, each having a total gross square footage of approximately 566,767 square feet, with two buildings fronting on Algonquin Road, and one building at the southwest corner of Dempster Street and Linneman Road. The Amended Plans consolidate the two buildings on Algonquin Road into a single, larger building (that may include two separate saleable/ leasable spaces separated by a party wall) (“Building 1”). The building at Dempster/ Linneman (“Building 2”) will be reconfigured slightly but has a similar footprint to that shown on the Original Plans. Both Building 1 and Building 2 are increased to three stories in height, as compared to the two-story buildings depicted on the Original Plans. Building 1 and Building 2 are referred to collectively herein as the “Data Center Buildings.”

Building 1 is proposed to have a footprint of approximately 445,000 square feet and a gross floor area of approximately 1.3 million square feet, with up to 240 MW of data center capacity. Building 1 is designed to allow occupancy by two separate tenants with a “zero lot line” subdivision at the mid-point of Building 1. Each half of Building 1 will have its own administrative/ office space, off-street parking, loading docks, and utility connections. Ancillary improvements associated with Building 1 include internal security gates and fencing, underground fuel storage for generators, ground-level fuel polishing equipment (discussed further below), other support equipment and structures, and underground utilities, including electric, fiber optic, sanitary sewer, water, and storm drainage collection and conveyance.

Building 2 is proposed to have a footprint of approximately 296,000 square feet and a gross floor area of approximately 872,000 square feet, with approximately 105MW of data center capacity. Building 2 is designed to be a single-occupancy building. Building 2 will have its own administrative/ office space, off-street parking, loading docks, and utility connections. Ancillary improvements associated with Building 2 include internal security gates and fencing, underground fuel storage for generators, fuel polishing equipment (discussed further below), other support equipment and structures, and underground utilities, including electric, fiber optic, sanitary sewer, water, and storm drainage collection and conveyance.

Additionally, CHQ has determined that a second ComEd electrical substation is needed to meet the capacity demands of the reconfigured Data Center Buildings. The second substation ("Substation #2") will be located on the Data Center Parcel to the west of Building 2.

Due to reconfiguration of the Data Center Buildings and Substation #2, the stormwater basins on the Data Center Parcel will be relocated as shown on the Amended Plans. A central, walled surface stormwater basin is proposed north of Building 1, with supplemental underground stormwater storage below the parking area northeast of Building 1. Separate surface storm water basins will serve Substation #2.

**REVISED PLAT OF SUBDIVISION**

The Original PUD Ordinance approved a final plat of subdivision for the Property ("Original Plat"), which divided the Property into five lots—three buildable lots and one common area lot within the Data Center Parcel, plus one lot for the Substation #1 Parcel. The Original Plat has not been recorded.

In connection with the requested PUD amendment, CHQ is seeking approval of a revised plat ("Revised Plat") that reflects the proposed reconfiguration of the Data Center Buildings and Substation #2. The Data Center Parcel would be subdivided into five lots—three buildable lots, one common area lot, and one lot for Substation #2. Additionally, the Substation #1 Lot would be subdivided into two lots, separating the ComEd substation improvements (northern portion) from the CHQ switch yard improvements (southern portion).

CHQ will record covenants and easements to provide for cross access and perpetual maintenance of common improvements, and to otherwise ensure that the campus functions cohesively.

**DATA CENTER BUILDINGS AND IMPROVEMENTS**

CHQ is requesting approval of all necessary zoning and subdivision exceptions and variations to allow development of the Property as depicted on the Amended Plans. Notable deviations from the underlying I-1 Limited Industrial District zoning requirements include:

| Regulation | Zoning Code Section | Required | Proposed |
|---|---|---|---|
| Ground-mounted antenna – number | 14.305(B)(1) | Not more than one per lot | Satellite antenna yard on Lot 1 (north of Building 1) with multiple receivers. |
| Height of screening structure for mechanical yard | 14.306(A)(3)(b)<br>14.318(B)(7)(a) | Accessory structures - 20' (max)<br>Fences – 8' (max) | 55'0" |
| Number of accessory structures | 14.306(A)(5) | Not more than two per lot | 10 fuel polishing sheds, 12 thermal storage tanks |
| Fence type | 14.318(C)(2) | Barb wire fencing on industrial property must be at least 6' above any sidewalk and extend inward of property. | Internal ComEd fence for Substation #2 contains barbed wire that extends outward of property. |

| Regulation | Zoning Code Section | Required | Proposed |
|---|---|---|---|
| Building height | 14.2104(C) | 50’ | Height of building: 85 feet (to parapet); Penthouse: 109’; Mechanicals: 121’ (Building 1), 138’ (Building 2) |
| Lot coverage/ open space | 14.2104(D), 14.504(C)(5)(d) | 75% | 82% |
| Ratio of deciduous/ evergreen shrubs | 14.2304(B)(2) | 50% / 50% | 57% / 43% |
| Perimeter landscaping | 14.2306(B) | Landscaping required on lot lines; see Code for design requirements | As shown on landscape plans |
| Foundation landscaping | 14.2307 | 4’-wide (min) landscaped area around front and exterior side façade of all buildings | As shown on landscape plans |

The Data Center Buildings will be constructed of high-quality materials including steel, concrete, and glass, with white metal cladding, stainless steel elements inserted into pre-cast panel reveals, and other outer surfaces. As depicted on the Amended Plans, the Data Center Buildings include meaningful architectural design elements to provide visual interest and break up the building mass.

Each Data Center Building features an administrative and office area (also referred to as an “administrative block”) with a proposed height of 60 feet (to parapet). Aesthetically, the administrative block breaks up the elevation of each Data Center Building. The administrative blocks feature large glass windows, glazed areas and stainless-steel cladding, providing a streamlined look that is more similar to an office building than an industrial building. To minimize visual impacts on the public right-of-way and residential neighbors to the north, Building 2 will be oriented so that the administrative block faces Dempster Street.

The Data Center Parcel will be a secure facility with high-quality, black coated steel ornamental perimeter fence. Primary vehicular access is proposed off Linneman Road, with emergency vehicle access provided from Dempster Street and Algonquin Road. All truck traffic will be required to use the main entrance on Linneman Road for both ingress and egress. Manned security guard booths and gates will be provided at the main entrance. Emergency gates are proposed at the right-in/ right-out driveways on Dempster Street and Algonquin Road.

The Project also will include construction of sidewalks and other bicycle/ pedestrian improvements that provide pedestrian access around the entire Data Center Property. On the Algonquin Road frontage, land will be dedicated for construction of a public sidewalk as part of an ongoing Village/ IDOT road improvement project.

Parking will be provided around each Data Center Building and adjacent to each administrative block. For data centers, the most useful measure of parking demand is the anticipated number of full-time employees during the busiest shift, as opposed to a ratio based on building square footage. Based on historic data, CHQ estimates that approximately 240 employees could occupy the data center campus during a 24-hour period, with the majority (but not more than 180) working

within standard daytime hours. CHQ proposes to provide 365 parking spaces on site, including 16 electric vehicle parking spaces and 12 accessible ADA spaces. Parking for 18-wheeler and delivery trucks would be provided within a multi-bay, partially screened truck dock.

The Amended Plans include updated screening and landscaping designs for the entire campus. Extensive landscaping will be provided throughout the Data Center Parcel, with an emphasis along the north property line. Landscape screening using evergreens in the transition setback is provided to help break up the visual sightline for neighbors to the north. Additionally, screening structures are proposed around the mechanical yards, which provide both visual and acoustical screening. Detention basins with additional landscaping are located on the north side of Building 1 to provide additional buffering and screening. Additional landscape screening is proposed along the north line of the Substation #1 Parcel.

**BACKUP SYSTEMS**

To ensure that its customers' mission-critical applications never go offline, CHQ utilizes layers of redundant electrical infrastructure, including emergency backup generators that provide backup electricity and thermal storage tanks that provide backup cooling.

CHQ's generators will be located on the roofs of both Data Center Buildings, and tanks storing #2 diesel fuel to power the generators will be located underground. The underground tanks will have double-wall construction and leak detection systems. Each tank has an outer diameter of approximately 12' 6”, with a minimum of 3’ cover, with the exact depth depending on topography and coordination with other site utilities. CHQ's plans provide for sufficient fuel storage to allow for 48 hours of backup power, which is the minimum demanded by most of its customers.

The backup electrical system also requires above-ground accessory structures, namely the "fuel oil polisher sheds" shown on the Amended Plans. In the event of an electrical outage, the backup generators (powered by #2 diesel fuel) provide electricity to the system. Because outages are rare, the fuel must be periodically “polished” to remove water that naturally accumulates from humidity and to prevent sediments from settling. To accomplish this, the Amended Plans include 10 accessory fuel oil polisher sheds that house mechanical pumps (which periodically cycle the fuel from the underground fuel tanks to the fuel oil polisher), valves, and fuel oil polisher equipment.

The backup cooling systems for the Data Center Buildings include 12 “thermal storage tanks” as depicted on the Amended Plans. In the event of an outage, pumps with battery-backed power will continue to move a solution of 35% propylene glycol to cool the system until the backup generators can run the chillers that ordinarily cool the system.

**BENEFITS TO VILLAGE**

The Project will benefit the Village and other units of local government in multiple ways, including capital investment in redevelopment of the former United Airlines site including new public infrastructure, generation of significant new municipal utility taxes, increased property tax

revenues for the Village and other taxing bodies, and creation of new permanent jobs (including skilled professional jobs) and construction jobs.

As demonstrated by the Traffic Study submitted with this application, the Project will generate significantly reduced traffic movements and impact on roadway infrastructure as compared to traditional industrial development. Additionally, the Project will produce lesser burdens on schools, police, fire protection, emergency, and other municipal services than would typically be experienced with other uses allowed in the I-1 zoning district.

CHQ will provide a detailed analysis of projected tax revenues, job creation, and other economic benefits to the Village as a supplement to its PUD amendment application.

**ECONOMIC IMPACT ANALYSIS**

**MOUNT PROSPECT TECHNOLOGY CAMPUS PLANNED UNIT DEVELOPMENT**

**PUD AMENDMENT APPLICATION**

**(Revised October 23, 2025)**

## I. Introduction

Tur Ventures LLC ("Tur") owns the eastern portion of the former United Airlines Operations Center site located at 1200 E. Algonquin Road and 1200 Dempster Street (the "Data Center Parcel"). Tur also owns a smaller parcel located at the southeast corner of the intersection of Dempster Street and Linneman Road (the "Substation #1 Parcel"), which is currently being developed for an electrical substation to serve the Data Center Parcel. The Data Center Parcel and the Substation #1 Parcel are, collectively, the "Property".

In 2021 and 2022, the Village of Mount Prospect (the "Village") approved a PUD for a data center campus on the Property. Now, Tur, with its affiliates, including CloudHQ LLC (Tur and its affiliates are, collectively, "CHQ"), proposes an amendment to the approved PUD, that will allow it to continue to redevelop the Data Center Parcel as a data center campus (the "Project") as further detailed in CHQ's final PUD amendment application.

The Project includes construction of a two-building data center campus as shown on the amended plans submitted with this application (the "Amended Plans"). The campus will include one building (that may include two separate saleable/ leasable spaces separated by a party wall) fronting on Algonquin Road ("Building 1," also referred to as "ORD1"), and a second building at the corner of Dempster Street and Linneman Road ("Building 2," also referred to as "ORD2"), as follows:

- Building 1 is proposed to have a footprint of approximately 445,000 square feet and a gross floor area of approximately 1.3 million square feet, with up to 240 MW of data center capacity. Building 1 is designed to allow occupancy by up to two separate tenants with a "zero lot line" subdivision at the mid-point of Building 1.

- Building 2 is proposed to have a footprint of approximately 296,000 square feet and a gross floor area of approximately 872,000 square feet, with approximately 105MW of data center capacity. Building 2 is designed to be a single-occupancy building.

The Project will benefit the Village and other units of local government in multiple ways, including new municipal utility consumption tax revenue, increased real property tax revenue, and job creation, while placing fewer demands on government services than other potential uses of the property, all as further outlined below.

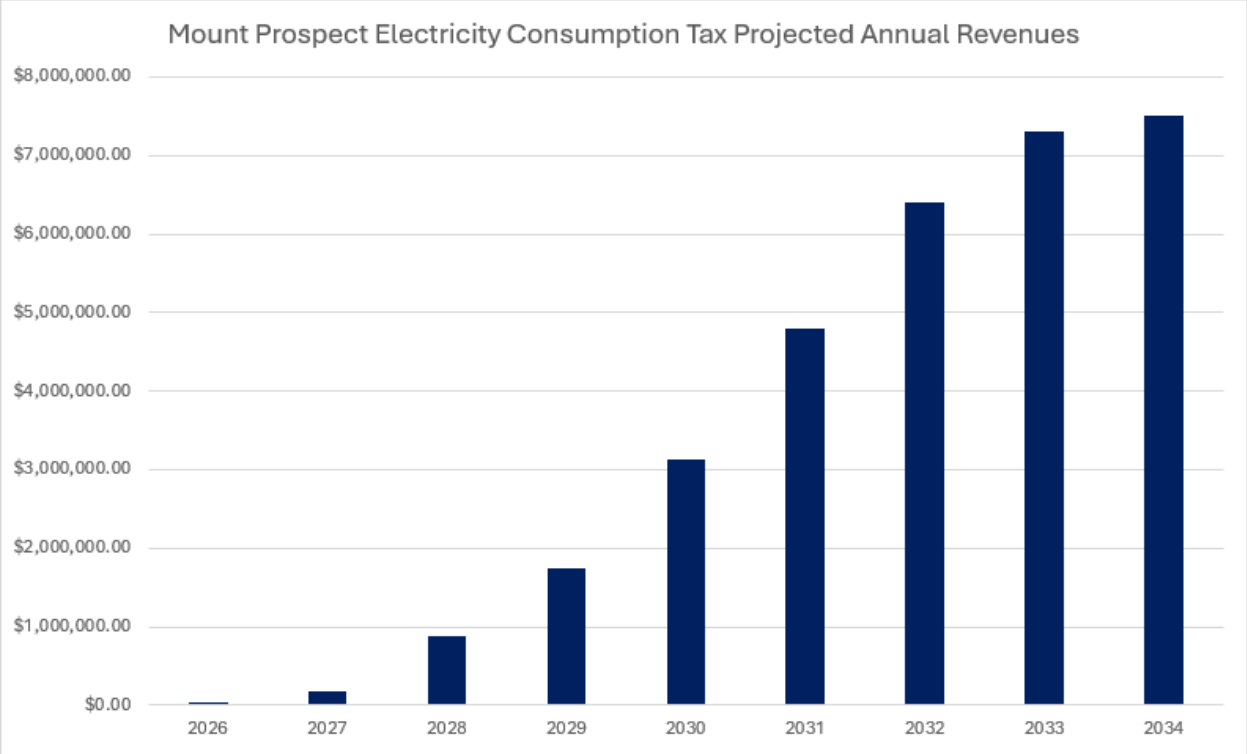
## II. Revenue Generation for Village

CHQ anticipates that the Project will generate revenue for the Village and other local governments

and promote local economic growth and development in several ways.

### A. Village Electricity Consumption Tax

The Project will generate substantial new municipal electricity consumption tax revenue. Assuming completion and full occupancy of the Project in accordance with the Amended Plans, CHQ estimates that new consumption tax revenues to the Village will exceed $3 million per year within five years and will exceed $7 million per year within eight years. See chart below.




The consumption tax projections shown above for year 2033 represent full build-out of the Project with data center operations at maximum design capacity for both Building 1 and Building 2. Once that benchmark is achieved, similar revenues would be generated year-to-year for as long as the campus is fully utilized.

### B. Real Estate Tax

Development of the Project also will substantially increase real estate tax revenues to the Village and its South Mount Prospect TIF District and, eventually, to schools and other local taxing bodies.

In connection with the Village's original approval of CHQ's data center project in 2021 and 2022, the Village also (i) adopted a resolution of support for the Class 6B property tax incentive and (ii) approved a redevelopment project area (i.e., a "TIF district") for the South Mount Prospect TIF District, which includes the Property and other property. The Class 6B incentive was, and continues to be, necessary for CHQ to undertake the Project. However, as in 2021-2022, CHQ is not currently seeking any tax increment finance incentives from the Village. Even assuming application of the Class 6B assessment rates, the Project will substantially increase the property tax base and revenues for the Village, the TIF, and other local entities.

The estimated 2025 taxes for the Property, in its current undeveloped condition, are approximately $1,080,698. Without the Project, property tax revenues will increase only to the extent of general growth in fair market value.

Assuming completion of Building 1 in 2026, the projected annual property taxes for the Property (with a Class 6B incentive) would increase to approximately $22,356,469 for tax year 2027. Assuming completion of Building 2 by 2031, the projected annual property taxes for the Property (with a Class 6B incentive) would increase to approximately $40,005,120 for tax year 2032. A significant portion of the increased property tax revenue can be used by the Village to finance eligible improvements and costs incurred to redevelop the TIF district.

## III. Job creation

The Project will create new construction and permanent employment opportunities within the Village. Although the exact number and type of jobs will depend on the ultimate users of the data center buildings, CHQ anticipates that a full build-out of both Building 1 and Building 2 will create a similar, or slightly higher, number of construction and permanent jobs as compared to the employment projections provided in connection with the original PUD approvals in 2021-22.

### A. Data Center Operational Employment

CHQ estimates at least 225-450 permanent jobs will be created by the development of both Building 1 and Building 2. Approximately 80% of these jobs will be for skilled, high-earning professionals with an estimated annual salary of $78,500+. These operating employees will include mechanical engineers, electrical engineers, computer engineers, security personnel, maintenance personnel, and real estate property managers.

CHQ anticipates that a significant number of these high-earning professionals will choose to live in close proximity to the Property, given the 24-hour nature of the facility.

### B. Data Center Construction Employment

CHQ estimates that at least 900-1,000 construction personnel will be employed on-site during construction of each data center building, and full build-out of the Project will involve at least 6.4 million labor hours.

### C. Additional Revenues

Both construction workers employed on the Project and permanent operational employees will support economic development and revenue growth within the Village. CHQ anticipates that a significant number of the permanent employees will choose to live in close proximity to the Property. Both resident and commuter employees, as well as business travelers and other visitors to the site, will generate increased sales tax revenues from purchases at local retail stores, restaurants, hotels, and other businesses.

## IV. Park Improvements Donation

In conjunction with the 2022 Final PUD Approval, CHQ agreed to make a park contribution in the amount of $2,000,000, to be made in three installments (one per Building). Because the proposed amended PUD includes two buildings rather than three, CHQ proposes to make the donation in two payments that are proportional to the square footage of each of the two Buildings. The park

contribution will be further addressed in an agreement to be entered into between the Village and CHQ prior to issuance of a building permit for the construction of the first Building.

Mission Critical Engineering
Member of WSP

233 North Water St., 6th Floor
Milwaukee, WI 53202
USA

**wsp.com/data-centers**

2025-09-18

The CloudHQ ORD1 facility located at 1200 E Algonquin Road, Mount Prospect, IL targets limited water use by its heat rejection system. To accomplish this, the facility is pushing the boundaries of market practices to raise the temperatures within the critical spaces to the maximum that the equipment can support. This allows for increased water temperatures throughout the facility, reducing the power required by the chillers to transfer the heat. Additionally, this allows for more rapid transition off of the adiabatic trim system to full dry heat rejection of the system.

The latest heat rejection design implements a cutting edge technology, Adiabatic Dry Coolers. This is a closed loop heat rejection system that normally uses zero water. Any time the ambient temperature is above the transition point, the equipment runs completely dry with no evaporative water used for heat rejection. During those short periods where the ambient dry bulb temperature raises above the full dry operational point, an adiabatic spray system engages to depress the inlet air temperature going through the equipment. This allows the facility to better balance energy efficiency with water use.

The communicated Hourly Maximum values represent the peak design conditions that the facility is designed to.  The heat rejection system is selected based on the ASHRAE 20-year extreme ambient temperature of 102.1°F for this location. That value does not represent a normal operating value. It is a historical analysis performed by ASHRAE and represents the temperature that historically has a 1/20=5% chance of occurring at some time during a given year. This does not indicate the temperature will be sustained for any period of time, but merely that there is a 5% chance of that temperature being reached for any period of time in a given year.

The Daily Average, Max Daily, and Annual Sum values are all based off of TMY3 BIN data. This is data that has been compiled based on historical weather data for the area to build a representative “average” year with ambient data assigned for all 8,760 hours throughout the year. This BIN data is then utilized to develop the Daily Average, Max Daily, and Annual Sum values to represent the expected water use during a normal period.

A Worst Case 24 hour Diurnal curve will be provided graphically representing the Max Daily information. This is based off of the BIN data covering the highest temperature 24 hour period expected from an average year. This will show during an average year, only on the worst day, water will only operate during the hottest periods of the day.

This is intended to clearly explain the apparent incongruities between design and expected water use, as well as describe how water is utilized for cooling on this site.

Sincerely,

**Kevin Cooper, PE**

Vice President, Mechanical Engineer

518.795.0471

City: CHICAGO_OHARE_INTL_AP

**Heat Rejection Water Usage Summary**

| Building | Total Critical Load (MW) | Number of units | Water Usage (Evap + Sewer) | | | | Sewer Discharge | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Hourly Maximum (gallons) | Daily Average (gallons) | Max Day (gallons) | Annual Sum (gallons) | Hourly Maximum (gallons) | Daily Average (gallons) | Max Day (gallons) | Annual Sum (gallons) |
| South | 240 | 94 ADC | 69,612 | 8,431 | 465,589 | 3,077,225 | 11,625 | 1,206 | 77,753 | 440,357 |
| North | 120 | 29 ADC | 66,679 | 5,170 | 314,808 | 1,886,959 | 0 | 0 | 0 | 0 |
| Combined | 360 | - | 136,290 | 13,601 | 780,397 | 4,964,184 | 11,625 | 1,206 | 77,753 | 440,357 |

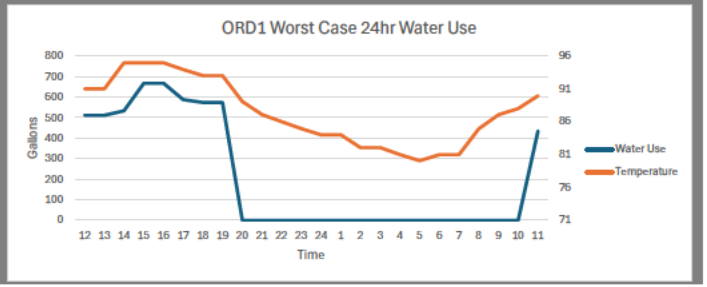
**Building Monthly Water Usage Break Down**

| Building | Month | Monthly Make-up Water (Gallons) | Monthly Evaporation (Gallons) | Monthly Sewer (Gallons) | Average Daily Make-Up Water (Gallons) | Average Daily Evaporation (Gallons) | Average Daily Sewer (Gallons) |
|---|---|---|---|---|---|---|---|
| South | January | 0 | 0 | 0 | 0 | 0 | 0 |
| South | February | 0 | 0 | 0 | 0 | 0 | 0 |
| South | March | 0 | 0 | 0 | 0 | 0 | 0 |
| South | April | 0 | 0 | 0 | 0 | 0 | 0 |
| South | May | 0 | 0 | 0 | 0 | 0 | 0 |
| South | June | 1,668,482 | 1,429,719 | 238,763 | 55,616 | 47,657 | 7,959 |
| South | July | 243,031 | 208,253 | 34,778 | 7,840 | 6,718 | 1,122 |
| South | August | 878,294 | 752,608 | 125,686 | 28,332 | 24,278 | 4,054 |
| South | September | 287,418 | 246,288 | 41,130 | 9,581 | 8,210 | 1,371 |
| South | October | 0 | 0 | 0 | 0 | 0 | 0 |
| South | November | 0 | 0 | 0 | 0 | 0 | 0 |
| South | December | 0 | 0 | 0 | 0 | 0 | 0 |

**Building Occupancy Water Usage and Sewer Discharge**

| Building | Total Critical Load (MW) | Total Building Occupants | Occupant Water Demand | | Occupant Sanitary Discharge | |
|---|---|---|---|---|---|---|
| | | | Daily Average (gallons) | Annual Sum (gallons) | Daily Average (gallons) | Annual Sum (gallons) |
| South | 240 | 160 | 1,600 | 584,000 | 1,600 | 584,000 |
| North | 120 | 110 | 1,100 | 401,500 | 1,100 | 401,500 |
| Combined | 360 | 270 | 2,700 | 985,500 | 2,700 | 985,500 |

| Campus Water Consumption and Sewer Discharge Summary | |
|---|---|
| Annual Water Consumption (gallons) | 5,949,684 |
| Annual Water Sewer Discharge (gallons) | 1,425,857 |



# Mount Prospect Public Works Department

INTEROFFICE MEMORANDUM

TO: COMMUNITY & ECONOMIC DEVELOPMENT DIRECTOR JASON SHALLCROSS, AICP, CECD

FROM: PROJECT ENGINEER CHUCK LINDELOF

DATE: OCTOBER 10, 2025

SUBJECT: PZZ25-000023; CLOUD HQ PUD AMENDMENTS & PLAT OF SUBDIVISION
(1200 E. ALGONQUIN ROAD AND 1200 DEMPSTER STREET)
WATER & SANITARY SERVICE DEMANDS

We have received the anticipated peak demand information for water and sanitary services for the proposed CloudHQ development. Our consultant has incorporated this information into the hydraulic model of the existing Village water and sanitary systems and confirmed that these existing systems are sufficient to accommodate the anticipated demands. We have flow tested and further confirmed that these results are accurate. Per these results, *no upgrades to the Village systems will be necessary to accommodate the proposed CloudHQ development*.

Please feel free to call if you have any questions.

Chuck

Chuck Lindelof

**I-1 ZONING DISTRICT PERFORMANCE STANDARDS AND "GAP" ANALYSIS**

**MOUNT PROSPECT TECHNOLOGY CAMPUS PLANNED UNIT DEVELOPMENT**

**PUD AMENDMENT APPLICATION**

Tur Ventures LLC ("Tur") owns the eastern portion of the former United Airlines Operations Center site located at 1200 E. Algonquin Road and 1200 Dempster Street (the "Data Center Parcel"). Tur also owns a smaller parcel located at the southeast corner of the intersection of Dempster Street and Linneman Road (the "Substation #1 Parcel"), which is currently being developed for an electrical substation to serve the Data Center Parcel. The Data Center Parcel and the Substation #1 Parcel are, collectively, the "Property".

In 2021 and 2022, the Village of Mount Prospect (the "Village") approved a PUD for a data center campus on the Property. Now, Tur, with its affiliates, including CloudHQ LLC (Tur and its affiliates are, collectively, "CHQ"), proposes an amendment to the approved PUD, that will allow it to continue to redevelop the Data Center Parcel as a data center campus (the "Project") as further detailed in CHQ's final PUD amendment application.

The Village requested that CHQ provide a supplemental "gap" analysis addressing the changes in bulk, intensity, and I-1 Zoning District performance standards between the plans approved by the 2022 Final PUD Ordinance ("Original Plans") and the proposed amended PUD plans (the "Amended Plans").

## A. Bulk Standards

The Amended Plans reflect the following changes with respect to bulk:

| | **2022 Final PUD Ordinance** | **Amended Plans** |
|---|---|---|
| Number of buildings | 3 | 2 |
| Building square footage | Each building: 566,767 SF Total: 1,700,301 gross SF | Building 1: 1,300,000 SF<br>Building 2: 872,000 SF<br>Total: 2,172,000 SF |
| Building height | Height of building: 81' (to parapet)<br>Equipment Penthouse: 79 feet<br>Administrative block: 54 feet | Height of building: 85' (to parapet)<br>Equipment Penthouse: 109'<br>Mechanicals: 121' (Building 1), 138' (Building 2)<br>Administrative block: 60' (to parapet) |
| Lot coverage | 75% | 82% |

## B. Performance Standards

Both the Original Plans and the Amended Plans demonstrate compliance with all Performance Standards of the I-1 Limited Industrial District under Section 14.2104.G of the

Village Zoning Code (the "Performance Standards," set forth in red below). Development of the project in accordance with the Amended Plans will achieve comparable or improved performance with respect to each Performance Standard, as specifically addressed below and in CHQ's application materials:

> 1. Noise Limitations: No industrial activity shall generate noise across any residential or business zoning district boundary line in excess of the levels shown in table I of this section, nor shall exceed seventy one (71) dBA when measured on the A-weighted scale.

Noise limitations are addressed in the separate acoustical study provided by CHQ. As detailed in the acoustical study, the project will meet the Village's performance standards for daytime and nighttime noise limits during routine operations and will meet the Village's maximum sound level of 71 dBA during emergency operations. Emergency operations would occur only in rare circumstances, such as a full utility outage.

Additionally, operational controls and mitigation measures will be implemented effectively to prevent excessive noise levels. CHQ will continue to evaluate site conditions to ensure compliance with applicable environmental and Village noise standards and community expectations. Should any changes arise, appropriate actions will be taken and communicated.

See gap report table below comparing the noise levels from the original 2022 PUD submission with current 2025 PUD submission:

| | | | | | Previous PUD - 2022 | | | Updated - 2025 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Receiver/Home | Receiver Number | Day Limit dB(A) | Night Limit dB(A) | Emergency Limit dB(A) | Day dB(A) | Night dB(A) | Emergency dB(A) | Day dB(A) | Night dB(A) | Emergency dB(A) |
| Crystal Towers Condos | 1 | 56 | 52 | 71 | 49 | 48 | 63 | 51 | 47 | 67 |
| Myers Place | 2 | 56 | 52 | 71 | 48 | 48 | 61 | 51 | 47 | 65 |
| 1510 Dempster St | 3 | 56 | 52 | 71 | 51 | 50 | 66 | 53 | 49 | 68 |
| Birch Manor Condos Northeast | 4 | 56 | 52 | 71 | 49 | 48 | 64 | 50 | 46 | 65 |
| Birch Manor Condos Southeast | 5 | 56 | 52 | 71 | 52 | 51 | 69 | 54 | 50 | 70 |
| Birch Manor Condos - North | 6 | 56 | 52 | 71 | 47 | 46 | 64 | 49 | 46 | 65 |
| Birch Manor Condos - South | 7 | 56 | 52 | 71 | 50 | 48 | 69 | 53 | 51 | 70 |
| 636 Pickwick | 8 | 56 | 52 | 71 | 44 | 43 | 60 | 47 | 45 | 60 |
| 648 Dempster | 9 | 56 | 52 | 71 | 52 | 51 | 67 | 53 | 51 | 66 |

> 2. Vibration Limitations:
>
> a. Earthborne vibrations from any industrial operation, equipment, or process shall not constitute a nuisance nor exceed the limits set forth herein. Vibrations shall be expressed as displacement in inches and shall be measured with a three (3) component measuring system.
>
> b. No industrial activity shall be responsible for the transmission of earthborne vibrations across any residence or business zoning district boundary line in excess of the displacement limits established through use of the following formula:

D = 0.003/f

Where:

D = The maximum allowable displacement in inches

f = The vibration frequency in cycles per second

The vibration generating equipment that will be used in this project (chillers and generators) have vibration isolators on each unit to limit vibration transmission to the ground contained within the building. Therefore, the equipment will not cause a nuisance or transmit earthborne vibrations across any residence or business zoning district boundary line. Both the Original Plans and the Amended Plans meet this standard, with no transmission of earthborne vibrations across residence or business zoning district boundary lines.

3. Smoke And Particulate Matter:

a. General Limitations: In addition to the performance standards specified hereinafter, the emission of smoke or particulate matter in such manner or quantity as to be detrimental to or endanger the public health, safety, comfort, or welfare is hereby declared to be a public nuisance and shall henceforth be unlawful.

Particulate matter emissions in excess of the threshold limit values caused by the wind from open storage areas, yards, roads, etc., within lot lines shall be kept to a minimum by appropriate landscaping, paving, oiling, wetting, and other means, or shall be eliminated.

For the purpose of determining the density or equivalent opacity of smoke, the Ringelmann chart as adopted and published by the United States bureau of mines in circular no. 8333 shall be used.

No industrial operation shall cause or allow to be emitted into the open air from any process or control equipment or to pass any convenient measuring point in a breaching or stack, dust in the gases to exceed 0.85 pounds per thousand pounds of gases adjusted to twelve percent (12%) CO2 content for the products of combustion.

The emission, from all sources within any zoning lot, of particulate matter containing more than ten percent (10%) by weight of particles having a particulate diameter larger than forty four (44) microns is prohibited.

b. Permitted Smoke Emission: Within one thousand feet (1,000') of a residence or office or business zoning district boundary line the emission of smoke from any vent, stack, chimney, or combustion process shall not exceed a density or equivalent opacity no greater than Ringelmann no. 1.

Smoke in excess of Ringelmann no. 1, but not exceeding Ringelmann no. 2, shall be permitted for not more than three (3) minutes in any sixty (60) minute period. Smoke not exceeding Ringelmann no. 3 shall be permitted for five (5) minutes during any eight (8) hour period for purposes of fire cleaning only. Smoke in excess of Ringelmann no. 3 is prohibited.

The proposed development will meet all performance standards for airborne emissions, and the Amended Plans will significantly reduce emissions of particulate matter and other air pollutants as compared to the Original Plans.

The Original Plans deployed 252 MW of data center capacity, while the Amended Plans will deploy up to 360 MW. However, improved diesel engine generators and additional pollution controls are expected to reduce emissions per MW for NOx (nitrogen oxides), CO (carbon monoxide), VOCs (volatile organic compounds), and PM (particulate matter) by 15% to 98% annually for the 2025 design, as further detailed in the following table:

| Emissions Comparison | | | | | |
|---|---|---|---|---|---|
| | 2022 Design | 2025 Design | | | |
| Structures | 3 | 2 | | | |
| MW per | 84 | 240 & 120 | | | |
| Site MW | 252 | 360 | | | |
| Diesel Engine Generators | Cat 175-16 | Cat 3516e | Cat C175-20 | | |
| Number | 150 | 172 | 27 | | |
| Annual Scheduled Maintenance Hours | 8 | 8 | 8 | | |
| Annual Emergency Hours (Est.) | 100 | 100 | 100 | | |
| Controls | SCR | SCR/DOC/DPF | SCR/DOC/DPF | | |
| Annual emissions estimate (Tons) | 2022 Design | | | 2025 Design | |
| NOx | 43.3 | 42.0 | 10.3 | 52.26 | |
| CO | 48.6 | 4.5 | 2.8 | 7.29 | |
| VOCs | 18.7 | 0.3 | 0.2 | 0.59 | |
| PM | 12.0 | 2.5 | 0.1 | 2.67 | |
| Emissions Per MW | | | | | 2025 % lower emissions |
| NOx | 0.172 | 0.117 | 0.029 | 0.145 | 15 |
| CO | 0.193 | 0.012 | 0.008 | 0.020 | 89 |
| VOCs | 0.074 | 0.001 | 0.001 | 0.002 | 98 |
| PM | 0.048 | 0.007 | 0.000 | 0.007 | 84 |

4. Fire And Explosion Hazard Limitations: The following regulations supplement those pertinent requirements contained in the Mount Prospect fire prevention code and all other applicable fire and explosion ordinances:

a. The storage, utilization, or manufacture of material or products ranging from incombustible to moderate burning, as determined for liquids by a closed cup flashpoint of not less than one hundred eighty seven degrees Fahrenheit (187°F), is permitted subject to compliance with all other performance standards for the industrial districts.

b. The storage, utilization, or manufacture of materials or products ranging from free or active burning to intense burning, as determined for liquids by a closed cup flashpoint of less than one hundred eighty seven degrees Fahrenheit (187°F) but not less than one hundred five degrees Fahrenheit (105°F), is permitted subject to compliance with all other performance standards for the industrial districts, and provided the following conditions are met:

(1) Said materials or products shall be stored, utilized, or produced within completely enclosed buildings or structures having exterior walls of fire resistive construction in accordance with other ordinances of this code.

(2) Unless otherwise provided in this chapter, all such buildings or structures shall be set back at least forty feet (40') from lot lines, or in lieu thereof, all such buildings or structures shall be protected throughout by an automatic sprinkler system complying with installation standards prescribed by the National Fire Protection Association; or if the materials, goods, or products are liquids, the protection thereof shall be in conformity with standards prescribed by the National Fire Protection Association.

In response to a. and b., the three solutions that will be stored on-site are a propylene glycol solution (32% concentration), diesel exhaust fluid (32.5% urea concentration), and #2 diesel fuel. The propylene glycol solution and the diesel exhaust fluid do not have a flashpoint. The #2 diesel's flashpoint is 125.6 degrees Fahrenheit. Its use will comply with the standard above because (i) it will be stored within completely enclosed, underground structures (i.e., underground storage tanks) having exterior walls of fire resistive construction in accordance with applicable laws.

c. The utilization in manufacturing processes of materials which produce flammable or explosive vapors or gases, as determined for liquids by a closed cup flashpoint of less than one hundred five degrees Fahrenheit (105°F), shall be permitted in the industrial districts provided:

(1) That the final manufactured product does not itself have a closed cup flashpoint of less than one hundred eighty seven degrees Fahrenheit (187°F).

(2) That the use and storage of such materials shall be in conformity with standards prescribed by the National Fire Protection Association and with the requirements of other ordinances of this code.

(3) That the storage of said materials shall be prohibited aboveground.

There will be no manufacturing processes occurring on the Subject Property.

5. Toxic Matter Limitations: In any industrial district, toxic materials which are released shall not exceed ten percent (10%) of the maximum permissible airborne concentration allowed an industrial worker when measured at any point beyond the lot line, either at ground level or habitable elevation, whichever is more restrictive. When maximum permissible airborne concentrations of toxic materials allowed an industrial worker are not contained in the most recent list of "Threshold Limit Values" published by the American conference of governmental industrial hygienists, the applicant shall satisfy the health inspector that proposed levels will be safe to the general population.

The Data Center Buildings, Substation 2, and the other ancillary uses of the Subject Property will not release hazardous or toxic airborne materials. See also discussion above regarding airborne emissions.

6. Odorous Matter Limitations: The release of odorous matter from any industrial district across residence or business district boundary lines shall be so controlled that, at ground level or at habitable elevations, the concentration shall not exceed the odor threshold level. Further, the release of odorous matter across lot lines shall not become a nuisance or source of discomfort to neighboring uses.

As part of CHQ's ongoing environmental monitoring and compliance efforts, an internal review has been conducted to assess potential odor impacts associated with the future operations at the property.

Based on evaluation of existing sites and operational activities, CHQ confirms that no odorous matter shall be emitted from the site across any lot lines. Operational controls and mitigation measures will be implemented effectively to prevent the release of odorous substances (if they were to occur). CHQ will continue to evaluate site conditions to ensure compliance with the Performance Standards and any other applicable environmental and community standards. Should any changes arise, appropriate actions will be taken and communicated.

Both the Original Plans and the Amended Plans meet this standard, with no transmission of odorous matter across lot lines or across residence or business district boundary lines that would cause a nuisance or discomfort to neighboring uses.

7. Glare Limitations: In any industrial district, any operation or activity producing glare shall be so conducted that direct and indirect illumination from the sources of light shall not cause illumination in excess of one-half (0.5) of one foot-candle when measured at any residence or business district boundary line. Flickering or intense sources of light shall be so controlled as not to cause a nuisance across any lot lines. (Ord. 4590, 9-21-1993; amd. Ord. 5173, 3-6-2001; Ord. 5751, 8-4-2009; Ord. 6548, 12-1-2021)

The data center operations will be almost exclusively conducted within enclosed buildings. Rooftop and ground-mounted equipment will be visually screened, and outdoor maintenance and other outdoor activities will be infrequent. The data center use will generate significantly fewer vehicular traffic movements, and require fewer outdoor parking spaces, as compared to traditional industrial development. In short, CHQ expects that no operations on the Subject Property will result in direct or indirect illumination in excess of

one-half of one foot-candle when measured at any resident or business district boundary line. Both the Original Plans and the Amended Plans meet this standard.

**C. Sustainability**

Although the Amended Plans will increase the overall size and capacity of the data center facilities on the property, the current Project will have a reduced environmental impact, and be "greener" and more sustainable, as compared to the Original Plans and 2022 PUD approval. Advancements in design and technology allow the development to achieve greater capacity with an overall reduced impact on the environment and natural resources, including reduced airborne emissions (as discussed above) and water usage. Additional information regarding expected water use and efficiency improvements in the data centers' heat rejection system is provided under separate cover.

Regarding water usage, each data center building will use a "closed loop" heat rejection system to cool the servers. The system includes internal "fan walls" in the server halls that pull in hot air generated by the servers, and liquid-filled coils that then reject the heat. The system also includes the transfer of heated air, via similar liquid-filled coils, from the servers to outdoor chillers and coolers that then reject the heat to the ambient air. The liquid in the coils is water and food-grade (non-toxic) propylene glycol. Once a building's system is filled with water upon commencement of building operations, the system, when operated and maintained properly, does not require any additional water, unless the outdoor temperature reaches 92+ degrees Fahrenheit, at which time the system uses sprayers to further cool some of the cooler's elements. Additional information regarding expected water use and efficiency improvements in the data centers' heat rejection system is provided under separate cover.

Additionally, both Building 1 and Building 2 will be designed to a LEED Silver standard and will meet CHQ's Global Design Standards, which prioritize inclusion of sustainable building and site-design elements to reduce light pollution and increase energy efficiency, water efficiency, operational waste handling, embodied carbon, biodiversity, enhanced climate change resilience, sustainable transit provisions, and guidelines for use of alternative fuels, and a wide range of other aspects of building performance.

CHQ's commitment to sustainable practices and environmental performance standards is detailed in its Sustainable Development Plan ("SDP," copy attached), which applies to all new CHQ developments, including the Project. The SDP establishes goals to, among other things, promote energy efficiency and optimize energy performance, reduce environmental emissions and waste, enhance biodiversity, and conserve natural resources.

## 1.1 – CONTRIBUTORS

Mohammad Ali, Keith Harney, Andrew Harrison, Pete Hohm, Tiffany Lathe, Michelle Melito, David McKeegan, Brian O'Hara, Patrick Quinn, Erin Ramana, Alex Tilley, Brian Zemcik, Carlos Cutting

## 1.2 – INTRODUCTION: THE CLOUDHQ BUSINESS

CloudHQ is committed to providing its clients with data centers that deliver value through quality, speed-to-market, sustainability, cost-efficiency, and safety. We achieve this by working closely with sustainable partners and leveraging the sustainable practices of our customers and suppliers. This means supporting our tenants to operate sustainably, guiding the right suppliers to sustainable outcomes wherever we can, and ensuring that our developments prioritize and deliver sustainable outcomes wherever we go.

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*"One must evolve to become better. At CloudHQ, that is our ultimate objective. We continue to push forward to provide the most efficient, reliable and cost-effective solutions for our customers"*

*– Hossein Fateh*

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## 1.3 – OBJECTIVES

The purpose of the Sustainable Development Policy (SDP) is to establish the minimum environmental performance level that CloudHQ developments must meet. It applies to all new CloudHQ developments.

The SDP establishes protocols and targets that promote energy efficiency, reduce cost, optimize capital investment for energy efficiency, reduce environmental and greenhouse gas emissions, reduce waste, enhance biodiversity and conserve natural resources. These protocols are organized according to the main processes that comprise CloudHQ operations. Further documentation is used to support the delivery of objectives within each process and is referenced separately.

**REVISION HISTORY**

| Date | Revision Number | Revision Description | Author | QC Approver |
|---|---|---|---|---|
| 04/26/2022 | 1 | Creation | CBS | |
| 06/21/2022 | 2 | Draft update | CBS/APH | |
| 07/14/2022 | 3 | Committee Draft | CBS/APH | |
| 09/29/2022 | 4 | Committee Draft – enhanced language | CBS/APH | |
| 22/02/2023 | 5 | Final Draft | CBS/APH | |



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## 2| DEVELOPMENT

### 2.1 – LAND ACQUISITION

**a.** Select new sites for potential data center usage in consideration of *SDP1.1 Sustainable Site Selection Guidelines*, before acquisition.
**b.** Support the development of sustainable cloud infrastructure and broader access to technology by selecting sites of strategic importance to sustainable cloud infrastructure providers.
**c.** Prioritize sites of strategic importance within national and regional energy and heat networks, including availability of renewable energy infrastructure, where possible.
**d.** Prioritize sites of strategic importance within international telecommunications networks.
**e.** Assess the suitability of new plots as a data center site using the *SDP1.1 Sustainable Site Selection Guidelines*, and report the measured score to the CHQ sustainability committee.
**f.** Engage with regional and local authorities and relevant stakeholders to understand environmental and social priorities to the local community and region, prior to land acquisition and brief definition.
**g.** Establish the site masterplan in accordance with the identified environmental and social priorities.
**h.** Complete a biodiversity pre-assessment using *SDP1.2 Biodiversity Pre-assessment Guidelines* and comply with the sustainable landscaping requirements identified in the *CloudHQ Global Design Standards*.
**i.** Select new sites for enhanced climate change resilience in accordance with the criteria identified in the *CloudHQ Due Dilligence Checklist.* Define site design criteria for enhanced climate change Vulnerability and climate change risk assessment in accordance with *CloudHQ Global Design Standards*.
**j.** Prioritize community engagement at an early stage, engaging in thoughtful conversations with the local neighbors, and incorporating feedback into the early design process where applicable – always with the intent of **being a good neighbor**. We take great pride in open dialogues with the public, often understanding the local needs of the area and finding opportunities to enhance (through landscaping, trails, ponds, etc) the local fabric of the community.

### 2.2 – DEVELOPMENT

**k.** Work with sustainable cloud infrastructure providers to design and deliver facilities that meet and exceed their sustainability requirements and deliver their infrastructure needs as sustainably as possible.
**l.** Develop the facility design in accordance with the sustainable building design requirements defined in *CloudHQ's Global Design Standards*[1]. Record any deviations at key design milestones and obtain senior team sign-off.
**m.** Incorporate applicable sustainability concepts from relevant green building rating systems such as LEED. Assess performance against an applicable rating system and identify opportunities for improving the development's environmental impact to a targeted goal of Gold or equivalent standard. Incorporate the measures necessary to achieve such a standard where these are feasible and consistent with the broader development objectives.
**n.** Assess the site for compliance with LEED requirements or those of an equivalent green building rating system during the early concept design. Use the assessment to identify opportunities for improving the development's environmental impact up to a LEED Silver/Gold or equivalent standard and incorporate these measures where feasible and consistent with the broader development objectives.
**o.** Reduce light pollution, and increase night sky access, improve nighttime visibility, and reduce the consequences of development for wildlife and people.

[1] The CloudHQ Global Design Standards stipulate minimum requirements related to sustainable building design. These include energy efficiency, water efficiency, operational waste handling, embodied carbon, biodiversity, enhanced climate change resilience, sustainable transit provisions, guidelines on the use of alternative fuels and a wide range of other aspects of building performance.



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**p.** Work with regional and local authorities and relevant stakeholders to identify potential users of waste heat. Incorporate facilities to provide heat free-to-use at the site boundary, according to the *CloudHQ Global Design Standards* and according to the identification of a suitable user.

**q.** Assess opportunities to incorporate on-site renewable, zero-carbon and alternative energy storage and generation technologies into the development.

**r.** Identify opportunities for the direct connection of off-site renewable energy infrastructure to the development. Incorporate suitable opportunities into the campus energy supply strategy where feasible.

**s.** Ensure the sustainable and regionally-appropriate use of water in accordance with the *CloudHQ Global Design Standards*. Avoid the use of potable water for irrigation. Promote the use of alternative water sources that do not increase water stress and prohibit the use of potable water for cooling purposes in any area defined as having a water source stress level greater than "low" by the World Resources Institute[2].

**t.** Assess the market availability of HVO and alternative fuels and ensure that the generator system is suitable for compatibility with HVO in accordance with *CloudHQ Global Design Standards*.

**u.** Identify local and national sustainability and energy efficiency programs. Assess opportunities to design and construct in accordance with their requirements and incorporate them into the development process where possible.

**v.** Optimize energy performance according to LEED guidelines and identify ways to further design energy efficient data centers in an effort to achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic harms associated with excessive energy use and greenhouse gas emissions that disproportionately impact frontline communities

**w.** Incorporate advanced energy metering to support energy management and identify opportunities for additional energy savings by tracking building-level and system-level energy use, in accordance with LEED.

**x.** Tender pre-construction and construction contracts in compliance with the *CloudHQ Responsible Sourcing Guidelines*[3]. Collect the identified sustainability metrics and evaluate these as part of the tender appraisal process.

**y.** Work with potential tenants to identify strategies for the collection and recycling of electronic waste and to provision for these in the building design.

**z.** Ensure the materials used during the development processes are in accordance with LEED standards for low emitting materials to reduce concentrations of chemical contaminants that can damage air quality and the environment, and to protect the health, productivity, and comfort of installers and building occupants

**aa.** Provide electrical vehicles and bicycle stations to promote bicycling and transportation efficiency and reduce vehicle distance traveled, and addition to improving public health by encouraging utilitarian and recreational physical activity.

**bb.** In an effort to encourage adaptive reuse and optimize the environmental performance of products and materials, CloudHQ demonstrates reduced environmental effects during initial project decision-making by reusing existing building resources or demonstrating a reduction in materials use through life-cycle assessment through LEED approved guidelines and strategies.

**cc.** Strive for considerate and thoughtful design practices for all employee and tenant office spaces, focusing on quality of daylight, quality views, and work environment as defined by LEED guidelines

[2] "Low" is defined as the lowest category of baseline water stress (0-1) according to the World Resource Institute's *Acqueduct* tool. Where wet cooling is shown to provide significant greenhouse gas savings and water stress is low-medium or greater, alternative water sources may only be used where they do not are not suitable for utility potable or agricultural usage.

[3] The CloudHQ Sustainable Sourcing Guidelines seek to encourage the use of sustainable procurement options in construction and operation. They encourage the use of local community suppliers, and those that disclose and aim to reduce their environmental impact. They also encourage the use of sustainable alternatives to conventional consumables such as fuels, refrigerants and electricity tariffs.



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## 2.3 – PRE-CONSTRUCTION AND CONSTRUCTION

**dd.** Carry out all activities in accordance with the *CloudHQ Global Safety Guidelines for Development*[4], including air quality management, with organized strategies to increase cleaner and in conformance with LEED or equivalent.

**ee.** Certify the development using LEED or an equivalent green building rating system where appropriate.

**ff.** Minimize air-borne, water-borne and other forms of pollution through the selection of appropriate best practice demolition, remediation and construction methods. Administer these activities according to a construction pollution prevention plan, in accordance with the requirements of the green building rating system and/or local or national code where applicable.

**gg.** Carry out demolition, remediation and construction activities in such a way as to maximize on-site re-use of demolition arisings, reclaim any recyclable materials and minimize waste to landfill. Administer these activities according to the requirements of a construction waste management plan, in accordance with the requirements of the green building rating system and/or local or national code where applicable.

**hh.** Carry out demolition, remediation and construction activities in such a way as to minimize the impact of traffic, noise, dust and other nuisances on the surrounding community. Assess opportunities to reduce the impact of construction activities through the use of alternative construction practices. Where applicable certify the development using an appropriate local or national certification system [such as the UK Considerate Constructors scheme].Record the total quantity of waste to landfill throughout the demolition, remediation and construction process.

**ii.** Schedule and complete pre-development and pre-construction activities in accordance with the campus biodiversity strategy.

**jj.** Provide LEED approved enhanced commissioning strategies to further support the design, construction, and eventual operation of a project that meets the owner's project requirements for energy, water, indoor environmental quality, and durability

[4] The CloudHQ Global Safety Guidelines for Development seek to safeguard the well-being and safety of personnel involved in construction and construction-related activities. They do this by providing good practice guidance and describing the minimum requirements we expect CloudHQ employees and our partners and suppliers to observe in protecting one another's health, safety and environment.



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## 3| OPERATION

**kk.** Work with the tenant where applicable to develop a sustainable operating strategy, using the *CloudHQ Standard Operating Procedure* template for sustainable, climate-resilient facility operations[5]. Incorporate ISO 50001 (Energy Management) and ISO14001 (Environmental Management) principles where applicable to optimize the facility's energy consumption and environmental performance.

**ll.** Conduct periodic reviews of energy and water consumption in any facility we operate. Compare the measured values with facility design estimates and identify any discrepancies. Collaborate with the tenant to propose and establish potential strategies for corrective action.

**mm.** Measure and record operational power and water consumption where applicable.

**nn.** Plan and document routine maintenance and end of life planning for powered equipment to ensure reliability and energy efficiency. Incorporate Life Cycle Assessment (LCA) principles into the procedure for end of life planning, in a manner consistent with ISO 14040, ISO 14044 or an equivalent, internationally recognised standard.

**oo.** Collect greenhouse gas data in accordance with the *CloudHQ Inventory Management Strategy*.

**pp.** Provide facilities for, ensure and encourage the separation of municipally recyclable materials from general waste wherever we operate. Measure and record quantities of operational waste to landfill, and to each municipally collected recycling stream. Assess UL Zero Waste to Landfill (UL 2799) and TRUE Zero Waste certification for all new buildings that we operate and pursue certification wherever feasible.

**qq.** Tender operational supply contracts in compliance with the *CloudHQ Responsible Sourcing Guidelines*[6]. Collect the identified sustainability metrics and evaluate these as part of the tender appraisal process.

**rr.** Provide Tenant Design and Construction Guidelines to educate tenants about implementing sustainable design and construction features in their tenant improvement build-out

**ss.** Review direct-appointed supply contracts on an annual basis in accordance with the *CloudHQ Responsible Sourcing Guidelines*. Identify sustainable alternative procurement options where feasible.

**tt.** Incorporate *CloudHQ Standard Operating Procedures* for enhanced climate change resilience where applicable. Communicate with tenants in relation to climate change-related risks where appropriate.

**uu.** Maintain and promote a safe and healthy work-place that promotes employee well-being and a positive, inclusive working environment.

5 *CloudHQ Standard Operating Procedures* provide a framework for sustainable, assured operations management. They include protocols that safeguard the environment and establish continual improvement in energy conservation, water usage, waste management and other key areas of operational sustainability. They also align with commonly recognised certification systems including ISO9001, ISO14001 and ISO50001, and can contribute to certification when implemented under an appropriate framework.

6 The CloudHQ Sustainable Sourcing Guidelines seek to encourage the use of sustainable procurement options in construction and operation. They promote the use of local community suppliers, and those that aim to disclose and reduce their environmental impact. They also encourage the use of sustainable alternatives to conventional consumables such as fuels, refrigerants and electricity tariffs.



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## 4| CORPORATE AND LEGAL

### 4.1 – Employees, Contractors and training

**vv.** Encourage all employees, regardless of affiliation, position, or title, to provide suggestions for improving corporate sustainability.
**ww.** Require designated employees to attend sustainability training as a mandatory component of their continuing professional development requirements.
**xx.** Enable the use of virtual meetings, training and team building exercises. Provide facilities for video and telephone conferencing at all sites to facilitate effective remote working where possible and minimize the incidence of unnecessary business travel.
**yy.** Enable hybrid and remote working models where appropriate in accordance with the *CloudHQ Remote Working Policy*.
**zz.** Facilitate enhanced employee wellbeing throughout CloudHQ platforms through the *CloudHQ Employee Wellbeing Policy*
**aaa.** Promote employee and partner wellbeing and a positive sense of team and community through inclusive team-building events, away-days and related initiatives.

### 4.2 – Governance and Legal Compliance

**bbb.** Ensure that all of our business and that of all suppliers to CloudHQ and affiliated companies is conducted in an honest and ethical manner.
**ccc.** Keep records ensuring that all suppliers have received, acknowledged and committed to compliance with CloudHQ's family of legal policies, including:

- *CloudHQ Anti corruption and bribery policy*
- *CloudHQ Modern slavery policy*
- *CloudHQ Data privacy policy*
- *CloudHQ Supplier code of conduct*

### 4.3 – Innovation and Improvement

**ddd.** Establish protocols for continual improvement and benchmarking of good practice guidance for sustainability performance. Complete reviews annually and report results to the CHQ sustainability committee.
**eee.** Assess industry-wide best practice to identify best-in-class behaviors and commitments in sustainability.

### 4.4 – Transparency and Disclosure

**fff.** Publish corporate sustainability targets and report annual performance against the identified objectives.
**ggg.** All CloudHQ data centers shall be climate neutral in accordance with the provisions of the Climate Neutral Data Centre Pact. This includes the requirements for water consumption, circular economy, energy efficiency and matching of data centre electricity demand with renewable or carbon free energy, for all facilities globally.
**hhh.** Measure and publicly report aggregated greenhouse gas emissions data and energy usage.
**iii.** Measure and disclose aggregated corporate water usage alongside regional measures of water stress.



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**jjj.** Establish regional targets for net biodiversity gain. Target net biodiversity gain for all developments.

**kkk.** Establish regional targets for waste, including operational waste to landfill. Measure and publicly report quantities of recycled waste and waste to landfill for all CloudHQ operations.

**lll.** Establish regional targets for sustainable sourcing. Measure and publicly report sustainable sourcing metrics for all CloudHQ operations.



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# Zoning Standards

**Updated October 15, 2025**

Tur Ventures LLC ("Tur") owns the eastern portion of the former United Airlines Operations Center site located at 1200 E. Algonquin Road and 1200 Dempster Street (the "Data Center Parcel"). Tur also owns a smaller parcel located at the southeast corner of the intersection of Dempster Street and Linneman Road (the "Substation #1 Parcel"), which is currently being developed for an electrical substation to serve the Data Center Parcel. The Data Center Parcel and the Substation #1 Parcel are, collectively, the "Property".

In 2021 and 2022, the Village of Mount Prospect (the "Village") approved a planned unit development ("PUD") for a data center campus on the Property. Now, Tur, with its affiliates, including CloudHQ LLC (Tur and its affiliates are, collectively, "CHQ"), proposes an amendment to the approved PUD that will allow it to continue to redevelop the Data Center Parcel as a data center campus (the "Project") as further detailed in CHQ's final PUD amendment application.

The Project meets all applicable standards for approval of the PUD amendment, including all requested zoning and subdivision exceptions and other relief in accordance with CHQ's application materials. As set forth below, the Project satisfies the applicable general standards for PUDs, standards for requested PUD exceptions, and conditional use standards.

**General Standards for Planned Unit Developments:**

The Project complies with the "General Standards for Planned Unit Developments" under Section 14.504(A) of the Village's Zoning Code, as follows:

1. Except as modified by and approved in the final planned unit development plan, the proposed development complies with the regulations of the district or districts in which it is to be located.

Except to the extent modified by the exceptions that would be approved with the requested Planned Unit Development, and assuming approval of CHQ's other requested relief, the proposed development complies with the regulations.

2. The principal use in the proposed planned unit development is consistent with the recommendations of the Comprehensive Plan of the Village for the area containing the subject site.

On the "Future Land Use Map" within the Village's Comprehensive Plan (See Comprehensive Plan, p. 84), the Property is designated as "Mixed Use District." The Comprehensive Plan describes "primary" Mixed Use District uses to include "heavy industrial" (see Comprehensive Plan, p. 82), while the "Future Land Use" map in the South Mount Prosect Plan (discussed below) calls for "industrial" uses (without distinguishing between "light" or "heavy") in the Mixed Use District.

The proposed development is consistent with the Mixed Use District "key characteristics" articulated in the Comprehensive Plan as follows:

- "Encourages the adaptive reuse of older buildings and sites."
- "Encourages larger sites to allow for large-scale employment facilities, with lot consolidation in areas that would benefit from redevelopment. Also encourages incorporation of pedestrian amenities, plazas and landscape features that improve the support the pedestrian environment."
    - The proposed development satisfies both the above characteristics by presenting a unique opportunity to replace the vacated United Airlines corporate campus with a

comprehensive redevelopment. CHQ expects the Project to generate between 225-450 permanent jobs (within the Data Center Buildings) as well as construction jobs. CHQ has submitted a separate "Economic Impact Analysis" for the Project, which addresses job creation and other economic benefits to the Village.

- The Project will include extension of public sidewalks and other streetscape improvements, as well as extensive landscaping, screening, and buffering improvements along the adjacent rights-of-way.

- "Encourages buildings to face the street frontage, be consistent with the quality and character of the area, aims to achieve green building performance standards, and includes sustainability best practices for stormwater management, native plantings, and site design."

    - The Data Center Buildings are oriented so that the shorter, office-like administrative blocks face public streets to the extent possible, given the site's shape and orientation. The administrative block for the eastern half of Building 1 faces the corner of Algonquin and Linneman Roads, and the administrative block for Building 2 faces Dempster Street. The only adjacent residential uses are on the opposite side of Dempster Street.

    - The exterior building materials reflect a high-quality light industrial project and include steel and glass, white metal cladding, and stainless steel elements inserted into the Data Center Buildings' pre-cast panel reveals and other outer surfaces. The administrative block of each Data Center building visually breaks up the elevation and includes large glass windows, glazed areas, and stainless steel cladding.

    - The Data Center Campus incorporates best practices for stormwater management, including on-site detention basins, supplemental underground storage, planting beds, and other improvements.

- "Provides adequate buffering of loading areas and transitions in building scale between adjacent uses."

    - Only Building 2 is adjacent to residential uses. CHQ will install a continuous evergreen hedge and additional landscaping along Dempster. As shown in the cross-section plan included in the application, the two-story administrative block of Building 2, with a height of 60 feet (to parapet), faces Dempster and is over 313 feet south of the closest residential buildings on the north side of Dempster.

- "Promotes well-defined and convenient vehicular site access while minimizing the impact on traffic congestion."

    - Site access to the campus will be clear and well-defined. Primary access, including access for all in-bound 18-wheelers, is proposed off Linneman Road via a full access entrance and exit with manned security booths and gates. Emergency vehicle-only access will be provided from driveways on Algonquin and Dempster with emergency gates. As borne out by the data in the Traffic Study, data centers are relatively low generators of traffic.

- "Promotes walkability by including streetscape that is accessible for all users and provides safe connections through parking lots, to adjacent uses, bus stops, recreational amenities and neighborhood centers that are within walking distance."

- Public sidewalks will be constructed on all three sides of the Property, which will connect pedestrians to the retail uses at the intersection of Algonquin, Dempster and Busse and to Kopp Park and the trail within the ComEd right of way adjacent to Kopp Park. In addition, the development will provide direct or indirect pedestrian connections to several Pace bus stops, including Route 230 running southbound along Linneman and Route 606 running eastbound/ westbound along Algonquin. A bus shelter will be installed at the corner of Algonquin and Linneman.

In addition to the Comprehensive Plan, the Village's "Connect South MP" plan (identified as "a cohesive planning document for South Mount Prospect") (the "South Mount Prospect Plan") assesses the development opportunities for the Property. The proposed development is consistent with several goals articulated in the South Mount Prospect Plan, including:

- The Subject Property is identified as an "opportunity site"—in fact, "South Mount Prospect's largest opportunity site," recognizing that it is "considerably underutilized" since United Airlines relocated its headquarters in 2009. (See South Mount Prospect Plan, p. 53). The South Mount Prospect Pan states that, "Should redevelopment occur, warehousing or an industrial park is recommended." The proposed Data Center Campus is an industrial park, adding significantly to the property tax base and creating good jobs, but without bringing the traffic congestion that could result from a traditional industrial park or warehousing facility.

- "Increase employment opportunities in South Mount Prospect to meet the needs of existing and future residents." (See South Mount Prospect Plan, p. 59, Objective 7.1.3). As discussed in the Economic Impact Analysis, the Data Center Campus is projected to generate 225-450 permanent jobs once fully developed, approximately 80% of which will be skilled professional jobs. As identified in the South Mount Prospect Plan, existing top employers in South Mount Prospect have approximately 100-150 employees. (See South Mount Prospect Plan, p. 50).

- "Expand the tax base by attracting new business to locate in South Mount Prospect." (See South Mount Prospect Plan, p. 59, Objective 7.2.1). The Data Center Campus will be a significant investment in redevelopment of the former United Airlines site, which will greatly enhance the Village's property tax base and utility tax revenues. CHQ has submitted a separate "Economic Impact Analysis" for the Project.

3. The proposed planned unit development is in the public interest and is consistent with the purposes of this zoning ordinance.

The proposed development presents an opportunity for the Village to replace a vacated corporate campus property with a comprehensive redevelopment of the entire approximately 50-acre site. The proposed development is consistent with the purposes of the Village Zoning Ordinance, including the purposes of the I-1 zoning district, where data centers are a permitted use.

In 2022, the Village approved an ordinance granting a conditional use for a final PUD for a data center campus on the Property (the "Final PUD Ordinance"). The current application seeks an amendment to the Final PUD Ordinance to approve amended plans ("Amended Plans") for a data center campus that will better meet current market demands and customer needs.

The Amended Plans for the Project will serve the public interest by addressing the changing needs of business and the national and local economies, bringing redevelopment and economic growth to a target opportunity site in south Mount Prospect, and significantly enhancing the Village's tax base. CHQ expects the Project to generate new construction and permanent jobs, including skilled professional jobs, and substantial new property and utility taxes. CHQ has submitted a separate "Economic Impact Analysis" for the Project.

In general, data centers have minimal impact on municipal services. As detailed in CHQ's Traffic Study, the Project will generate significantly lower traffic volumes than other potential uses in the I-1 zoning district, such as warehousing and distribution facilities. The Project will not require the Village to expend funds on public infrastructure and will not meaningfully increase the demand on the Village's fire protection or police services. Also, the Project will generate new tax revenues without a significant population increase.

In conjunction with its approval of the original PUD, the Village Board of Trustees approved a resolution supporting a Cook County 6b Property Tax Incentive for this Project, which will be necessary in light of the substantial investment being made.

4. The streets have been designed to avoid:

    a. Inconvenient or unsafe access to the planned unit development;

    b. Traffic congestion in the streets which adjoin the planned unit development;

    c. An excessive burden on public parks, recreation areas, schools, and other public facilities which serve or are proposed to serve the planned unit development.

The proposed development will not include any new streets. The Data Center Campus will be a secured facility, with primary vehicular access provided via the main entrance on Linneman Road. Additional access points for emergency vehicles only will be provided on Dempster and Algonquin. As demonstrated by the Traffic Study, data centers are relatively low generators of traffic, and the proposed access improvements will provide safe and efficient access to the development.

**Planned Unit Development Exceptions:**

CHQ requests approval of the following zoning and subdivision exceptions as part of the PUD approval, pursuant to 14.504(C) of the Zoning Code:

**Exceptions from the Zoning Code:**

a. An exception from Section 14.305(B)(1) to permit an increase in the maximum number of ground mounted antenna towers or dishes located on a zoning lot from one to more than one.

b. An exception from Section 14.306(A)(3)(b) to permit an increase in the maximum height of accessory structures in the I-1 zoning district from twenty feet (20') to:

    i. Fifty-five feet (55'-0") for the acoustical screen;

    ii. Not to exceed sixty feet (60'-0") for the above-ground TES tanks;

    iii. Not to exceed thirty feet (30'-0") for the non-occupied GIS-control enclosure in the switchgear yard.

c. An exception from Section 14.306(A)(5) to permit an increase in the maximum number of accessory structures from two accessory structures to ten (10) fuel polishing sheds and twelve (12) screened thermal energy storage tanks.

d. An exception from Section 14.309(A)(2) to allow temporary trailers or facilities to be located within the applicable setback requirements of the zoning ordinance.

e. An exception from Section 14.318(B)(7)(a) to permit an increase in the maximum height of a fence permitted in the I-1 zoning district from eight feet (8'-0") to fifty-five feet (55'-0") for the mechanical yard screening structure.

f. An exception from Section 14.318(B)(7)(a) to permit an increase in the maximum height of a fence permitted in the I-1 zoning district from eight feet (8'-0") to ten feet (10'-0") for perimeter security fencing.

g. An exception from Section 14.318(B)(7)(a) to permit an increase in the maximum height of a fence permitted in the I-1 zoning district from eight feet (8'-0") to fifteen feet (15'-0") for a solid style screening fence on the north and west sides of substation #2 (Lot 5).

h. An exception from Section 14.318(C)(2) to permit the barbed wire on top of the internal substation #2 fence to extend outward of the Property (Lot 5).

i. An exception from Section 14.2104 (C) to permit an increase in the maximum building height from fifty feet (50'-0") to eighty-five feet (85') to parapet (60' to parapet of administrative blocks); penthouse to one hundred nine feet (109'); and mechanicals to one hundred twenty-one feet (121') for ORD1 and one hundred thirty-eight feet (138') for ORD2.

j. An exception from Section 14.2206(E)(1)(a) to permit parking lot setbacks of less than 10 feet (10') from the property line.

k. An exception from Section 14.2304 (B)(2) to permit a 43%/57% ratio of evergreen shrubs to deciduous shrubs.

l. An exception from Section 14.2306(B) to waive the perimeter landscaping requirements as illustrated in the proposed landscape plans.

m. An exception from Section 14.2307 to waive the foundation landscaping requirements as illustrated in the proposed landscape plans.

n. An exception from 14.504(C)(5)(d) to permit a reduction in the area of open space within the PUD from 25% (as required in the underlying I-1 zoning district) to 18%.

o. An exception from Section 14.2104(D) to permit an increase in the maximum lot coverage requirement in the I-1 zoning district from 75% to 82%.

p. An exception from Section 14.2104(B) to permit a reduction in the minimum side yard requirement from fifteen feet (15') to zero feet (0') for the lot line between Lots 1 and 2.

q. An exception from Section 14.2104(E) to permit a reduction in the minimum transitional setback requirement for parking lots from forty feet (40') to 17.8 feet along Dempster Street.

r. An exception from Section 14.2207 to permit development of the Project with a total of 365 off-street parking spaces (including 12 accessible spaces and 16 EV spaces).

s. Any other Zoning Code exceptions required to permit development of the Property with the Project as depicted on the approved final PUD plans.

**Exceptions from the Subdivision Code:**

a. An exception from Section 15.305(B)(2) to allow access to the arterial street for corner lots abutting an arterial street. Lots 1 and 2 each have an emergency access driveway on Algonquin Road, and Lot 3 has an emergency access driveway on Dempster Street.

b. An exception from Section 15.305(B)(6) to allow the depth-to-width ratio to exceed two and one-half to one (2.5:1) for Lot 4 (irregularly shaped) and Lot 5 (ratio is approximately 3.07:1).

c. Any other Subdivision Code exceptions required to permit development of the Property with the Project as depicted on the approved final PUD plans.

**Standards for Exceptions Approved in a Planned Unit Development:**

The Project complies with the "Standards for Planned Unit Developments with Other Exceptions" under

Section 14.504(C) of the Village's Zoning Code, as follows:

1. Any reduction in the requirements of this chapter is in the public interest.

The requested exceptions are necessary and appropriate for the development of an emerging use that is vital to the continued growth of the local and national economies. The Project will serve the public interest by addressing changing business and economic needs, bringing redevelopment, quality jobs, and economic growth to a target opportunity site, and significantly enhancing the Village's tax base.

2. The proposed exceptions would not adversely impact the value or use of any other property.

The exceptions as a whole will not adversely impact the value or use of any other property. The development is a light industrial use, within an area already zoned I-1 and will be surrounded on three sides by other industrial uses. While the exceptions allow a greater building height, the portion of the northern Building 2 that is closest to residential uses will be only 10 feet taller (including parapet wall) than the otherwise permitted height and will be separated from the closest residential buildings on the north side of Dempster Street by the length of a football field. As such, the height exception will not adversely impact the value of the residential properties to the north.

3. Such exceptions are solely for the purpose of promoting better development which will be beneficial to the residents or occupants of the planned unit development as well as those of the surrounding properties.

The exceptions requested by CHQ are necessary for the Project to be developed in a functional and cohesive manner that meets the needs of the market and end users. The Property is currently a large vacant site, and its redevelopment with a state-of-the-art facility will be beneficial to surrounding properties and the community as a whole.

4. In residential planned unit developments the maximum number of dwelling units allowed per acre shall not exceed forty eight (48) units per acre for developments incorporating senior housing or assisted living facilities.

Not applicable.

5. All buildings are to be located within the planned unit development in such a way as to dissipate any adverse impact on adjoining buildings and shall not invade the privacy of the occupants of such buildings and shall conform to the following:

a. The front, side or rear yard setbacks on the perimeter of the development shall not be less than that required in the abutting zoning district(s) or the zoning district underlying the subject site, whichever is greater.

The proposed development complies with all applicable perimeter front, side, and rear yard setback requirements.

b. All transitional yards and transitional landscape yards of the underlying zoning district are complied with.

CHQ is requesting an exception from the transitional yard requirement along Dempster Street. The Property is irregular in shape; specifically, the angles of Algonquin Road and Dempster Street and the United Airlines in-holding at the northwest corner of the Property create angles and configurations that diminish the Property's otherwise buildable area. This creates unique and specific challenges in the design and configuration of the improvements required to develop a data center campus that meets

current market demands, including size and capacity of the facilities.

The Project includes extensive landscaping and screening, which is focused on the perimeter of the Property, and particularly the northern yard adjacent to Dempster Street, which mitigates any potential adverse impacts on residential properties on the north side of Dempster. Although the width of a portion of the northern transition yard is reduced due to the angle of Dempster, the yard includes a continuous evergreen hedge and other new plantings, as well as existing mature trees, that provide appropriate screening and buffering.

c. If required transitional yards and transitional landscape yards are not adequate to protect the privacy and enjoyment of property adjacent to the development, the Planning and Zoning Commission shall recommend either or both of the following requirements:

i. All structures located on the perimeter of the planned unit development must be set back by a distance sufficient to protect the privacy and amenity of adjacent existing uses;

ii. All structures located along the entire perimeter of the planned unit development must be permanently screened with sightproof screening in a manner which is sufficient to protect the privacy and amenity of adjacent existing uses.

For the reasons stated throughout CHQ's Application, the proposed transitional yards, landscaping plan, and screening measures are adequate to protect the privacy and enjoyment of adjacent properties. Building 2 is the only Data Center Building adjacent to residential uses. As shown in the cross-section plan included in the application, its height is mitigated by (i) its distance (over 313 feet) from the closest residential buildings on the north side of Dempster Street and (ii) its placement, so that the shorter, two-story "administrative block," with a height of only 60 feet (to parapet), faces Dempster Street, pushing the tallest portion of Building 2 back even further from the closest residential buildings.

Building 1 is not adjacent to residential uses, but instead is adjacent to primarily industrial uses on the east, south, and west.

Accessory structures and equipment are located in the interior portions of the site, and appropriate visual and acoustical screening measures are provided.

d. The area of open space provided in a planned unit development shall be at least that required in the underlying zoning district.

CHQ is requesting an exception to reduce the required area of open space from 25% (required by the LI District) to 18%. As compared to traditional industrial uses, data centers must be sized to meet escalating market demands, and the facilities require significant accessory structures and equipment for functionality and security, which cannot be provided under the current lot coverage limits. Significantly, to meet current market capacity demands, it is necessary to install a second electrical substation with accessory improvements that satisfy ComEd requirements. This is a unique need for data center development, which is not generally applicable to other properties or uses within the same zoning classification.

**Conditional Use Standards:**

The Project also complies with the standards for "Conditional Uses" under Section 14.203(F)(8) of the Village's Zoning Code, as follows:

No conditional use shall be recommended for approval by the planning and zoning commission unless it finds:

1. That the establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare.

For the reasons stated throughout this Application, the conditional use (PUD for Data Center Campus) will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare. In 2022, the Village previously approved the Final PUD Ordinance for a data center campus on the Property. The requested PUD amendment will modify the size and configuration of the proposed data center buildings and related improvements, but these changes will not adversely impact public health, safety, or welfare.

2. That the conditional use will not be injurious to the uses and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood in which it is to be located.

The conditional use will not adversely impact the value or use of any other property. The development is a light industrial use, within an area already zoned I-1 and will be surrounded on three sides by other industrial uses. Building 2 will be separated from the closest residential buildings on the north side of Dempster Street by over 313 feet. Data centers are a permitted use in the underlying I-1 zoning district, and the Village previously approved data center development for this site. For these reasons, the conditional use will not adversely impact the property values within the neighborhood.

3. That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The surrounding property in the I-1 district is already developed, so the conditional use will not impede the development of that surrounding property. In addition, even if those surrounding parcels are to be redeveloped, the proposed conditional use is self-contained within the Property. It will generate a relatively low volume of traffic. The Project satisfies all perimeter building setbacks and includes appropriate screening and buffering. As such, the conditional use also will not impede any redevelopment of the surrounding property for uses permitted in the I-1 district.

4. That adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided.

Adequate utilities, roads, drainage, and other facilities are already in place or will be installed by CHQ.

5. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.

As established by CHQ's proposed plans and the Traffic Study, the proposed ingresses and egresses to and from the development will have a relatively minimal incremental impact on traffic congestion.

6. That the proposed conditional use is not contrary to the objectives of the current Comprehensive Plan for the Village.

As stated in response to PUD Standard #2, the conditional use is consistent with the objectives of the Village's Comprehensive Plan.

7. That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the Planning & Zoning Commission.

Except as modified in the approved PUD, and assuming approval of CHQ's other requested relief, the conditional use will conform to the applicable regulations of the I-1 zoning district.

# Development Schedule

- Start date of construction:  11/1/2025 (MWRD early earthwork start)
- Two construction phases:
    - ORD1: Start 11/1/25- Complete 3/31/27
    - ORD2: Start June 2029- Complete December 2030

# ALTA/NSPS LAND TITLE SURVEY

OF

PARCEL 1:
LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4763976, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, IN COOK COUNTY, ILLINOIS.

PARCEL 2:
THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716044, IN COOK COUNTY, ILLINOIS.

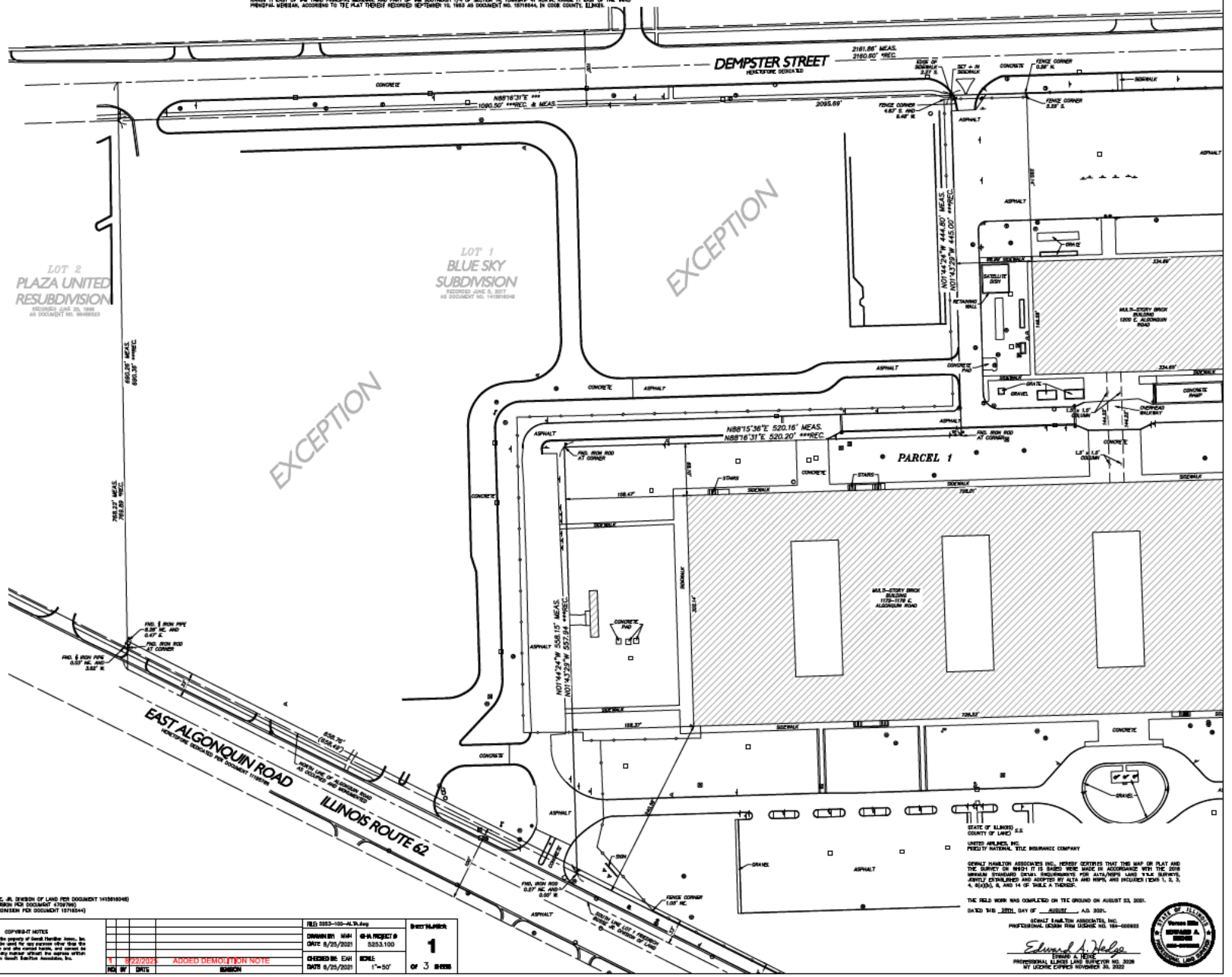
PARCEL 3:
THE NORTH 130.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716044, IN COOK COUNTY, ILLINOIS.

NOTE: ALL SITE IMPROVEMENTS SHOWH ON THE PARCELS WEST OF LINNEMAN RD WERE DEMOLISHED UNDER COOK COUNTY DEMOLITION PERMIT #PD16073394

**LOCATION MAP**




GRAPHIC SCALE
50 0 25 50
( IN FEET )
1 inch. = 50 ft.




**LEGEND**

| | |
|---|---|
| AIR CONDITIONER | NAIL/P.K. NAIL |
| BOLLARD/POST | SANITARY SEWER MANHOLE |
| BUFFALO BOX | SIGN |
| CATCH BASIN | STORM SEWER MANHOLE |
| CLEANOUT | TELEPHONE MANHOLE |
| CROSS/NOTCH | TELEPHONE BOX/PEDESTAL |
| DOR | TELEVISION MANHOLE |
| ELECTRIC BOX | TELEVISION BOX/PEDESTAL |
| ELECTRIC MANHOLE | VALVE BOX |
| ELECTRIC METER | WATER VALVE |
| FIBER OPTIC MANHOLE | WATER METER |
| GAS MANHOLE | VALVE VAULT |
| GAS METER | FLARED END SECTION |
| GAS VALVE | MONITORING WELL |
| INLET | |
| IRON PIPE | |
| IRON ROD | |
| TRAFFIC SIGNAL | |
| HANDHOLE | |
| LIGHT POLE | |
| POWER POLE | |
| OVERHEAD ELECTRIC LINE | |
| FENCE | |
| GUARDRAIL | |
| | ASPHALT/PAVEMENT |
| | CONCRETE |
| | BRICK PAVERS |
| | BUILDINGS/WALLS |

**ABBREVIATIONS**

N NORTH
S SOUTH
E EAST
W WEST
(100.00 M00°00'00"E) MEASURED DATUM
(100.00 M00°00'00"E) RECORD DATUM
(*RECORD DIMENSION PER FRIEDRICH BUSSE, JR. DIVISION OF LAND PER DOCUMENT 1415616048)
(**RECORD DIMENSION PER LINNEMAN'S DIVISION PER DOCUMENT 4763976)
(***RECORD DIMENSION PER BLUE SKY SUBDIVISION PER DOCUMENT 15716044)

**SURVEY PREPARED FOR:**
GLOUDING LLC
1313 NEW YORK AVENUE NW, SUITE 1000
WASHINGTON, DC 20005

GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive ■ Vernon Hills, IL. 60061
TEL 847.478.9700 ■ FAX 847.478.9701

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| NO. | BY | DATE | REVISION |
|---|---|---|---|
| 1 | | 9/22/2021 | ADDED DEMOLITION NOTE |

FILE: 5353-100-ALTA.dwg
DRAWN BY: MAH
DATE: 8/25/2021
G-H PROJECT #: 5353.100
CHECKED BY: EAH
DATE: 8/25/2021
SCALE: 1"=50'
SHEET NUMBER: 1 OF 3 SHEETS

# ALTA/NSPS LAND TITLE SURVEY

OF

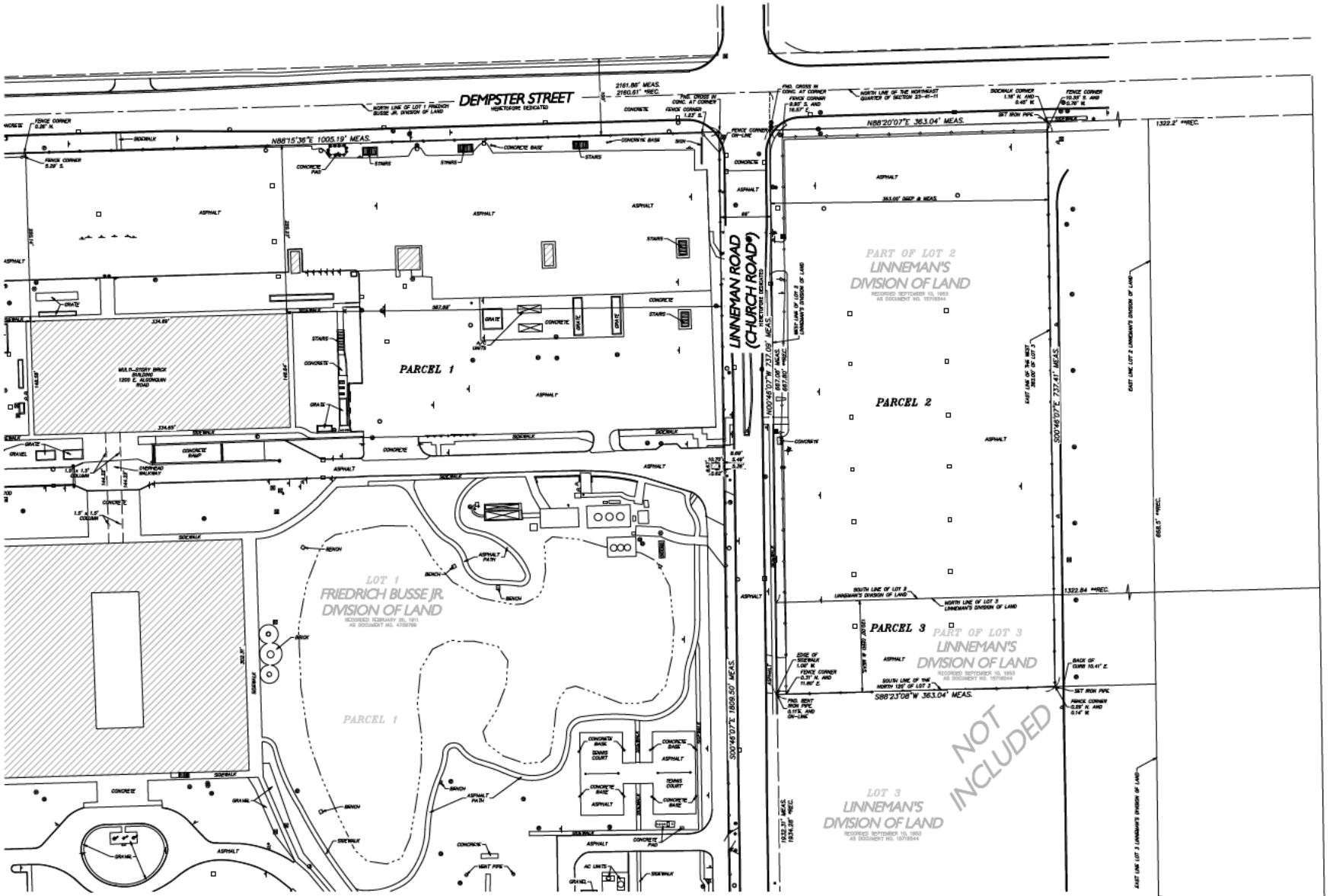
PARCEL 1:
LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 33, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709766, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1418816048, IN COOK COUNTY, ILLINOIS.

PARCEL 2:
THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 33, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15718044, IN COOK COUNTY, ILLINOIS.

PARCEL 3:
THE NORTH 135.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 33, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15718044, IN COOK COUNTY, ILLINOIS.

NOTE: ALL SITE IMPROVEMENTS SHOWN ON THE PARCELS WEST OF LINNEMAN RD WERE DEMOLISHED UNDER COOK COUNTY DEMOLITION PERMIT #PD16073394

GRAPHIC SCALE
50 0 25 50
( IN FEET )
1 inch = 50 ft.




LEGEND

- AIR CONDITIONER
- BOLLARD/POST
- BUFFALO BOX
- CATCH BASIN
- CLEANOUT
- CROSS/NOTCH
- DISH
- ELECTRIC BOX
- ELECTRIC MANHOLE
- ELECTRIC METER
- FIBER OPTIC MANHOLE
- GAS MANHOLE
- GAS METER
- GAS VALVE
- INLET
- IRON PIPE
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(***RECORD DIMENSION PER BLUE SKY SUBDIVISION PER DOCUMENT 15718044)

SURVEY PREPARED FOR:
CLOUDHQ LLC
1213 NEW YORK AVENUE NW, SUITE 1000
WASHINGTON, DC 20005

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| NO. | BY | DATE | REVISION |
|---|---|---|---|
| 1 | | 8/22/2025 | ADDED DEMOLITION NOTE |

FILE: 5253-100-ALTA.dwg
DRAWN BY: MAH
G-H PROJECT #: 5253.100
CHECKED BY: EAH
DATE: 8/25/2021
SCALE: 1"=50'
SHEET NUMBER: 2 OF 3 SHEETS

# ALTA/NSPS LAND TITLE SURVEY

OF

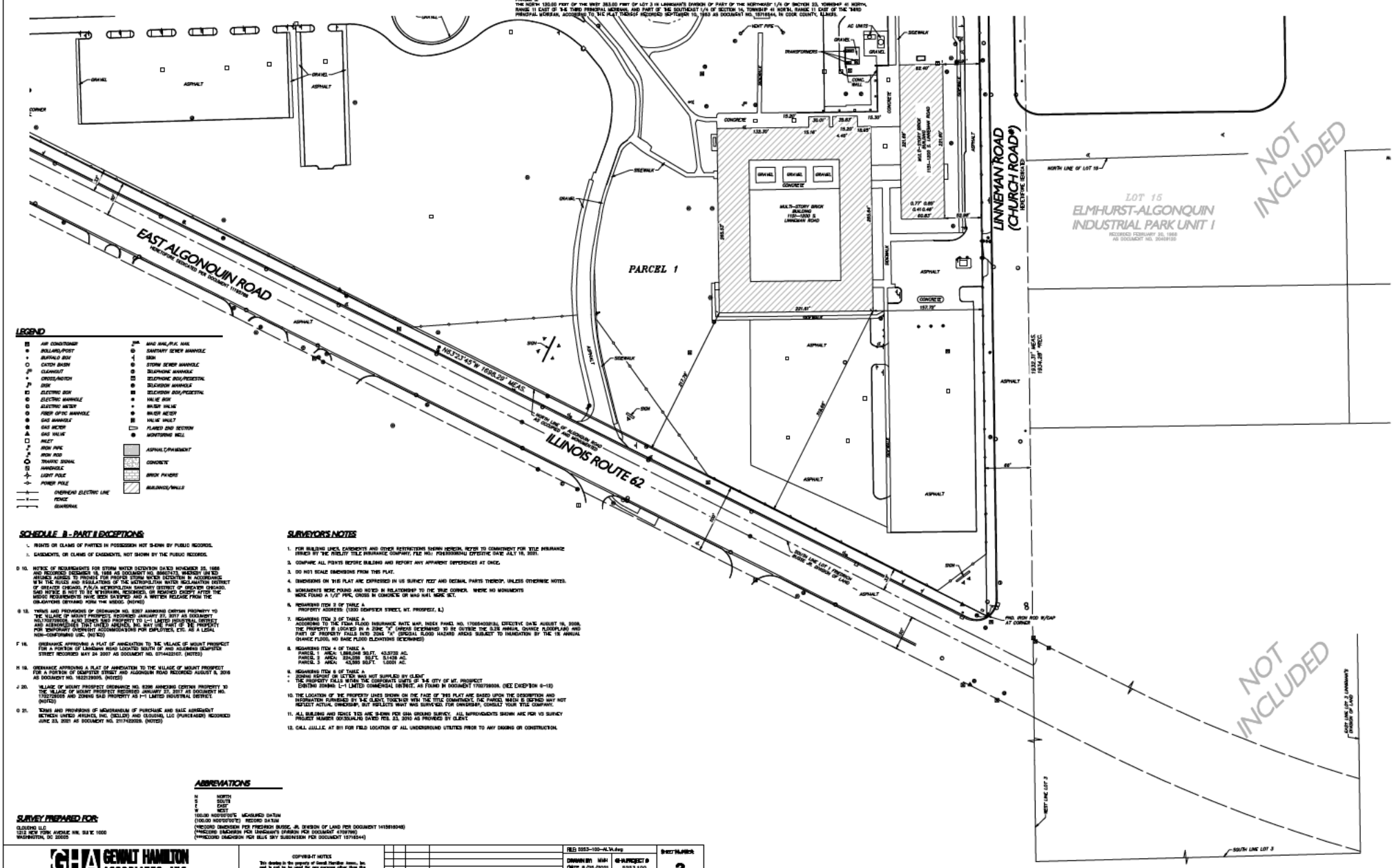
PARCEL 1:
LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1991 AS DOCUMENT NO. 91026788, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 9, 2014 AS DOCUMENT NO. 1416816048, IN COOK COUNTY, ILLINOIS.

PARCEL 2:
THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 15, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

PARCEL 3:
THE NORTH 130.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 15, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

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GRAPHIC SCALE
50 0 25 50
( IN FEET )
1 inch = 50 ft.




## LEGEND

| | |
|---|---|
| AIR CONDITIONER | MAG NAIL/P.K. NAIL |
| BOLLARD/POST | SANITARY SEWER MANHOLE |
| BUFFALO BOX | SIGN |
| CATCH BASIN | STORM SEWER MANHOLE |
| CLEANOUT | TELEPHONE MANHOLE |
| CROSS/NOTCH | TELEVISION BOX/PEDESTAL |
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| GAS METER | FLARED END SECTION |
| GAS VALVE | MONITORING WELL |
| INLET | |
| IRON PIPE | ASPHALT/PAVEMENT |
| IRON ROD | CONCRETE |
| TRAFFIC SIGNAL | BRICK PAVERS |
| HANDHOLE | BUILDINGS/WALLS |
| LIGHT POLE | |
| POWER POLE | |
| OVERHEAD ELECTRIC LINE | |
| FENCE | |
| GUARDRAIL | |

## SCHEDULE B - PART II EXCEPTIONS

1. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY PUBLIC RECORDS.
2. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS.

D 10. NOTICE OF REQUIREMENTS FOR STORM WATER DETENTION DATED NOVEMBER 25, 1988 AND RECORDED DECEMBER 19, 1988 AS DOCUMENT 88, 588,013, WHEREIN OWNER HAS AGREED TO PROVIDE FOR PROPER STORM WATER DETENTION IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO, F/K/A METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO. SAID NOTICE IS NOT TO BE REMEMBERED, RECORDED, OR FILED EXCEPT AFTER THE MEANS REQUIREMENTS HAVE BEEN SATISFIED AND A WRITTEN RELEASE FROM THE AFORESAID DISTRICT. (NOTED)

D 12. TERMS AND PROVISIONS OF ORDINANCE NO. 83907 ANNEXING CERTAIN PROPERTY TO THE VILLAGE OF MOUNT PROSPECT, RECORDED JANUARY 27, 2017 AS DOCUMENT 1702720008. ALSO SAID PROPERTY IS SUBJECT TO "--" LIMITED INDUSTRIAL DISTRICT AND ACKNOWLEDGES THAT UNITED ARMENIA, INC. MAY USE PART OF THE PROPERTY FOR TEMPORARY OVERNIGHT ACCOMMODATIONS FOR EVANGELISTS, ETC. AS A LEGAL NON-CONFORMING USE. (NOTED)

F 16. ORDINANCE APPROVING A PLAT OF ANNEXATION TO THE VILLAGE OF MOUNT PROSPECT FOR A PORTION OF LANGHAM ROAD LOCATED SOUTH OF AND ALGONQUIN (DUPSTER STREET RECORDED MAY 24 2007 AS DOCUMENT NO. 0714422107. (NOTED)

H 18. ORDINANCE APPROVING A PLAT OF ANNEXATION TO THE VILLAGE OF MOUNT PROSPECT FOR A PORTION OF DUPSTER STREET AND ALGONQUIN ROAD RECORDED AUGUST 9, 2016 AS DOCUMENT NO. 1622139005. (NOTED)

J 20. VILLAGE OF MOUNT PROSPECT ORDINANCE NO. 5286 ANNEXING CERTAIN PROPERTY TO THE VILLAGE OF MOUNT PROSPECT RECORDED JANUARY 27, 2017 AS DOCUMENT NO. 1702720008 AND ZONING SAID PROPERTY AS "--" LIMITED INDUSTRIAL DISTRICT. (NOTED)

O 21. TERMS AND PROVISIONS OF MEMORANDUM OF PURCHASE AND SALE AGREEMENT BETWEEN UNITED ARMENIA, INC. (SELLER) AND CLOUDHQ, LLC (PURCHASER) RECORDED JUNE 23, 2021 AS DOCUMENT NO. 2117422029. (NOTED)

## SURVEYORS NOTES

1. FOR BUILDING LINES, EASEMENTS AND OTHER RESTRICTIONS SHOWN HEREON, REFER TO COMMITMENT FOR TITLE INSURANCE ISSUED BY THE FIDELITY TITLE INSURANCE COMPANY, FILE NO: FSI2000004U EFFECTIVE DATE JULY 16, 2021.
2. COMPARE ALL POINTS BEFORE BUILDING AND REPORT ANY APPARENT DIFFERENCES AT ONCE.
3. DO NOT SCALE DIMENSIONS FROM THIS PLAT.
4. DIMENSIONS ON THIS PLAT ARE EXPRESSED IN US SURVEY FEET AND DECIMAL PARTS THEREOF, UNLESS OTHERWISE NOTED.
5. MONUMENTS WERE FOUND AND NOTED IN RELATIONSHIP TO THE TRUE CORNER. WHERE NO MONUMENTS WERE FOUND A 1/2" PIPE, CROSS IN CONCRETE OR MAG NAIL WERE SET.
6. REGARDING ITEM 2 OF TABLE A
PROPERTY ADDRESS: 1300 DUPSTER STREET, MT. PROSPECT, IL)
7. REGARDING ITEM 3 OF TABLE A
ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP, INDEX PANEL NO. 17031C0403J, EFFECTIVE DATE AUGUST 19, 2008, THE PROPERTY IS LOCATED IN A ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AND PART OF PROPERTY FALLS INTO ZONE "A" (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, NO BASE FLOOD ELEVATIONS DETERMINED)
8. REGARDING ITEM 4 OF TABLE A
PARCEL 1 AREA: 1,886,048 SQ.FT. 43.3733 AC.
PARCEL 2 AREA: 224,099 SQ.FT. 5.1439 AC.
PARCEL 3 AREA: 43,585 SQ.FT. 1.0001 AC.
9. REGARDING ITEM 6 OF TABLE A
ZONING REPORT OR LETTER WAS NOT SUPPLIED BY CLIENT
THE PROPERTY FALLS WITHIN THE CORPORATE LIMITS OF THE CITY OF MT. PROSPECT
ZONED: ZONING: I-1 LIMITED COMMERCIAL DISTRICT, AS FOUND IN DOCUMENT 1702720008. (SEE EXCEPTION 0-12)
10. THE LOCATION OF THE PROPERTY LINES SHOWN ON THE FACE OF THIS PLAT ARE BASED UPON THE DESCRIPTION AND INFORMATION FURNISHED BY THE CLIENT, TOGETHER WITH THE TITLE COMMITMENT. THE PARCEL WHICH IS DEPICTED MAY NOT REFLECT ACTUAL OWNERSHIP, BUT REFLECTS WHAT WAS SURVEYED. FOR OWNERSHIP, CONSULT YOUR TITLE COMPANY.
11. ALL BUILDING AND FENCE TIES ARE SHOWN FOR GHA GROUND SURVEY. ALL IMPROVEMENTS SHOWN ARE PER VS SURVEY PROJECT NUMBER 00135LAND DATED FEB. 23, 2010 AS PROVIDED BY CLIENT
12. CALL J.U.L.I.E. AT 811 FOR FIELD LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION.

## ABBREVIATIONS

N NORTH
S SOUTH
E EAST
W WEST
(100.00 MEASURED) MEASURED DATUM
(100.00 RECORD) RECORD DATUM
(RECORD DIMENSION PER FRIEDRICH BUSSE, JR. DIVISION OF LAND PER DOCUMENT 1415816048)
(*RECORD DIMENSION PER LINNEMAN'S DIVISION PER DOCUMENT 4709766)
(**RECORD DIMENSION PER BLUE SKY SUBDIVISION PER DOCUMENT 15716544)

**SURVEY PREPARED FOR:**
CLOUDHQ, LLC
1212 NEW YORK AVENUE NW, SUITE 1000
WASHINGTON, DC 20005

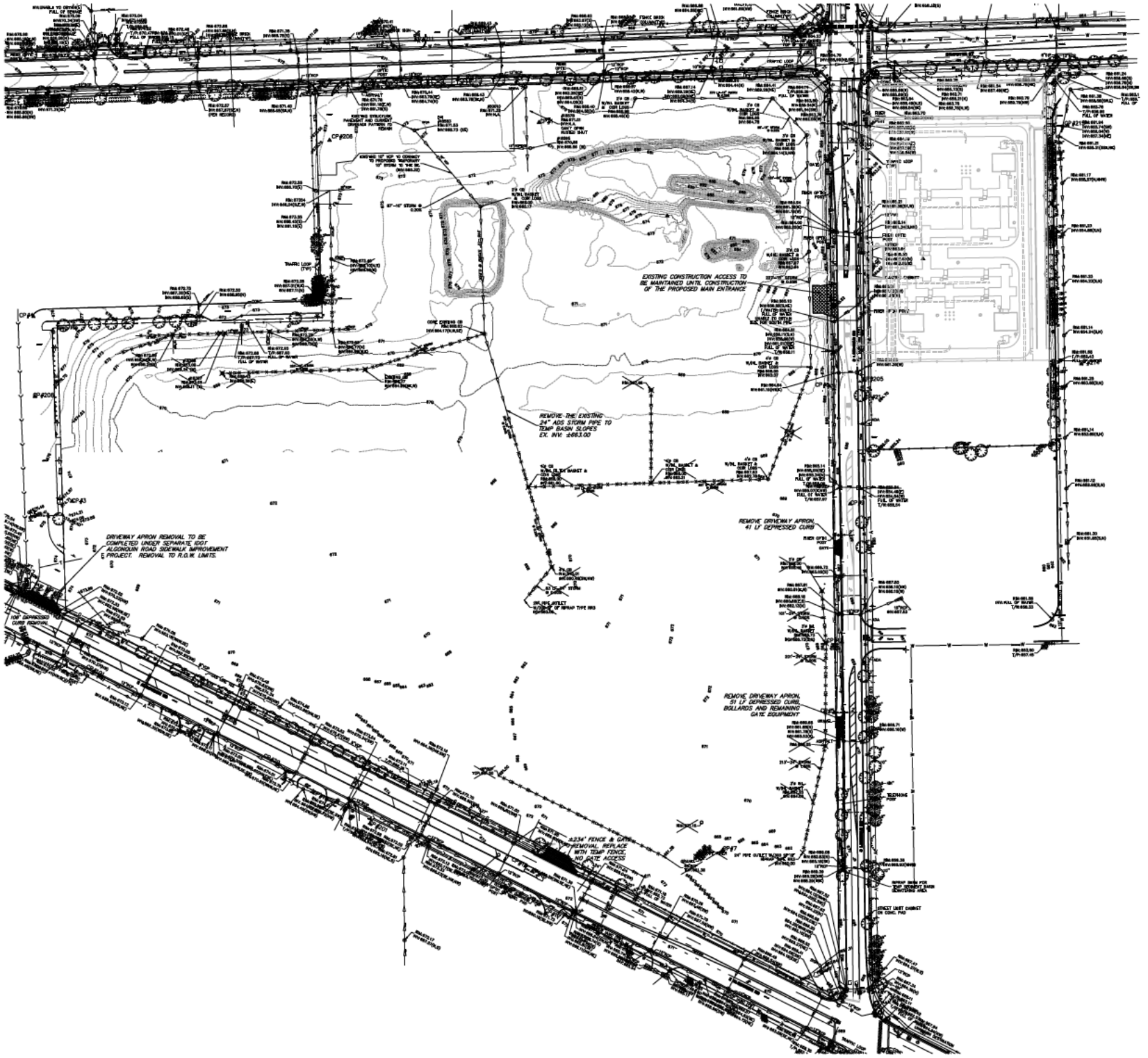

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625 Forest Edge Drive ■ Vernon Hills, IL 60061
TEL 847.478.9700 ■ FAX 847.478.9701



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| NO. | BY | DATE | REVISION |
|---|---|---|---|
| 1 | | 9/22/2025 | ADDED DEMOLITION NOTE |

FILE: 5253-100-ALTA.dwg
DRAWN BY: MMH
DATE: 8/25/2021
GHA PROJECT #: 5253.100
CHECKED BY: EAH
DATE: 8/25/2021
SCALE: 1"=50'
SHEET NUMBER: 3
OF 3 SHEETS




CORGAN

kW Mission Critical Engineering
Member of WSP

PASE

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

| ISSUES | |
|---|---|
| 1 | 05.05.2025 REVISED PER DEPARTMENT REVIEW |
| 2 | 05.21.2025 REVISED PER DEPARTMENT REVIEW |
| 3 | 05.21.2025 ISSUED FOR 100% DD |
| 4 | 06.27.2025 PROGRESS SET - DESIGN TEAM |
| 5 | 07.15.2025 CONCEPT PUD RESUBMITTAL |
| 6 | 08.14.2025 ISSUED FOR PRELIM PLAT PUD |
| 7 | 09.12.2025 PUD PRELIMINAL PLAT #2 |
| 8 | 10.20.2025 PUD PRELIMINAL SUB #3 |

REVISIONS

REVISIONS

DONALD S. DIXON 062-061136 STATE OF ILLINOIS

This Document was produced by or under the authority of Registered Engineer: Donald S. Dixon

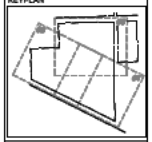
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: DONALD S. DIXON P.E.
Date: 08.08.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



EXISTING CONDITIONS & DEMOLITION PLAN - OVERALL

JOB 5253.220
SHEET
C02-00

PARCEL 1:

LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, (C)THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS 50 FEET SOUTH OF THE NORTHEAST CORNER OF SAID LOT 1; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 1 FOR 40.01 FEET; THENCE NORTH 46 DEGREES 15 MINUTES 15 SECONDS WEST FOR 56.10 FEET TO A LINE 50.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 1; THENCE NORTH 88 DEGREES 15 MINUTES 36 SECONDS EAST FOR 40.01 FEET TO THE POINT OF BEGINNING, (D)THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS ON THE NORTH LINE OF ALGONQUIN ROAD; THENCE NORTH 63 DEGREES 23 MINUTES 45 SECONDS WEST ALONG THE NORTH LINE OF SAID ALGONQUIN ROAD FOR 28.30 FEET; THENCE NORTH 71 DEGREES 35 MINUTES 52 SECONDS EAST FOR 26.37 FEET TO THE WEST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST FOR 21.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, EXCEPT THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE NORTH 88 DEGREES 20 MINUTES 07 SECONDS EAST ALONG THE NORTH LINE OF SAID LOT 2 FOR 25.00: THENCE SOUTH 43 DEGREES 47 MINUTES 00 SECONDS WEST FOR 35.63 FEET TO THE WEST LINE OF SAID LOT 2; THENCE NORTH 00 DEGREES 46 MINUTES 07 SECONDS WEST FOR 25.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 3:

THE NORTH 120.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

October 24, 2025

Jason C. Shallcross, AICP, CEcD
Director of Community & Economic
Development
Village of Mount Prospect
50 S. Emerson Street
Mount Prospect, IL 60056

Via email: jshallcross@mountprospect.org

Dear Mr. Shallcross,

On October 23, 2025, the Village's Planning & Zoning Commission ("PZC") recommended approval of a final planned unit development for Mount Prospect Technology Campus by a vote (the "PUD"). The special use ordinance approving the PUD is scheduled to go before the Village Board of Trustees for the ordinance's first reading on October 28, 2025.

We are requesting that the Village Board waive the second reading and take final action at its October 28, 2025 meeting. The reason for this request is that Tur Ventures LLC is ready to promptly increase its development activities on the site and wants to ensure that it has the final PUD approval before doing so.

I appreciate your assistance in facilitating this request. Should you have any questions, feel free to contact me at 571-447-7255 or by email at bburnette@cloudhq.com.

Sincerely,

Brett Burnette

CloudHQ
1212 New York Avenue, NW, Suite 100
Washington, DC 20005

Thunder Hearing & Sound, LLC
847 South Randall Road, #218 Elgin, IL 60123
855-566-7488 www.ThunderHearing.com

# Updated Sound Assessment of Cloud HQ Data Center

October 16th, 2025

*Prepared for:*
*Gewalt Hamilton Associates, Inc. – Vernon Hills, IL*

Thunder Hearing and Sound examined the noise emissions expected from the operation of two data centers planned for the southwest corner of Dempster Street and South Linneman Road in Mt. Prospect, Illinois. The study was needed because the operation of adiabatic dry coolers and generators associated with these data centers has the potential to radiate excessive noise into the community.

Adiabatic dry coolers will be installed in a mechanical equipment yard of ORD1 and on the rooftop of ORD2 to provide cooling for the servers and related electronic equipment. This equipment will operate continuously for 24 hours, 7 days a week, as the data storage systems and servers require uninterrupted operation. To ensure continuous operation in the event of a power failure, diesel generators will be on standby to provide emergency backup power. While an emergency operation would be rare, generators will be cycled individually for short periods throughout the year to ensure they will operate reliably when needed.

To conduct an environmental noise assessment for this project, we identified the applicable city noise code, conducted a site inspection, assessed the ambient background noise, reviewed sound emissions data for the adiabatic dry coolers and generators, performed a propagation analysis of the noise from these sources to nearby receivers, and configured acoustical treatment necessary to meet the noise code.

A preliminary report was issued on 10/5/2021 that presented an assessment of chiller noise for the building on Dempster Avenue. An updated report was provided on 11/12/2021 that included all three buildings and a noise emissions assessment of the diesel generators. A comprehensive report was issued on 12/1/2021 that included a full sound assessment based on the noise controls needed to meet the Village noise code and to respond to staff questions and concerns. These reports were issued by our sister company Acoustic Associates, Ltd. The present report was generated based on changes to the building designs, most notably a shift to two buildings, with the larger one (ORD1) moving equipment to a mechanical yard and the smaller building (ORD2) with different equipment on the roof than what was in the previous studies. Both buildings have generator rooms on the roof. Addtionaly, some equipment quanties have changes since the modeling was completed on October 2nd. These changes were minor and result in no changes to the expected inpact. See the “October 16th Update” section at the end of this report for more information.

## Applicable Noise Regulations

The Village of Mt. Prospect has performance standards for industrial districts that are published in Article XXI, I-1 Limited Industrial Districts. Section, 14.2104(G)(1). In part, it states:

> *"**Noise Limitations**: No industrial activity shall generate noise across any residential or business zoning district boundary line in excess of the levels shown in Table I of this section, nor shall exceed seventy-one (71) dBA when measured on the A-weighted scale."*

Specifically, Table 1 of the Village noise code sets decibel limits at each of ten octave-band frequencies from 16 Hz to 16,000 Hz, the range of human hearing. When no particular octave-band frequency dominates the sound spectrum, such as a tonal noise, these limits can be logarithmically summed to establish a single-number, overall noise level limit. **Based on this calculation, the equivalent limit for noise radiating to residential properties is 56 dBA during the daytime hours and 52 dBA during the nighttime hours (10:00 PM to 8:00 AM). The Village's maximum sound level for emergency operation is 71 dBA**. For reference, the State of Illinois limits noise radiated from industrial land to residential land to an equivalent of 61 dBA during the day and 51 dBA during the night from 10:00 PM to 7:00 AM.

Regardless of the absolute noise level limits given in local or state noise codes, assessing the existing ambient noise is a critical element in preparing an environmental noise impact statement. Such data not only helps to identify if the regulatory code limits are reasonable, but when the projected sound levels are compared to the existing ambient noise levels, the impact of the noise can be evaluated.

To assess the current ambient noise, we conducted a site visit on Thursday, October 21, 2021, where we inspected the site, examined the surrounding area, and set up professional-grade equipment to produce an audio recording of the ambient noise. The equipment was set up on the west side of the United Airlines building, about 200 feet from Dempster Street. The recording ran for 24 hours and was analyzed in our lab to determine the 1-minute and 10-minute time-averaged levels (called equivalent levels or Leqs).

**Figure 1** shows the ambient noise over the 24-hour period. When the recording was auditioned, we noted that airplanes flew over the site during the night. Google Earth shows that O'Hare Airport is about 3 miles to the southeast and that the site is in line with two of its runways. By listening to the recording, we also heard lawn mowing equipment operating during the day. Finally, we noted that a helicopter hovered over the site for a short period around 9:30 AM on Friday. After we removed the extraneous noise of the mower and the helicopter from the data, the calculated **daytime ambient Leq was 57 dBA.** The **nighttime ambient Leq (10:00 PM to 8:00 AM) was 54 dBA**.

These day and night sound levels compare well with the typical sound levels given in ANSI Standard 12.9, "*Quantities and Procedure for Description and Measurement of Environmental Sound"* for a densely populated suburban residential area. Specifically, ANSI indicates that a

typical daytime ambient Leq in such a populated area is about 55 dBA, while a typical nighttime Leq is about 49 dBA - without airplanes. Since the ANSI estimated ambient levels and the measured ambient levels are comparable to the Village's daytime and nighttime limits of 56 dBA and 52 dBA, respectively, the Mount Prospect limits should be considered reasonable limits to protect the health and safety of the residents in the community.

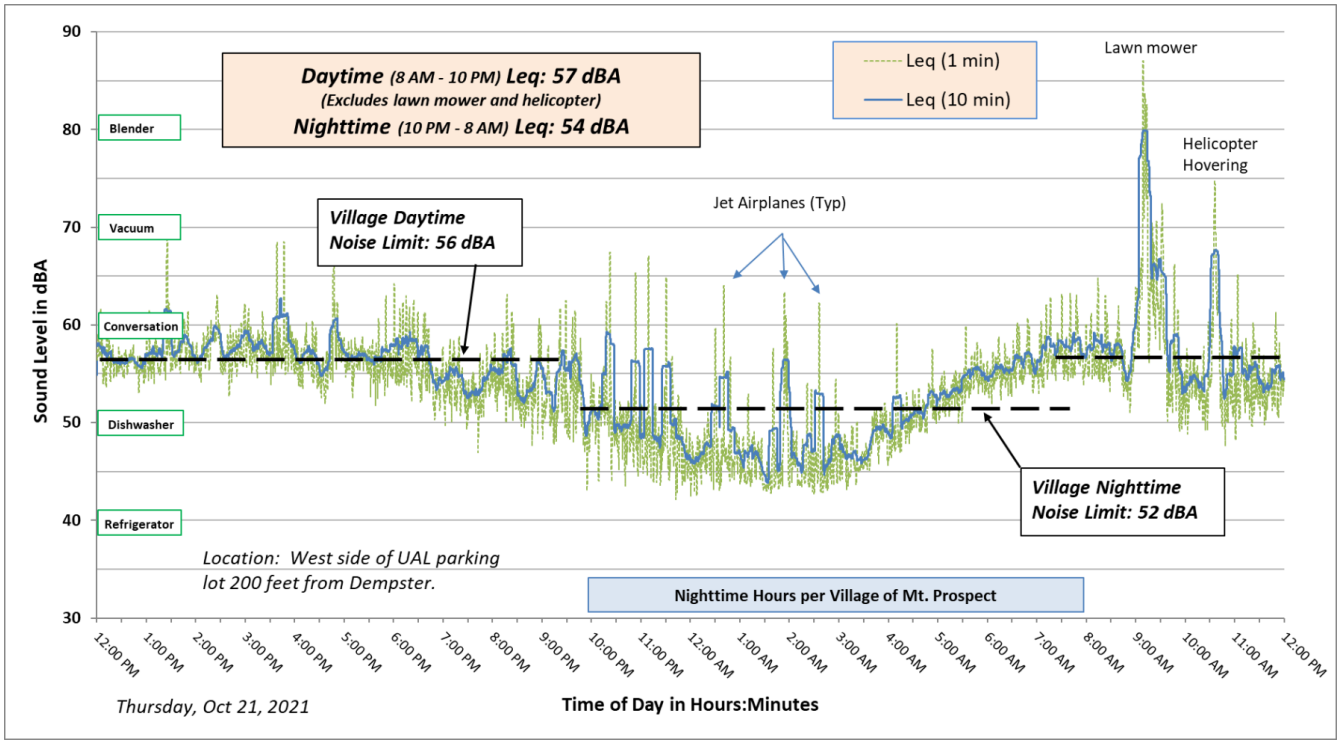



**Figure 1 – Ambient noise levels measured over a 24-hour weekday period at the site.**

# Equipment Sound Emissions

## Cooling Equipment Sound Emissions

Several different types of cooling units are now planned for this project:

- ORD1 also uses ninety-six (96) dry cooler units, divided among four sectors in groups of twenty-four, located in the ORD1 mechanical yard.
- ORD2 uses thirty (30) dry coolers, located on the rooftop of ORD2.

To model the cooling equipment as acoustical sources, we used the sound data provided by KW Mission Critical Engineering. The equipment was tested following the Air-Conditioning, Heating,

and Refrigeration Institute (AHRI) Standard 370, *"Sound Performance Rating of Large Air-cooled Outdoor Refrigeration and Air-conditioning Equipment."*

This data is expressed in terms of the equipment's sound power levels (that is, the sound energy radiated from the equipment), not its sound pressure level (as measured with a conventional sound level meter or heard with the human ear). See the sidebar for a more detailed explanation.

Some data was supplied as sound pressure levels, with measurement positions. When this type of information was provided, we used it to calculate the sound power level for use in our modeling software.

Based on the BAC Trillium Series Adiabatics Dry Cooler model, and the 51% fan speed "energy saving mode", the **dry coolers** (for ORD1) generate **97 dBA** of sound power (dB ref 1 pW) per unit (1 unit has 4 fans).

Based on the "Ultra Low Noise" model, the **eco-Air Titian Coolers** (for ORD2) generate **109 dBA** of sound power (dB ref 1 pW) per unit (1 unit has 4 fans).

**Table 1 of Appendix A** gives the sound data for each octave band frequency. Data given for each frequency band is necessary since the propagation of sound depends on the environmental factors listed in the sidebar, which are frequency-dependent.

*Because sound power and sound pressure both use the decibel (dB) scale, they are often confused. Sound power is the energy radiated from a source, like the "wattage" of a light bulb. Sound pressure, however, is the effect that that energy has on a sound level meter or a person's ears after it has traveled to the receiver.*

*For example, a 100 dB sound power source will emit the same sound power regardless of where it is located. However, the loudness of the sound - and its sound pressure level - depends on how far the listener is from the source. In addition to distance, the sound pressure level also depends on environmental factors such as atmospheric absorption, ground effects, diffraction around buildings, and reflections off large structures.*

## Generator Sound Emissions

One hundred and thirty-six (136) diesel-driven generators, divided among four sectors, are planned for the ORD1 data center building and are to be located in penthouses on the roof, on two sides of the building. Additionally, eight (8) Tomball Controls enclosed diesel-driven generators, divided among four sectors, are to be located on the roof of ORD1. Fifty-three (53) diesel-driven generators are planned for ORD2, also located in penthouses on the roof, along two sides of the building. The sound emissions data for the generators are given in **Table 1 of Appendix A**. The total A-weighted sound power level of the mechanical part of the 4-megawatt (MW) generator is **127 dBA**; the intake side of the 3-megawatt (MW) Tomball Controls enclosed generator, with 3 dB of sound treatment is **114 dBA**; and the mechanical part of the 3-megawatt (MW) generator is **125 dBA**. The sound emissions for the radiators are **118 dBA**.

The noise from each engine exhaust will pass upwards through the exhaust piping, which will emerge from the roof of the penthouse. The noise emissions data for the engine exhaust are given in **Table 1 of Appendix A**. The unsilenced exhaust noise is rated at a sound power level of 131 dBA (4 MW) and 130 dBA (3 MW). However, a "hospital-grade" silencer is planned that will provide about 33-39 dB of attenuation in the mid-frequency range. Therefore, the sound power, calculated by octave band, of the treated exhaust noise is **95 dBA** (4 MW) and **92 dBA** (3 MW).

While there are a total of 197 generators, the only condition under which all these units would operate at the same time would be during a power outage. However, groups of generators would run intermittently for short periods for a few weeks before the building is occupied. This is to program and test the units to ensure they will operate as intended.

After the pre-occupancy test phase, only one or two generators in each building/quadrant would run at a time for routine testing. When tested, they run for short periods, totaling 5-8 hours per year. In our modeling, we configured one generator running per building/quadrant, plus one Tomball Controls enclosed generator, for 15 minutes in any given hour. Note that this testing would only occur during the daytime hours of 9:00 AM to 5:00 PM and only during the weekdays.

In the rare instance when power is lost, all the generators would need to run. This, of course, would significantly increase the noise level. The noise generated from this emergency situation is addressed below.

## Noise Mitigation

Preliminary modeling indicated that mitigation would be necessary to meet the Village noise code for both the daytime (56 dBA) and nighttime (52 dBA) periods and to meet the 71 dBA maximum level during a power outage. Our acoustical mitigation plan is presented below.

**Acoustical Louvered Screen Wall (Industrial Acoustics Company SL-12)** – is planned for the mechanical yard of ORD1. This 12" thick louvered wall will extend from ground level to 55 ft tall.

**Rooftop Noise Barrier (Noise Barriers HP-38) Panels** – are planned for the rooftop of ORD1 and ORD2. A 28 ft tall metal panel wall system is planned that will extend from the penthouse on one side of the data center to the penthouse on the other side. These will be on the west side of ORD1 and the east & west sides of ORD2.

**Titan Cooler Noise Barrier (Noise Barriers HP-38) Panels** – are planned for the cooler discharge of ORD2. This metal panel wall system will create a chimney-like structure to reduce noise from the Titan coolers. This panel includes an acoustically absorptive side to dissipate

sound energy as it travels upward. To ensure good airflow to the coolers, this structure will start at 7 ft less than the top of the penthouse roof and then extend up 66 ft tall.

**Hospital Grade Silencers** – are planned for the exhaust pipes of the diesel engines for the generators. This class of silencer offers the highest performance for diesel engine exhausts. Specifically, the silencers will provide 33-39 dB of sound attenuation for the noise radiated from the engine exhaust pipes.

**Parallel Baffle Silencers (Kinetics Noise Control)** – are planned for the discharge air from each radiator fan. The discharge chute of these fans will be connected to the wall system to ensure this noise is radiated through the silencers, not around them. The same silencers are planned for the intake side of the room. The sizes vary in length from 3 ft, 5ft, or 7ft.

**Absorption Panels (Noise Barriers Quietperf 4" thick)** – are planned for the interior of the generator rooms. These help reduce noise before it exits the room.

**Substitutions** of the above-specified noise mitigation products may be necessary as the project moves forward. If new models have noise reduction values (per octave band) that are equal to or greater than the above-specified units, this is acceptable.

## Software Modeling

To evaluate the propagation of sound from the coolers and generators, we used SoundPLAN, an internationally recognized and sophisticated computer program for generating contours of sound levels radiated into the community surrounding a project. With this software, we built a 3D model to determine how the sound from the chiller units and the generators for each of the buildings would propagate to nearby residential areas. This model incorporates the propagation factors of topography, atmospheric absorption, surface absorption, building reflections, and "acoustic shadows" caused by sound bending around buildings. Based on Google Earth and drone views, we estimated the size and heights of acoustically relevant buildings in the surrounding area and added them to the model. All the equipment was modeled based on the most recent site plans and the details noted in the "Equipment Sound Emissions" section and the sound power values found in **Table 1**.

The accepted practice in preparing an environmental noise assessment is to use the time-averaging metric called the Leq. In fact, the State of Illinois stipulates that the 1-hour time-average (1-hour Leq) be used. While time-averaging does not apply to the coolers since they operate all the time, day and night, it would apply to the generators since a single generator in each building would run for only ¼ of an hour at a time. At this reduced duration, the 1-hour Leq would be 6 dB less than if it ran for a full hour. This time-averaging is consistent with the impact of noise on humans and was used in our software modeling.

In an emergency where power is lost, all of the generators would need to run. This would, of course, significantly increase the noise level. The acoustical mitigation for this project was planned to limit the noise to the Village's maximum sound limit of 71 dBA. For reference, this is the loudness of a vacuum cleaner. If residents were inside their homes when such an emergency occurred, the indoor sound level with the windows partially open would be about 51-56 dBA. This is a level lower than normal conversation.

Three noise contour plots were generated and are shown below (larger figures are included in the appendix of this report). **Figure 2** is for the daytime noise levels, which reflect the constant noise of the coolers and a single generator per building/sector, plus one Tomball Controls enclosed generator, undergoing a 15-minute test. **Figure 3** is for the nighttime noise, which reflects cooling equipment operation only. **Figure 4** is for an emergency condition when there is a power outage. This reflects all the equipment running, including all the generators.

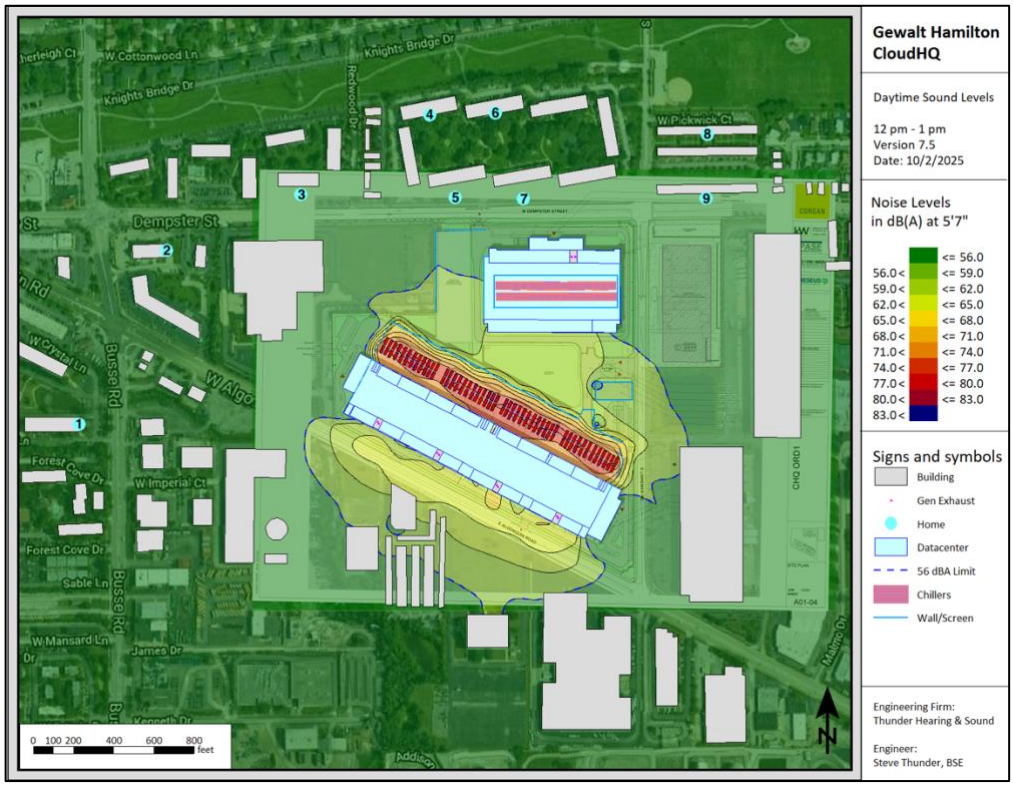



**Figure 2 – Audibility level contours for the daytime**

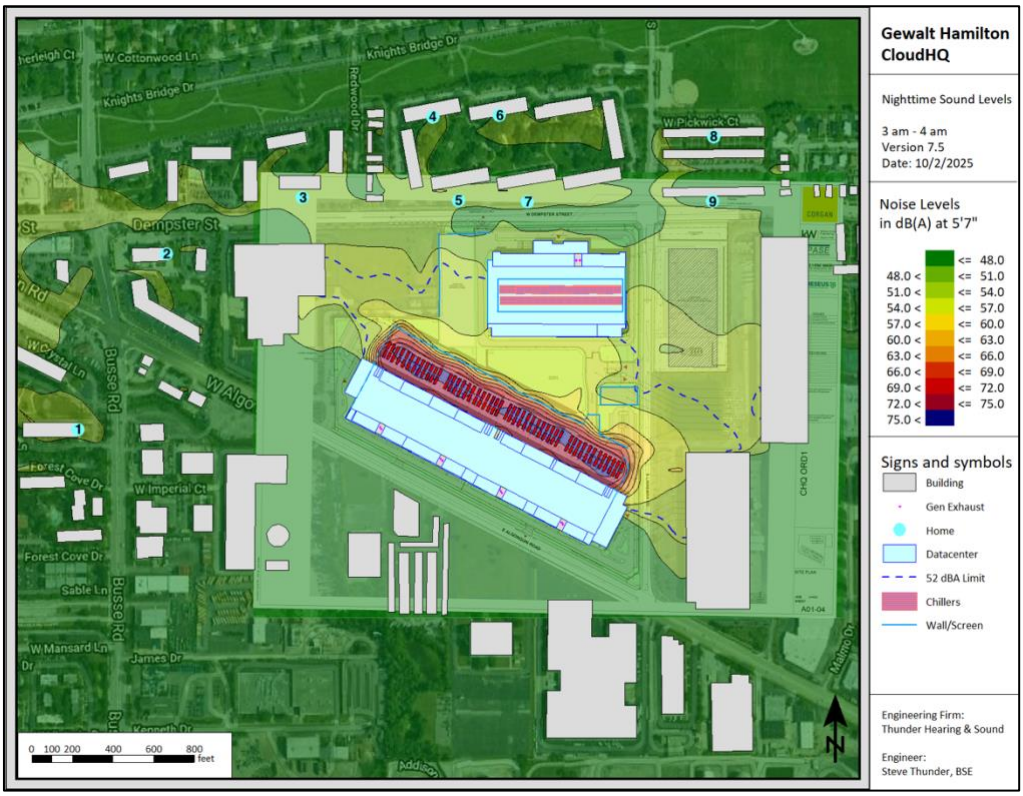



**Figure 3 – Audibility level contours for the nighttime**

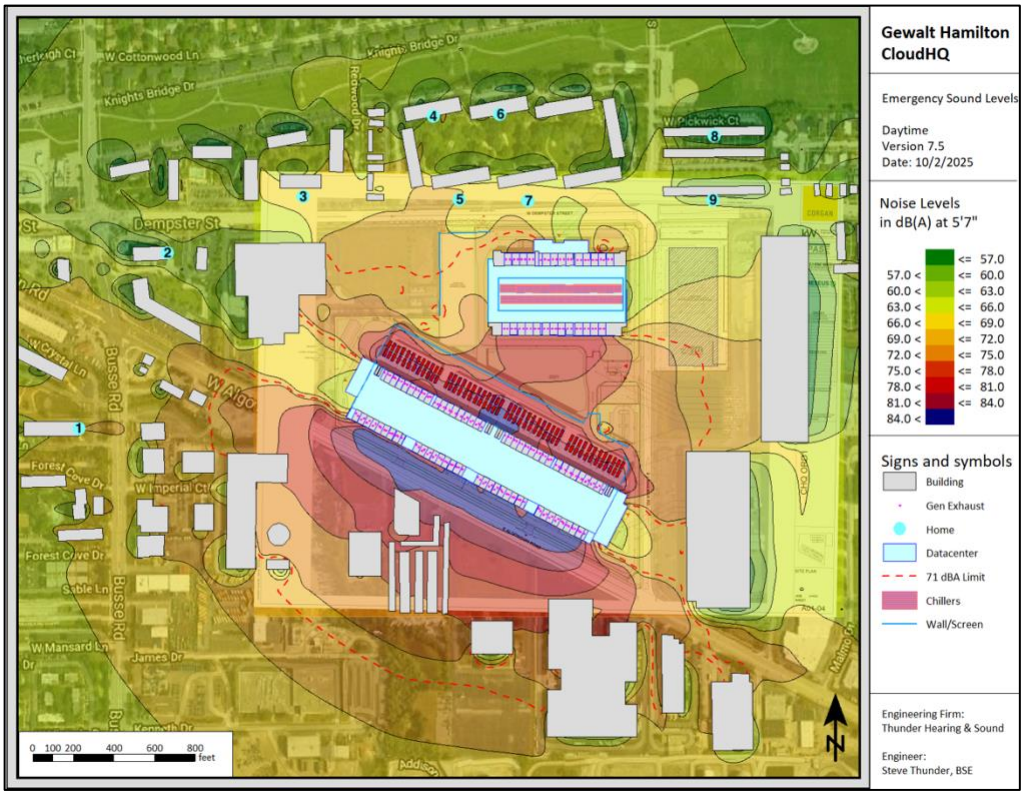



**Figure 4 – Audibility level contours for an emergency**

The blue circles in Figures 2-4 show the location number for nine residential locations, including the Birch Manor Condo residential buildings to the north, the Pickwick Apartments to the northeast, Meyers Place to the west, and the Crystal Towers complex to the southwest. **Table 2 of Appendix A** includes these sound levels. The sound levels given in this table represent the sound levels predicted at the marked location at 5½ feet off the ground.

As seen in Figure 2, the predicted daytime sound levels at the nine residential property lines are all below the Village daytime limit of 56 dBA (shown with a blue dashed line). Figure 3 shows that the predicted nighttime levels are all below the Village's nighttime limit of 52 dBA (shown by a blue dashed line). Finally, Figure 4 shows that during a power outage, the sound levels at the residential locations are all below the Village's maximum limit of 71 dBA (shown by a red dashed line).

Additional figures are attached in the appendix showing sound levels before ORD2 is constructed. All these levels are lower and also meet the villages sound level limits.

## October 16th Update

Several equipment quantities have been updated since the modeling and calculations for this report were completed. However, these changes will only be minor. **Table 3** summarizes the changes and lists the expected change in noise level. For reference, in a lab setting, the smallest change detectable by the human ear is 1 dB. In real world settings, the smallest detectable change would be even higher. While the figures and numerical values included in this report reflect the equipment quantities on 10/2/2025, based on these new equipment quantities I expect no change to the impacts or conclusions of this report.

| Equipment Quantity Changes 10/16/2024 | | | |
|---|---|---|---|
| Equipment | Sound Study Quantity | New Quantity | Expected Change in Level, dBA |
| ORD1 - Adiabatic Dry Coolers | 96 | 102 | 0.3 |
| ORD1 - Penthouse Generators | 136 | 135 | 0.0 |
| ORD1 - Generator Enclosures | 8 | 2 | -6.0 |
| ORD2 - Adiabatic Dry Coolers | 30 | 30 | 0.0 |
| ORD2 - Penthouse Generators | 53 | 62 | 0.7 |

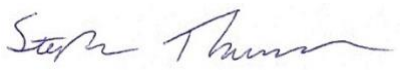
**Table 3 – Equipment Quantity Changes and Associated Sound Level**

## Conclusion

Based on our site inspection, our ambient background noise study, our review of the sound emissions data for the coolers and generators, our sound propagation analysis using a sophisticated computer modeling program, and our planned acoustical treatment, the noise from the data centers will meet the Village's daytime and nighttime noise limits for routine operation, and meet the Village's maximum sound level for emergency operation.

This is not to say that the noise will be inaudible at all times. For example, when a generator is tested, it would likely be audible to a nearby person. But as the US EPA advocates, to assess the long-term annoyance of a noise source, logarithmic time-averaging must be used in the analysis. And, as noted above, the State of Illinois noise code also stipulates a time average using a one-hour time reference. This was the approach we used.

Submitted by:



Steve Thunder, BSE
Acoustical Engineer

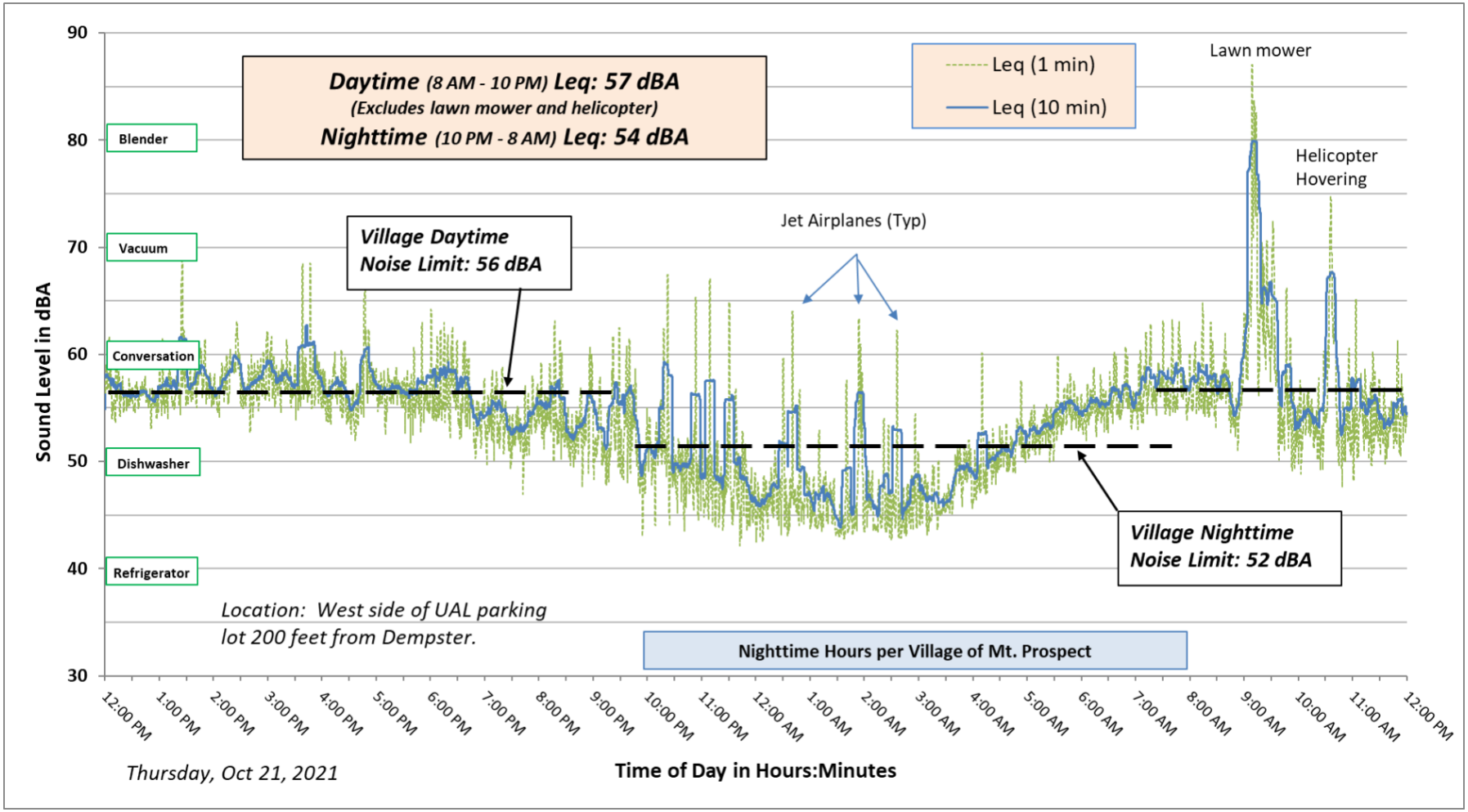



**Figure 1 – Ambient noise levels measured over a 24-hour weekday period at the site.**

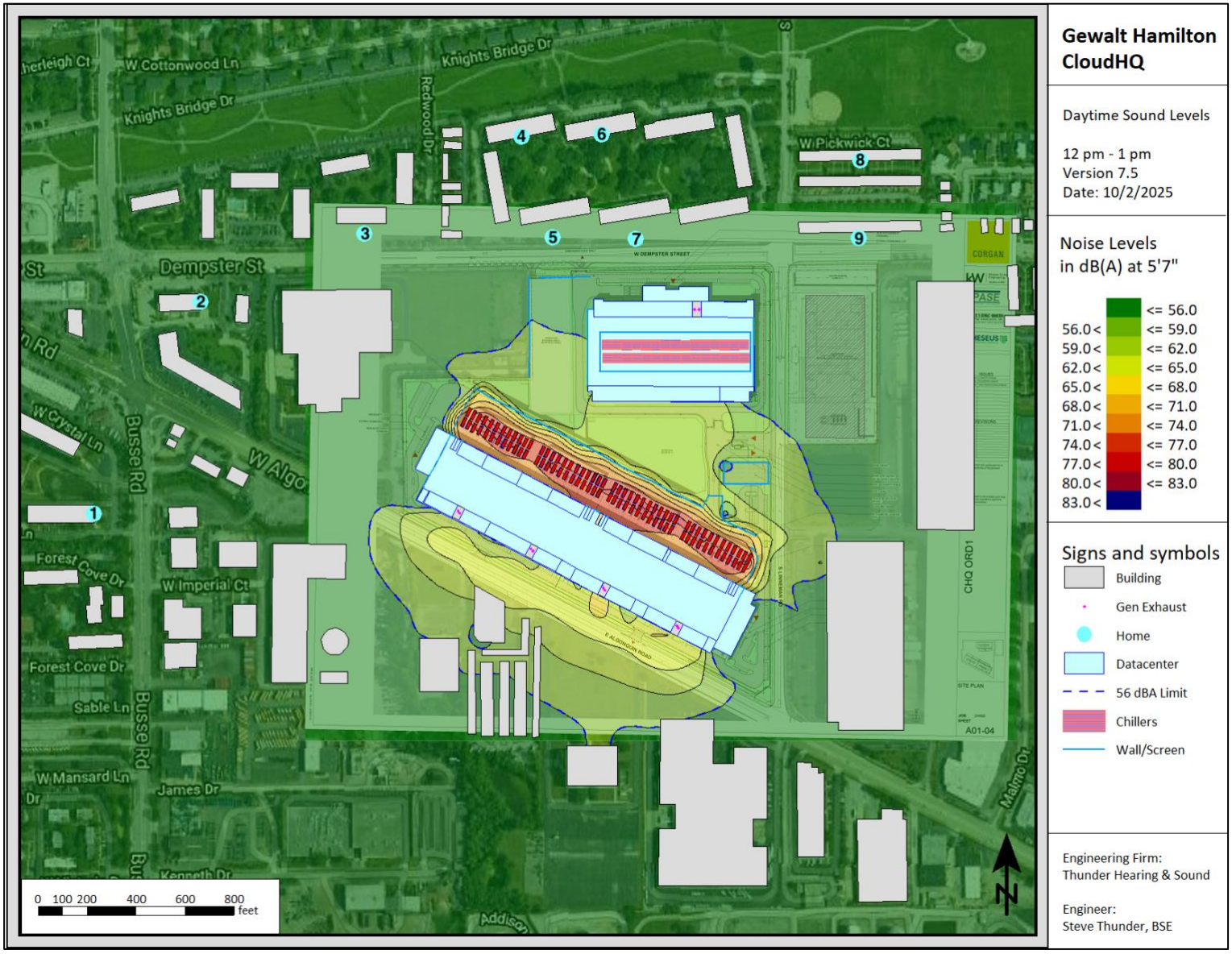



**Figure 2 – Audibility level contours for the daytime**

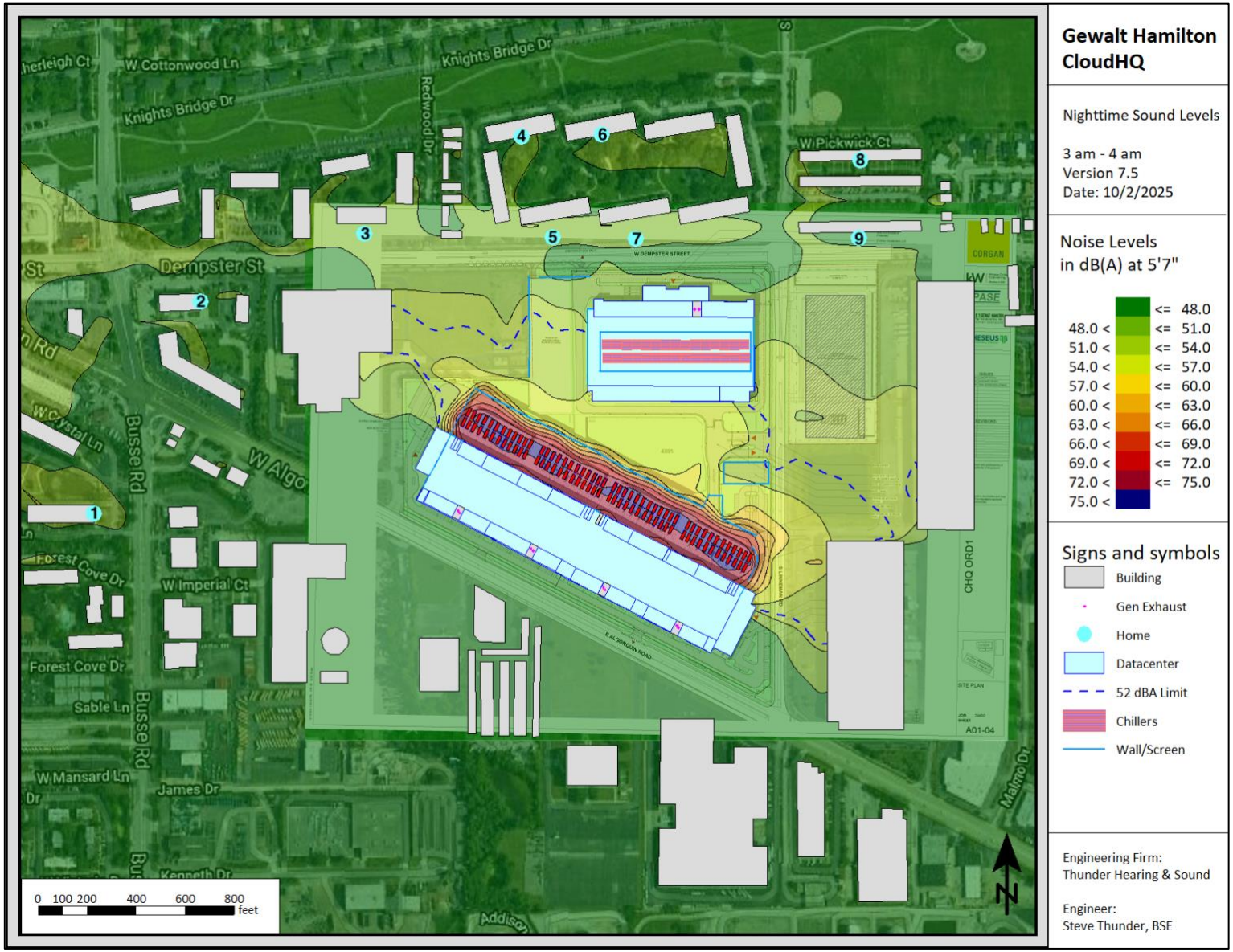



**Figure 3 – Audibility level contours for the nighttime**

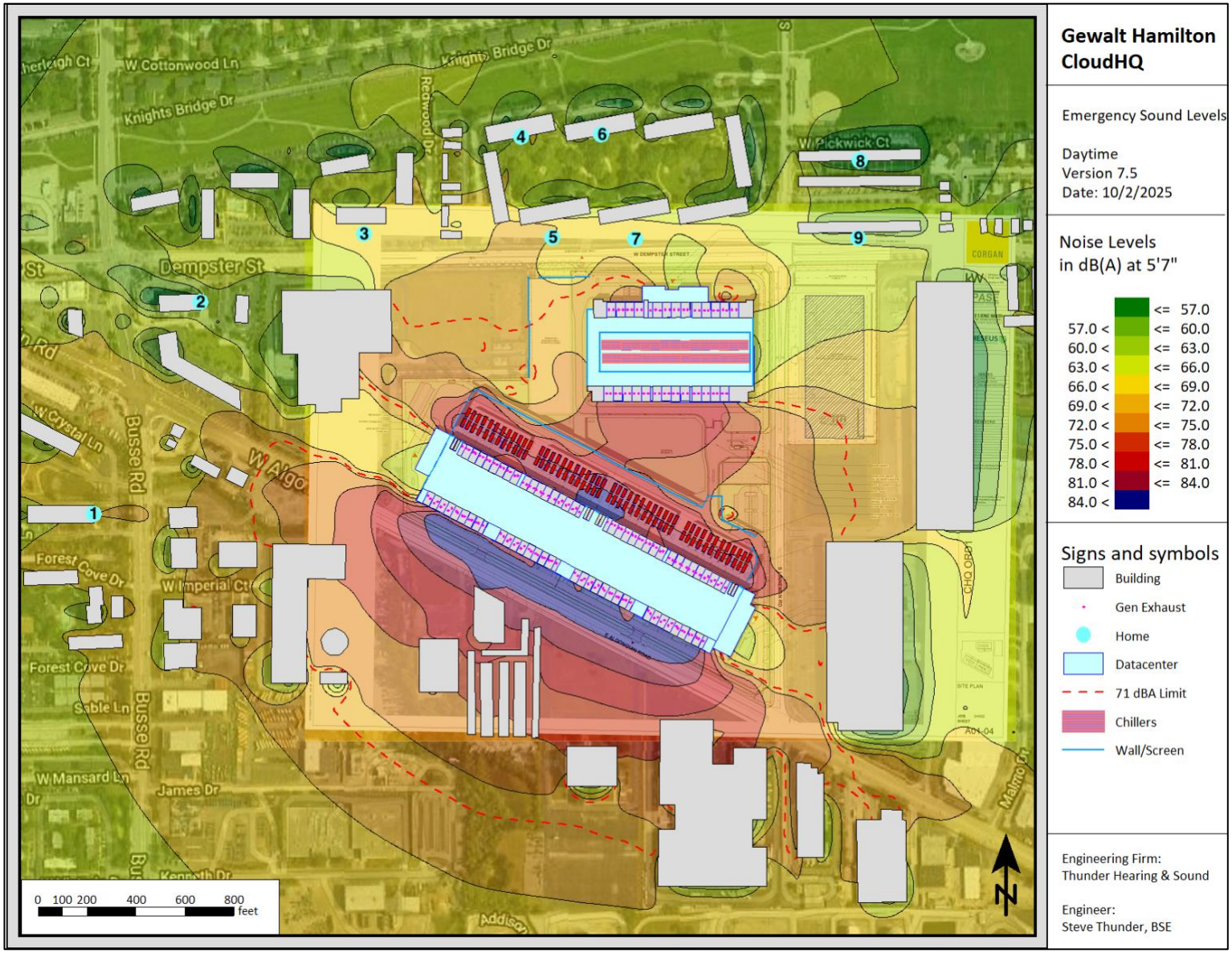



**Figure 4 – Audibility level contours for an emergency**

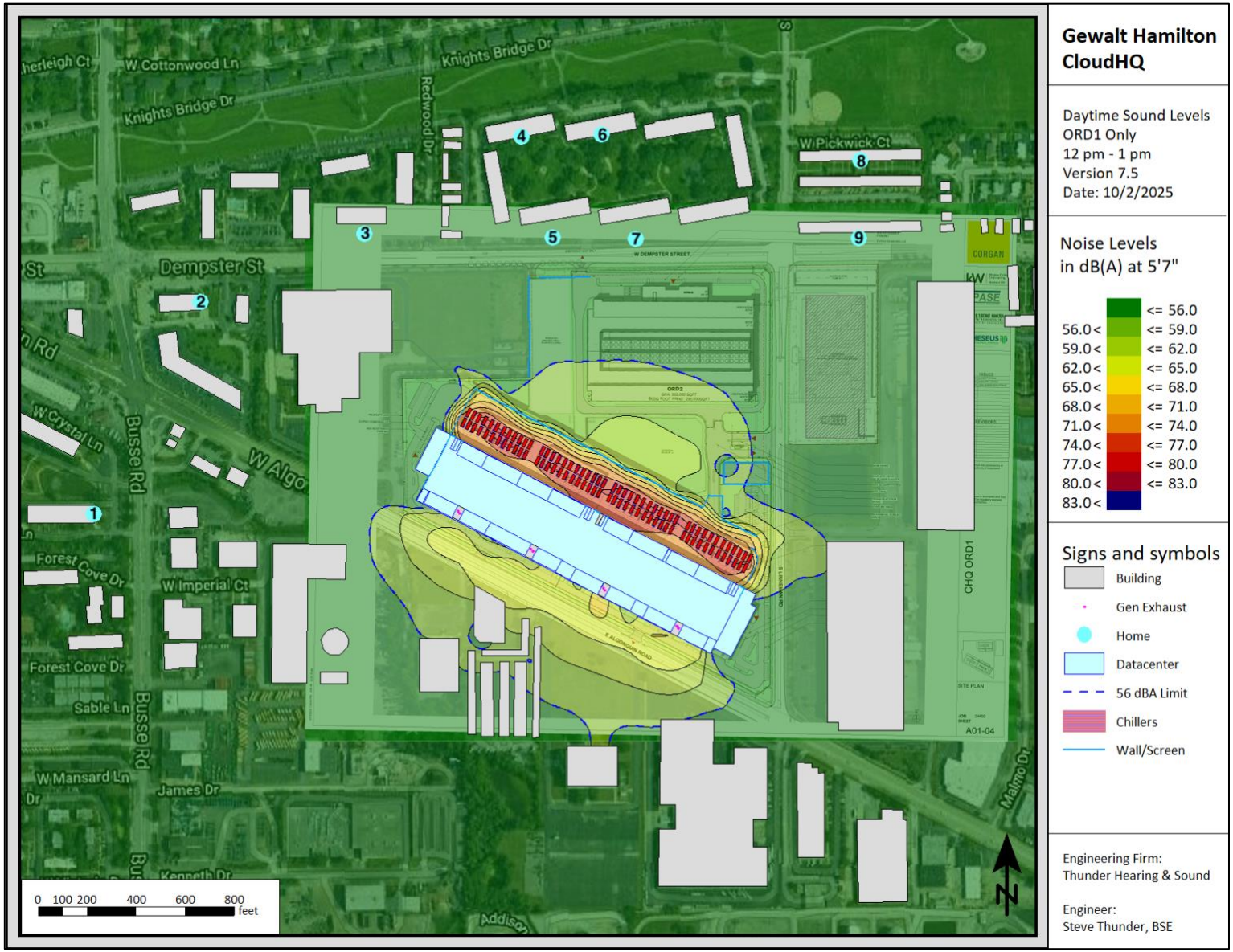



**Figure 5 – Audibility level contours for the daytime without ORD2**

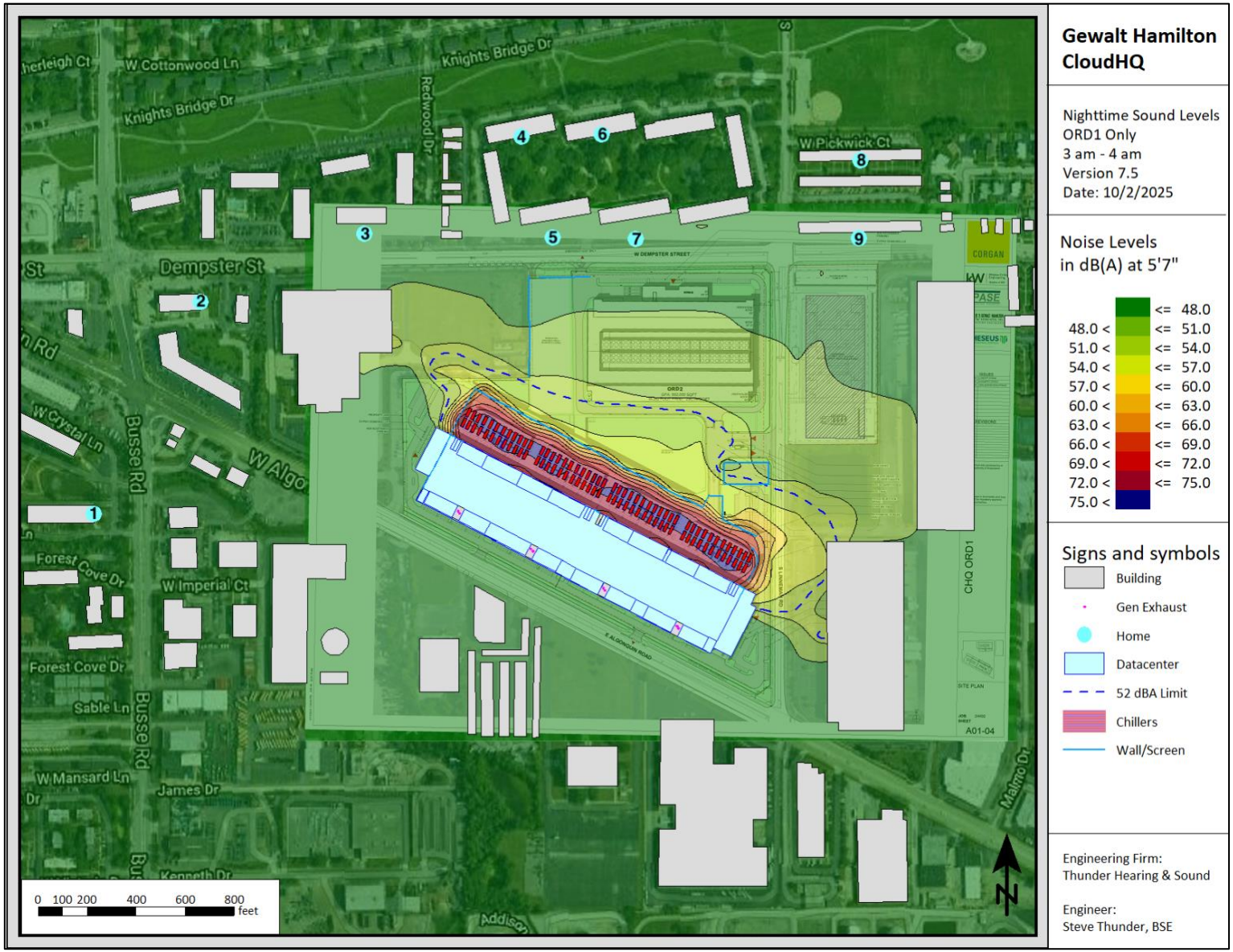



**Figure 6 – Audibility level contours the nighttime without ORD2**

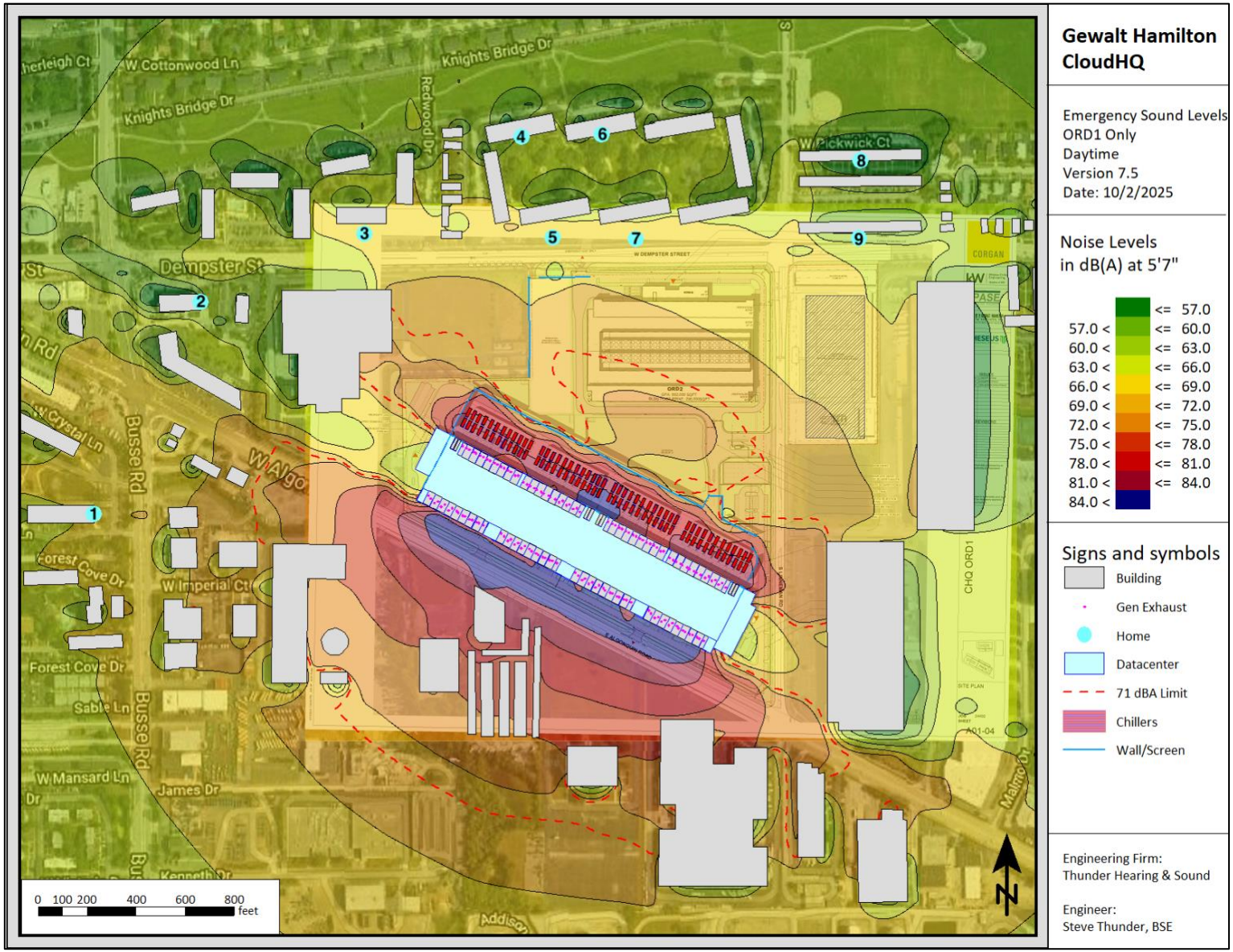



**Figure 7 – Audibility level contours for an emergency without ORD2**

**Appendix A – Table 1**

Sound power level data provided by equipment manufacturers and used in the SoundPLAN modeling program. When only sound pressure levels were provided, they were converted to sound power for use in the model.

| Sound Power Levels (Per KW Mission Critical Engineering) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 31 Hz | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1k Hz | 2k Hz | 4k Hz | 8k Hz | Total (dBA) |
| BAC Adiabatic Dry Cooler - energy saver mode, at 51% | | 105 | 103 | 100 | 96 | 87 | 82 | 79 | 75 | 97 |
| Titan Cooler unit - 4 fans - Ultra low noise option | 112 | 114 | 113 | 110 | 104 | 104 | 101 | 96 | 89 | 109 |
| Generator Radiator Noise | | 125 | 124 | 121 | 116 | 114 | 108 | 102 | 96 | 118 |
| 4MW Generator Exhaust Noise with Silencer | | | 95 | 94 | 89 | 84 | 81 | 73 | 98 | 97 |
| 4MW Generator Engine Noise | | | 118 | 118 | 120 | 119 | 119 | 118 | 124 | 127 |
| 3MW Generator Exhaust Noise with Silencer | | | 103 | 98 | 94 | 87 | 83 | 81 | 80 | 95 |
| 3MW Generator Engine Noise | | | 123 | 119 | 120 | 118 | 119 | 116 | 118 | 125 |
| 3MW Enclosed Generator - Sides | | 131 | 121 | 111 | 105 | 92 | 91 | 89 | 89 | 110 |
| 3MW Enclosed Generator - Intake, with 3 dB of treatment | | 136 | 128 | 113 | 97 | 86 | 83 | 81 | 86 | 114 |
| 3MW Enclosed Generator - Discharge | | 125 | 117 | 106 | 99 | 87 | 85 | 84 | 84 | 105 |

**Appendix A – Table 2**

Sound level at receiver/home locations (blue circles) in figures 2, 3, and 4.

| | | | | | | | | Without ORD2 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Receiver/Home | Receiver Number | Day Limit dB(A) | Night Limit dB(A) | Emergency Limit dB(A) | Day dB(A) | Night dB(A) | Emergency dB(A) | Day dB(A) | Night dB(A) | Emergency dB(A) |
| Crystal Towers Condos | 1 | 56 | 52 | 71 | 49 | 47 | 67 | 45 | 31 | 67 |
| Myers Place | 2 | 56 | 52 | 71 | 50 | 47 | 62 | 48 | 41 | 62 |
| 1510 Dempster St | 3 | 56 | 52 | 71 | 53 | 50 | 67 | 51 | 47 | 67 |
| Birch Manor Condos Northeast | 4 | 56 | 52 | 71 | 50 | 46 | 65 | 48 | 40 | 64 |
| Birch Manor Condos Southeast | 5 | 56 | 52 | 71 | 53 | 50 | 69 | 51 | 45 | 67 |
| Birch Manor Condos - North | 6 | 56 | 52 | 71 | 48 | 47 | 64 | 49 | 41 | 64 |
| Birch Manor Condos - South | 7 | 56 | 52 | 71 | 50 | 49 | 68 | 53 | 47 | 68 |
| 636 Pickwick | 8 | 56 | 52 | 71 | 44 | 43 | 58 | 44 | 38 | 59 |
| 648 Dempster | 9 | 56 | 52 | 71 | 50 | 50 | 65 | 51 | 47 | 66 |

# Traffic Impact Study

## Mount Prospect Technology Campus
## 1200 Algonquin Road
## Mount Prospect, Illinois

**July 7, 2025**

**Prepared For:**

CloudHQ
Where data lives.


***Prepared by:***

***Milan K Patel, PE, PTOE, RSP 1***

***Daniel P Brinkman, PE, PTOE***

GHA GEWALT HAMILTON ASSOCIATES, INC.

## Part I. Introduction and Project Context

Gewalt Hamilton Associates, Inc. (GHA) has conducted a Traffic Impact Study for the proposed *Mount Prospect Technology Campus (MPTC)* development to be constructed at 1200 E Algonquin Road (IL Rte 62) in Mount Prospect, Illinois. The approximately 44-acre site formerly contained the United Airlines Operation Center (OPC). Access to the OPC site was provided via a gated Right-In/Right-Out (RIRO) access on Dempster Street, three full movement (two gated) driveways on South Linneman Road and two full movement access drives on E Algonquin Road, as well cross access to the adjacent parcel to the west which also had full access to both Dempster Street and E Algonquin Road.

Cloud HQ proposes to construct two (2) data centers on the site, with multiple floors comprising approximately 2,172,000 square feet of gross floor area. The project also includes the approximately 6-acre parcel at the southeast corner of Dempster Street and Linneman Road. This former remote parking lot for the OPC will be converted to a power substation for the proposed data centers. Controlled access to the substation will utilize the existing northern curb cut on Linneman Road. An additional power substation will be constructed on an approximately 3.5-acre parcel in the northwest corner of the campus. Access to this substation will be at the location of the existing RIRO access on Dempster.

Per the June 30, 2025 Preliminary PUD Site Plan prepared by GHA, the two buildings will be arranged on the subject site to strategically share detention and circulation facilities as well as cross access, but are ultimately able to be individually secured. Access for the MPTC will include a new gated emergency only RIRO access on Dempster Street, a new full movement access on Linneman Road, and two new full movement, emergency only, gated accesses on E Algonquin Road. A separate left turn lane is proposed at the Linneman Road access point, which will be the primary point of access for the facility.

The following summarizes our findings and provides various recommendations for your consideration. *Appendices* referenced are in the Technical Addendum at the end of this document.

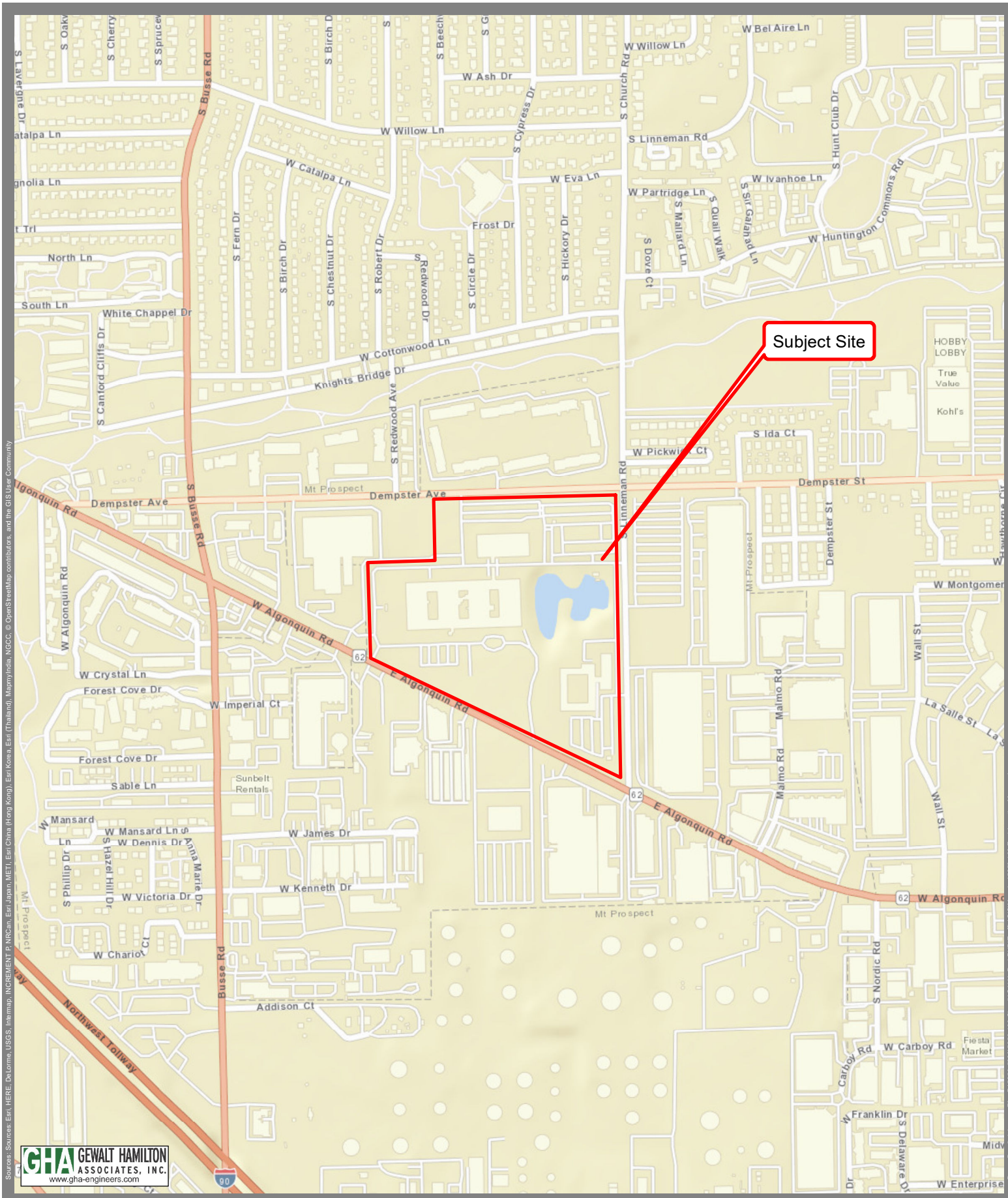
## Part II. Background Information

### *Site Location Map and Roadway Inventory*

***Exhibit 1*** provides a site location map. The existing traffic operations in the site area are illustrated on ***Exhibit 2***. ***Appendix A*** provides a photo inventory of the site vicinity. Pertinent comments to the adjacent roadways include:

<u>E Algonquin Road (IL Route 62)</u>

- IL Rte 62 is an east-west Minor Arterial under the jurisdiction of the Illinois Department of Transportation (IDOT).
- IL Rte 62 provides a five-lane cross section (two through lanes in each direction, with a wide (±16-ft) center lane), with a posted speed limit of 45 miles per hour (mph) in the vicinity of the site.
- A dedicated right-turn lane is provided in the westbound direction at its signalized intersection with Linneman Road and at its signalized intersection with Busse Road.
- Dedicated left turn lanes are provided within the median eastbound at the unsignalized shared access with the parcel to the west and at the signalized Linneman Road intersection. *Note left turns from eastbound IL Rte 62 to northbound Busse Road are prohibited.*
- Dedicated left turn lanes are provided within the median westbound at the signalized Linneman Road intersection, the 1305 E Algonquin Road east access, and the signalized Busse Road intersection.
- IL Rte 62 is designated as a Class II Truck route.
- The Annual Average Daily Traffic (AADT), year 2023, on IL Rte 62 was 13,100 vehicles with 1,125 trucks (8.6%).




Sources: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Drawn By: dbrinkman File: P:\0250-0299\0253.100 Cloud\HOUAL Pre\PUDT raffic\GIS\Mapping\0253.100 Ex 1 Location Map.mxd

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1 inch = 800 Feet

# Exhibit 1 - Location Map

**1200 E Algonquin Road**
**Mount Prospect, IL**

MapCode: Date: 04/08/2021 Scale: 1" = 800'

W Dempster St

Busse Rd

IL Rte 62 (E Algonquin Rd)

S Linneman Rd

SITE

40 MPH

35 MPH

45 MPH

30 MPH

## Legend:

- Existing Travel Lane
- Existing Stop Sign
- Existing Traffic Signal
- Pedestrian Crosswalk
- Posted Speed Limit

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Not to Scale

# Exhibit 2
## Existing Traffic Operations

Dempster Street

- Dempster Street is an east-west Minor Arterial under the jurisdiction of the Cook County Department of Transportation and Highways (CCDOTH).
- Dempster Street provides a five-lane cross section (two through lanes in each direction) along the site frontage. The median narrows west of Linneman Road from approximately 16-ft to approximately 4-ft at the existing RIRO access serving the site.
- A dedicated right-turn lane is provided in the westbound direction at its signalized intersection with Busse Road.
- Dedicated left turn lanes are provided within the median eastbound and westbound at the signalized Linneman Road intersection the signalized Busse Road intersection.
- The Annual Average Daily Traffic (AADT), year 2022, on Dempster Street was 9,950 vehicles.

Linneman Road

- Linneman Road is a local north-south roadway, extending northerly from IL Rte 62 and is under the jurisdiction of the Village of Mount Prospect. Further north of Dempster Street, Linneman Road becomes Church Street and terminates in a residential neighborhood.
- In general, Linneman Road provides a three-lane cross-section (one through lane in each direction and a center lane for left-turns), with a posted speed limit of 30 mph.
- Linneman Road widens to provide separate left and right turn lanes northbound and southbound at its signalized intersections with Dempster Street and IL Rte 62.
- The Annual Average Daily Traffic (AADT), year 2022, on Linneman Road was 1,600 vehicles.

Pedestrian Facilities

- A sidewalk is provided along the north side of Dempster Street between Busse Road and Linneman Road but only along the south side of Dempster west of the subject site to Busse
- A sidewalk is provided along the east side of Linneman Road between IL Rte 62 and Dempster Street.
- A sidewalk is provided along the north and south sides of IL Rte 62 from Busse Road east to the subject site frontage.
- There are no sidewalks along any of the subject site frontage on Dempster, IL Rte 62 or Linneman. However, a pedestrian crossing to the site is provided on Linneman Road approximately 375 feet south of Dempster Street.

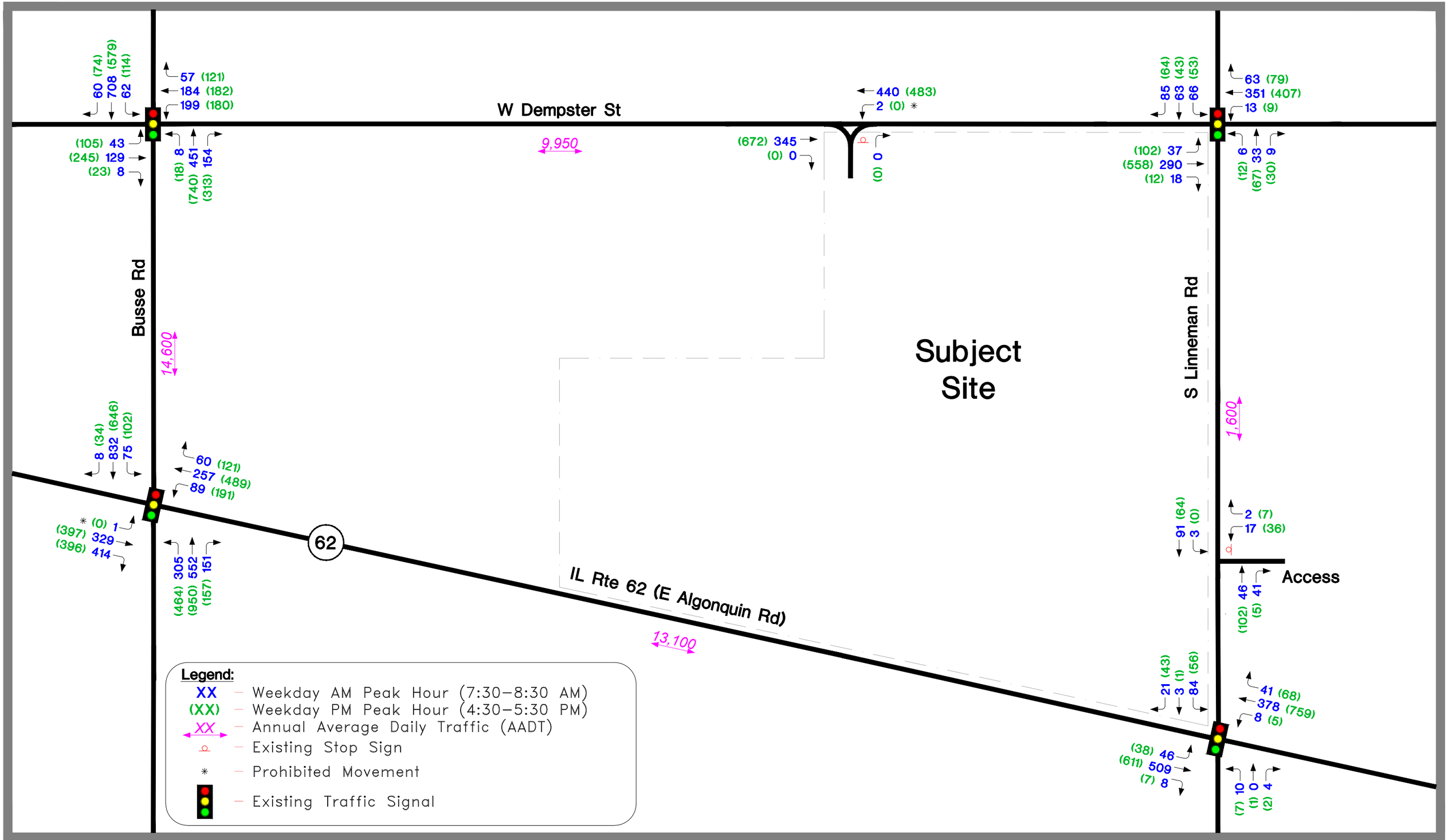
Transit

- PACE Bus Route 606 runs east-west along IL Rte 62 with a marked stop at 1311 W Algonquin Road across from the subject site.
- PACE Bus Route 230 runs north-south along Linneman Road with a marked stop at the Linneman Road and Algonquin Road intersection.

## *Existing Traffic*

***Exhibit 3*** summarizes the existing weekday morning and evening peak hour traffic volumes. Peak period traffic turning movement counts were conducted by GHA on Wednesday April 9, 2025, from 7:00 to 9:00 AM and 4:00 to 6:00 PM. The observed weekday morning and evening peak hours generally occurred from 7:30 to 8:30 AM and 4:30 to 5:30 PM, respectively. ***Exhibit 3*** also provides the AADT (24-hour volume) along Dempster, Linneman and IL Rte 62 from 2022 and 2023 as published by IDOT on their website: www.gettingaroundillinois.com.

No unusual activities (e.g., roadway construction, or inclement weather) were observed during our counts that would be expected to impact traffic volumes or travel patterns in the vicinity. Summaries of the existing traffic counts can be found in ***Appendix B***.




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**Exhibit 3**
**Existing Traffic**

Sources: 1) GHA April, 2025 2) IDOT 2022/2023 AADT

## *Crash Analysis*

Crash data was obtained from the IDOT Division of Transportation and Safety for the last five calendar years, 2019 through 2023. A summary of the crash data is provided in **Table 1** with the locations mapped on the exhibit contained in ***Appendix C***.

**Table 1 2019-2023 Crash Summary(A)**

| Location | No. of Crashes | PD | Severity[A] | | | F | Crash Type[B] | | | | | | | | | Percent Wet / Icy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | B | C | | A | FO | FTF | FTR | SSD | T | PED | BIKE | O | |
| *Intersections (Crashes within 250 ft of Intersection)* | | | | | | | | | | | | | | | | |
| Dempster St at Busse Rd | 36 | 22 | 0 | 8 | 6 | 0 | 6 | 3 | 1 | 8 | 5 | 12 | 1 | 0 | 0 | 31% |
| Dempster St at Linneman Rd | 14 | 6 | 0 | 5 | 2 | 1 | 2 | 1 | 0 | 2 | 1 | 7 | 0 | 1 | 0 | 36% |
| Algonquin Rd at Busse Rd | 122 | 88 | 2 | 17 | 14 | 1 | 8 | 6 | 2 | 39 | 4 | 58 | 0 | 1 | 4 | 20% |
| Algonquin Rd at Linneman Rd | 13 | 7 | 0 | 2 | 4 | 0 | 0 | 2 | 0 | 4 | 1 | 6 | 0 | 0 | 0 | 23% |
| *Segments (Crashes between signalized intersections)* | | | | | | | | | | | | | | | | |
| Dempster St from Busse to Linneman | 8 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 1 | 13% |
| Algonquin from Busse to Linneman | 8 | 6 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 13% |
| Total (2019-2023) = | 201 | 136 | 3 | 32 | 28 | 2 | 18 | 13 | 6 | 54 | 13 | 88 | 2 | 2 | 5 | 21% |

[A] PD=Property Damage Only, A=Type A (incapacitating injury), B=Type B (non-incapacitating injury), C=Type C (possible injury), F= Fatal Injury

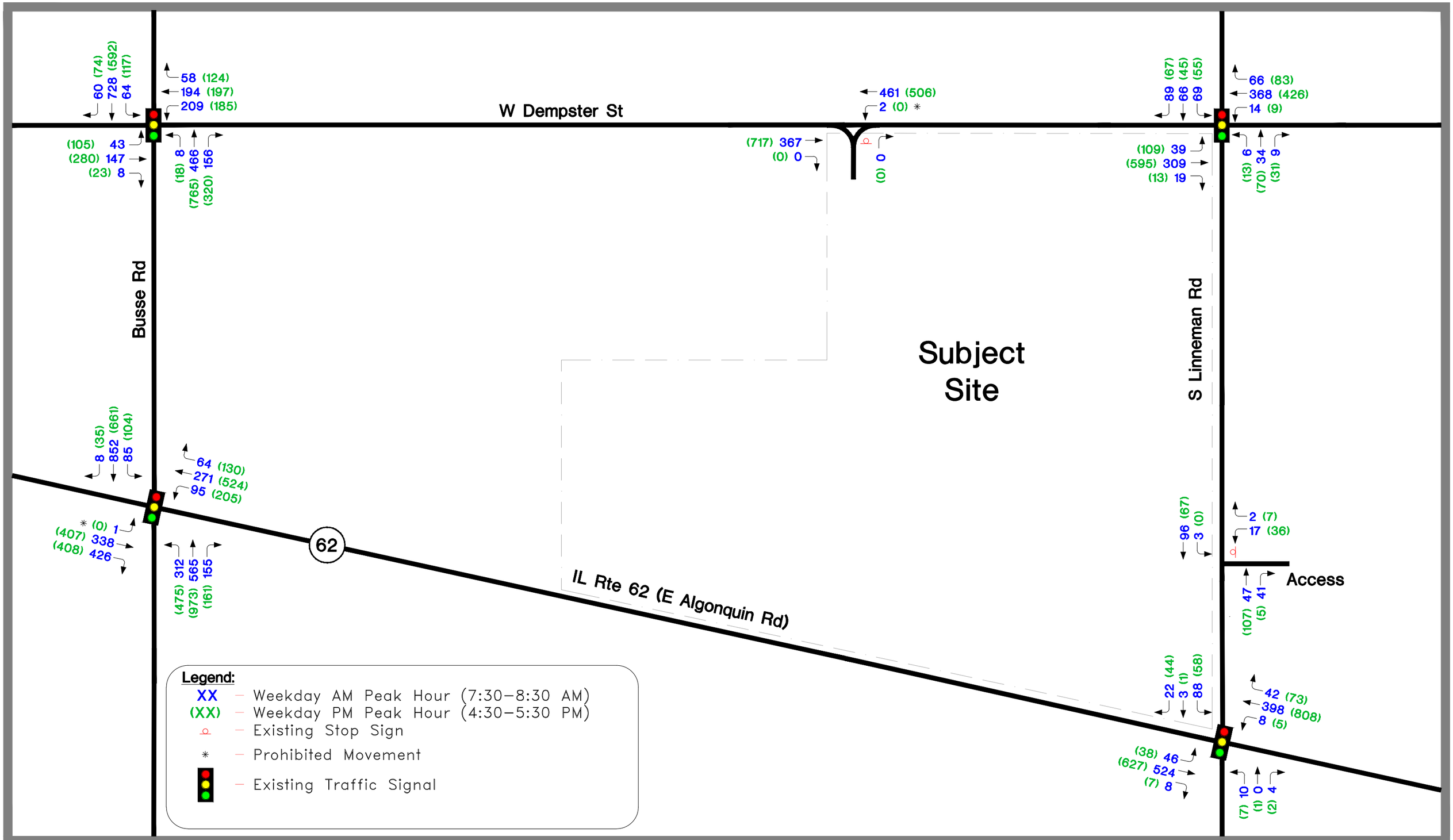
[B] A=Angle, FO=Fixed Object, FTF=Front-to-Front, FTR=Front-to-Rear, SSD=Sideswipe Same Direction, T=Turning, PED=Pedestrian, BIKE=Pedacyclist, O=Other

As shown in **Table 1**, the intersection of Algonquin Rd at Busse Rd experienced the highest number of crashes within the study area over the five-year analysis period, with a total of 122 crashes or 24.4 crashes per year. Approximately 72 percent (88 of 122) of the crashes involved property damage only and approximately 48% (58 of 122) were turning movement crashes. There was also a fatal crash and a pedcyclist crash at Algonquin Rd & Busse. The fatal crash occurred during clear, dark, wet conditions and was a front-to-rear crash type. The pedcyclist crash was during the day with rainy and wet conditions, which resulted in an injury severity of B (non-incapacitating).

Another fatal crash also occurred at the intersection of Dempster St at Linneman Rd. This crash was a turning movement during clear, daytime, and dry conditions. Three other crashes to note are a pedcyclist crash at Linneman & Dempster which occurred during daytime, clear, and dry conditions with a C-injury (possible injury), a pedestrian crash Algonquin Rd between Busse & Linneman during daytime, clear and dry conditions with an A-injury (incapacitating) and another pedestrian crash at Dempster Rd & Busse Rd during daytime, clear, and dry conditions resulting in a B-Injury.

## *No-Build Traffic*

Traffic growth in the area is a function of expected land development in the region. Future traffic volume conditions were developed for the year 2032, build-out year of the development (year 2027) plus five years. Based on a review of historical traffic volumes and the Chicago Metropolitan Agency for Planning (CMAP) 2050 projections (see ***Appendix D***), traffic volumes along the roadways surrounding the site are assumed to experience an overall annual, compounded growth rate of between 0.34% and 0.99% per year. Accordingly, the 2032 No-Build peak hour traffic volumes (see ***Exhibit 4***) were developed by applying the projected growth rates to the existing traffic.




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**Exhibit 4**
**2032 No Build Traffic**

# Part III. Traffic Evaluation

## *Future Site Characteristics*

**Proposed Development Plan**
Cloud HQ proposes to construct two (2) data centers on the site, with multiple floors comprising approximately 2,172,000 square feet of gross floor area. Access for the Mount Prospect Technology Campus (MPTC) will include two gated emergency only RIRO access on Dempster Street (one existing and one proposed), a new full movement access on Linneman Road, and two new full movement gated emergency accesses on E Algonquin Road.

The following summarizes the proposed access points and locations from existing intersections.

- The existing RIRO on Dempster Street is approximately 1,025 feet west of the signalized Linneman Road intersection with Dempster Street.
- The proposed RIRO on Dempster Street is approximately 800 feet west of the signalized Linneman Road intersection with Dempster Street.
- The proposed access on Linneman Road is approximately 750 feet south of Dempster Street and approximately 350 feet north of an existing access drive on the east side of Linneman Road.
- The proposed accesses on IL Rte 62 are located approximately 700 and 1,300 feet west of the signalized Linneman Road intersection with Algonquin Rd.

These dimensions are also illustrated on ***Exhibits 5 & 6***.

All internal and external circulation and access improvements are anticipated to be constructed with the first building which will be delivered to the end users in the second quarter of 2027. Building II is expected to come online in 2028.

The June 30, 2025, Preliminary PUD Site Plan prepared by GHA is provided in ***Appendix E***.

**Trip Generation**
**Table 2** summarizes the traffic generation calculations for the proposed development. Trip generation rates published by the Institute of Transportation Engineers (ITE) in the 11th Edition of the Manual *Trip Generation* were used to determine the anticipated traffic generated by the proposed development. Given the total scale of the proposed development, GHA calculated the trip generations for two individual data centers of approximately 1,300,000 and 827,000 square feet independently and added them together for the overall development.

See ***Appendix F*** for excerpts from the ITE manual.

**Table 2: Trip Generation Calculations**

| Land Use | Size | ITE Code | Weekday Peak Hours | | | | | | Daily | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Morning 7:30-8:30 AM | | | Evening 4:30-5:30 PM | | | | | |
| | | | In | Out | Sum | In | Out | Sum | In | Out | Sum |
| **Phase I - Data Center I Q2 2027** | | | | | | | | | | | |
| Data Center | 1300 KSF | 160 | 90 | 73 | 163 | 41 | 96 | 137 | 644 | 643 | 1,287 |
| **Phase II - Data Center II 2028** | | | | | | | | | | | |
| Data Center | 827 KSF | 160 | 59 | 49 | 108 | 27 | 63 | 90 | 431 | 432 | 863 |
| **Total Development (Phases I - II)** | | | | | | | | | | | |
| **New Trips** | | | **149** | **122** | **271** | **68** | **159** | **227** | **1,075** | **1,075** | **2,150** |

*Sources:ITE Trip Generation Manual, 11th Edition - See Appendix F*

Note: The ITE Trip Generation Manual for code 160, Data Center, states "Data centers typically have a small number of employees and visitors" ***(See Appendix F).*** The proposed data centers have multiple floors, increasing the gross flow area to a relatively high range, but the expected number of trips is not expected to increase as much. The ITE Trip Generation Calculations can be seen as a conservative estimate of trips generated by the proposed site.

**Trip Distribution**

**Table 3** provides the anticipated distribution of site traffic. This was based on existing site travel patterns, proposed access and the operational characteristics of the adjacent street system.

**Table 3: Trip Distribution**

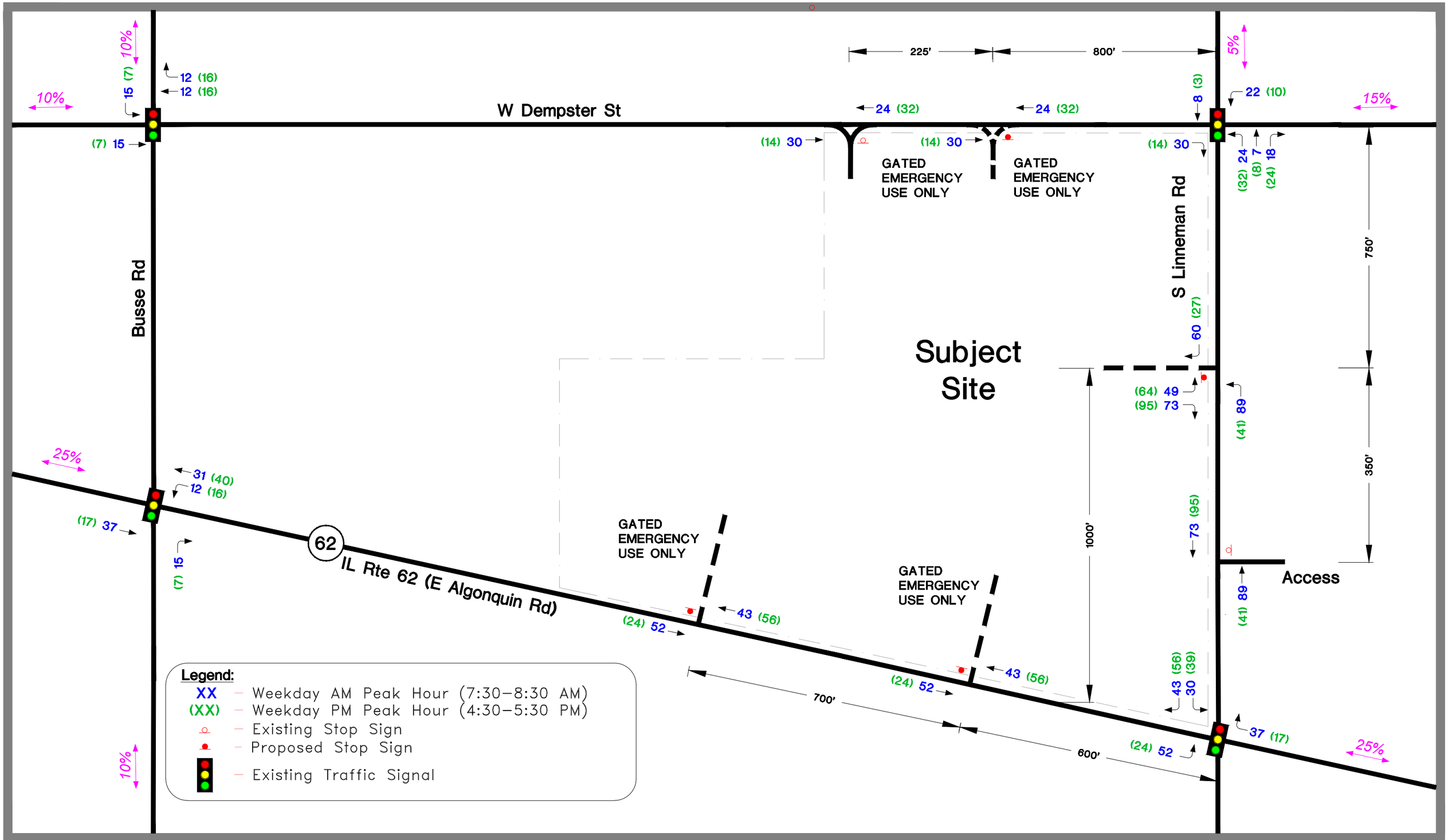
| Route & Direction | Percent Route To/From Site | |
|---|---|---|
| **Algonquin Rd (IL Rte 62)** | Arrive | Depart |
| East of Linneman Rd | 25% | 25% |
| West of Busse Road | 25% | 25% |
| **Dempster Street** | | |
| East of Linneman Rd | 15% | 15% |
| West of Busse Road | 10% | 10% |
| **Linneman Road** | | |
| North of Dempster Street | 5% | 5% |
| **Busse Road** | | |
| North of Dempster Street | 10% | 10% |
| South of Algonquin Road | 10% | 10% |
| ***Totals* =** | ***100%*** | ***100%*** |

Traffic usage of the area roadway network is also illustrated on ***Exhibit 5.***

## *Site and Total Traffic Assignments*

***Exhibit 5*** illustrates the site traffic assignment for the development's trips, which is based on the traffic characteristics summarized in **Tables 2 and 3** (traffic generation and trip distribution) and assigned to the area roadways. As previously noted, all external access improvements are anticipated to be constructed for the initial building completion (2027), but the complete development will not turn over to tenants until 2028. Therefore, we have considered the total impacts of the complete development for the year 2032, build out of the final Data Center plus five years

The MPTC site traffic (***Exhibit 5***) and 2032 No-Build traffic (***Exhibit 4***) were combined to produce the 2032 Total traffic, which is illustrated on ***Exhibit 6***.

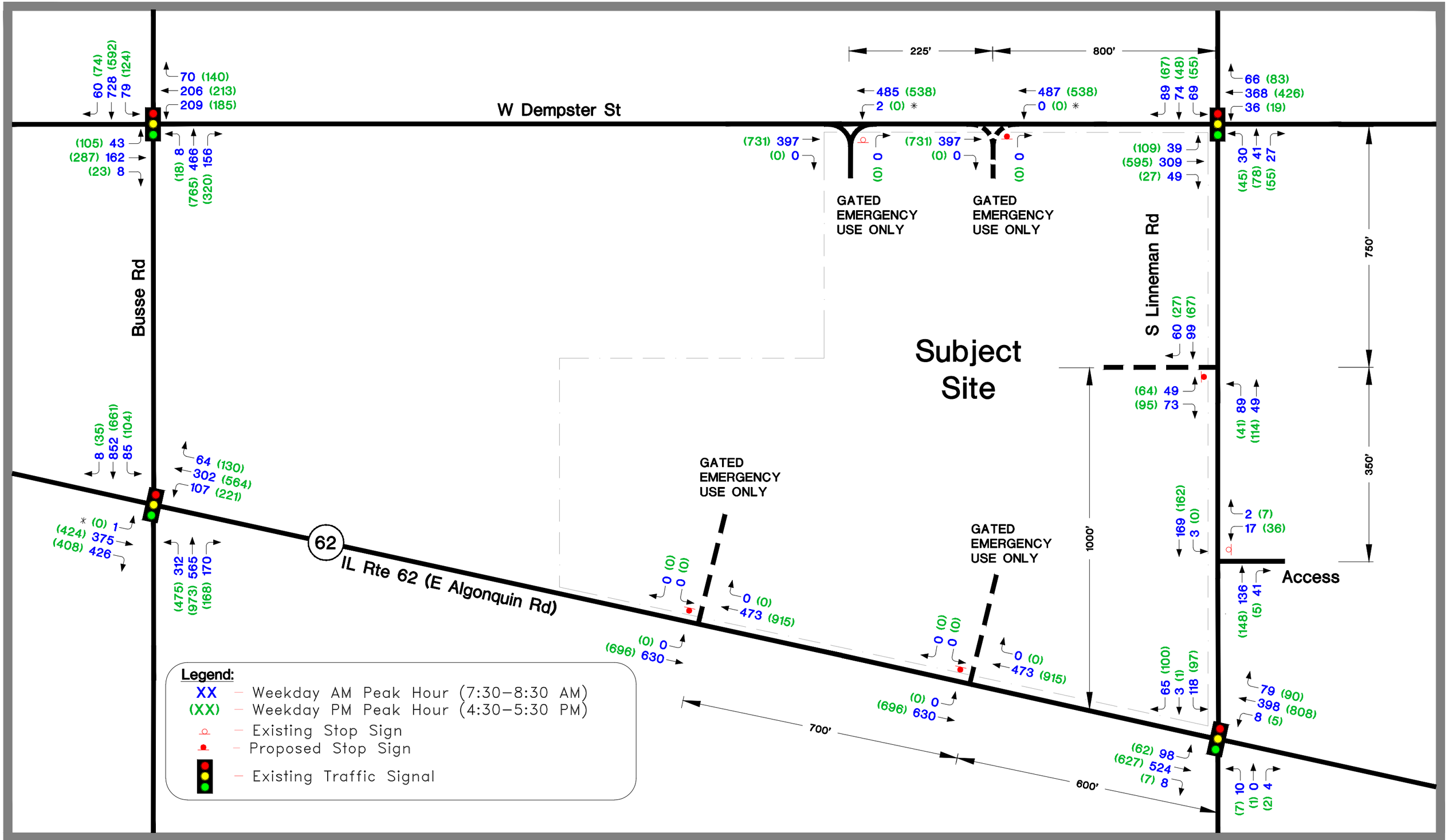



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**Exhibit 5**
**Site Traffic**




**Legend:**

- XX — Weekday AM Peak Hour (7:30–8:30 AM)
- (XX) — Weekday PM Peak Hour (4:30–5:30 PM)
- — Existing Stop Sign
- — Proposed Stop Sign
- — Existing Traffic Signal

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**Exhibit 6**
**2032 Total Traffic**

## *Capacity Analysis*

Capacity analyses are a standard measurement that identifies how an intersection operates. They are measured in terms of Level of Service (LOS). The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six Levels of Service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS C is often considered acceptable for design purposes and LOS D is usually considered as providing the lower threshold of acceptable operations. Since the level of service is a function of the traffic flows placed upon it, the facility may operate at a wide range of levels of service, depending on the time of day, day of week or period of year. A description of the operating condition under each level of service, based on the analysis parameters as published in the Transportation Research Board's (TRB) Highway Capacity Manual (HCM), Sixth Edition, is provided in ***Table 4***.

**Table 4: Level of Service (LOS) Summary**

| LOS | Description | Delay (sec/veh) | |
|---|---|---|---|
| | | Traffic Signal | Stop Sign |
| A | Describes conditions with little to no delay to motorists. | <10 | < 10 |
| B | Represents a desirable level with relatively low delay to motorists. | >10 and < 20 | >10 and < 15 |
| C | Describes conditions with average delays to motorists. | >20 and < 35 | >15 and < 25 |
| D | Describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range. | >35 and < 55 | >25 and < 35 |
| E | Represents operating conditions with high delay values. This level is often considered within urban settings or for minor streets intersecting major arterial roadways to be the limit of acceptable delay. | >55 and < 80 | >35 and < 50 |
| F | Is unacceptable to most drivers with high delay values that often occur when arrival flow rates exceed the capacity of the intersection. | >80 | >50 |

Capacity analyses were performed using the methodologies outlined in the HCM, for the following scenarios:

- *Existing Traffic* - Existing traffic (year 2025),
- *No-Build Traffic* – Future (non-site, year 2032) traffic with background growth
- *Total Traffic* – Future No-Build traffic volumes (year 2032) plus the addition of the MPTC site generated traffic.

**Table 5** summarizes the intersection capacity and queue analysis results.

Capacity analysis summary printouts are provided in ***Appendix G.***

## Table 5: Level-of-Service Summary

| Intersection / Timeframe | | Roadway Conditions | Movement Group By Approach (> = Shared Lane - = Non Critical or Not Allowed Movement) | | | | | | | | | | | | Overall Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| **1. Dempster St at Busse Rd** | | **Traffic Signal** | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| **AM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | **D** | **D** | **D** | **E** | **D** | **D** | **A** | **A** | **B** | **A** | **A** | **A** | **C** |
| | | • Delay | 46.6 | 52.7 | 52.9 | 66.7 | 40.9 | 40.8 | 6.9 | 6.8 | 12.4 | 9 | 4.5 | 5.5 | 20.3 |
| | | • 95th Queue Length (ft) | 54 | 97 | 96 | 291 | 113 | 77 | 79 | 78 | 104 | 31 | 92 | 104 | - |
| | | • Approach LOS (Delay) | **D (51.3)** | | | **D (52.6)** | | | **A (8.3)** | | | **A (5.3)** | | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | **D** | **D** | **D** | **E** | **D** | **D** | **A** | **A** | **B** | **A** | **A** | **A** | **C** |
| | | • Delay | 45.8 | 52.3 | 52.4 | 67.9 | 39.8 | 39.5 | 7.7 | 7.6 | 13.3 | 9.6 | 5.2 | 6.2 | 21.1 |
| | | • 95th Queue Length (ft) | 54 | 109 | 108 | 306 | 117 | 77 | 88 | 88 | 110 | 33 | 106 | 117 | - |
| | | • Approach LOS (Delay) | **D (50.9)** | | | **D (52.5)** | | | **A (9.1)** | | | **A (6.0)** | | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | **D** | **D** | **D** | **E** | **D** | **D** | **A** | **A** | **B** | **B** | **A** | **A** | **C** |
| | | • Delay | 45 | 51.6 | 51.7 | 67.9 | 39.2 | 39.2 | 8.5 | 8.4 | 14.1 | 10.2 | 5.6 | 6.6 | 21.7 |
| | | • 95th Queue Length (ft) | 53 | 118 | 117 | 306 | 124 | 93 | 96 | 96 | 114 | 43 | 113 | 123 | - |
| | | • Approach LOS (Delay) | **D (50.3)** | | | **D (51.6)** | | | **A (9.9)** | | | **A (6.5)** | | | - |
| **PM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | **D** | **D** | **D** | **E** | **D** | **D** | **B** | **B** | **B** | **B** | **A** | **A** | **C** |
| | | • Delay | 43.5 | 54.3 | 54.6 | 73.5 | 44.6 | 47.3 | 10.9 | 10.8 | 18.3 | 11.9 | 5.6 | 7.2 | 24.6 |
| | | • 95th Queue Length (ft) | 135 | 200 | 197 | 292 | 122 | 171 | 186 | 174 | 244 | 66 | 96 | 113 | - |
| | | • Approach LOS (Delay) | **D (51.3)** | | | **E (56.0)** | | | **B (13.0)** | | | **A (7.3)** | | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | **D** | **D** | **D** | **E** | **D** | **D** | **B** | **B** | **B** | **B** | **A** | **A** | **C** |
| | | • Delay | 42.4 | 53.7 | 54.0 | 74.2 | 43.3 | 45.6 | 12.2 | 12.1 | 19.7 | 12.9 | 6.5 | 8 | 25.3 |
| | | • 95th Queue Length (ft) | 133 | 219 | 216 | 300 | 130 | 171 | 205 | 195 | 258 | 71 | 114 | 131 | - |
| | | • Approach LOS (Delay) | **D (50.9)** | | | **E (55.2)** | | | **B (14.3)** | | | **A (8.1)** | | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | **D** | **D** | **D** | **E** | **D** | **D** | **B** | **B** | **C** | **B** | **A** | **A** | **C** |
| | | • Delay | 42 | 53.3 | 53.5 | 74.2 | 43.1 | 45.9 | 12.7 | 12.7 | 20.2 | 13.3 | 6.7 | 8.3 | 25.8 |
| | | • 95th Queue Length (ft) | 132 | 223 | 219 | 300 | 140 | 195 | 210 | 200 | 261 | 77 | 118 | 134 | - |
| | | • Approach LOS (Delay) | **D (50.5)** | | | **D (54.5)** | | | **B (14.9)** | | | **A (8.4)** | | | - |

**Table 5: Level-of-Service Summary (cont.)**

| Intersection / Timeframe | | Roadway Conditions | Movement Group By Approach > = Shared Lane - = Non Critical or Not Allowed Movement | | | | | | | | | | | | Overall Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| **2. Dempster St at Linneman Rd** | | **Traffic Signal** | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| **AM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | **A** | **B** | **B** | **A** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** |
| | | • Delay | 9.5 | 10.3 | 10.3 | 9.8 | 11.2 | 11.2 | 15.4 | 16.1 | 15.7 | 14.3 | 14.9 | 15.9 | 11.9 |
| | | • 95th Queue Length (ft) | 9 | 40 | 38 | 4 | 57 | 54 | 2 | 13 | 4 | 23 | 23 | 35 | - |
| | | • Approach LOS (Delay) | **B (10.2)** | | | **B (11.2)** | | | **B (15.9)** | | | **B (15.1)** | | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** |
| | | • Delay | 12.8 | 13.8 | 13.9 | 13.00 | 15.00 | 15.00 | 14.3 | 14.8 | 14.5 | 12.8 | 13.5 | 14.1 | 14.2 |
| | | • 95th Queue Length (ft) | 14 | 62 | 59 | 6 | 88 | 83 | 2 | 14 | 4 | 26 | 26 | 37 | - |
| | | • Approach LOS (Delay) | **B (13.7)** | | | **B (14.9)** | | | **B (14.7)** | | | **B (13.5)** | | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | **A** | **B** | **B** | **A** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** | **B** |
| | | • Delay | 9.6 | 11 | 11.0 | 9.8 | 11.3 | 11.3 | 15.7 | 16.9 | 16.8 | 15.1 | 16.3 | 17.3 | 12.5 |
| | | • 95th Queue Length (ft) | 10 | 50 | 47 | 10 | 62 | 59 | 11 | 17 | 12 | 26 | 30 | 40 | - |
| | | • Approach LOS (Delay) | **B (10.8)** | | | **B (11.2)** | | | **B (16.5)** | | | **B (16.3)** | | | - |
| **PM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | **A** | **A** | **A** | **A** | **B** | **B** | **B** | **C** | **C** | **B** | **B** | **C** | **B** |
| | | • Delay | 8.1 | 9.4 | 9.4 | 9.5 | 11 | 11.0 | 19.4 | 21.3 | 20.6 | 18.8 | 19.2 | 20.2 | 11.8 |
| | | • 95th Queue Length (ft) | 23 | 76 | 76 | 3 | 77 | 72 | 6 | 36 | 16 | 25 | 21 | 33 | - |
| | | • Approach LOS (Delay) | **A (9.2)** | | | **B (11.0)** | | | **C (20.9)** | | | **B (19.5)** | | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | **A** | **A** | **A** | **A** | **B** | **B** | **C** | **C** | **C** | **B** | **C** | **C** | **B** |
| | | • Delay | 7.9 | 9.3 | 9 | 9.4 | 11 | 11.0 | 20.3 | 22.4 | 21.7 | 19.6 | 20.1 | 21.2 | 12.0 |
| | | • 95th Queue Length (ft) | 25 | 84 | 83 | 3 | 84 | 78 | 6 | 40 | 18 | 27 | 24 | 37 | - |
| | | • Approach LOS (Delay) | **A (9.1)** | | | **B (11.0)** | | | **C (22.0)** | | | **C (20.4)** | | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | **A** | **A** | **A** | **A** | **B** | **B** | **C** | **C** | **C** | **B** | **C** | **C** | **B** |
| | | • Delay | 8.1 | 9.6 | 9.6 | 9.4 | 11 | 11.1 | 20.1 | 22.8 | 22.8 | 19.8 | 21.5 | 22.8 | 12.6 |
| | | • 95th Queue Length (ft) | 25 | 89 | 88 | 6 | 84 | 79 | 23 | 45 | 33 | 28 | 26 | 39 | - |
| | | • Approach LOS (Delay) | **A (9.4)** | | | **B (11.0)** | | | **C (22.1)** | | | **C (21.4)** | | | - |

**Table 5: Level-of-Service Summary (cont.)**

| Intersection / Timeframe | | Roadway Conditions | Movement Group By Approach > = Shared Lane - = Non Critical or Not Allowed Movement | | | | | | | | | | | | Overall Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| **3. Algonquin Rd at Busse Rd** | | **Traffic Signal** | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| **AM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | - | **D** | **D** | **C** | **C** | **C** | **C** | **B** | **B** | **B** | **C** | **C** | **C** |
| | | • Delay | - | 40.6 | 48.9 | 31.8 | 30.6 | 26.0 | 28.3 | 11.3 | 13.2 | 18.9 | 24.2 | 24.3 | 27.5 |
| | | • 95th Queue Length (ft) | - | 209 | 539 | 100 | 141 | 60 | 270 | 147 | 106 | 62 | 339 | 324 | - |
| | | • Approach LOS (Delay) | | **D (45.2)** | | | **C (30.2)** | | | **B (16.8)** | | | **C (23.8)** | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | - | **D** | **D** | **C** | **C** | **C** | **C** | **B** | **B** | **B** | **C** | **C** | **C** |
| | | • Delay | - | 40.8 | 49.6 | 31.90 | 30.70 | 25.80 | 27.3 | 11.6 | 13.3 | 18.7 | 23.8 | 24 | 27.5 |
| | | • 95th Queue Length (ft) | - | 208 | 542 | 103 | 145 | 62 | 265 | 148 | 106 | 68 | 333 | 319 | - |
| | | • Approach LOS (Delay) | | **D (45.7)** | | | **C (30.2)** | | | **B (16.6)** | | | **C (23.4)** | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | - | **D** | **D** | **C** | **C** | **C** | **C** | **B** | **B** | **B** | **C** | **C** | **C** |
| | | • Delay | - | 42.4 | 51.9 | 32.5 | 31.0 | 25.8 | 27.3 | 11.6 | 13.1 | 18.7 | 23.8 | 24 | 28.1 |
| | | • 95th Queue Length (ft) | - | 231 | 552 | 118 | 163 | 62 | 265 | 148 | 115 | 68 | 334 | 319 | - |
| | | • Approach LOS (Delay) | | **D (47.4)** | | | **C (30.7)** | | | **B (16.5)** | | | **C (23.4)** | | - |
| **PM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | - | **D** | **C** | **C** | **C** | **C** | **D** | **C** | **B** | **C** | **D** | **D** | **C** |
| | | • Delay | - | 41.2 | 26.6 | 30.4 | 28.7 | 22.1 | 50.5 | 22.1 | 16.6 | 32 | 47 | 47.8 | 33.4 |
| | | • 95th Queue Length (ft) | - | 245 | 366 | 205 | 244 | 108 | 498 | 343 | 129 | 112 | 418 | 398 | - |
| | | • Approach LOS (Delay) | | **C (33.9)** | | | **C (28.1)** | | | **C (29.9)** | | | **D (45.4)** | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | - | **D** | **C** | **C** | **C** | **C** | **E** | **C** | **B** | **C** | **D** | **E** | **D** |
| | | • Delay | - | 42.1 | 26 | 30.9 | 29 | 22.0 | 56.6 | 22.8 | 16.4 | 33.7 | 54.9 | 55.7 | 35.7 |
| | | • 95th Queue Length (ft) | - | 253 | 369 | 219 | 260 | 117 | 551 | 358 | 131 | 118 | 460 | 438 | - |
| | | • Approach LOS (Delay) | | **C (33.9)** | | | **C (28.4)** | | | **C (32.1)** | | | **D (52.5)** | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | - | **D** | **C** | **C** | **C** | **C** | **E** | **C** | **B** | **C** | **E** | **E** | **D** |
| | | • Delay | - | 43.4 | 26.5 | 31.5 | 29.4 | 21.9 | 57 | 22.9 | 16 | 33.8 | 55.6 | 56.4 | 36.1 |
| | | • 95th Queue Length (ft) | - | 257 | 371 | 224 | 265 | 116 | 550 | 359 | 132 | 118 | 461 | 438 | - |
| | | • Approach LOS (Delay) | | **C (35.1)** | | | **C (28.8)** | | | **C (32.2)** | | | **D (53.1)** | | - |

**Table 5: Level-of-Service Summary (cont.)**

| Intersection / Timeframe | | Roadway Conditions | Movement Group By Approach<br>> = Shared Lane - = Non Critical or Not Allowed Movement | | | | | | | | | | | | Overall Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| **4. Algonquin Rd at Linneman Rd** | | **Traffic Signal** | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| **AM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | **A** | **A** | **A** | **A** | **A** | **A** | **>** | **B** | **<** | **B** | **B** | **<** | **A** |
| | | • Delay | 6 | 6.9 | 6.9 | 6.5 | 7.2 | 6.6 | > | 14.1 | < | 15.7 | 14.9 | < | 7.8 |
| | | • 95th Queue Length (ft) | 6 | 36 | 34 | 1 | 28 | 6 | > | 4 | < | 28 | 10 | < | - |
| | | • Approach LOS (Delay) | | **A (6.8)** | | | **A (7.1)** | | | **B (14.1)** | | | **B (15.5)** | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | **A** | **A** | **A** | **A** | **A** | **A** | **>** | **B** | **<** | **B** | **B** | **<** | **A** |
| | | • Delay | 6 | 6.8 | 6.8 | 6.50 | 7.20 | 6.50 | > | 14.5 | < | 16.3 | 15.3 | < | 7.9 |
| | | • 95th Queue Length (ft) | 6 | 37 | 36 | 1 | 30 | 6 | > | 4 | < | 31 | 11 | < | - |
| | | • Approach LOS (Delay) | | **A (6.7)** | | | **A (7.1)** | | | **B (14.5)** | | | **B (16.0)** | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | **A** | **A** | **A** | **A** | **A** | **A** | **>** | **B** | **<** | **B** | **B** | **<** | **A** |
| | | • Delay | 6.4 | 7.6 | 7.6 | 7.7 | 8.7 | 8.1 | > | 14.6 | < | 19.4 | 16.9 | < | 9.5 |
| | | • 95th Queue Length (ft) | 14 | 47 | 45 | 2 | 41 | 15 | > | 5 | < | 51 | 33 | < | - |
| | | • Approach LOS (Delay) | | **A (7.4)** | | | **A (8.6)** | | | **B (14.6)** | | | **B (18.5)** | | - |
| **PM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | **A** | **A** | **A** | **A** | **A** | **A** | **>** | **C** | **<** | **C** | **C** | **<** | **A** |
| | | • Delay | 4.7 | 5.2 | 5.2 | 5 | 6.1 | 5.0 | > | 22 | < | 25 | 23.7 | < | 6.9 |
| | | • 95th Queue Length (ft) | 5 | 46 | 45 | 1 | 67 | 10 | > | 6 | < | 34 | 25 | < | - |
| | | • Approach LOS (Delay) | | **A (5.2)** | | | **A (6.0)** | | | **C (22.0)** | | | **C (24.4)** | | - |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | **A** | **A** | **A** | **A** | **A** | **A** | **>** | **C** | **<** | **C** | **C** | **<** | **A** |
| | | • Delay | 4.6 | 5.1 | 5 | 4.8 | 6 | 4.9 | > | 23.3 | < | 26.7 | 25.2 | < | 6.9 |
| | | • 95th Queue Length (ft) | 6 | 49 | 48 | 1 | 75 | 11 | > | 6 | < | 39 | 37 | < | - |
| | | • Approach LOS (Delay) | | **A (5.0)** | | | **A (5.9)** | | | **C (23.3)** | | | **C (26.0)** | | - |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | **A** | **A** | **A** | **A** | **A** | **A** | **>** | **C** | **<** | **C** | **C** | **<** | **A** |
| | | • Delay | 6.2 | 6.7 | 6.7 | 6.5 | 8.2 | 6.7 | > | 22.7 | < | 29.6 | 25.7 | < | 9.8 |
| | | • 95th Queue Length (ft) | 13 | 74 | 72 | 2 | 115 | 21 | > | 7 | < | 74 | 65 | < | - |
| | | • Approach LOS (Delay) | | **A (6.7)** | | | **A (8.1)** | | | **C (22.7)** | | | **C (27.6)** | | - |

**Table 5: Level-of-Service Summary (cont.)**

| Intersection / Timeframe | | Roadway Conditions | Movement Group By Approach > = Shared Lane - = Non Critical or Not Allowed Movement | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | |
| **5. Linneman at Access** | | **TWSC - WB Stop** | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| **AM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | - | - | - | > | A | < | - | - | - | A | - | - |
| | | • Delay | - | - | - | - | 9.1 | - | - | - | - | 7.4 | - | - |
| | | • 95th Queue Length (ft) | - | - | - | - | 3 | - | - | - | - | 0 | - | - |
| | | • Approach LOS (Delay) | | - | | | A (9.1) | | | - | | | A (0.2) | |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | - | - | - | > | A | < | - | - | - | A | - | - |
| | | • Delay | - | - | - | - | 9.1 | - | - | - | - | 7.4 | - | - |
| | | • 95th Queue Length (ft) | - | - | - | - | 3 | - | - | - | - | 0 | - | - |
| | | • Approach LOS (Delay) | | - | | | A (9.1) | | | - | | | A (0.2) | |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | - | - | - | > | A | < | - | - | - | A | - | - |
| | | • Delay | - | - | - | - | 9.6 | - | - | - | - | 7.6 | - | - |
| | | • 95th Queue Length (ft) | - | - | - | - | 3 | - | - | - | - | 0 | - | - |
| | | • Approach LOS (Delay) | | - | | | A (9.6) | | | - | | | A (0.1) | |
| **PM Peak** | **A. Existing Traffic (See Exhibit 3)** | • LOS | - | - | - | > | A | < | - | - | - | A | - | - |
| | | • Delay | - | - | - | - | 9.2 | - | - | - | - | 7.4 | - | - |
| | | • 95th Queue Length (ft) | - | - | - | - | 5 | - | - | - | - | 0 | - | - |
| | | • Approach LOS (Delay) | | - | | | A (9.2) | | | - | | | A (0.0) | |
| | **B. 2032 No-Build Traffic (See Exhibit 4)** | • LOS | - | - | - | > | A | < | - | - | - | A | - | - |
| | | • Delay | - | - | - | - | 9.2 | - | - | - | - | 7.5 | - | - |
| | | • 95th Queue Length (ft) | - | - | - | - | 5 | - | - | - | - | 0 | - | - |
| | | • Approach LOS (Delay) | | - | | | A (9.2) | | | - | | | A (0.0) | |
| | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | - | - | - | > | A | < | - | - | - | A | - | - |
| | | • Delay | - | - | - | - | 9.6 | - | - | - | - | 7.5 | - | - |
| | | • 95th Queue Length (ft) | - | - | - | - | 5 | - | - | - | - | 0 | - | - |
| | | • Approach LOS (Delay) | | - | | | A (9.6) | | | - | | | A (0.0) | |

**Table 5: Level-of-Service Summary (cont.)**

| Intersection / Timeframe | | Roadway Conditions | Movement Group By Approach | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | > = Shared Lane - = Non Critical or Not Allowed Movement | | | | | | | | | | | |
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | |
| **6. Linneman at Site Entrance** | | **TWSC - EB Stop** | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| **AM Peak** | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | > | **B** | < | - | - | - | **A** | - | - | - | - | - |
| | | • Delay | - | 10.1 | - | - | - | - | 7.7 | - | - | - | - | - |
| | | • 95th Queue Length (ft) | - | 13 | - | - | - | - | 5 | - | - | - | - | - |
| | | • Approach LOS (Delay) | | **B (10.1)** | | | - | | | **A (5.0)** | | | - | |
| **PM Peak** | **C. 2032 Total Traffic (See Exhibit 6)** | • LOS | > | **A** | < | - | - | - | **A** | - | - | - | - | - |
| | | • Delay | - | 10.0 | - | - | - | - | 7.5 | - | - | - | - | - |
| | | • 95th Queue Length (ft) | - | 18 | - | - | - | - | 3 | - | - | - | - | - |
| | | • Approach LOS (Delay) | | **A (10.0)** | | | - | | | **A (2.1)** | | | - | |

**Total traffic conditions assumed the following, with *Exhibit 7*, illustrating future traffic operations:**

- The painted median along Linneman Road will be restriped to provide a separate left-turn lane. for northbound traffic.
- Stop signs will be installed for exiting traffic at all site access driveways.
- The Linneman Rd access will provide two inbound lanes (one for auto traffic and a second for trucks) and a single outbound lane.

**Access Spacing**

- The existing RIRO on Dempster Street is approximately 1,025 feet west of the signalized Linneman Road intersection with Dempster Street.

- The proposed RIRO on Dempster Street is approximately 800 feet west of the signalized Linneman Road intersection with Dempster Street.

- The proposed access on Linneman Road is approximately 750 feet south of Dempster Street and approximately 350 feet north of an existing access drive on the east side of Linneman Road.

- The proposed accesses on IL Rte 62 are located approximately 700 and 1,300 feet west of the signalized Linneman Road intersection with Algonquin Rd.

The following summarizes the findings of the Capacity Analyses.

Dempster Street at Busse Road
Under both existing and future (No-Build and Total) conditions all northbound and southbound movements at this signalized intersection operate at acceptable Levels of Service (LOS "C" or better) during peak hours. All eastbound and westbound movements experience longer than desirable delays and operate at LOS "D or E". Overall intersection operations are expected to remain at the same LOS and the development has a minimal impact on the intersection's operations. No changes to the existing signal timing and phasing are required to accommodate the development traffic.

Dempster Street at Linneman Road
Under both existing and future (No-Build and Total) conditions, all movements as well as the overall intersection operations at this signalized intersection are expected to function at acceptable Levels of Service (at LOS "C" or better) during the peak hours. Despite the proximity to one of the primary access points, the proposed site traffic has minimal impact on the intersection's operations. No changes to the existing signal timing and phasing are required to accommodate the development traffic.

IL Rte 62 (Algonquin Road) at Busse Road
Under both existing and future (No-Build and Total) conditions, all movements at this signalized intersection operate at acceptable Levels of Service (at LOS "C" or better) during the AM peak hour with the exception of the eastbound through and right turn movement which experiences longer than desirable delays and operates at LOS "D". However, overall intersection operations are expected to remain at the "Design" LOS C or better and the development has a minimal impact on the intersection's operations. During the PM Peak hour, some movements experience longer than desirable delays at LOS "D or E", but the overall intersection operations are

expected to remain the same between No-Build 2032 and Total (with development traffic) 2032. No changes to the existing signal timing and phasing are required to accommodate the development traffic.

IL Rte 62 (Algonquin Road) at Linneman Road

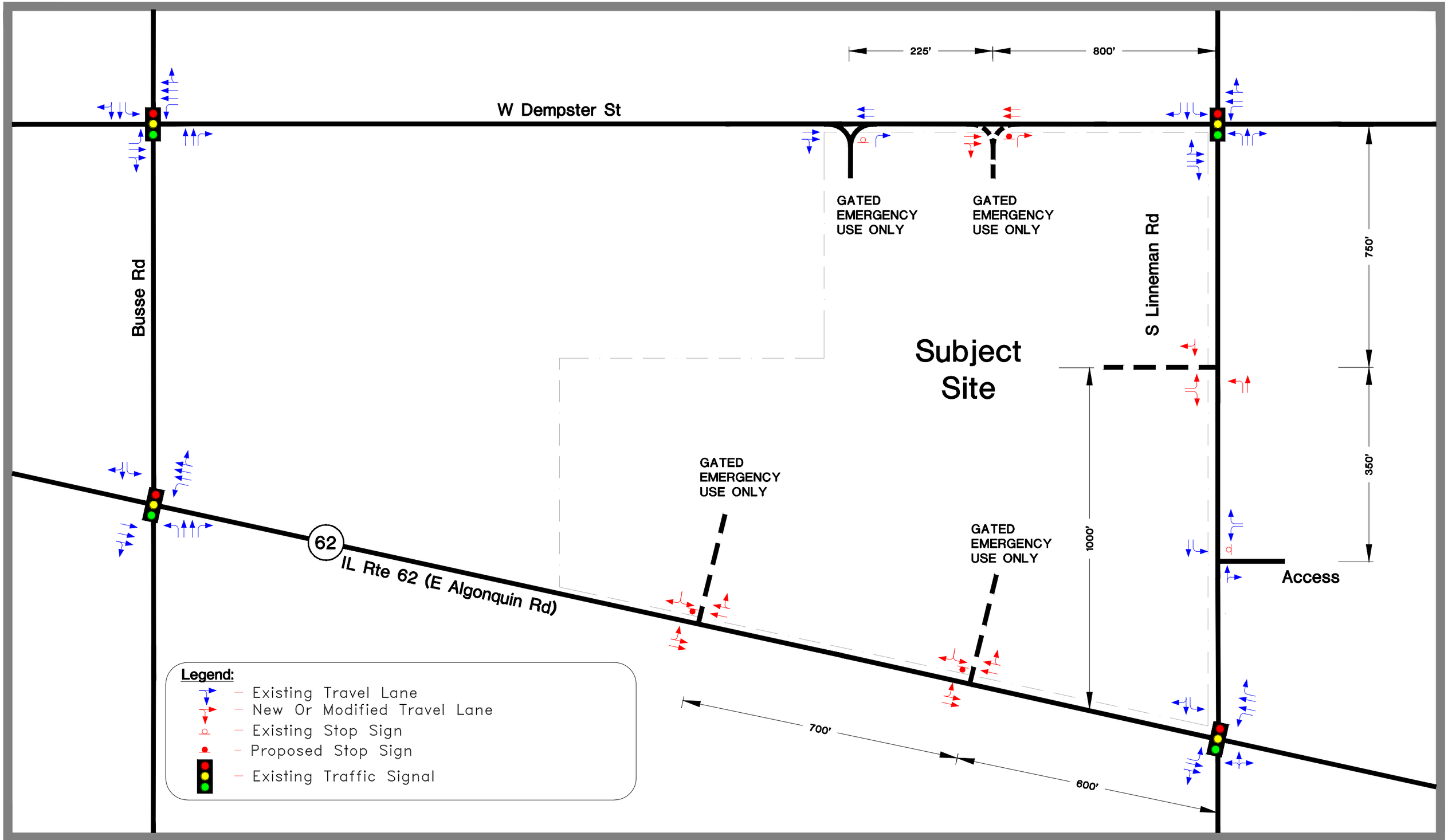
Under both existing and future (No-Build and Total) conditions, all movements at this signalized intersection operate at acceptable Levels of Service (at LOS "C" or better) during the peak hours. Despite the proximity to one of the primary access points, the proposed site traffic has minimal impact on the intersection's operations. No changes to the existing signal timing and phasing are required to accommodate the development traffic.

Linneman Road at Access

Under both existing and future (No-Build and Total) conditions, all movements at this unsignalized intersection operate at acceptable Levels of Service (at LOS "A" or better) during all peak hours studied. Despite the proximity to one of the primary access points, the proposed site traffic has minimal impact on the intersection's operations.

Linneman Road at Proposed MPTC Site Entrance

Under future conditions, all movements at this unsignalized intersection operate at acceptable Levels of Service (at LOS "A" or better) during all peak hours studied except eastbound coming out of the site which operates at LOS B by an extra 0.1 seconds of delay.




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Not to Scale

**Exhibit 7**
**Future Traffic Operations**

## Part IV. Recommendations and Conclusions

Analyses have been conducted under existing and future conditions to determine the impact from the proposed data center development on the study area intersections. The capacity analysis results indicate that the increase in project site-generated traffic has little effect upon the operations of the area roadway network with the recommendations contained herein:

- Stop signs will be installed for exiting traffic at all the proposed access driveways.
- The Linneman Rd access will provide two inbound lanes (one for auto traffic and a second for trucks) and a single outbound lane.
- Access to Algonquin Road and Dempster Street will be gated and for emergency use only.

## Part V. Technical Addendum

The following Appendices were previously referenced. They provide technical support for our observations, findings and recommendations discussed in the text.

Appendices

A. Photo Inventory
B. 2025 Traffic Count Summaries
C. Crash Summary Map
D. CMAP Traffic Projections
E. June 30, 2025 Preliminary PUD Site Plan
F. ITE Trip Generation Excerpts
G. Capacity Analysis Worksheets

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# TECHNICAL ADDENDUM

GEWALT HAMILTON ASSOCIATES, INC.

# APPENDICES

A. Photo Inventory
B. 2025 Traffic Count Summaries
C. Crash Summary Map
D. CMAP Traffic Projections
E. June 30, 2025 Preliminary PUD Site Plan
F. ITE Trip Generation Excerpts
G. Capacity Analysis Worksheets

GEWALT HAMILTON ASSOCIATES, INC.

# APPENDIX A
## *Photo Inventory*

GEWALT HAMILTON ASSOCIATES, INC.



Looking South across Dempster St approaching Linneman Rd



Looking North across Dempster St approaching Linneman Rd



Looking East across Linneman Rd approaching Dempster St



Looking West across Linneman Rd approaching Dempster St



Looking North across Algonquin Rd approaching Linneman Rd



Looking South across Algonquin Rd approaching Linneman Rd



Looking East across Linneman Rd approaching Algonquin Rd



Looking West across Linneman Rd approaching Algonquin Rd



Looking North across Algonquin Rd at existing Site Entrance



Looking South across  Algonquin Rd from existing Site Entrance



Looking East along  Algonquin Rd from existing Site Entrance



Looking West along  Algonquin Rd from existing Site Entrance



Looking South across Dempster St at existing Site Entrance



Looking North across Dempster St from existing Site Entrance




Looking East along Dempster St from existing Site Entrance



Looking West along Dempster St from existing Site Entrance



Looking West across Linneman Rd at existing North Site Entrance



Looking South across Linneman Rd from existing North Site Entrance



Looking North along Linneman Rd from existing North Site Entrance



Looking South along Linneman Rd from existing North Site Entrance



Looking East across Linneman Rd at existing middle Site Entrance



Looking South across Linneman Rd from existing middle Site Entrance



Looking East along Linneman Rd from existing middle Site Entrance



Looking West along Linneman Rd from existing middle Site Entrance



Looking West across Linneman Rd at South Site Entrance



Looking East across Linneman Rd from South Site Entrance



Looking North along Linneman Rd from South Site Entrance



Looking South along Linneman Rd from South Site Entrance

# APPENDIX B

## *2025 Traffic Count Data*

GEWALT HAMILTON ASSOCIATES, INC.

Dempster St at Busse Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Dempster St at Busse Rd
Site Code:
Start Date: 04/09/2025
Page No: 1

# Turning Movement Data

| Start Time | Busse Rd Southbound | | | | | Dempster St Westbound | | | | | Busse Rd Northbound | | | | | Dempster St Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:00 AM | 0 | 7 | 128 | 20 | 155 | 0 | 36 | 42 | 14 | 92 | 0 | 1 | 97 | 22 | 120 | 0 | 6 | 18 | 1 | 25 | 392 |
| 7:15 AM | 0 | 14 | 169 | 8 | 191 | 0 | 47 | 39 | 11 | 97 | 0 | 3 | 95 | 27 | 125 | 0 | 17 | 16 | 3 | 36 | 449 |
| 7:30 AM | 0 | 14 | 201 | 14 | 229 | 0 | 62 | 53 | 11 | 126 | 0 | 2 | 99 | 25 | 126 | 0 | 7 | 22 | 1 | 30 | 511 |
| 7:45 AM | 0 | 17 | 189 | 15 | 221 | 0 | 47 | 43 | 17 | 107 | 0 | 3 | 98 | 32 | 133 | 0 | 15 | 27 | 4 | 46 | 507 |
| Hourly Total | 0 | 52 | 687 | 57 | 796 | 0 | 192 | 177 | 53 | 422 | 0 | 9 | 389 | 106 | 504 | 0 | 45 | 83 | 9 | 137 | 1859 |
| 8:00 AM | 0 | 10 | 152 | 14 | 176 | 0 | 38 | 45 | 15 | 98 | 1 | 3 | 125 | 34 | 163 | 0 | 8 | 28 | 3 | 39 | 476 |
| 8:15 AM | 0 | 11 | 166 | 17 | 194 | 0 | 52 | 43 | 14 | 109 | 0 | 0 | 129 | 38 | 167 | 0 | 13 | 27 | 0 | 40 | 510 |
| 8:30 AM | 0 | 18 | 147 | 21 | 186 | 0 | 25 | 60 | 15 | 100 | 0 | 0 | 121 | 33 | 154 | 0 | 14 | 37 | 2 | 53 | 493 |
| 8:45 AM | 0 | 17 | 142 | 18 | 177 | 0 | 44 | 44 | 15 | 103 | 0 | 1 | 105 | 21 | 127 | 0 | 14 | 25 | 1 | 40 | 447 |
| Hourly Total | 0 | 56 | 607 | 70 | 733 | 0 | 159 | 192 | 59 | 410 | 1 | 4 | 480 | 126 | 611 | 0 | 49 | 117 | 6 | 172 | 1926 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4:00 PM | 0 | 30 | 140 | 18 | 188 | 0 | 39 | 49 | 26 | 114 | 0 | 4 | 169 | 53 | 226 | 1 | 25 | 55 | 6 | 87 | 615 |
| 4:15 PM | 0 | 28 | 148 | 20 | 196 | 0 | 42 | 41 | 24 | 107 | 0 | 6 | 151 | 64 | 221 | 0 | 21 | 49 | 9 | 79 | 603 |
| 4:30 PM | 0 | 34 | 160 | 15 | 209 | 0 | 55 | 42 | 34 | 131 | 0 | 3 | 190 | 72 | 265 | 0 | 19 | 53 | 7 | 79 | 684 |
| 4:45 PM | 0 | 36 | 128 | 22 | 186 | 0 | 48 | 45 | 27 | 120 | 2 | 7 | 198 | 71 | 278 | 0 | 30 | 56 | 5 | 91 | 675 |
| Hourly Total | 0 | 128 | 576 | 75 | 779 | 0 | 184 | 177 | 111 | 472 | 2 | 20 | 708 | 260 | 990 | 1 | 95 | 213 | 27 | 336 | 2577 |
| 5:00 PM | 0 | 23 | 124 | 19 | 166 | 0 | 41 | 46 | 26 | 113 | 1 | 5 | 169 | 79 | 254 | 1 | 29 | 56 | 9 | 95 | 628 |
| 5:15 PM | 0 | 21 | 167 | 18 | 206 | 0 | 36 | 49 | 34 | 119 | 0 | 3 | 183 | 76 | 262 | 0 | 27 | 68 | 2 | 97 | 684 |
| 5:30 PM | 0 | 25 | 137 | 18 | 180 | 0 | 50 | 53 | 33 | 136 | 1 | 3 | 181 | 60 | 245 | 0 | 18 | 75 | 5 | 98 | 659 |
| 5:45 PM | 0 | 26 | 146 | 18 | 190 | 0 | 24 | 50 | 35 | 109 | 1 | 2 | 131 | 60 | 194 | 0 | 20 | 59 | 6 | 85 | 578 |
| Hourly Total | 0 | 95 | 574 | 73 | 742 | 0 | 151 | 198 | 128 | 477 | 3 | 13 | 664 | 275 | 955 | 1 | 94 | 258 | 22 | 375 | 2549 |
| Grand Total | 0 | 331 | 2444 | 275 | 3050 | 0 | 686 | 744 | 351 | 1781 | 6 | 46 | 2241 | 767 | 3060 | 2 | 283 | 671 | 64 | 1020 | 8911 |
| Approach % | 0.0 | 10.9 | 80.1 | 9.0 | - | 0.0 | 38.5 | 41.8 | 19.7 | - | 0.2 | 1.5 | 73.2 | 25.1 | - | 0.2 | 27.7 | 65.8 | 6.3 | - | - |
| Total % | 0.0 | 3.7 | 27.4 | 3.1 | 34.2 | 0.0 | 7.7 | 8.3 | 3.9 | 20.0 | 0.1 | 0.5 | 25.1 | 8.6 | 34.3 | 0.0 | 3.2 | 7.5 | 0.7 | 11.4 | - |
| Lights | 0 | 325 | 2269 | 263 | 2857 | 0 | 666 | 725 | 337 | 1728 | 6 | 45 | 2116 | 735 | 2902 | 2 | 277 | 665 | 62 | 1006 | 8493 |
| % Lights | - | 98.2 | 92.8 | 95.6 | 93.7 | - | 97.1 | 97.4 | 96.0 | 97.0 | 100.0 | 97.8 | 94.4 | 95.8 | 94.8 | 100.0 | 97.9 | 99.1 | 96.9 | 98.6 | 95.3 |
| Mediums | 0 | 6 | 157 | 12 | 175 | 0 | 17 | 16 | 14 | 47 | 0 | 1 | 99 | 28 | 128 | 0 | 5 | 5 | 2 | 12 | 362 |
| % Mediums | - | 1.8 | 6.4 | 4.4 | 5.7 | - | 2.5 | 2.2 | 4.0 | 2.6 | 0.0 | 2.2 | 4.4 | 3.7 | 4.2 | 0.0 | 1.8 | 0.7 | 3.1 | 1.2 | 4.1 |
| Articulated Trucks | 0 | 0 | 18 | 0 | 18 | 0 | 3 | 3 | 0 | 6 | 0 | 0 | 26 | 4 | 30 | 0 | 1 | 1 | 0 | 2 | 56 |
| % Articulated Trucks | - | 0.0 | 0.7 | 0.0 | 0.6 | - | 0.4 | 0.4 | 0.0 | 0.3 | 0.0 | 0.0 | 1.2 | 0.5 | 1.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.2 | 0.6 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Dempster St at Busse Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Dempster St at Busse Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (7:30 AM)

| Start Time | Busse Rd Southbound | | | | | Dempster St Westbound | | | | | Busse Rd Northbound | | | | | Dempster St Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:30 AM | 0 | 14 | 201 | 14 | 229 | 0 | 62 | 53 | 11 | 126 | 0 | 2 | 99 | 25 | 126 | 0 | 7 | 22 | 1 | 30 | 511 |
| 7:45 AM | 0 | 17 | 189 | 15 | 221 | 0 | 47 | 43 | 17 | 107 | 0 | 3 | 98 | 32 | 133 | 0 | 15 | 27 | 4 | 46 | 507 |
| 8:00 AM | 0 | 10 | 152 | 14 | 176 | 0 | 38 | 45 | 15 | 98 | 1 | 3 | 125 | 34 | 163 | 0 | 8 | 28 | 3 | 39 | 476 |
| 8:15 AM | 0 | 11 | 166 | 17 | 194 | 0 | 52 | 43 | 14 | 109 | 0 | 0 | 129 | 38 | 167 | 0 | 13 | 27 | 0 | 40 | 510 |
| Total | 0 | 52 | 708 | 60 | 820 | 0 | 199 | 184 | 57 | 440 | 1 | 8 | 451 | 129 | 589 | 0 | 43 | 104 | 8 | 155 | 2004 |
| Approach % | 0.0 | 6.3 | 86.3 | 7.3 | - | 0.0 | 45.2 | 41.8 | 13.0 | - | 0.2 | 1.4 | 76.6 | 21.9 | - | 0.0 | 27.7 | 67.1 | 5.2 | - | - |
| Total % | 0.0 | 2.6 | 35.3 | 3.0 | 40.9 | 0.0 | 9.9 | 9.2 | 2.8 | 22.0 | 0.0 | 0.4 | 22.5 | 6.4 | 29.4 | 0.0 | 2.1 | 5.2 | 0.4 | 7.7 | - |
| PHF | 0.000 | 0.765 | 0.881 | 0.882 | 0.895 | 0.000 | 0.802 | 0.868 | 0.838 | 0.873 | 0.250 | 0.667 | 0.874 | 0.849 | 0.882 | 0.000 | 0.717 | 0.929 | 0.500 | 0.842 | 0.980 |
| Lights | 0 | 48 | 658 | 55 | 761 | 0 | 194 | 177 | 48 | 419 | 1 | 8 | 402 | 110 | 521 | 0 | 43 | 103 | 8 | 154 | 1855 |
| % Lights | - | 92.3 | 92.9 | 91.7 | 92.8 | - | 97.5 | 96.2 | 84.2 | 95.2 | 100.0 | 100.0 | 89.1 | 85.3 | 88.5 | - | 100.0 | 99.0 | 100.0 | 99.4 | 92.6 |
| Mediums | 0 | 4 | 45 | 5 | 54 | 0 | 4 | 6 | 9 | 19 | 0 | 0 | 38 | 18 | 56 | 0 | 0 | 1 | 0 | 1 | 130 |
| % Mediums | - | 7.7 | 6.4 | 8.3 | 6.6 | - | 2.0 | 3.3 | 15.8 | 4.3 | 0.0 | 0.0 | 8.4 | 14.0 | 9.5 | - | 0.0 | 1.0 | 0.0 | 0.6 | 6.5 |
| Articulated Trucks | 0 | 0 | 5 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 11 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 19 |
| % Articulated Trucks | - | 0.0 | 0.7 | 0.0 | 0.6 | - | 0.5 | 0.5 | 0.0 | 0.5 | 0.0 | 0.0 | 2.4 | 0.8 | 2.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Dempster St at Busse Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Dempster St at Busse Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (4:30 PM)

| Start Time | Busse Rd Southbound | | | | | Dempster St Westbound | | | | | Busse Rd Northbound | | | | | Dempster St Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 4:30 PM | 0 | 34 | 160 | 15 | 209 | 0 | 55 | 42 | 34 | 131 | 0 | 3 | 190 | 72 | 265 | 0 | 19 | 53 | 7 | 79 | 684 |
| 4:45 PM | 0 | 36 | 128 | 22 | 186 | 0 | 48 | 45 | 27 | 120 | 2 | 7 | 198 | 71 | 278 | 0 | 30 | 56 | 5 | 91 | 675 |
| 5:00 PM | 0 | 23 | 124 | 19 | 166 | 0 | 41 | 46 | 26 | 113 | 1 | 5 | 169 | 79 | 254 | 1 | 29 | 56 | 9 | 95 | 628 |
| 5:15 PM | 0 | 21 | 167 | 18 | 206 | 0 | 36 | 49 | 34 | 119 | 0 | 3 | 183 | 76 | 262 | 0 | 27 | 68 | 2 | 97 | 684 |
| Total | 0 | 114 | 579 | 74 | 767 | 0 | 180 | 182 | 121 | 483 | 3 | 18 | 740 | 298 | 1059 | 1 | 105 | 233 | 23 | 362 | 2671 |
| Approach % | 0.0 | 14.9 | 75.5 | 9.6 | - | 0.0 | 37.3 | 37.7 | 25.1 | - | 0.3 | 1.7 | 69.9 | 28.1 | - | 0.3 | 29.0 | 64.4 | 6.4 | - | - |
| Total % | 0.0 | 4.3 | 21.7 | 2.8 | 28.7 | 0.0 | 6.7 | 6.8 | 4.5 | 18.1 | 0.1 | 0.7 | 27.7 | 11.2 | 39.6 | 0.0 | 3.9 | 8.7 | 0.9 | 13.6 | - |
| PHF | 0.000 | 0.792 | 0.867 | 0.841 | 0.917 | 0.000 | 0.818 | 0.929 | 0.890 | 0.922 | 0.375 | 0.643 | 0.934 | 0.943 | 0.952 | 0.250 | 0.875 | 0.857 | 0.639 | 0.933 | 0.976 |
| Lights | 0 | 113 | 545 | 72 | 730 | 0 | 175 | 177 | 117 | 469 | 3 | 18 | 730 | 295 | 1046 | 1 | 104 | 233 | 21 | 359 | 2604 |
| % Lights | - | 99.1 | 94.1 | 97.3 | 95.2 | - | 97.2 | 97.3 | 96.7 | 97.1 | 100.0 | 100.0 | 98.6 | 99.0 | 98.8 | 100.0 | 99.0 | 100.0 | 91.3 | 99.2 | 97.5 |
| Mediums | 0 | 1 | 32 | 2 | 35 | 0 | 4 | 3 | 4 | 11 | 0 | 0 | 3 | 1 | 4 | 0 | 1 | 0 | 2 | 3 | 53 |
| % Mediums | - | 0.9 | 5.5 | 2.7 | 4.6 | - | 2.2 | 1.6 | 3.3 | 2.3 | 0.0 | 0.0 | 0.4 | 0.3 | 0.4 | 0.0 | 1.0 | 0.0 | 8.7 | 0.8 | 2.0 |
| Articulated Trucks | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 7 | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 14 |
| % Articulated Trucks | - | 0.0 | 0.3 | 0.0 | 0.3 | - | 0.6 | 1.1 | 0.0 | 0.6 | 0.0 | 0.0 | 0.9 | 0.7 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Dempster St at Linneman Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Dempster St at Linneman Rd
Site Code:
Start Date: 04/09/2025
Page No: 1

# Turning Movement Data

| Start Time | Linneman Rd Southbound | | | | | Dempster St Westbound | | | | | Linneman Rd Northbound | | | | | Dempster St Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:00 AM | 0 | 11 | 4 | 21 | 36 | 0 | 0 | 61 | 6 | 67 | 0 | 1 | 2 | 2 | 5 | 0 | 9 | 39 | 4 | 52 | 160 |
| 7:15 AM | 0 | 9 | 18 | 17 | 44 | 0 | 6 | 64 | 9 | 79 | 0 | 1 | 7 | 2 | 10 | 0 | 4 | 60 | 6 | 70 | 203 |
| 7:30 AM | 0 | 10 | 10 | 22 | 42 | 0 | 4 | 79 | 17 | 100 | 0 | 1 | 15 | 1 | 17 | 0 | 3 | 60 | 7 | 70 | 229 |
| 7:45 AM | 0 | 12 | 6 | 22 | 40 | 0 | 4 | 72 | 12 | 88 | 0 | 5 | 4 | 2 | 11 | 0 | 10 | 68 | 6 | 84 | 223 |
| Hourly Total | 0 | 42 | 38 | 82 | 162 | 0 | 14 | 276 | 44 | 334 | 0 | 8 | 28 | 7 | 43 | 0 | 26 | 227 | 23 | 276 | 815 |
| 8:00 AM | 0 | 10 | 20 | 11 | 41 | 0 | 5 | 61 | 14 | 80 | 0 | 0 | 4 | 2 | 6 | 0 | 5 | 63 | 6 | 74 | 201 |
| 8:15 AM | 0 | 13 | 8 | 25 | 46 | 0 | 4 | 66 | 17 | 87 | 0 | 1 | 6 | 4 | 11 | 0 | 14 | 85 | 3 | 102 | 246 |
| 8:30 AM | 0 | 31 | 14 | 12 | 57 | 0 | 0 | 64 | 20 | 84 | 0 | 0 | 3 | 1 | 4 | 0 | 8 | 74 | 3 | 85 | 230 |
| 8:45 AM | 0 | 8 | 6 | 19 | 33 | 0 | 5 | 66 | 7 | 78 | 0 | 0 | 5 | 3 | 8 | 0 | 5 | 62 | 5 | 72 | 191 |
| Hourly Total | 0 | 62 | 48 | 67 | 177 | 0 | 14 | 257 | 58 | 329 | 0 | 1 | 18 | 10 | 29 | 0 | 32 | 284 | 17 | 333 | 868 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4:00 PM | 0 | 6 | 6 | 14 | 26 | 0 | 2 | 97 | 16 | 115 | 0 | 1 | 13 | 7 | 21 | 0 | 18 | 106 | 4 | 128 | 290 |
| 4:15 PM | 0 | 10 | 12 | 9 | 31 | 0 | 5 | 86 | 23 | 114 | 0 | 3 | 8 | 4 | 15 | 0 | 20 | 128 | 1 | 149 | 309 |
| 4:30 PM | 0 | 14 | 7 | 15 | 36 | 0 | 1 | 105 | 27 | 133 | 0 | 3 | 19 | 10 | 32 | 0 | 17 | 147 | 4 | 168 | 369 |
| 4:45 PM | 0 | 11 | 4 | 19 | 34 | 0 | 4 | 94 | 20 | 118 | 0 | 3 | 9 | 5 | 17 | 0 | 20 | 133 | 3 | 156 | 325 |
| Hourly Total | 0 | 41 | 29 | 57 | 127 | 0 | 12 | 382 | 86 | 480 | 0 | 10 | 49 | 26 | 85 | 0 | 75 | 514 | 12 | 601 | 1293 |
| 5:00 PM | 0 | 13 | 11 | 13 | 37 | 0 | 3 | 90 | 17 | 110 | 0 | 3 | 19 | 7 | 29 | 0 | 29 | 135 | 0 | 164 | 340 |
| 5:15 PM | 0 | 15 | 11 | 17 | 43 | 0 | 1 | 117 | 15 | 133 | 0 | 3 | 11 | 8 | 22 | 0 | 36 | 143 | 5 | 184 | 382 |
| 5:30 PM | 0 | 6 | 7 | 5 | 18 | 0 | 3 | 115 | 25 | 143 | 0 | 3 | 20 | 8 | 31 | 0 | 26 | 139 | 2 | 167 | 359 |
| 5:45 PM | 0 | 9 | 9 | 10 | 28 | 0 | 5 | 101 | 33 | 139 | 0 | 3 | 17 | 10 | 30 | 0 | 20 | 112 | 4 | 136 | 333 |
| Hourly Total | 0 | 43 | 38 | 45 | 126 | 0 | 12 | 423 | 90 | 525 | 0 | 12 | 67 | 33 | 112 | 0 | 111 | 529 | 11 | 651 | 1414 |
| Grand Total | 0 | 188 | 153 | 251 | 592 | 0 | 52 | 1338 | 278 | 1668 | 0 | 31 | 162 | 76 | 269 | 0 | 244 | 1554 | 63 | 1861 | 4390 |
| Approach % | 0.0 | 31.8 | 25.8 | 42.4 | - | 0.0 | 3.1 | 80.2 | 16.7 | - | 0.0 | 11.5 | 60.2 | 28.3 | - | 0.0 | 13.1 | 83.5 | 3.4 | - | - |
| Total % | 0.0 | 4.3 | 3.5 | 5.7 | 13.5 | 0.0 | 1.2 | 30.5 | 6.3 | 38.0 | 0.0 | 0.7 | 3.7 | 1.7 | 6.1 | 0.0 | 5.6 | 35.4 | 1.4 | 42.4 | - |
| Lights | 0 | 185 | 153 | 245 | 583 | 0 | 45 | 1306 | 261 | 1612 | 0 | 29 | 157 | 72 | 258 | 0 | 238 | 1521 | 59 | 1818 | 4271 |
| % Lights | - | 98.4 | 100.0 | 97.6 | 98.5 | - | 86.5 | 97.6 | 93.9 | 96.6 | - | 93.5 | 96.9 | 94.7 | 95.9 | - | 97.5 | 97.9 | 93.7 | 97.7 | 97.3 |
| Mediums | 0 | 3 | 0 | 6 | 9 | 0 | 7 | 27 | 17 | 51 | 0 | 2 | 1 | 4 | 7 | 0 | 6 | 29 | 4 | 39 | 106 |
| % Mediums | - | 1.6 | 0.0 | 2.4 | 1.5 | - | 13.5 | 2.0 | 6.1 | 3.1 | - | 6.5 | 0.6 | 5.3 | 2.6 | - | 2.5 | 1.9 | 6.3 | 2.1 | 2.4 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 3 | 0 | 3 | 12 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.4 | 0.0 | 0.3 | - | 0.0 | 2.5 | 0.0 | 1.5 | - | 0.0 | 0.2 | 0.0 | 0.2 | 0.3 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |

Dempster St at Linneman Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Dempster St at Linneman Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (7:45 AM)

| Start Time | Linneman Rd Southbound | | | | | Dempster St Westbound | | | | | Linneman Rd Northbound | | | | | Dempster St Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:45 AM | 0 | 12 | 6 | 22 | 40 | 0 | 4 | 72 | 12 | 88 | 0 | 5 | 4 | 2 | 11 | 0 | 10 | 68 | 6 | 84 | 223 |
| 8:00 AM | 0 | 10 | 20 | 11 | 41 | 0 | 5 | 61 | 14 | 80 | 0 | 0 | 4 | 2 | 6 | 0 | 5 | 63 | 6 | 74 | 201 |
| 8:15 AM | 0 | 13 | 8 | 25 | 46 | 0 | 4 | 66 | 17 | 87 | 0 | 1 | 6 | 4 | 11 | 0 | 14 | 85 | 3 | 102 | 246 |
| 8:30 AM | 0 | 31 | 14 | 12 | 57 | 0 | 0 | 64 | 20 | 84 | 0 | 0 | 3 | 1 | 4 | 0 | 8 | 74 | 3 | 85 | 230 |
| Total | 0 | 66 | 48 | 70 | 184 | 0 | 13 | 263 | 63 | 339 | 0 | 6 | 17 | 9 | 32 | 0 | 37 | 290 | 18 | 345 | 900 |
| Approach % | 0.0 | 35.9 | 26.1 | 38.0 | - | 0.0 | 3.8 | 77.6 | 18.6 | - | 0.0 | 18.8 | 53.1 | 28.1 | - | 0.0 | 10.7 | 84.1 | 5.2 | - | - |
| Total % | 0.0 | 7.3 | 5.3 | 7.8 | 20.4 | 0.0 | 1.4 | 29.2 | 7.0 | 37.7 | 0.0 | 0.7 | 1.9 | 1.0 | 3.6 | 0.0 | 4.1 | 32.2 | 2.0 | 38.3 | - |
| PHF | 0.000 | 0.532 | 0.600 | 0.700 | 0.807 | 0.000 | 0.650 | 0.913 | 0.788 | 0.963 | 0.000 | 0.300 | 0.708 | 0.563 | 0.727 | 0.000 | 0.661 | 0.853 | 0.750 | 0.846 | 0.915 |
| Lights | 0 | 64 | 48 | 67 | 179 | 0 | 10 | 254 | 55 | 319 | 0 | 6 | 17 | 9 | 32 | 0 | 34 | 277 | 18 | 329 | 859 |
| % Lights | - | 97.0 | 100.0 | 95.7 | 97.3 | - | 76.9 | 96.6 | 87.3 | 94.1 | - | 100.0 | 100.0 | 100.0 | 100.0 | - | 91.9 | 95.5 | 100.0 | 95.4 | 95.4 |
| Mediums | 0 | 2 | 0 | 3 | 5 | 0 | 3 | 7 | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 13 | 0 | 16 | 39 |
| % Mediums | - | 3.0 | 0.0 | 4.3 | 2.7 | - | 23.1 | 2.7 | 12.7 | 5.3 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 8.1 | 4.5 | 0.0 | 4.6 | 4.3 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.8 | 0.0 | 0.6 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Dempster St at Linneman Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Dempster St at Linneman Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (4:30 PM)

| Start Time | Linneman Rd Southbound | | | | | Dempster St Westbound | | | | | Linneman Rd Northbound | | | | | Dempster St Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 4:30 PM | 0 | 14 | 7 | 15 | 36 | 0 | 1 | 105 | 27 | 133 | 0 | 3 | 19 | 10 | 32 | 0 | 17 | 147 | 4 | 168 | 369 |
| 4:45 PM | 0 | 11 | 4 | 19 | 34 | 0 | 4 | 94 | 20 | 118 | 0 | 3 | 9 | 5 | 17 | 0 | 20 | 133 | 3 | 156 | 325 |
| 5:00 PM | 0 | 13 | 11 | 13 | 37 | 0 | 3 | 90 | 17 | 110 | 0 | 3 | 19 | 7 | 29 | 0 | 29 | 135 | 0 | 164 | 340 |
| 5:15 PM | 0 | 15 | 11 | 17 | 43 | 0 | 1 | 117 | 15 | 133 | 0 | 3 | 11 | 8 | 22 | 0 | 36 | 143 | 5 | 184 | 382 |
| Total | 0 | 53 | 33 | 64 | 150 | 0 | 9 | 406 | 79 | 494 | 0 | 12 | 58 | 30 | 100 | 0 | 102 | 558 | 12 | 672 | 1416 |
| Approach % | 0.0 | 35.3 | 22.0 | 42.7 | - | 0.0 | 1.8 | 82.2 | 16.0 | - | 0.0 | 12.0 | 58.0 | 30.0 | - | 0.0 | 15.2 | 83.0 | 1.8 | - | - |
| Total % | 0.0 | 3.7 | 2.3 | 4.5 | 10.6 | 0.0 | 0.6 | 28.7 | 5.6 | 34.9 | 0.0 | 0.8 | 4.1 | 2.1 | 7.1 | 0.0 | 7.2 | 39.4 | 0.8 | 47.5 | - |
| PHF | 0.000 | 0.883 | 0.750 | 0.842 | 0.872 | 0.000 | 0.563 | 0.868 | 0.731 | 0.929 | 0.000 | 1.000 | 0.763 | 0.750 | 0.781 | 0.000 | 0.708 | 0.949 | 0.600 | 0.913 | 0.927 |
| Lights | 0 | 53 | 33 | 64 | 150 | 0 | 8 | 395 | 78 | 481 | 0 | 12 | 58 | 29 | 99 | 0 | 102 | 557 | 11 | 670 | 1400 |
| % Lights | - | 100.0 | 100.0 | 100.0 | 100.0 | - | 88.9 | 97.3 | 98.7 | 97.4 | - | 100.0 | 100.0 | 96.7 | 99.0 | - | 100.0 | 99.8 | 91.7 | 99.7 | 98.9 |
| Mediums | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 1 | 11 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 13 |
| % Mediums | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 11.1 | 2.2 | 1.3 | 2.2 | - | 0.0 | 0.0 | 3.3 | 1.0 | - | 0.0 | 0.0 | 8.3 | 0.1 | 0.9 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.5 | 0.0 | 0.4 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.2 | 0.0 | 0.1 | 0.2 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Algonquin Rd at Busse Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Algonquin Rd at Busse Rd
Site Code:
Start Date: 04/09/2025
Page No: 1

# Turning Movement Data

| Start Time | Busse Rd Southbound | | | | | Algonquin Rd Westbound | | | | | Busse Rd Northbound | | | | | Algonquin Rd Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:00 AM | 0 | 20 | 145 | 2 | 167 | 0 | 20 | 62 | 8 | 90 | 0 | 79 | 113 | 25 | 217 | 0 | 0 | 64 | 107 | 171 | 645 |
| 7:15 AM | 0 | 29 | 189 | 1 | 219 | 0 | 23 | 47 | 15 | 85 | 0 | 75 | 107 | 28 | 210 | 0 | 0 | 83 | 91 | 174 | 688 |
| 7:30 AM | 0 | 20 | 222 | 2 | 244 | 0 | 16 | 69 | 10 | 95 | 1 | 70 | 119 | 31 | 221 | 0 | 0 | 74 | 108 | 182 | 742 |
| 7:45 AM | 0 | 24 | 226 | 4 | 254 | 0 | 20 | 49 | 10 | 79 | 0 | 88 | 123 | 41 | 252 | 0 | 0 | 101 | 115 | 216 | 801 |
| Hourly Total | 0 | 93 | 782 | 9 | 884 | 0 | 79 | 227 | 43 | 349 | 1 | 312 | 462 | 125 | 900 | 0 | 0 | 322 | 421 | 743 | 2876 |
| 8:00 AM | 1 | 17 | 164 | 2 | 184 | 0 | 22 | 70 | 11 | 103 | 0 | 72 | 147 | 46 | 265 | 0 | 0 | 79 | 93 | 172 | 724 |
| 8:15 AM | 0 | 14 | 210 | 0 | 224 | 0 | 31 | 54 | 12 | 97 | 0 | 75 | 138 | 33 | 246 | 0 | 1 | 75 | 98 | 174 | 741 |
| 8:30 AM | 0 | 15 | 133 | 3 | 151 | 0 | 23 | 65 | 17 | 105 | 0 | 86 | 136 | 37 | 259 | 0 | 0 | 86 | 111 | 197 | 712 |
| 8:45 AM | 0 | 19 | 173 | 6 | 198 | 0 | 29 | 73 | 12 | 114 | 0 | 85 | 104 | 51 | 240 | 0 | 0 | 75 | 100 | 175 | 727 |
| Hourly Total | 1 | 65 | 680 | 11 | 757 | 0 | 105 | 262 | 52 | 419 | 0 | 318 | 525 | 167 | 1010 | 0 | 1 | 315 | 402 | 718 | 2904 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4:00 PM | 1 | 16 | 164 | 11 | 192 | 0 | 48 | 139 | 18 | 205 | 0 | 100 | 210 | 42 | 352 | 1 | 0 | 100 | 89 | 190 | 939 |
| 4:15 PM | 0 | 35 | 178 | 8 | 221 | 0 | 52 | 107 | 18 | 177 | 0 | 120 | 186 | 44 | 350 | 0 | 0 | 104 | 104 | 208 | 956 |
| 4:30 PM | 0 | 36 | 157 | 11 | 204 | 0 | 56 | 151 | 31 | 238 | 0 | 100 | 236 | 46 | 382 | 0 | 0 | 95 | 101 | 196 | 1020 |
| 4:45 PM | 0 | 22 | 154 | 9 | 185 | 0 | 37 | 96 | 21 | 154 | 0 | 127 | 236 | 41 | 404 | 0 | 0 | 95 | 103 | 198 | 941 |
| Hourly Total | 1 | 109 | 653 | 39 | 802 | 0 | 193 | 493 | 88 | 774 | 0 | 447 | 868 | 173 | 1488 | 1 | 0 | 394 | 397 | 792 | 3856 |
| 5:00 PM | 0 | 21 | 149 | 8 | 178 | 0 | 58 | 135 | 39 | 232 | 0 | 116 | 216 | 37 | 369 | 0 | 0 | 94 | 82 | 176 | 955 |
| 5:15 PM | 0 | 23 | 173 | 6 | 202 | 0 | 40 | 107 | 30 | 177 | 0 | 121 | 232 | 33 | 386 | 0 | 0 | 113 | 110 | 223 | 988 |
| 5:30 PM | 0 | 27 | 162 | 9 | 198 | 0 | 43 | 104 | 35 | 182 | 0 | 108 | 203 | 31 | 342 | 0 | 0 | 103 | 94 | 197 | 919 |
| 5:45 PM | 0 | 23 | 141 | 8 | 172 | 0 | 32 | 84 | 17 | 133 | 0 | 120 | 167 | 27 | 314 | 0 | 0 | 98 | 83 | 181 | 800 |
| Hourly Total | 0 | 94 | 625 | 31 | 750 | 0 | 173 | 430 | 121 | 724 | 0 | 465 | 818 | 128 | 1411 | 0 | 0 | 408 | 369 | 777 | 3662 |
| Grand Total | 2 | 361 | 2740 | 90 | 3193 | 0 | 550 | 1412 | 304 | 2266 | 1 | 1542 | 2673 | 593 | 4809 | 1 | 1 | 1439 | 1589 | 3030 | 13298 |
| Approach % | 0.1 | 11.3 | 85.8 | 2.8 | - | 0.0 | 24.3 | 62.3 | 13.4 | - | 0.0 | 32.1 | 55.6 | 12.3 | - | 0.0 | 0.0 | 47.5 | 52.4 | - | - |
| Total % | 0.0 | 2.7 | 20.6 | 0.7 | 24.0 | 0.0 | 4.1 | 10.6 | 2.3 | 17.0 | 0.0 | 11.6 | 20.1 | 4.5 | 36.2 | 0.0 | 0.0 | 10.8 | 11.9 | 22.8 | - |
| Lights | 2 | 349 | 2551 | 89 | 2991 | 0 | 508 | 1355 | 295 | 2158 | 1 | 1416 | 2529 | 534 | 4480 | 1 | 1 | 1368 | 1468 | 2838 | 12467 |
| % Lights | 100.0 | 96.7 | 93.1 | 98.9 | 93.7 | - | 92.4 | 96.0 | 97.0 | 95.2 | 100.0 | 91.8 | 94.6 | 90.1 | 93.2 | 100.0 | 100.0 | 95.1 | 92.4 | 93.7 | 93.8 |
| Mediums | 0 | 11 | 170 | 1 | 182 | 0 | 30 | 41 | 7 | 78 | 0 | 93 | 119 | 43 | 255 | 0 | 0 | 51 | 99 | 150 | 665 |
| % Mediums | 0.0 | 3.0 | 6.2 | 1.1 | 5.7 | - | 5.5 | 2.9 | 2.3 | 3.4 | 0.0 | 6.0 | 4.5 | 7.3 | 5.3 | 0.0 | 0.0 | 3.5 | 6.2 | 5.0 | 5.0 |
| Articulated Trucks | 0 | 1 | 19 | 0 | 20 | 0 | 12 | 16 | 2 | 30 | 0 | 33 | 25 | 15 | 73 | 0 | 0 | 20 | 22 | 42 | 165 |
| % Articulated Trucks | 0.0 | 0.3 | 0.7 | 0.0 | 0.6 | - | 2.2 | 1.1 | 0.7 | 1.3 | 0.0 | 2.1 | 0.9 | 2.5 | 1.5 | 0.0 | 0.0 | 1.4 | 1.4 | 1.4 | 1.2 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Algonquin Rd at Busse Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Algonquin Rd at Busse Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (7:30 AM)

| Start Time | Busse Rd Southbound | | | | | Algonquin Rd Westbound | | | | | Busse Rd Northbound | | | | | Algonquin Rd Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:30 AM | 0 | 20 | 222 | 2 | 244 | 0 | 16 | 69 | 10 | 95 | 1 | 70 | 119 | 31 | 221 | 0 | 0 | 74 | 108 | 182 | 742 |
| 7:45 AM | 0 | 24 | 226 | 4 | 254 | 0 | 20 | 49 | 10 | 79 | 0 | 88 | 123 | 41 | 252 | 0 | 0 | 101 | 115 | 216 | 801 |
| 8:00 AM | 1 | 17 | 164 | 2 | 184 | 0 | 22 | 70 | 11 | 103 | 0 | 72 | 147 | 46 | 265 | 0 | 0 | 79 | 93 | 172 | 724 |
| 8:15 AM | 0 | 14 | 210 | 0 | 224 | 0 | 31 | 54 | 12 | 97 | 0 | 75 | 138 | 33 | 246 | 0 | 1 | 75 | 98 | 174 | 741 |
| Total | 1 | 75 | 822 | 8 | 906 | 0 | 89 | 242 | 43 | 374 | 1 | 305 | 527 | 151 | 984 | 0 | 1 | 329 | 414 | 744 | 3008 |
| Approach % | 0.1 | 8.3 | 90.7 | 0.9 | - | 0.0 | 23.8 | 64.7 | 11.5 | - | 0.1 | 31.0 | 53.6 | 15.3 | - | 0.0 | 0.1 | 44.2 | 55.6 | - | - |
| Total % | 0.0 | 2.5 | 27.3 | 0.3 | 30.1 | 0.0 | 3.0 | 8.0 | 1.4 | 12.4 | 0.0 | 10.1 | 17.5 | 5.0 | 32.7 | 0.0 | 0.0 | 10.9 | 13.8 | 24.7 | - |
| PHF | 0.250 | 0.781 | 0.909 | 0.500 | 0.892 | 0.000 | 0.718 | 0.864 | 0.896 | 0.908 | 0.250 | 0.866 | 0.896 | 0.821 | 0.928 | 0.000 | 0.250 | 0.814 | 0.900 | 0.861 | 0.939 |
| Lights | 1 | 70 | 773 | 8 | 852 | 0 | 80 | 225 | 40 | 345 | 1 | 252 | 469 | 135 | 857 | 0 | 1 | 313 | 361 | 675 | 2729 |
| % Lights | 100.0 | 93.3 | 94.0 | 100.0 | 94.0 | - | 89.9 | 93.0 | 93.0 | 92.2 | 100.0 | 82.6 | 89.0 | 89.4 | 87.1 | - | 100.0 | 95.1 | 87.2 | 90.7 | 90.7 |
| Mediums | 0 | 5 | 43 | 0 | 48 | 0 | 6 | 13 | 1 | 20 | 0 | 41 | 49 | 12 | 102 | 0 | 0 | 10 | 46 | 56 | 226 |
| % Mediums | 0.0 | 6.7 | 5.2 | 0.0 | 5.3 | - | 6.7 | 5.4 | 2.3 | 5.3 | 0.0 | 13.4 | 9.3 | 7.9 | 10.4 | - | 0.0 | 3.0 | 11.1 | 7.5 | 7.5 |
| Articulated Trucks | 0 | 0 | 6 | 0 | 6 | 0 | 3 | 4 | 2 | 9 | 0 | 12 | 9 | 3 | 24 | 0 | 0 | 6 | 7 | 13 | 52 |
| % Articulated Trucks | 0.0 | 0.0 | 0.7 | 0.0 | 0.7 | - | 3.4 | 1.7 | 4.7 | 2.4 | 0.0 | 3.9 | 1.7 | 2.0 | 2.4 | - | 0.0 | 1.8 | 1.7 | 1.7 | 1.7 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.1 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Gewalt Hamilton Associates Inc.
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Algonquin Rd at Busse Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Count Name: Algonquin Rd at Busse Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (4:30 PM)

| Start Time | Busse Rd Southbound | | | | | Algonquin Rd Westbound | | | | | Busse Rd Northbound | | | | | Algonquin Rd Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 4:30 PM | 0 | 36 | 157 | 11 | 204 | 0 | 56 | 151 | 31 | 238 | 0 | 100 | 236 | 46 | 382 | 0 | 0 | 95 | 101 | 196 | 1020 |
| 4:45 PM | 0 | 22 | 154 | 9 | 185 | 0 | 37 | 96 | 21 | 154 | 0 | 127 | 236 | 41 | 404 | 0 | 0 | 95 | 103 | 198 | 941 |
| 5:00 PM | 0 | 21 | 149 | 8 | 178 | 0 | 58 | 135 | 39 | 232 | 0 | 116 | 216 | 37 | 369 | 0 | 0 | 94 | 82 | 176 | 955 |
| 5:15 PM | 0 | 23 | 173 | 6 | 202 | 0 | 40 | 107 | 30 | 177 | 0 | 121 | 232 | 33 | 386 | 0 | 0 | 113 | 110 | 223 | 988 |
| Total | 0 | 102 | 633 | 34 | 769 | 0 | 191 | 489 | 121 | 801 | 0 | 464 | 920 | 157 | 1541 | 0 | 0 | 397 | 396 | 793 | 3904 |
| Approach % | 0.0 | 13.3 | 82.3 | 4.4 | - | 0.0 | 23.8 | 61.0 | 15.1 | - | 0.0 | 30.1 | 59.7 | 10.2 | - | 0.0 | 0.0 | 50.1 | 49.9 | - | - |
| Total % | 0.0 | 2.6 | 16.2 | 0.9 | 19.7 | 0.0 | 4.9 | 12.5 | 3.1 | 20.5 | 0.0 | 11.9 | 23.6 | 4.0 | 39.5 | 0.0 | 0.0 | 10.2 | 10.1 | 20.3 | - |
| PHF | 0.000 | 0.708 | 0.915 | 0.773 | 0.942 | 0.000 | 0.823 | 0.810 | 0.776 | 0.841 | 0.000 | 0.913 | 0.975 | 0.853 | 0.954 | 0.000 | 0.000 | 0.878 | 0.900 | 0.889 | 0.957 |
| Lights | 0 | 101 | 593 | 34 | 728 | 0 | 180 | 476 | 119 | 775 | 0 | 455 | 909 | 142 | 1506 | 0 | 0 | 380 | 379 | 759 | 3768 |
| % Lights | - | 99.0 | 93.7 | 100.0 | 94.7 | - | 94.2 | 97.3 | 98.3 | 96.8 | - | 98.1 | 98.8 | 90.4 | 97.7 | - | - | 95.7 | 95.7 | 95.7 | 96.5 |
| Mediums | 0 | 1 | 38 | 0 | 39 | 0 | 8 | 9 | 2 | 19 | 0 | 5 | 4 | 10 | 19 | 0 | 0 | 12 | 13 | 25 | 102 |
| % Mediums | - | 1.0 | 6.0 | 0.0 | 5.1 | - | 4.2 | 1.8 | 1.7 | 2.4 | - | 1.1 | 0.4 | 6.4 | 1.2 | - | - | 3.0 | 3.3 | 3.2 | 2.6 |
| Articulated Trucks | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 4 | 0 | 7 | 0 | 4 | 7 | 5 | 16 | 0 | 0 | 5 | 4 | 9 | 34 |
| % Articulated Trucks | - | 0.0 | 0.3 | 0.0 | 0.3 | - | 1.6 | 0.8 | 0.0 | 0.9 | - | 0.9 | 0.8 | 3.2 | 1.0 | - | - | 1.3 | 1.0 | 1.1 | 0.9 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 |

Algonquin Rd at Linneman Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Algonquin Rd at Linneman Rd
Site Code:
Start Date: 04/09/2025
Page No: 1

# Turning Movement Data

| Start Time | Linneman Rd Southbound | | | | | Algonquin Rd Westbound | | | | | Linneman Rd Northbound | | | | | Algonquin Rd Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:00 AM | 0 | 6 | 0 | 5 | 11 | 0 | 3 | 81 | 3 | 87 | 0 | 2 | 0 | 2 | 4 | 0 | 9 | 89 | 3 | 101 | 203 |
| 7:15 AM | 0 | 20 | 0 | 11 | 31 | 0 | 1 | 80 | 4 | 85 | 0 | 2 | 0 | 2 | 4 | 0 | 12 | 122 | 4 | 138 | 258 |
| 7:30 AM | 0 | 20 | 0 | 10 | 30 | 0 | 0 | 83 | 12 | 95 | 0 | 0 | 0 | 2 | 2 | 0 | 9 | 112 | 2 | 123 | 250 |
| 7:45 AM | 0 | 12 | 0 | 3 | 15 | 0 | 3 | 95 | 12 | 110 | 0 | 1 | 0 | 1 | 2 | 0 | 18 | 149 | 2 | 169 | 296 |
| Hourly Total | 0 | 58 | 0 | 29 | 87 | 0 | 7 | 339 | 31 | 377 | 0 | 5 | 0 | 7 | 12 | 0 | 48 | 472 | 11 | 531 | 1007 |
| 8:00 AM | 0 | 24 | 1 | 6 | 31 | 0 | 3 | 92 | 8 | 103 | 0 | 4 | 0 | 1 | 5 | 0 | 10 | 125 | 2 | 137 | 276 |
| 8:15 AM | 0 | 14 | 0 | 6 | 20 | 0 | 2 | 101 | 14 | 117 | 0 | 3 | 0 | 2 | 5 | 0 | 4 | 110 | 2 | 116 | 258 |
| 8:30 AM | 0 | 16 | 2 | 3 | 21 | 0 | 0 | 90 | 4 | 94 | 0 | 2 | 0 | 0 | 2 | 0 | 14 | 125 | 2 | 141 | 258 |
| 8:45 AM | 0 | 11 | 2 | 3 | 16 | 0 | 3 | 103 | 3 | 109 | 0 | 2 | 1 | 0 | 3 | 0 | 11 | 128 | 0 | 139 | 267 |
| Hourly Total | 0 | 65 | 5 | 18 | 88 | 0 | 8 | 386 | 29 | 423 | 0 | 11 | 1 | 3 | 15 | 0 | 39 | 488 | 6 | 533 | 1059 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4:00 PM | 0 | 11 | 1 | 8 | 20 | 0 | 1 | 180 | 14 | 195 | 0 | 2 | 0 | 1 | 3 | 0 | 3 | 147 | 3 | 153 | 371 |
| 4:15 PM | 0 | 12 | 0 | 6 | 18 | 0 | 1 | 183 | 16 | 200 | 0 | 1 | 1 | 0 | 2 | 0 | 5 | 160 | 3 | 168 | 388 |
| 4:30 PM | 0 | 12 | 0 | 10 | 22 | 0 | 1 | 192 | 23 | 216 | 0 | 2 | 0 | 1 | 3 | 0 | 12 | 166 | 2 | 180 | 421 |
| 4:45 PM | 0 | 7 | 1 | 7 | 15 | 0 | 3 | 156 | 15 | 174 | 0 | 3 | 0 | 1 | 4 | 0 | 11 | 146 | 1 | 158 | 351 |
| Hourly Total | 0 | 42 | 2 | 31 | 75 | 0 | 6 | 711 | 68 | 785 | 0 | 8 | 1 | 3 | 12 | 0 | 31 | 619 | 9 | 659 | 1531 |
| 5:00 PM | 0 | 15 | 0 | 12 | 27 | 1 | 0 | 206 | 14 | 221 | 0 | 1 | 0 | 0 | 1 | 0 | 10 | 139 | 1 | 150 | 399 |
| 5:15 PM | 0 | 14 | 1 | 7 | 22 | 0 | 0 | 152 | 14 | 166 | 0 | 3 | 0 | 3 | 6 | 0 | 9 | 151 | 1 | 161 | 355 |
| 5:30 PM | 0 | 12 | 1 | 12 | 25 | 0 | 0 | 159 | 21 | 180 | 0 | 1 | 0 | 0 | 1 | 0 | 10 | 148 | 1 | 159 | 365 |
| 5:45 PM | 0 | 17 | 0 | 9 | 26 | 0 | 0 | 122 | 15 | 137 | 0 | 1 | 0 | 1 | 2 | 0 | 14 | 141 | 0 | 155 | 320 |
| Hourly Total | 0 | 58 | 2 | 40 | 100 | 1 | 0 | 639 | 64 | 704 | 0 | 6 | 0 | 4 | 10 | 0 | 43 | 579 | 3 | 625 | 1439 |
| Grand Total | 0 | 223 | 9 | 118 | 350 | 1 | 21 | 2075 | 192 | 2289 | 0 | 30 | 2 | 17 | 49 | 0 | 161 | 2158 | 29 | 2348 | 5036 |
| Approach % | 0.0 | 63.7 | 2.6 | 33.7 | - | 0.0 | 0.9 | 90.7 | 8.4 | - | 0.0 | 61.2 | 4.1 | 34.7 | - | 0.0 | 6.9 | 91.9 | 1.2 | - | - |
| Total % | 0.0 | 4.4 | 0.2 | 2.3 | 6.9 | 0.0 | 0.4 | 41.2 | 3.8 | 45.5 | 0.0 | 0.6 | 0.0 | 0.3 | 1.0 | 0.0 | 3.2 | 42.9 | 0.6 | 46.6 | - |
| Lights | 0 | 209 | 7 | 112 | 328 | 1 | 15 | 1981 | 187 | 2184 | 0 | 22 | 2 | 11 | 35 | 0 | 144 | 2041 | 20 | 2205 | 4752 |
| % Lights | - | 93.7 | 77.8 | 94.9 | 93.7 | 100.0 | 71.4 | 95.5 | 97.4 | 95.4 | - | 73.3 | 100.0 | 64.7 | 71.4 | - | 89.4 | 94.6 | 69.0 | 93.9 | 94.4 |
| Mediums | 0 | 12 | 1 | 4 | 17 | 0 | 1 | 65 | 4 | 70 | 0 | 2 | 0 | 1 | 3 | 0 | 9 | 84 | 3 | 96 | 186 |
| % Mediums | - | 5.4 | 11.1 | 3.4 | 4.9 | 0.0 | 4.8 | 3.1 | 2.1 | 3.1 | - | 6.7 | 0.0 | 5.9 | 6.1 | - | 5.6 | 3.9 | 10.3 | 4.1 | 3.7 |
| Articulated Trucks | 0 | 2 | 1 | 2 | 5 | 0 | 5 | 29 | 1 | 35 | 0 | 6 | 0 | 5 | 11 | 0 | 8 | 33 | 6 | 47 | 98 |
| % Articulated Trucks | - | 0.9 | 11.1 | 1.7 | 1.4 | 0.0 | 23.8 | 1.4 | 0.5 | 1.5 | - | 20.0 | 0.0 | 29.4 | 22.4 | - | 5.0 | 1.5 | 20.7 | 2.0 | 1.9 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Algonquin Rd at Linneman Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Algonquin Rd at Linneman Rd
Site Code:
Start Date: 04/09/2025
Page No: 3

## Turning Movement Peak Hour Data (7:45 AM)

| Start Time | Linneman Rd Southbound | | | | | Algonquin Rd Westbound | | | | | Linneman Rd Northbound | | | | | Algonquin Rd Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 7:45 AM | 0 | 12 | 0 | 3 | 15 | 0 | 3 | 95 | 12 | 110 | 0 | 1 | 0 | 1 | 2 | 0 | 18 | 149 | 2 | 169 | 296 |
| 8:00 AM | 0 | 24 | 1 | 6 | 31 | 0 | 3 | 92 | 8 | 103 | 0 | 4 | 0 | 1 | 5 | 0 | 10 | 125 | 2 | 137 | 276 |
| 8:15 AM | 0 | 14 | 0 | 6 | 20 | 0 | 2 | 101 | 14 | 117 | 0 | 3 | 0 | 2 | 5 | 0 | 4 | 110 | 2 | 116 | 258 |
| 8:30 AM | 0 | 16 | 2 | 3 | 21 | 0 | 0 | 90 | 4 | 94 | 0 | 2 | 0 | 0 | 2 | 0 | 14 | 125 | 2 | 141 | 258 |
| Total | 0 | 66 | 3 | 18 | 87 | 0 | 8 | 378 | 38 | 424 | 0 | 10 | 0 | 4 | 14 | 0 | 46 | 509 | 8 | 563 | 1088 |
| Approach % | 0.0 | 75.9 | 3.4 | 20.7 | - | 0.0 | 1.9 | 89.2 | 9.0 | - | 0.0 | 71.4 | 0.0 | 28.6 | - | 0.0 | 8.2 | 90.4 | 1.4 | - | - |
| Total % | 0.0 | 6.1 | 0.3 | 1.7 | 8.0 | 0.0 | 0.7 | 34.7 | 3.5 | 39.0 | 0.0 | 0.9 | 0.0 | 0.4 | 1.3 | 0.0 | 4.2 | 46.8 | 0.7 | 51.7 | - |
| PHF | 0.000 | 0.688 | 0.375 | 0.750 | 0.702 | 0.000 | 0.667 | 0.936 | 0.679 | 0.906 | 0.000 | 0.625 | 0.000 | 0.500 | 0.700 | 0.000 | 0.639 | 0.854 | 1.000 | 0.833 | 0.919 |
| Lights | 0 | 63 | 2 | 15 | 80 | 0 | 7 | 351 | 36 | 394 | 0 | 8 | 0 | 3 | 11 | 0 | 43 | 484 | 6 | 533 | 1018 |
| % Lights | - | 95.5 | 66.7 | 83.3 | 92.0 | - | 87.5 | 92.9 | 94.7 | 92.9 | - | 80.0 | - | 75.0 | 78.6 | - | 93.5 | 95.1 | 75.0 | 94.7 | 93.6 |
| Mediums | 0 | 2 | 0 | 2 | 4 | 0 | 0 | 21 | 2 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 18 | 0 | 19 | 46 |
| % Mediums | - | 3.0 | 0.0 | 11.1 | 4.6 | - | 0.0 | 5.6 | 5.3 | 5.4 | - | 0.0 | - | 0.0 | 0.0 | - | 2.2 | 3.5 | 0.0 | 3.4 | 4.2 |
| Articulated Trucks | 0 | 1 | 1 | 1 | 3 | 0 | 1 | 6 | 0 | 7 | 0 | 2 | 0 | 1 | 3 | 0 | 2 | 7 | 2 | 11 | 24 |
| % Articulated Trucks | - | 1.5 | 33.3 | 5.6 | 3.4 | - | 12.5 | 1.6 | 0.0 | 1.7 | - | 20.0 | - | 25.0 | 21.4 | - | 4.3 | 1.4 | 25.0 | 2.0 | 2.2 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Algonquin Rd at Linneman Rd
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Algonquin Rd at Linneman Rd
Site Code:
Start Date: 04/09/2025


## Turning Movement Peak Hour Data (4:15 PM)

| Start Time | Linneman Rd Southbound | | | | | Algonquin Rd Westbound | | | | | Linneman Rd Northbound | | | | | Algonquin Rd Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | U-Turn | Left | Thru | Right | App. Total | Int. Total |
| 4:15 PM | 0 | 12 | 0 | 6 | 18 | 0 | 1 | 183 | 16 | 200 | 0 | 1 | 1 | 0 | 2 | 0 | 5 | 160 | 3 | 168 | 388 |
| 4:30 PM | 0 | 12 | 0 | 10 | 22 | 0 | 1 | 192 | 23 | 216 | 0 | 2 | 0 | 1 | 3 | 0 | 12 | 166 | 2 | 180 | 421 |
| 4:45 PM | 0 | 7 | 1 | 7 | 15 | 0 | 3 | 156 | 15 | 174 | 0 | 3 | 0 | 1 | 4 | 0 | 11 | 146 | 1 | 158 | 351 |
| 5:00 PM | 0 | 15 | 0 | 12 | 27 | 1 | 0 | 206 | 14 | 221 | 0 | 1 | 0 | 0 | 1 | 0 | 10 | 139 | 1 | 150 | 399 |
| Total | 0 | 46 | 1 | 35 | 82 | 1 | 5 | 737 | 68 | 811 | 0 | 7 | 1 | 2 | 10 | 0 | 38 | 611 | 7 | 656 | 1559 |
| Approach % | 0.0 | 56.1 | 1.2 | 42.7 | - | 0.1 | 0.6 | 90.9 | 8.4 | - | 0.0 | 70.0 | 10.0 | 20.0 | - | 0.0 | 5.8 | 93.1 | 1.1 | - | - |
| Total % | 0.0 | 3.0 | 0.1 | 2.2 | 5.3 | 0.1 | 0.3 | 47.3 | 4.4 | 52.0 | 0.0 | 0.4 | 0.1 | 0.1 | 0.6 | 0.0 | 2.4 | 39.2 | 0.4 | 42.1 | - |
| PHF | 0.000 | 0.767 | 0.250 | 0.729 | 0.759 | 0.250 | 0.417 | 0.894 | 0.739 | 0.917 | 0.000 | 0.583 | 0.250 | 0.500 | 0.625 | 0.000 | 0.792 | 0.920 | 0.583 | 0.911 | 0.926 |
| Lights | 0 | 42 | 1 | 35 | 78 | 1 | 2 | 714 | 67 | 784 | 0 | 6 | 1 | 2 | 9 | 0 | 33 | 584 | 4 | 621 | 1492 |
| % Lights | - | 91.3 | 100.0 | 100.0 | 95.1 | 100.0 | 40.0 | 96.9 | 98.5 | 96.7 | - | 85.7 | 100.0 | 100.0 | 90.0 | - | 86.8 | 95.6 | 57.1 | 94.7 | 95.7 |
| Mediums | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 14 | 0 | 14 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 16 | 3 | 23 | 42 |
| % Mediums | - | 8.7 | 0.0 | 0.0 | 4.9 | 0.0 | 0.0 | 1.9 | 0.0 | 1.7 | - | 14.3 | 0.0 | 0.0 | 10.0 | - | 10.5 | 2.6 | 42.9 | 3.5 | 2.7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 1 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 12 | 25 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.0 | 1.2 | 1.5 | 1.6 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 2.6 | 1.8 | 0.0 | 1.8 | 1.6 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Linneman Rd at Access
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Linneman Rd at Access
Site Code:
Start Date: 04/09/2025
Page No: 1

# Turning Movement Data

| Start Time | Linneman Rd Southbound | | | | Access Westbound | | | | Linneman Rd Northbound | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | App. Total | U-Turn | Left | Right | App. Total | U-Turn | Thru | Right | App. Total | |
| 7:00 AM | 0 | 1 | 7 | 8 | 0 | 5 | 1 | 6 | 0 | 6 | 6 | 12 | 26 |
| 7:15 AM | 0 | 0 | 27 | 27 | 0 | 6 | 0 | 6 | 0 | 8 | 9 | 17 | 50 |
| 7:30 AM | 0 | 1 | 19 | 20 | 0 | 8 | 0 | 8 | 0 | 18 | 3 | 21 | 49 |
| 7:45 AM | 0 | 1 | 14 | 15 | 0 | 1 | 2 | 3 | 0 | 11 | 19 | 30 | 48 |
| Hourly Total | 0 | 3 | 67 | 70 | 0 | 20 | 3 | 23 | 0 | 43 | 37 | 80 | 173 |
| 8:00 AM | 0 | 1 | 31 | 32 | 0 | 2 | 0 | 2 | 0 | 9 | 10 | 19 | 53 |
| 8:15 AM | 0 | 1 | 15 | 16 | 0 | 3 | 0 | 3 | 0 | 10 | 6 | 16 | 35 |
| 8:30 AM | 0 | 0 | 17 | 17 | 0 | 4 | 0 | 4 | 0 | 6 | 13 | 19 | 40 |
| 8:45 AM | 0 | 1 | 15 | 16 | 0 | 2 | 0 | 2 | 0 | 7 | 8 | 15 | 33 |
| Hourly Total | 0 | 3 | 78 | 81 | 0 | 11 | 0 | 11 | 0 | 32 | 37 | 69 | 161 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4:00 PM | 0 | 1 | 12 | 13 | 0 | 8 | 1 | 9 | 0 | 19 | 0 | 19 | 41 |
| 4:15 PM | 0 | 1 | 17 | 18 | 0 | 2 | 2 | 4 | 0 | 16 | 3 | 19 | 41 |
| 4:30 PM | 0 | 0 | 11 | 11 | 0 | 9 | 1 | 10 | 0 | 32 | 6 | 38 | 59 |
| 4:45 PM | 0 | 0 | 11 | 11 | 0 | 4 | 0 | 4 | 0 | 23 | 2 | 25 | 40 |
| Hourly Total | 0 | 2 | 51 | 53 | 0 | 23 | 4 | 27 | 0 | 90 | 11 | 101 | 181 |
| 5:00 PM | 0 | 0 | 15 | 15 | 0 | 13 | 5 | 18 | 0 | 24 | 1 | 25 | 58 |
| 5:15 PM | 0 | 0 | 15 | 15 | 0 | 7 | 0 | 7 | 0 | 21 | 1 | 22 | 44 |
| 5:30 PM | 0 | 0 | 14 | 14 | 0 | 10 | 2 | 12 | 0 | 27 | 0 | 27 | 53 |
| 5:45 PM | 0 | 0 | 20 | 20 | 0 | 6 | 0 | 6 | 0 | 28 | 3 | 31 | 57 |
| Hourly Total | 0 | 0 | 64 | 64 | 0 | 36 | 7 | 43 | 0 | 100 | 5 | 105 | 212 |
| Grand Total | 0 | 8 | 260 | 268 | 0 | 90 | 14 | 104 | 0 | 265 | 90 | 355 | 727 |
| Approach % | 0.0 | 3.0 | 97.0 | - | 0.0 | 86.5 | 13.5 | - | 0.0 | 74.6 | 25.4 | - | - |
| Total % | 0.0 | 1.1 | 35.8 | 36.9 | 0.0 | 12.4 | 1.9 | 14.3 | 0.0 | 36.5 | 12.4 | 48.8 | - |
| Lights | 0 | 8 | 250 | 258 | 0 | 78 | 12 | 90 | 0 | 254 | 76 | 330 | 678 |
| % Lights | - | 100.0 | 96.2 | 96.3 | - | 86.7 | 85.7 | 86.5 | - | 95.8 | 84.4 | 93.0 | 93.3 |
| Mediums | 0 | 0 | 10 | 10 | 0 | 8 | 2 | 10 | 0 | 7 | 8 | 15 | 35 |
| % Mediums | - | 0.0 | 3.8 | 3.7 | - | 8.9 | 14.3 | 9.6 | - | 2.6 | 8.9 | 4.2 | 4.8 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 4 | 6 | 10 | 14 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | - | 4.4 | 0.0 | 3.8 | - | 1.5 | 6.7 | 2.8 | 1.9 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 |

Linneman Rd at Access
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

Vernon Hills, Illinois, United States 60061
(847) 478-9700 poster@gha-engineers.com

Count Name: Linneman Rd at Access
Site Code:
Start Date: 04/09/2025
Page No: 3

## Turning Movement Peak Hour Data (7:15 AM)

| Start Time | Linneman Rd Southbound | | | | Access Westbound | | | | Linneman Rd Northbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | App. Total | U-Turn | Left | Right | App. Total | U-Turn | Thru | Right | App. Total | Int. Total |
| 7:15 AM | 0 | 0 | 27 | 27 | 0 | 6 | 0 | 6 | 0 | 8 | 9 | 17 | 50 |
| 7:30 AM | 0 | 1 | 19 | 20 | 0 | 8 | 0 | 8 | 0 | 18 | 3 | 21 | 49 |
| 7:45 AM | 0 | 1 | 14 | 15 | 0 | 1 | 2 | 3 | 0 | 11 | 19 | 30 | 48 |
| 8:00 AM | 0 | 1 | 31 | 32 | 0 | 2 | 0 | 2 | 0 | 9 | 10 | 19 | 53 |
| Total | 0 | 3 | 91 | 94 | 0 | 17 | 2 | 19 | 0 | 46 | 41 | 87 | 200 |
| Approach % | 0.0 | 3.2 | 96.8 | - | 0.0 | 89.5 | 10.5 | - | 0.0 | 52.9 | 47.1 | - | - |
| Total % | 0.0 | 1.5 | 45.5 | 47.0 | 0.0 | 8.5 | 1.0 | 9.5 | 0.0 | 23.0 | 20.5 | 43.5 | - |
| PHF | 0.000 | 0.750 | 0.734 | 0.734 | 0.000 | 0.531 | 0.250 | 0.594 | 0.000 | 0.639 | 0.539 | 0.725 | 0.943 |
| Lights | 0 | 3 | 89 | 92 | 0 | 15 | 2 | 17 | 0 | 40 | 38 | 78 | 187 |
| % Lights | - | 100.0 | 97.8 | 97.9 | - | 88.2 | 100.0 | 89.5 | - | 87.0 | 92.7 | 89.7 | 93.5 |
| Mediums | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 4 | 7 |
| % Mediums | - | 0.0 | 2.2 | 2.1 | - | 5.9 | 0.0 | 5.3 | - | 4.3 | 4.9 | 4.6 | 3.5 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 1 | 5 | 6 |
| % Articulated Trucks | - | 0.0 | 0.0 | 0.0 | - | 5.9 | 0.0 | 5.3 | - | 8.7 | 2.4 | 5.7 | 3.0 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 |

Linneman Rd at Access
5253.220 Cloud HQ Update
7-9AM; 4-6PM
GHA Mio

Gewalt Hamilton Associates Inc.
625 Forest Edge Drive

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(847) 478-9700 poster@gha-engineers.com

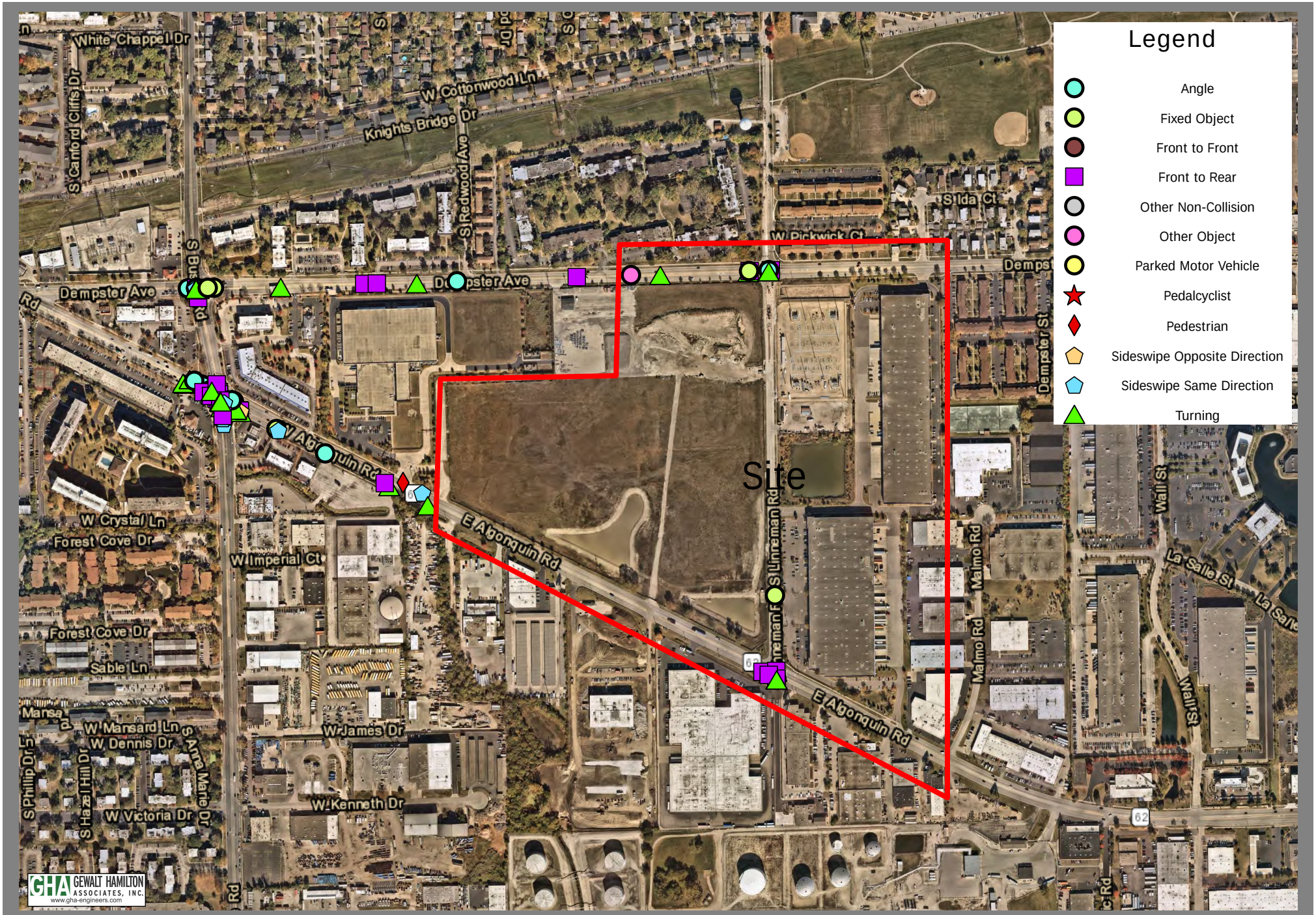
Count Name: Linneman Rd at Access
Site Code:
Start Date: 04/09/2025
Page No: 5

## Turning Movement Peak Hour Data (5:00 PM)

| Start Time | Linneman Rd Southbound | | | | Access Westbound | | | | Linneman Rd Northbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-Turn | Left | Thru | App. Total | U-Turn | Left | Right | App. Total | U-Turn | Thru | Right | App. Total | Int. Total |
| 5:00 PM | 0 | 0 | 15 | 15 | 0 | 13 | 5 | 18 | 0 | 24 | 1 | 25 | 58 |
| 5:15 PM | 0 | 0 | 15 | 15 | 0 | 7 | 0 | 7 | 0 | 21 | 1 | 22 | 44 |
| 5:30 PM | 0 | 0 | 14 | 14 | 0 | 10 | 2 | 12 | 0 | 27 | 0 | 27 | 53 |
| 5:45 PM | 0 | 0 | 20 | 20 | 0 | 6 | 0 | 6 | 0 | 28 | 3 | 31 | 57 |
| Total | 0 | 0 | 64 | 64 | 0 | 36 | 7 | 43 | 0 | 100 | 5 | 105 | 212 |
| Approach % | 0.0 | 0.0 | 100.0 | - | 0.0 | 83.7 | 16.3 | - | 0.0 | 95.2 | 4.8 | - | - |
| Total % | 0.0 | 0.0 | 30.2 | 30.2 | 0.0 | 17.0 | 3.3 | 20.3 | 0.0 | 47.2 | 2.4 | 49.5 | - |
| PHF | 0.000 | 0.000 | 0.800 | 0.800 | 0.000 | 0.692 | 0.350 | 0.597 | 0.000 | 0.893 | 0.417 | 0.847 | 0.914 |
| Lights | 0 | 0 | 61 | 61 | 0 | 34 | 7 | 41 | 0 | 98 | 1 | 99 | 201 |
| % Lights | - | - | 95.3 | 95.3 | - | 94.4 | 100.0 | 95.3 | - | 98.0 | 20.0 | 94.3 | 94.8 |
| Mediums | 0 | 0 | 3 | 3 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 4 | 9 |
| % Mediums | - | - | 4.7 | 4.7 | - | 5.6 | 0.0 | 4.7 | - | 2.0 | 40.0 | 3.8 | 4.2 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| % Articulated Trucks | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 40.0 | 1.9 | 0.9 |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | - | - | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 |

# APPENDIX C
## *Crash Summary Map*

GEWALT HAMILTON ASSOCIATES, INC.




0

1 inch = 775 Feet

Map Center: 87.95249°W 42.03418°N

## Appendix C - IDOT Crash Data 2019-23

Mount Prospect Technology Campus
1200 Algonquin Road
Mount Prospect, IL

# APPENDIX D
## *CMAP Traffic Projections*

GEWALT HAMILTON ASSOCIATES, INC.

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

April 10, 2025

Daniel P. Brinkman, PE, PTOE
Senior Transportation Engineer
Gewalt Hamilton Associates
625 Forest Edge Drive
Vernon Hills, IL 60025

***Subject: Algonquin Rd, Busse Rd, Dempster Street, & Linneman Rd***
IDOT

Dear Mr. Brinkman:

In response to a request made on your behalf and dated April 9, 2025, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

| ROAD SEGMENT | Current ADT | Year 2050 ADT |
|---|---|---|
| Dempster Ave east of Linneman Rd | 10,800 | 12,300 |
| Dempster Ave west of Linneman Rd | 9,950 | 11,900 |
| S Linneman Rd south of Dempster Ave | 1,600 | 1,800 |
| E Algonquin Rd east of S Busse Rd | 13,100 | 17,100 |
| W Algonquin Rd west of S Busse Rd | 26,000 | 29,000 |
| S Busse Rd north of Algonquin Rd | 14,600 | 18,000 |
| S Busse Rd south of Algonquin Rd | 25,200 | 27,600 |

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2025_trafficForecasts\MountProspect\ck-34-25\ck-34-25.docx

# APPENDIX E

## *June 30, 2025 Preliminary PUD Site Plan*

GEWALT HAMILTON ASSOCIATES, INC.

## PROPOSED LEGEND

- HEAVY DUTY BITUMINOUS PAVEMENT
- NORMAL DUTY BITUMINOUS PAVEMENT
- PCC DRIVEWAY PAVEMENT
- PCC PAVEMENT
- PCC SIDEWALK
- STONE RIP RAP, CLASS A1
- AGGREGATE – COMED SUBSTATION
- PERVIOUS AREA ('TURF GRASS, LANDSCAPING OR NATURALIZED BASIN BOTTOM)
- DETECTABLE WARNINGS
- B6.12 CURB & GUTTER (REGULAR)
- B6.12 CURB & GUTTER (DEPRESSED)
- PAVEMENT SAWCUT
- FENCE
- RETAINING WALLS
- PROPOSED TREE
- TREE TRUNK PROTECTION FENCE

W DEMPSTER STREET
DEMPSTER ST
BRICK SIGN
CONC.
GRAVEL
EMERGENCY ACCESS DRIVE 35' CANTILEVERED GATE
COMED SUBSTATION ACCESS DRIVE
ASPHALT
TRAFFIC LOOP (TYP)
CONC. PAD
30' BUILDING SETBACK
15' BUILDING SETBACK
AMERISTAR IMPASSE II 8' SECURITY FENCE FULL PERIMETER OF CAMPUS
END OF 7'+1' CHAINLINK FENCE (SOUTH) AT PERIMETER AMERISTAR IMPASSE II FENCE
241.87'
PROPOSED ORD02 BUILDING (PHASE 3)
FFE: 670.50
TENANT #1 ADMIN.
92 STD STALLS,
4 HC STALLS,
4 EV STALLS
S LINNEMAN RD
ELECTRIC CABINET
OLD ALGONQUIN RD
AMERISTAR IMPASSE II – 8' SECURITY FENCE FULL PERIMETER OF CAMPUS
END OF 6' SAFETY FENCE (SOUTH) AT PERIMETER AMERISTAR IMPASSE II FENCE
#14467
RIM: 677.51
INV: 664.71 (E,S)
BASIN BOTTOM MAINTENANCE RAMP
INTERIOR FENCE WITHIN COMED SECURITY FENCE. POSSIBLE 6' SAFETY FENCE AROUND BASINS
SUBSTATION SECURITY FENCING TYPICAL 7'+1' CHAINLINK WITH BARBED WIRE TOP.
ORD02 SECURITY GATE FOR TRUCK REJECTION. LOCATION TO BE ADJUSTED FOR FINAL ORD02 SITE PLAN
PROPERTY BOUNDARY
MECHANICAL YARD SCREEN WALL (SEE ARCH. & STRUCTURAL PLANS FOR DETAILS
65.8' CHILLER UNITS TO SCREEN WALL
TENANT #2 SECURITY GATE
6.5' SECURITY FENCE TO B/C
10.5' SCREEN WALL TO B/C
10' SCREEN WALL TO BASIN WALL
MECHANICAL YARD
STARLINK ANTENNA YARD
STORMTRAP UNDERGROUND STORAGE
OFF-SITE RETENTION POND
11' SECURITY FENCE TO INTERIOR B/C
6' SECURITY FENCE TO SIDEWALK
5' SIDEWALK
OPTIONAL PASSENGER VEHICLE DROP-OFF AREA (PASSENGER VEHICLES ONLY. ALL OTHER DELIVERIES TO BE THROUGH THE LOADING DOCK AREA.
PROPOSED ORD01 BUILDING (PHASE 2)
FFE: 672.50
TENANT #2 ADMIN.
91 STD STALLS,
4 HC STALLS,
6 EV STALLS
1354.24' SERVICE DRIVE
PHASE 2
PHASE 1
TENANT #1 SECURITY GATE
E. ALGONQUIN ROAD
E ALGONQUIN RD
EMERGENCY ENTRANCE ORD01 – TENANT #2
10.4' SECURITY FENCE TO B/C
EMERGENCY ACCESS DRIVE 40' CANTILEVERED GATE
STRIPED AREA FOR VEHICLE TURN-AROUND AT THE SECURITY GATE BETWEEN TENANT #1 & TENANT #2 SITES
BIFOLD SECURITY GATE FOR PHASE 1 & 2 TENANTS W/KNOW BOX FOR FIRE DEPARTMENT ACCESS
PROPOSED ORD01 BUILDING (PHASE 1)
FFE: 672.50
TENANT #1 ADMIN.
148 STD STALLS,
4 HC STALLS,
6 EV STALLS
6' B/C TO SIDEWALK
14.5' SIDEWALK TO SECURITY FENCE
10' SIDEWALK
EMERGENCY ENTRANCE ORD01 – TENANT #1
TELEPHONE CABINET ON CONC. PAD
STREET LIGHT CABINET ON CONC. PAD
TRAFFIC SIGNAL CABINET
TRAFFIC LOOP (TYP)
CONC. PAD

## SITE DATA

| | | |
|---|---|---|
| LOCATION: | VILLAGE OF MT. PROSPECT, ILLINOIS<br>COOK COUNTY | |
| SITE AREA: | MAIN CAMPUS: 43.44 AC (1,892,416.79 SF) | |
| EXISTING PERMITTED USE: | LIMITED INDUSTRIAL | |
| BUILDING SETBACKS: | FRONT YARDS: 30 FT MIN FROM FRONT LOT LINE<br>SIDE YARDS: 15 FT MIN FROM AN INTERIOR SIDE LOT LINE<br>CORNER YARDS: 30 FT MIN FROM CORNER SIDE LOT LINE<br>REAR YARDS: 20 FT MIN FROM REAR LOT LINE<br>TRANSITION YARD: 40 FT MIN FROM RESIDENTIAL ZONING DISTRICT | |
| ZONING ORDINANCE: | VILLAGE OF MT. PROSPECT, ILLINOIS | |
| EXISTING ZONING: | I-1 | |
| PROPOSED ZONING: | PUD | |
| LOT COVERAGE: | MAXIMUM: 75%<br>MAIN CAMPUS PROVIDED: 82% | |
| PARKING: | INDUSTRIAL, RESEARCH AND DEVELOPMENT – 1 PARKING SPACE PER 1.5 EMPLOYEES PLUS 1 SPACE PER COMPANY VEHICLE<br>OFFICE – 4 SPACES PER 1,000 SF | |
| PARKING SETBACKS: | 10 FT MIN FROM PROPERTY LINE | |
| PARKING COUNT | PARKING REQUIRED (40 SPACES/60 MW UNIT): | 160 |
| | BUILDING PARKING PROVIDED (ORD01-PHASE 1) | 239 |
| | EV PARKING SPACES PROVIDED: | 12 |
| | ACCESSIBLE PARKING SPACES PROVIDED: | 8 |
| | TOTAL PARKING PROVIDED: | 259 |
| | BUILDING PARKING PROVIDED (ORD02-PHASE 2) | 100 |
| | EV PARKING SPACES PROVIDED: | 4 |
| | ACCESSIBLE PARKING SPACES PROVIDED: | 4 |
| | TOTAL PARKING PROVIDED: | 108 |
| PARKING SPACES: | MINIMUM 9' x 18'<br>ACCESSIBLE – MINIMUM 8' x 16' | |

## KEYED NOTES

1. 8' SECURITY FENCE (AMERISTAR IMPASSE II)
2. CANTILEVERED SECURITY GATE (AMERISTAR IMPASSE II)
3. SWING SECURITY GATE (AMERISTAR IMPASSE II)
4. GUARD SHACK (10'x25')
5. ADA PARKING STALLS
6. EV PARKING STALLS W/DUAL CHARGE STATIONS
7. UNDERGROUND FUEL TANKS
8. SANITARY SEWER LIFT STATION
9. EMERGENCY ACCESS DRIVE – ALGONQUIN ROAD
10. EMERGENCY ACCESS DRIVE – DEMPSTER AVENUE
11. 5' MODULAR BLOCK RETAINING WALL
12. MODULAR BLOCK RETAINING WALL – DETENTION
13. UNDERGROUND UREA TANKS
14. TES TANK
15. FUEL POLISHING SHED

N

GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60 ft.

CORGAN

kW Mission Critical Engineering Member of WSP

PASE 408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC. CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |

REVISIONS

This Document was produced by or under the authority of Registered Engineer: Donald E. Dixon

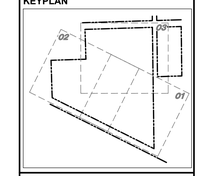
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: P.E.
DONALD E. DIXON
Date: 06.30.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN




SITE PLAN - OVERALL

JOB 5253.220
SHEET C01-03

# APPENDIX F

## *ITE Trip Generation Excerpts*

GEWALT HAMILTON ASSOCIATES, INC.

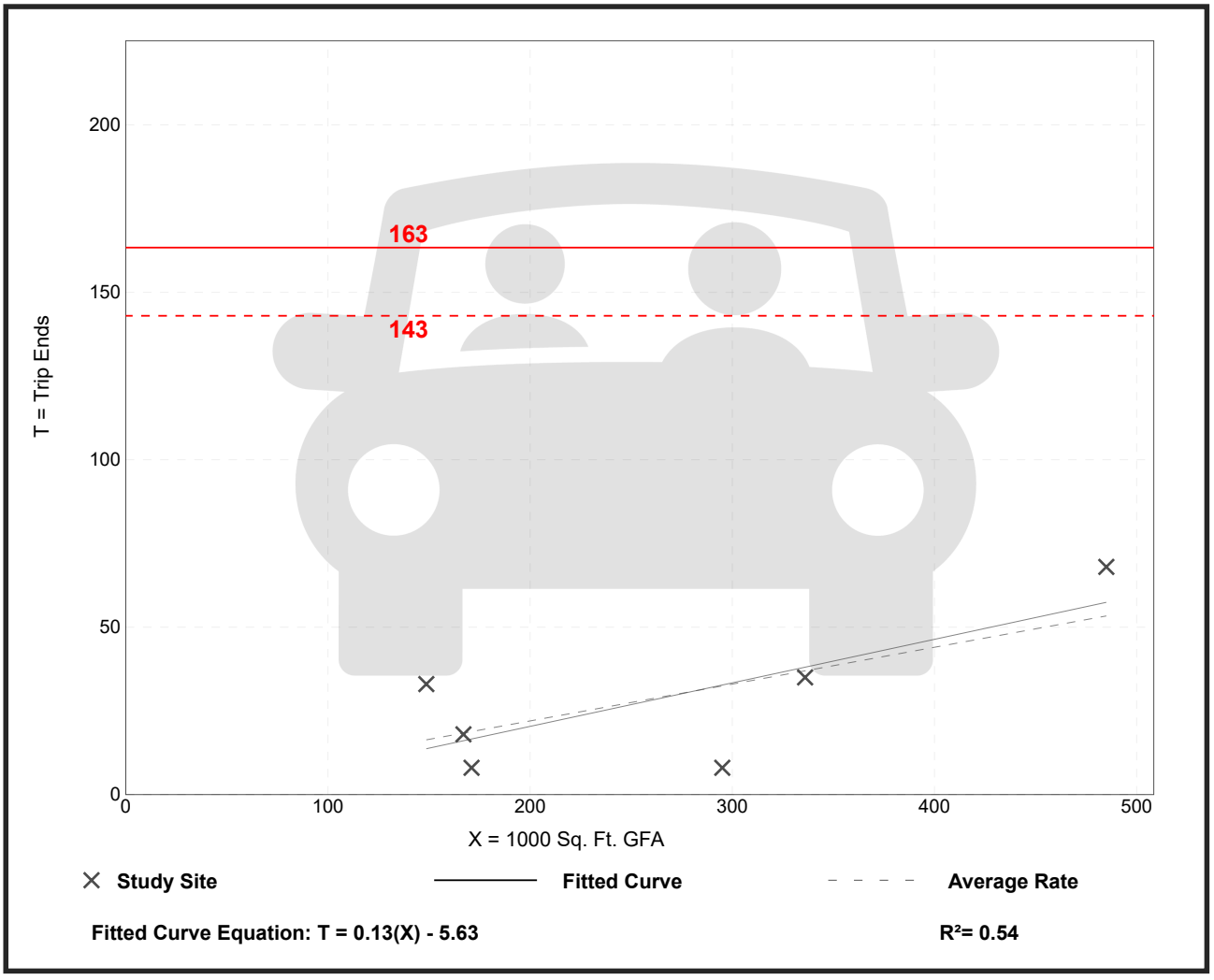
# Data Center
(160)

**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 267
Directional Distribution: 55% entering, 45% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.11 | 0.03 - 0.22 | 0.06 |

## Data Plot and Equation




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# Data Center
(160)

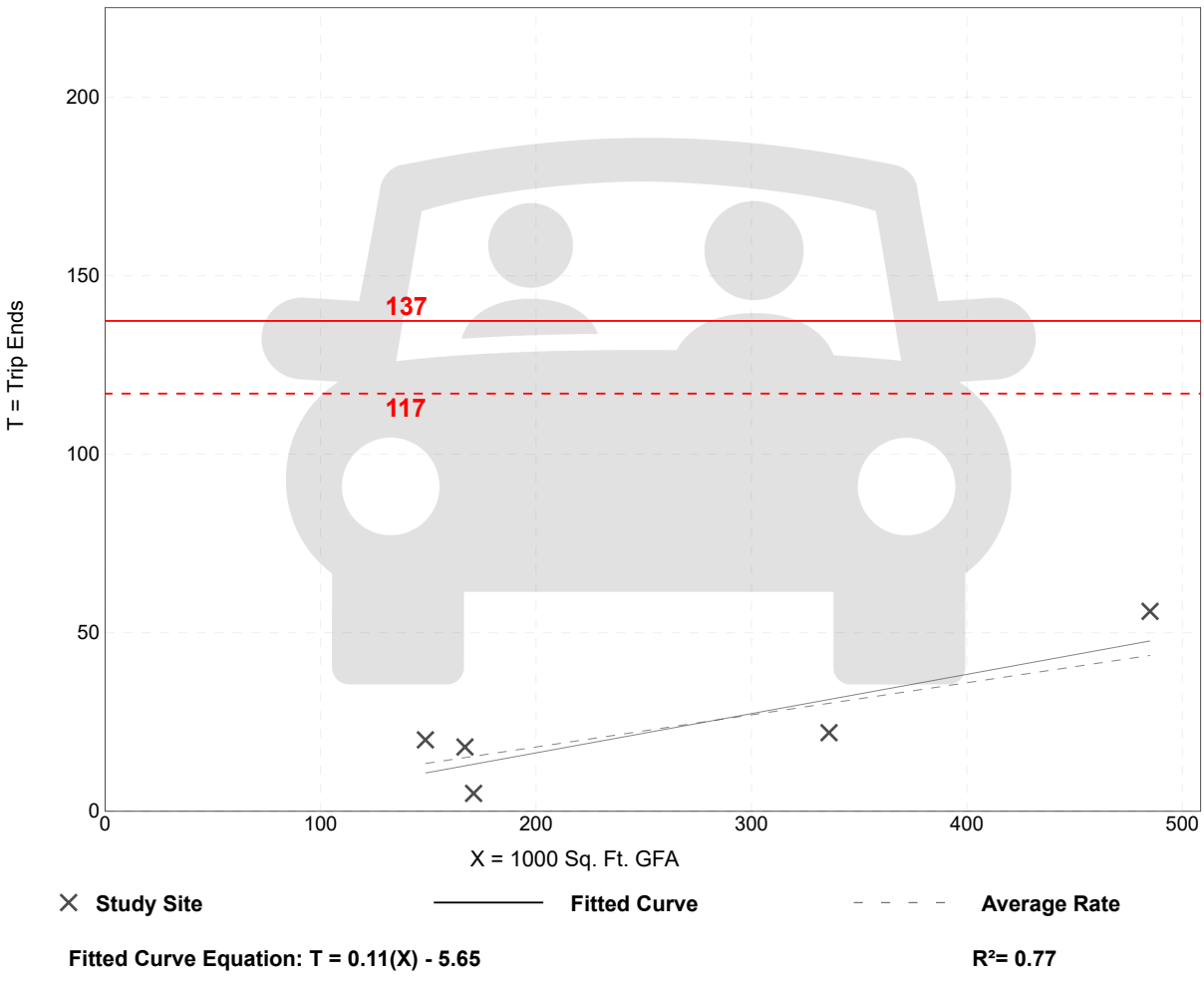
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 262
Directional Distribution: 30% entering, 70% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.09 | 0.03 - 0.13 | 0.04 |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: T = 0.11(X) - 5.65**

**$R^2$= 0.77**

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Appendix F

# Data Center
(160)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Weekday**

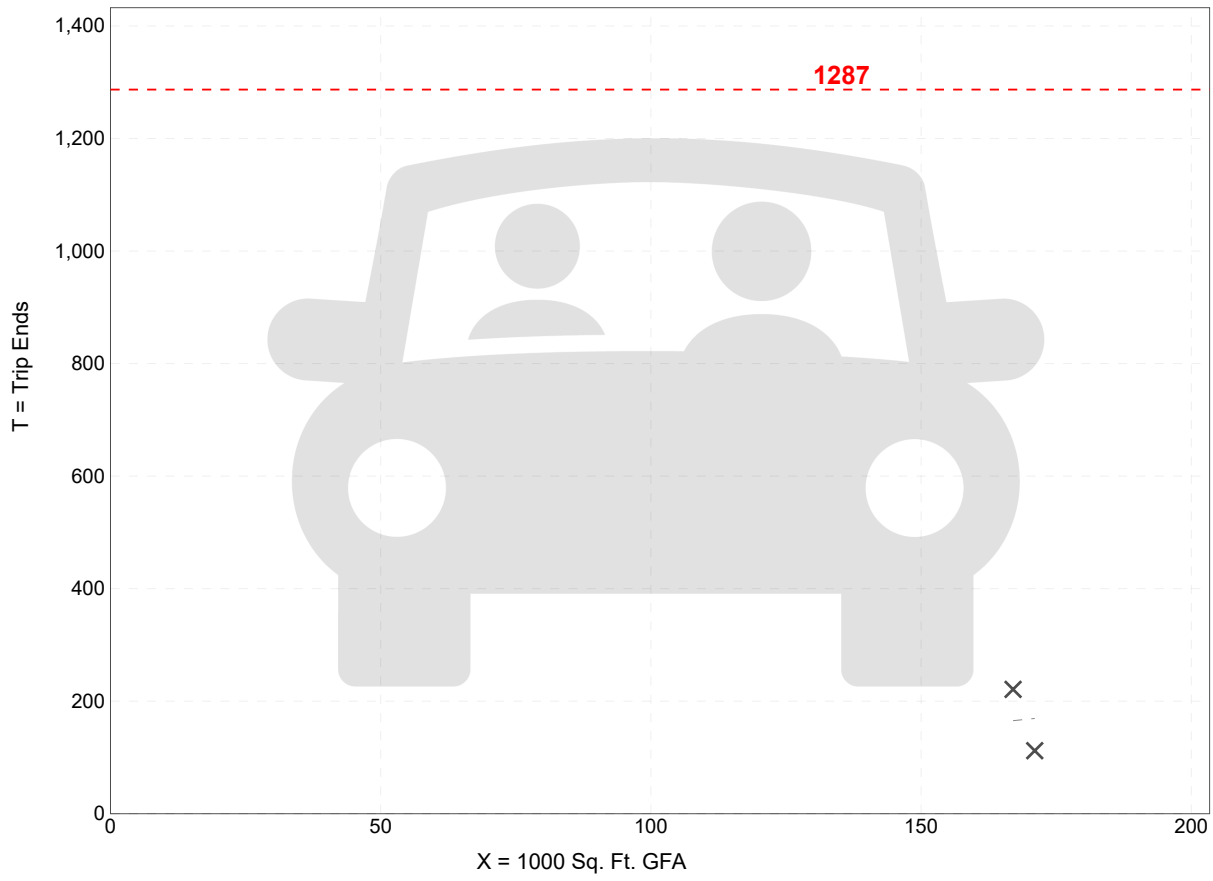
**Setting/Location: General Urban/Suburban**
Number of Studies: 2
Avg. 1000 Sq. Ft. GFA: 169
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.99 | 0.65 - 1.32 | * |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ****

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Appendix F

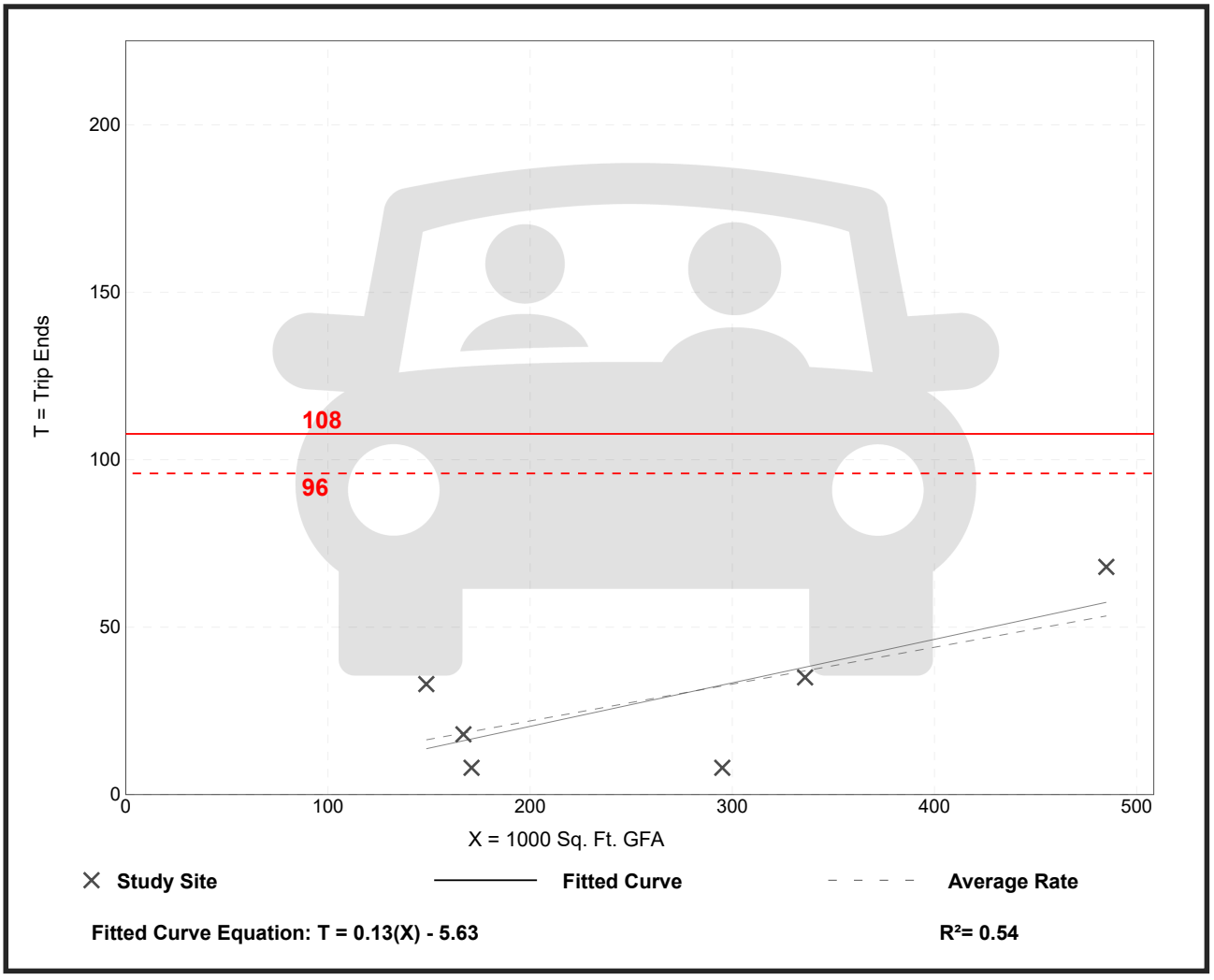
# Data Center
(160)

**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 267
Directional Distribution: 55% entering, 45% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.11 | 0.03 - 0.22 | 0.06 |

## Data Plot and Equation




*Trip Gen Manual,* 11th Edition ● Institute of Transportation Engineers

# Data Center
(160)

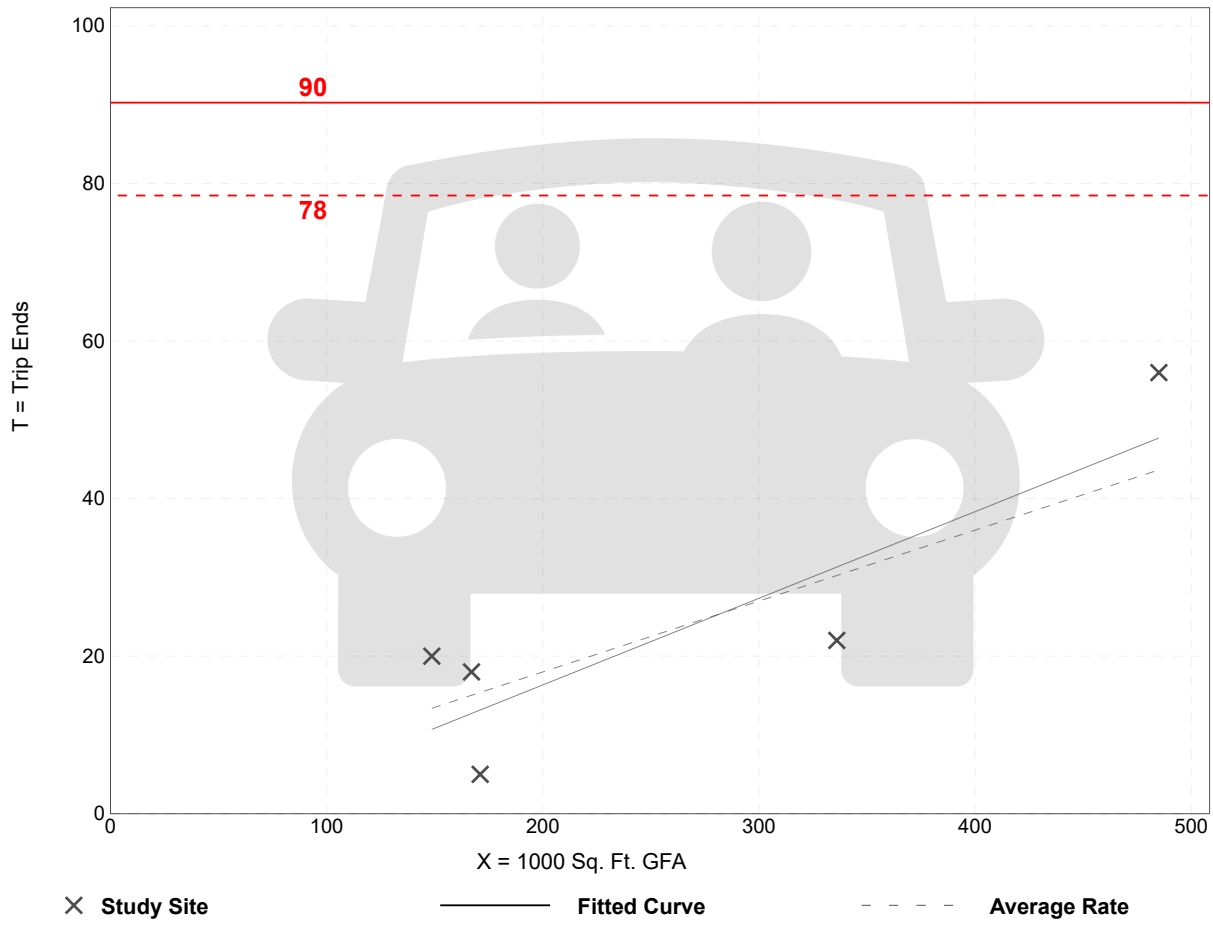
**Vehicle Trip Ends vs:** **1000 Sq. Ft. GFA**
**On a:** **Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location:** **General Urban/Suburban**
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 262
Directional Distribution: 30% entering, 70% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.09 | 0.03 - 0.13 | 0.04 |

## Data Plot and Equation

***Caution – Small Sample Size***




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Appendix F

# Data Center
(160)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**
**On a: Weekday**

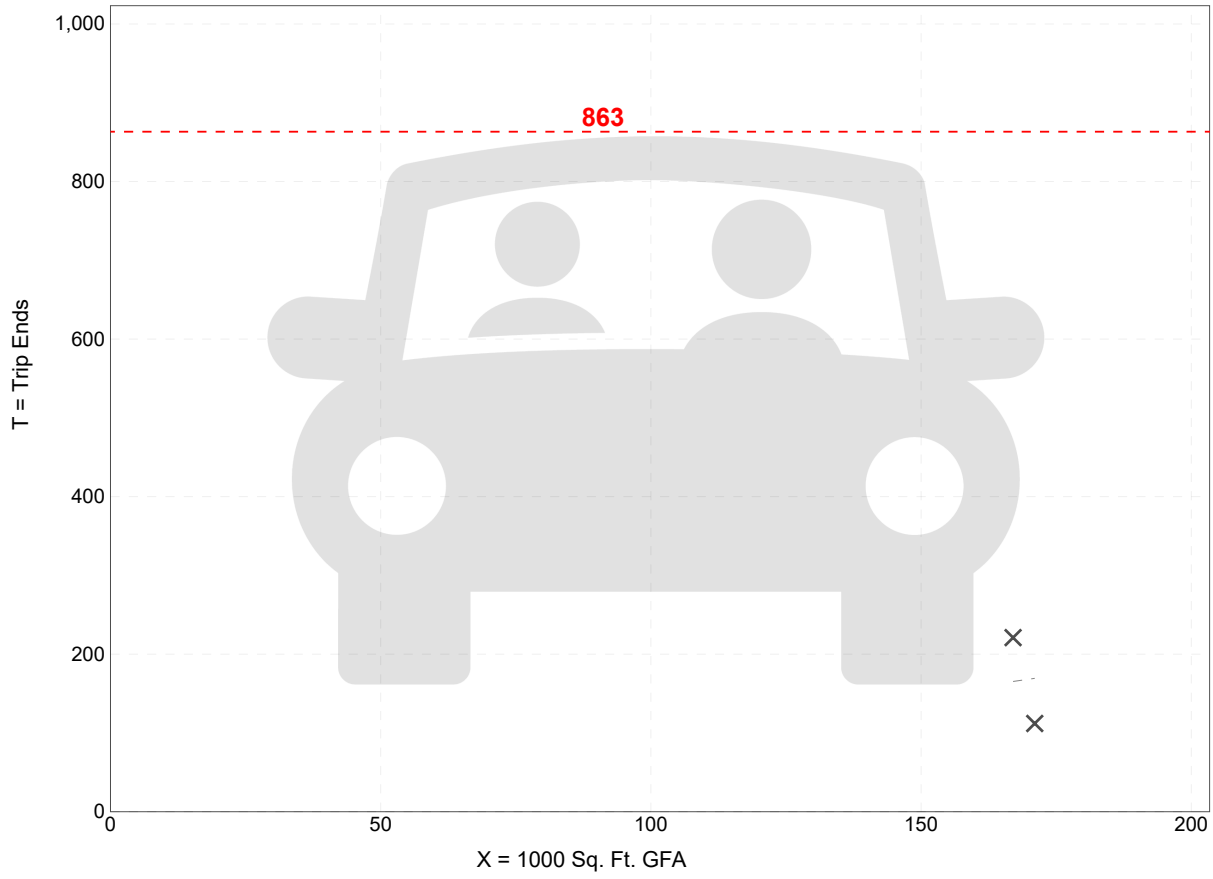
**Setting/Location: General Urban/Suburban**
Number of Studies: 2
Avg. 1000 Sq. Ft. GFA: 169
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.99 | 0.65 - 1.32 | * |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ****

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# Land Use: 160
# Data Center

## Description

A data center is a free-standing warehouse type of facility that is primarily used for off-site storage of computer systems and associated components including applications and secure data. Some data centers may include maintenance areas and a small office. Data centers may be occupied by single or multiple tenants. Data centers typically have a small number of employees and visitors.

## Additional Data

For the two data sites with time-of-day data, the AM and PM peak hours for the sites were between 6:30 and 7:30 a.m. and 3:00 and 4:00 p.m., respectively.

The sites were surveyed in the 2010s in Illinois and Virginia.

***Caution should be used when applying trip generation rates for data centers, as the database contains a small number of sites with limited data on the number of tenants and employees. To assist in the future analysis of this land use, it is important that this information be reported.***

## Source Numbers

660, 958

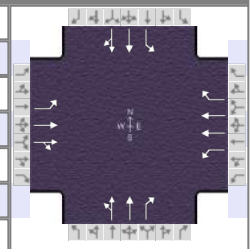
# APPENDIX G

## *Capacity Analysis Worksheets*

GEWALT HAMILTON ASSOCIATES, INC.

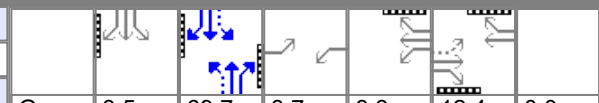
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | DB | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

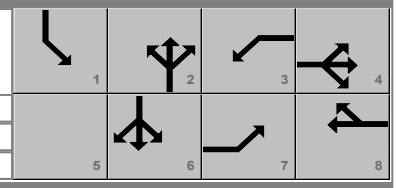


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 129 | 8 | 199 | 184 | 57 | 8 | 451 | 154 | 62 | 708 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 3.5 | 69.7 | 3.7 | 8.3 | 12.4 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 43 | 129 | 8 | 199 | 184 | 57 | 8 | 451 | 154 | 62 | 708 | 60 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 1 | | 2 | 4 | 16 | | 11 | 15 | 8 | 7 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | 105 | 0 | | 175 | 0 | 125 | | 0 | 145 | 205 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 35 | 35 | 35 |

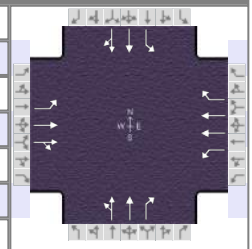
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.6 | 26.4 | 25.2 | 36.0 | | 49.2 | 19.2 | 68.4 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 8 | 3 | 8 | | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 5.0 | 3.0 | 5.0 | | 2.0 | 3.0 | 2.0 |
| Recall Mode | Off | Off | Off | Off | | Min | Off | Min |
| Dual Entry | No | Yes | No | Yes | | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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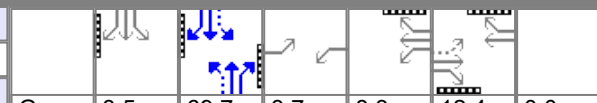
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | DB | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

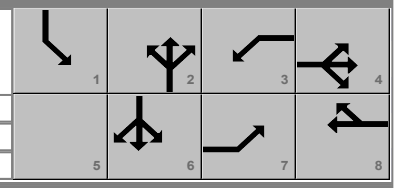


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 129 | 8 | 199 | 184 | 57 | 8 | 451 | 154 | 62 | 708 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 3.5 | 69.7 | 3.7 | 8.3 | 12.4 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 7 | 4 | 3 | 8 | | 2 | 1 | 6 |
| Case Number | 1.1 | 4.0 | 2.0 | 3.0 | | 7.3 | 1.0 | 4.0 |
| Phase Duration, s | 7.2 | 18.4 | 19.0 | 30.2 | | 75.7 | 7.0 | 82.7 |
| Change Period, ( *Y+R c* ), s | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 9.1 | 4.0 | 9.1 | | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( *g s* ), s | 4.7 | 6.4 | 15.1 | 7.6 | | | 3.8 | |
| Green Extension Time ( *g e* ), s | 0.0 | 6.0 | 0.3 | 7.3 | | 0.0 | 0.2 | 0.0 |
| Phase Call Probability | 0.78 | 1.00 | 1.00 | 1.00 | | | 0.89 | |
| Max Out Probability | 0.01 | 0.27 | 0.16 | 0.08 | | | 0.00 | |

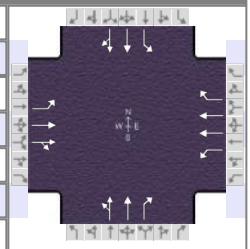
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | 45 | 72 | 72 | 209 | 194 | 60 | 250 | 233 | 162 | 65 | 410 | 399 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 1885 | 1846 | 1875 | 1752 | 1409 | 1781 | 1664 | 1422 | 1697 | 1796 | 1746 |
| Queue Service Time ( *g s* ), s | 2.7 | 4.3 | 4.4 | 13.1 | 5.6 | 4.3 | 0.0 | 4.7 | 6.5 | 1.8 | 5.8 | 7.0 |
| Cycle Queue Clearance Time ( *g c* ), s | 2.7 | 4.3 | 4.4 | 13.1 | 5.6 | 4.3 | 4.7 | 4.7 | 6.5 | 1.8 | 5.8 | 7.0 |
| Green Ratio ( *g/C* ) | 0.13 | 0.10 | 0.10 | 0.13 | 0.20 | 0.20 | 0.58 | 0.58 | 0.58 | 0.63 | 0.64 | 0.64 |
| Capacity ( *c* ), veh/h | 240 | 194 | 190 | 242 | 706 | 284 | 1065 | 966 | 825 | 584 | 1148 | 1116 |
| Volume-to-Capacity Ratio ( *X* ) | 0.189 | 0.372 | 0.378 | 0.867 | 0.274 | 0.211 | 0.235 | 0.241 | 0.196 | 0.112 | 0.357 | 0.357 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 54 | 97 | 96 | 291 | 113 | 77 | 79 | 78 | 104 | 31 | 92 | 104 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 2.2 | 3.8 | 3.8 | 11.5 | 4.4 | 2.7 | 3.1 | 2.9 | 3.7 | 1.2 | 3.5 | 4.1 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.52 | 0.00 | 0.00 | 1.66 | 0.00 | 0.62 | 0.00 | 0.00 | 0.72 | 0.15 | 0.00 | 0.00 |
| Uniform Delay ( *d 1* ), s/veh | 46.2 | 50.2 | 50.2 | 51.3 | 40.5 | 40.0 | 6.4 | 6.2 | 11.9 | 8.9 | 3.6 | 4.6 |
| Incremental Delay ( *d 2* ), s/veh | 0.4 | 2.5 | 2.6 | 15.4 | 0.4 | 0.8 | 0.5 | 0.6 | 0.5 | 0.1 | 0.9 | 0.9 |
| Initial Queue Delay ( *d 3* ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 46.6 | 52.7 | 52.9 | 66.7 | 40.9 | 40.8 | 6.9 | 6.8 | 12.4 | 9.0 | 4.5 | 5.5 |
| Level of Service (LOS) | D | D | D | E | D | D | A | A | B | A | A | A |
| Approach Delay, s/veh / LOS | 51.3 | D | | 52.6 | D | | 8.3 | A | | 5.3 | A | |
| Intersection Delay, s/veh / LOS | 20.3 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.31 | B | 2.30 | B | 2.40 | B | 2.24 | B |
| Bicycle LOS Score / LOS | 0.64 | A | 0.87 | A | 1.02 | A | 1.21 | A |

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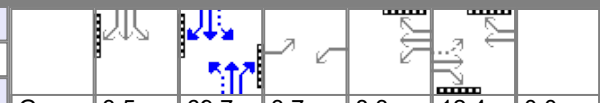
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | DB | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

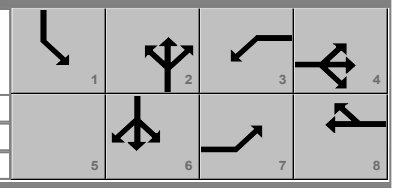


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 129 | 8 | 199 | 184 | 57 | 8 | 451 | 154 | 62 | 708 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 3.5 | 69.7 | 3.7 | 8.3 | 12.4 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



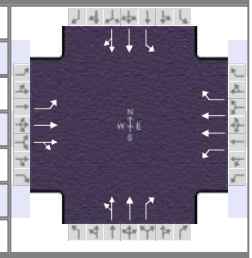

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.992 | 1.000 | 0.984 | 0.969 | 0.875 | 1.000 | 0.914 | 0.883 | 0.938 | 0.945 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.974 | 0.974 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.979 | 0.979 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.972 | 0.972 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3515 | 216 | 1875 | 3505 | 1409 | 60 | 3385 | 1422 | 1697 | 3266 | 277 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.10 | 0.10 | 0.13 | 0.20 | 0.20 | 0.58 | 0.77 | 0.58 | 0.03 | 0.85 | 0.64 |
| Incremental Delay Factor ($k$) | 0.11 | 0.23 | 0.23 | 0.20 | 0.23 | 0.23 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.13 | 0.10 | 0.13 | 0.20 | | 0.58 | 0.63 | 0.64 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 1208 | 0 | 0 | 0 | | 685 | 876 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 12.4 | 0.0 | 0.0 | 0.0 | | 69.7 | 71.7 | 0.0 |
| Permitted Service Time ($g_u$), s | 12.4 | 0.0 | 0.0 | 0.0 | | 69.6 | 65.0 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.0 | | | | | 0.0 | 0.5 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 40.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 4.7 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | 0 | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | 0.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.557 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.155 | 0.000 | 0.146 | 0.000 | 0.095 | 0.000 | 0.082 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 206.04 | 48.27 | 402.81 | 38.27 | 1161.01 | 10.56 | 1277.78 | 7.82 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.16 | -3.64 | 0.38 | -3.64 | 0.53 | -3.64 | 0.72 |

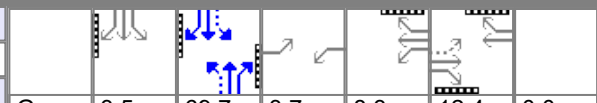
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | DB | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

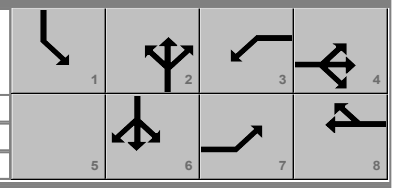


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 129 | 8 | 199 | 184 | 57 | 8 | 451 | 154 | 62 | 708 | 60 |

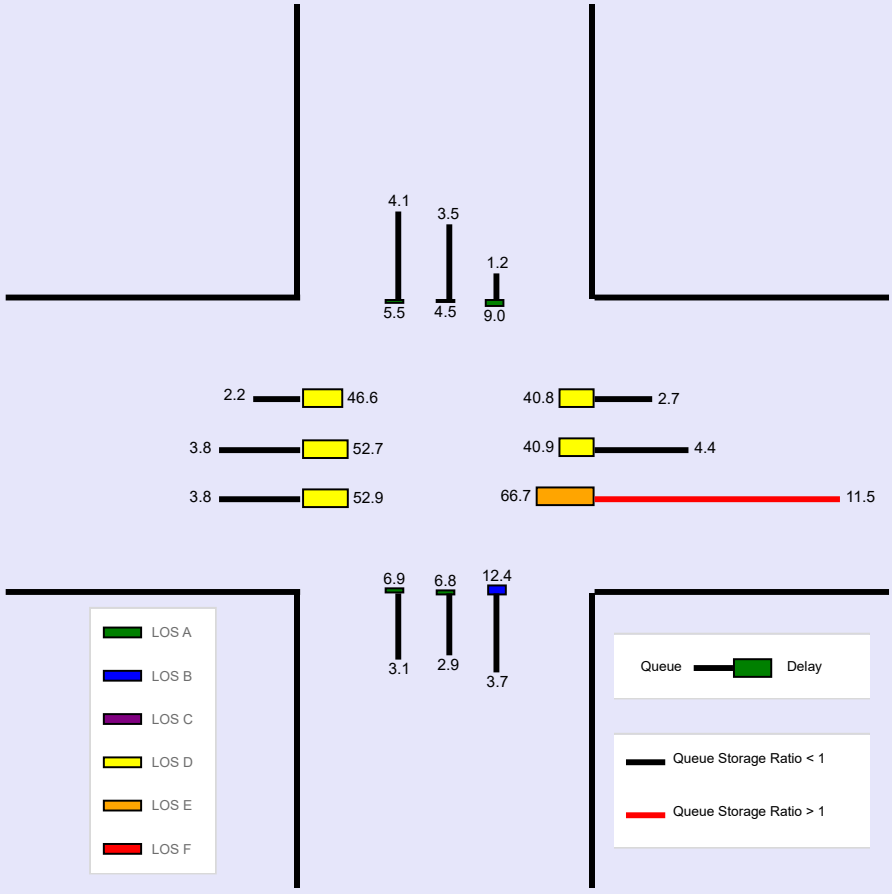
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 3.5 | 69.7 | 3.7 | 8.3 | 12.4 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 54 | 97 | 96 | 291 | 113 | 77 | 79 | 78 | 104 | 31 | 92 | 104 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 2.2 | 3.8 | 3.8 | 11.5 | 4.4 | 2.7 | 3.1 | 2.9 | 3.7 | 1.2 | 3.5 | 4.1 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.52 | 0.00 | 0.00 | 1.66 | 0.00 | 0.62 | 0.00 | 0.00 | 0.72 | 0.15 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | 46.6 | 52.7 | 52.9 | 66.7 | 40.9 | 40.8 | 6.9 | 6.8 | 12.4 | 9.0 | 4.5 | 5.5 |
| Level of Service (LOS) | D | D | D | E | D | D | A | A | B | A | A | A |
| Approach Delay, s/veh / LOS | 51.3 | D | | 52.6 | D | | 8.3 | A | | 5.3 | A | |
| Intersection Delay, s/veh / LOS | 20.3 | | | | | | C | | | | | |



## --- Messages ---

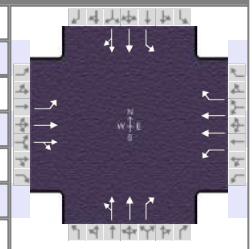
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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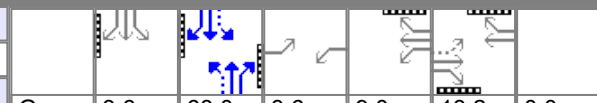
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

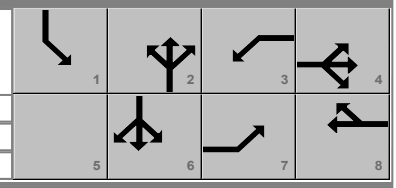


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 147 | 8 | 209 | 194 | 58 | 8 | 466 | 156 | 64 | 728 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 3.6 | 68.0 | 3.6 | 9.0 | 13.2 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 43 | 147 | 8 | 209 | 194 | 58 | 8 | 466 | 156 | 64 | 728 | 60 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 1 | | 2 | 4 | 16 | | 11 | 15 | 8 | 7 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | 105 | 0 | | 175 | 0 | 125 | | 0 | 145 | 205 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 35 | 35 | 35 |

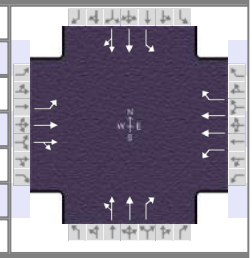
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.6 | 26.4 | 25.2 | 36.0 | | 49.2 | 19.2 | 68.4 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 8 | 3 | 8 | | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 5.0 | 3.0 | 5.0 | | 2.0 | 3.0 | 2.0 |
| Recall Mode | Off | Off | Off | Off | | Min | Off | Min |
| Dual Entry | No | Yes | No | Yes | | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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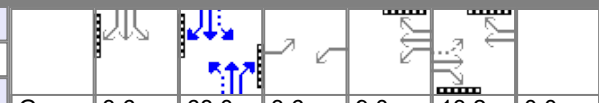
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

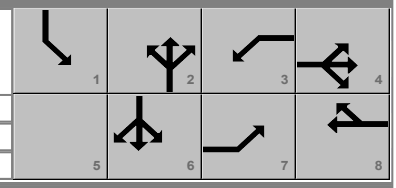


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 147 | 8 | 209 | 194 | 58 | 8 | 466 | 156 | 64 | 728 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 3.6 | 68.0 | 3.6 | 9.0 | 13.2 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 7 | 4 | 3 | 8 | | 2 | 1 | 6 |
| Case Number | 1.1 | 4.0 | 2.0 | 3.0 | | 7.3 | 1.0 | 4.0 |
| Phase Duration, s | 7.1 | 19.2 | 19.6 | 31.7 | | 74.0 | 7.1 | 81.2 |
| Change Period, ( *Y+R c* ), s | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 9.1 | 4.0 | 9.1 | | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( *g s* ), s | 4.6 | 6.9 | 15.8 | 7.8 | | | 3.9 | |
| Green Extension Time ( *g e* ), s | 0.0 | 6.3 | 0.3 | 8.0 | | 0.0 | 0.2 | 0.0 |
| Phase Call Probability | 0.78 | 1.00 | 1.00 | 1.00 | | | 0.89 | |
| Max Out Probability | 0.01 | 0.34 | 0.27 | 0.10 | | | 0.00 | |

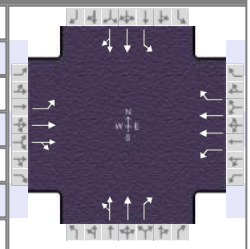
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | 45 | 82 | 81 | 220 | 204 | 61 | 259 | 240 | 164 | 67 | 420 | 409 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 1885 | 1851 | 1875 | 1752 | 1409 | 1783 | 1664 | 1422 | 1697 | 1796 | 1748 |
| Queue Service Time ( *g s* ), s | 2.6 | 4.8 | 4.9 | 13.8 | 5.8 | 4.3 | 0.0 | 5.2 | 6.8 | 1.9 | 6.7 | 7.9 |
| Cycle Queue Clearance Time ( *g c* ), s | 2.6 | 4.8 | 4.9 | 13.8 | 5.8 | 4.3 | 5.2 | 5.2 | 6.8 | 1.9 | 6.7 | 7.9 |
| Green Ratio ( *g/C* ) | 0.14 | 0.11 | 0.11 | 0.13 | 0.21 | 0.21 | 0.57 | 0.57 | 0.57 | 0.61 | 0.63 | 0.63 |
| Capacity ( *c* ), veh/h | 246 | 207 | 203 | 252 | 750 | 301 | 1042 | 943 | 806 | 563 | 1125 | 1095 |
| Volume-to-Capacity Ratio ( *X* ) | 0.184 | 0.395 | 0.400 | 0.873 | 0.272 | 0.203 | 0.248 | 0.255 | 0.204 | 0.120 | 0.373 | 0.374 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 54 | 109 | 108 | 306 | 117 | 77 | 88 | 88 | 110 | 33 | 106 | 117 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 2.2 | 4.3 | 4.3 | 12.1 | 4.5 | 2.7 | 3.5 | 3.2 | 3.9 | 1.3 | 4.0 | 4.7 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.51 | 0.00 | 0.00 | 1.75 | 0.00 | 0.62 | 0.00 | 0.00 | 0.76 | 0.16 | 0.00 | 0.00 |
| Uniform Delay ( *d 1* ), s/veh | 45.5 | 49.7 | 49.7 | 50.9 | 39.4 | 38.8 | 7.2 | 7.0 | 12.7 | 9.5 | 4.2 | 5.2 |
| Incremental Delay ( *d 2* ), s/veh | 0.4 | 2.6 | 2.7 | 17.0 | 0.4 | 0.7 | 0.6 | 0.7 | 0.6 | 0.1 | 1.0 | 1.0 |
| Initial Queue Delay ( *d 3* ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 45.8 | 52.3 | 52.4 | 67.9 | 39.8 | 39.5 | 7.7 | 7.6 | 13.3 | 9.6 | 5.2 | 6.2 |
| Level of Service (LOS) | D | D | D | E | D | D | A | A | B | A | A | A |
| Approach Delay, s/veh / LOS | 50.9 | D | | 52.5 | D | | 9.1 | A | | 6.0 | A | |
| Intersection Delay, s/veh / LOS | 21.1 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.31 | B | 2.30 | B | 2.41 | B | 2.24 | B |
| Bicycle LOS Score / LOS | 0.66 | A | 0.89 | A | 1.03 | A | 1.23 | A |

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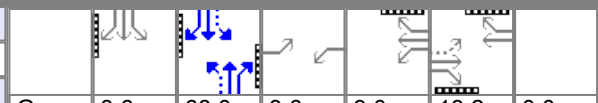
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

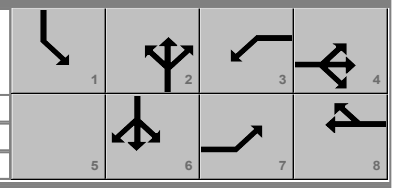


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 147 | 8 | 209 | 194 | 58 | 8 | 466 | 156 | 64 | 728 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 3.6 | 68.0 | 3.6 | 9.0 | 13.2 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



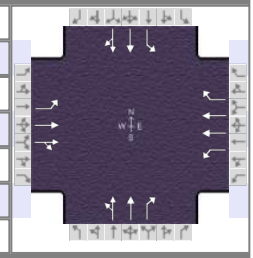

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.992 | 1.000 | 0.984 | 0.969 | 0.875 | 1.000 | 0.914 | 0.883 | 0.938 | 0.945 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.975 | 0.975 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.982 | 0.982 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.973 | 0.973 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3544 | 192 | 1875 | 3505 | 1409 | 58 | 3389 | 1422 | 1697 | 3274 | 270 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.11 | 0.11 | 0.13 | 0.21 | 0.21 | 0.57 | 0.76 | 0.57 | 0.03 | 0.84 | 0.63 |
| Incremental Delay Factor ($k$) | 0.11 | 0.23 | 0.23 | 0.22 | 0.23 | 0.23 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.14 | 0.11 | 0.13 | 0.21 | | 0.57 | 0.61 | 0.63 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 1197 | 0 | 0 | 0 | | 672 | 863 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 13.2 | 0.0 | 0.0 | 0.0 | | 68.0 | 70.0 | 0.0 |
| Permitted Service Time ($g_u$), s | 13.2 | 0.0 | 0.0 | 0.0 | | 67.3 | 62.8 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.0 | | | | | 0.0 | 0.6 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 40.1 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 5.2 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | 0 | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | 0.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.557 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.155 | 0.000 | 0.145 | 0.000 | 0.097 | 0.000 | 0.085 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 219.76 | 47.54 | 427.83 | 37.08 | 1133.92 | 11.25 | 1253.03 | 8.37 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.17 | -3.64 | 0.40 | -3.64 | 0.55 | -3.64 | 0.74 |

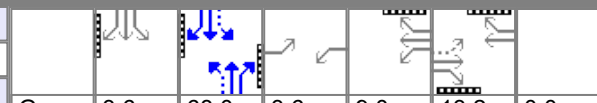
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

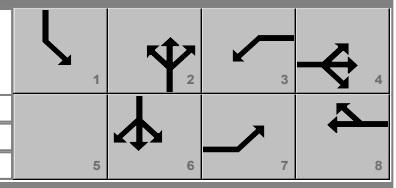


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 147 | 8 | 209 | 194 | 58 | 8 | 466 | 156 | 64 | 728 | 60 |

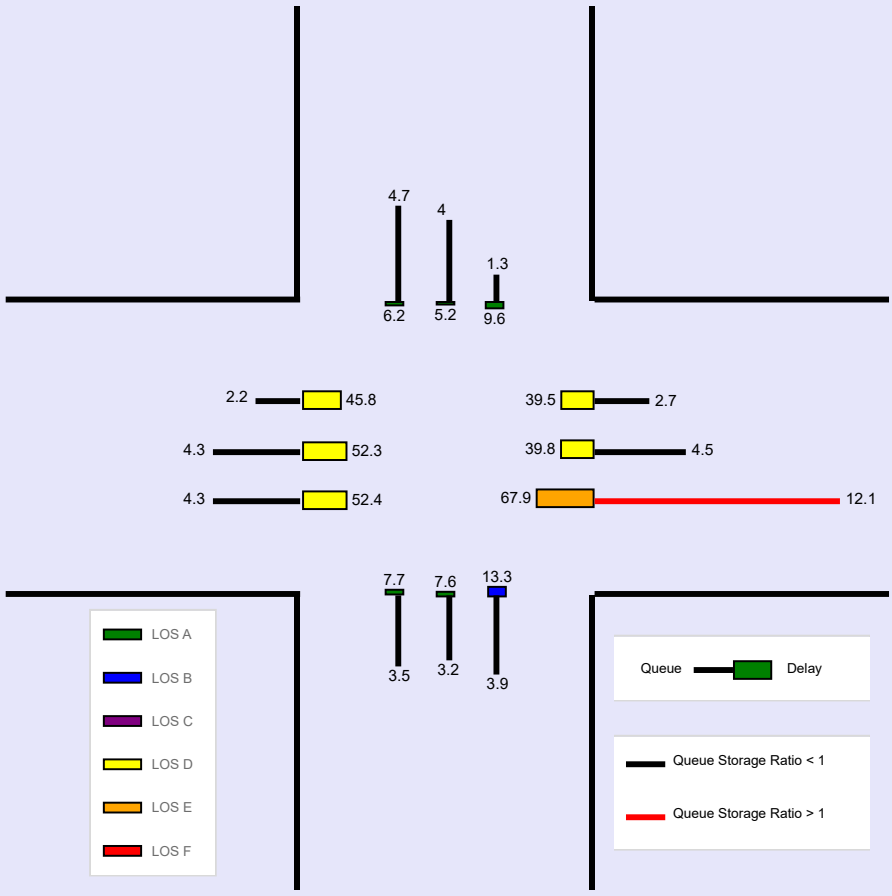
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 3.6 | 68.0 | 3.6 | 9.0 | 13.2 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 54 | 109 | 108 | 306 | 117 | 77 | 88 | 88 | 110 | 33 | 106 | 117 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 2.2 | 4.3 | 4.3 | 12.1 | 4.5 | 2.7 | 3.5 | 3.2 | 3.9 | 1.3 | 4.0 | 4.7 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.51 | 0.00 | 0.00 | 1.75 | 0.00 | 0.62 | 0.00 | 0.00 | 0.76 | 0.16 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | 45.8 | 52.3 | 52.4 | 67.9 | 39.8 | 39.5 | 7.7 | 7.6 | 13.3 | 9.6 | 5.2 | 6.2 |
| Level of Service (LOS) | D | D | D | E | D | D | A | A | B | A | A | A |
| Approach Delay, s/veh / LOS | 50.9 | D | | 52.5 | D | | 9.1 | A | | 6.0 | A | |
| Intersection Delay, s/veh / LOS | 21.1 | | | | | | C | | | | | |



## --- Messages ---

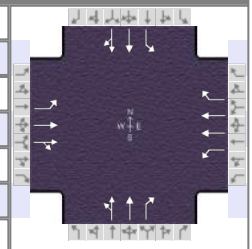
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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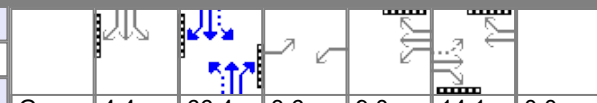
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

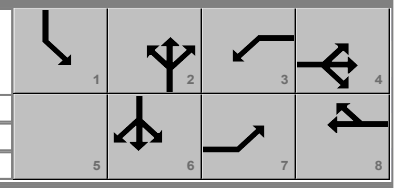


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 162 | 8 | 209 | 206 | 70 | 8 | 466 | 156 | 79 | 728 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 4.4 | 66.4 | 3.6 | 9.0 | 14.1 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 43 | 162 | 8 | 209 | 206 | 70 | 8 | 466 | 156 | 79 | 728 | 60 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 1 | | 2 | 4 | 16 | | 11 | 15 | 8 | 7 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | 105 | 0 | | 175 | 0 | 125 | | 0 | 145 | 205 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 35 | 35 | 35 |

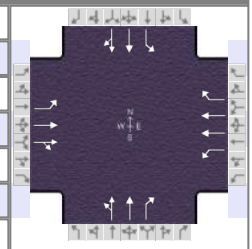
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.6 | 26.4 | 25.2 | 36.0 | | 49.2 | 19.2 | 68.4 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 8 | 3 | 8 | | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 5.0 | 3.0 | 5.0 | | 2.0 | 3.0 | 2.0 |
| Recall Mode | Off | Off | Off | Off | | Min | Off | Min |
| Dual Entry | No | Yes | No | Yes | | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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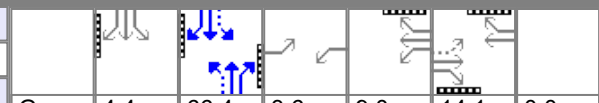
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

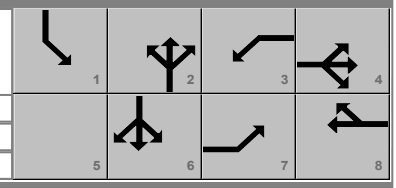


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 162 | 8 | 209 | 206 | 70 | 8 | 466 | 156 | 79 | 728 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 4.4 | 66.4 | 3.6 | 9.0 | 14.1 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 7 | 4 | 3 | 8 | | 2 | 1 | 6 |
| Case Number | 1.1 | 4.0 | 2.0 | 3.0 | | 7.3 | 1.0 | 4.0 |
| Phase Duration, s | 7.1 | 20.1 | 19.6 | 32.6 | | 72.4 | 7.9 | 80.3 |
| Change Period, ( *Y+R c* ), s | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 9.0 | 4.0 | 9.0 | | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( *g s* ), s | 4.6 | 7.4 | 15.8 | 8.2 | | | 4.4 | |
| Green Extension Time ( *g e* ), s | 0.0 | 6.7 | 0.3 | 8.7 | | 0.0 | 0.2 | 0.0 |
| Phase Call Probability | 0.78 | 1.00 | 1.00 | 1.00 | | | 0.94 | |
| Max Out Probability | 0.01 | 0.40 | 0.27 | 0.13 | | | 0.00 | |

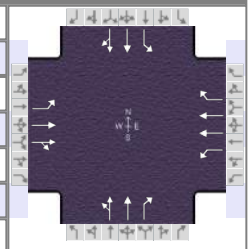
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | 45 | 90 | 89 | 220 | 217 | 74 | 259 | 240 | 164 | 83 | 420 | 409 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 1885 | 1854 | 1875 | 1752 | 1409 | 1784 | 1664 | 1422 | 1697 | 1796 | 1748 |
| Queue Service Time ( *g s* ), s | 2.6 | 5.3 | 5.4 | 13.8 | 6.2 | 5.2 | 0.0 | 5.6 | 7.0 | 2.4 | 7.1 | 8.3 |
| Cycle Queue Clearance Time ( *g c* ), s | 2.6 | 5.3 | 5.4 | 13.8 | 6.2 | 5.2 | 5.6 | 5.6 | 7.0 | 2.4 | 7.1 | 8.3 |
| Green Ratio ( *g/C* ) | 0.15 | 0.12 | 0.12 | 0.13 | 0.22 | 0.22 | 0.55 | 0.55 | 0.55 | 0.61 | 0.62 | 0.62 |
| Capacity ( *c* ), veh/h | 254 | 221 | 218 | 252 | 776 | 312 | 1019 | 921 | 787 | 559 | 1112 | 1082 |
| Volume-to-Capacity Ratio ( *X* ) | 0.179 | 0.406 | 0.410 | 0.873 | 0.279 | 0.236 | 0.254 | 0.261 | 0.209 | 0.149 | 0.378 | 0.378 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 53 | 118 | 117 | 306 | 124 | 93 | 96 | 96 | 114 | 43 | 113 | 123 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 2.1 | 4.7 | 4.7 | 12.1 | 4.8 | 3.3 | 3.8 | 3.5 | 4.1 | 1.6 | 4.3 | 4.9 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.51 | 0.00 | 0.00 | 1.75 | 0.00 | 0.74 | 0.00 | 0.00 | 0.79 | 0.21 | 0.00 | 0.00 |
| Uniform Delay ( *d 1* ), s/veh | 44.7 | 49.1 | 49.1 | 50.9 | 38.8 | 38.4 | 7.9 | 7.7 | 13.5 | 10.0 | 4.6 | 5.6 |
| Incremental Delay ( *d 2* ), s/veh | 0.3 | 2.5 | 2.6 | 17.0 | 0.4 | 0.8 | 0.6 | 0.7 | 0.6 | 0.1 | 1.0 | 1.0 |
| Initial Queue Delay ( *d 3* ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 45.0 | 51.6 | 51.7 | 67.9 | 39.2 | 39.2 | 8.5 | 8.4 | 14.1 | 10.2 | 5.6 | 6.6 |
| Level of Service (LOS) | D | D | D | E | D | D | A | A | B | B | A | A |
| Approach Delay, s/veh / LOS | 50.3 | D | | 51.6 | D | | 9.9 | A | | 6.5 | A | |
| Intersection Delay, s/veh / LOS | 21.7 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.31 | B | 2.30 | B | 2.41 | B | 2.24 | B |
| Bicycle LOS Score / LOS | 0.67 | A | 0.91 | A | 1.03 | A | 1.24 | A |

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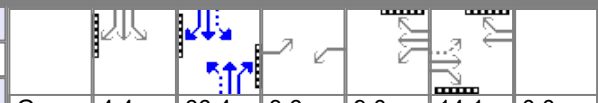
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

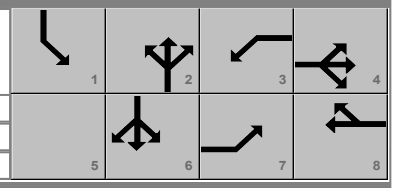


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 162 | 8 | 209 | 206 | 70 | 8 | 466 | 156 | 79 | 728 | 60 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 4.4 | 66.4 | 3.6 | 9.0 | 14.1 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



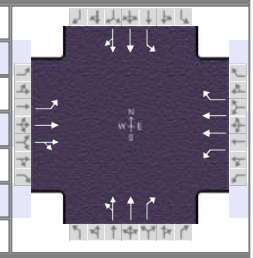

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.992 | 1.000 | 0.984 | 0.969 | 0.875 | 1.000 | 0.914 | 0.883 | 0.938 | 0.945 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.976 | 0.976 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.983 | 0.983 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.973 | 0.973 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3564 | 175 | 1875 | 3505 | 1409 | 58 | 3390 | 1422 | 1697 | 3274 | 270 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.12 | 0.12 | 0.13 | 0.22 | 0.22 | 0.55 | 0.74 | 0.55 | 0.04 | 0.83 | 0.62 |
| Incremental Delay Factor ($k$) | 0.11 | 0.23 | 0.23 | 0.22 | 0.23 | 0.23 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.15 | 0.12 | 0.13 | 0.22 | | 0.55 | 0.61 | 0.62 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 1183 | 0 | 0 | 0 | | 672 | 863 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 14.1 | 0.0 | 0.0 | 0.0 | | 66.4 | 68.4 | 0.0 |
| Permitted Service Time ($g_u$), s | 14.1 | 0.0 | 0.0 | 0.0 | | 66.0 | 60.8 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.0 | | | | | 0.0 | 0.8 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 39.6 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 5.6 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | 0 | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | 0.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.557 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.154 | 0.000 | 0.144 | 0.000 | 0.099 | 0.000 | 0.087 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 234.67 | 46.75 | 443.02 | 36.36 | 1107.24 | 11.96 | 1238.12 | 8.71 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.18 | -3.64 | 0.42 | -3.64 | 0.55 | -3.64 | 0.75 |

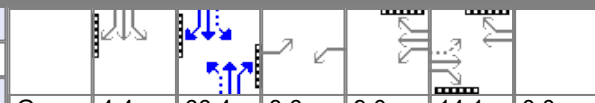
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

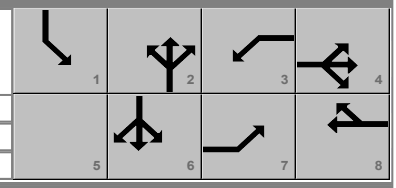


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 43 | 162 | 8 | 209 | 206 | 70 | 8 | 466 | 156 | 79 | 728 | 60 |

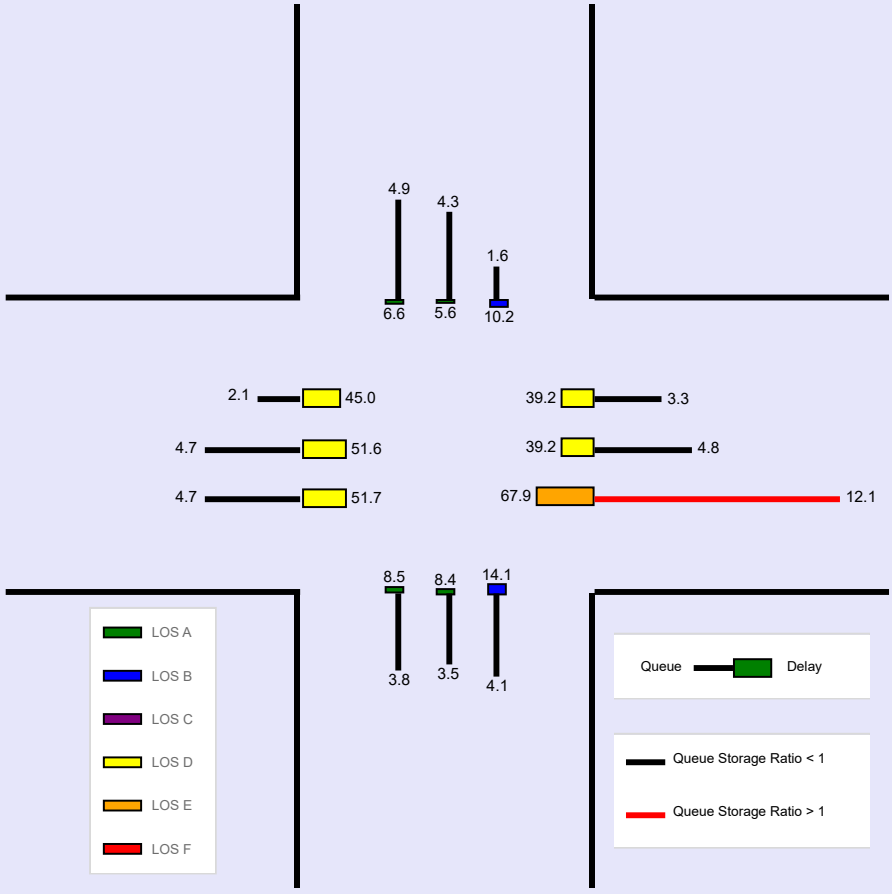
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 4.4 | 66.4 | 3.6 | 9.0 | 14.1 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 53 | 118 | 117 | 306 | 124 | 93 | 96 | 96 | 114 | 43 | 113 | 123 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 2.1 | 4.7 | 4.7 | 12.1 | 4.8 | 3.3 | 3.8 | 3.5 | 4.1 | 1.6 | 4.3 | 4.9 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.51 | 0.00 | 0.00 | 1.75 | 0.00 | 0.74 | 0.00 | 0.00 | 0.79 | 0.21 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | 45.0 | 51.6 | 51.7 | 67.9 | 39.2 | 39.2 | 8.5 | 8.4 | 14.1 | 10.2 | 5.6 | 6.6 |
| Level of Service (LOS) | D | D | D | E | D | D | A | A | B | B | A | A |
| Approach Delay, s/veh / LOS | 50.3 | D | | 51.6 | D | | 9.9 | A | | 6.5 | A | |
| Intersection Delay, s/veh / LOS | 21.7 | | | | | | C | | | | | |



## --- Messages ---

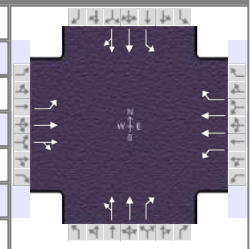
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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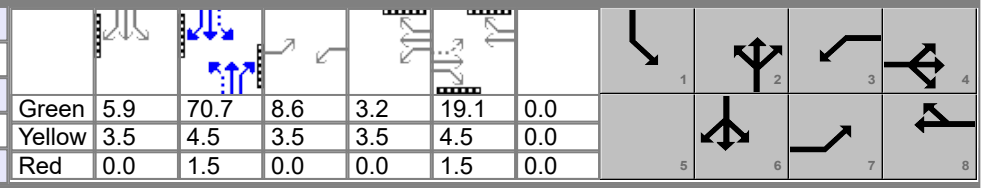
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 245 | 23 | 180 | 182 | 121 | 18 | 740 | 313 | 114 | 549 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 5.9 | 70.7 | 8.6 | 3.2 | 19.1 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |

| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 105 | 245 | 23 | 180 | 182 | 121 | 18 | 740 | 313 | 114 | 549 | 74 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 1 | | 3 | 3 | 3 | | 1 | 1 | 1 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | 105 | 0 | | 175 | 0 | 125 | | 0 | 145 | 205 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 35 | 35 | 35 |

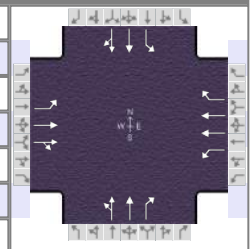
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.6 | 28.6 | 24.7 | 37.7 | | 57.2 | 19.5 | 76.7 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 8 | 3 | 8 | | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 5.0 | 3.0 | 5.0 | | 2.0 | 3.0 | 2.0 |
| Recall Mode | Off | Off | Off | Off | | Min | Off | Min |
| Dual Entry | No | Yes | No | Yes | | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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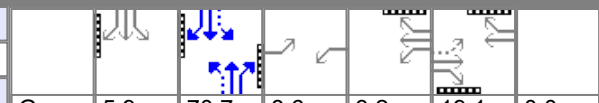
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

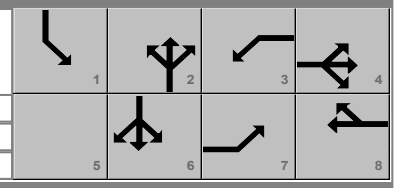


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 245 | 23 | 180 | 182 | 121 | 18 | 740 | 313 | 114 | 549 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.9 | 70.7 | 8.6 | 3.2 | 19.1 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 7 | 4 | 3 | 8 | | 2 | 1 | 6 |
| Case Number | 1.1 | 4.0 | 2.0 | 3.0 | | 7.3 | 1.0 | 4.0 |
| Phase Duration, s | 12.1 | 25.1 | 18.8 | 31.8 | | 76.7 | 9.4 | 86.1 |
| Change Period, ( *Y+R c* ), s | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 8.9 | 4.0 | 8.9 | | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( *g s* ), s | 8.7 | 11.2 | 15.0 | 11.2 | | | 5.7 | |
| Green Extension Time ( *g e* ), s | 0.1 | 7.9 | 0.3 | 9.6 | | 0.0 | 0.3 | 0.0 |
| Phase Call Probability | 0.98 | 1.00 | 1.00 | 1.00 | | | 0.99 | |
| Max Out Probability | 1.00 | 0.54 | 0.19 | 0.33 | | | 0.00 | |

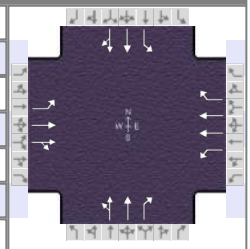
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | 111 | 142 | 140 | 189 | 192 | 127 | 411 | 387 | 329 | 120 | 334 | 322 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 1885 | 1828 | 1860 | 1766 | 1572 | 1916 | 1806 | 1598 | 1795 | 1811 | 1735 |
| Queue Service Time ( *g s* ), s | 6.7 | 9.0 | 9.2 | 13.0 | 6.0 | 9.2 | 0.0 | 10.7 | 15.4 | 3.7 | 5.7 | 7.1 |
| Cycle Queue Clearance Time ( *g c* ), s | 6.7 | 9.0 | 9.2 | 13.0 | 6.0 | 9.2 | 10.5 | 10.7 | 15.4 | 3.7 | 5.7 | 7.1 |
| Green Ratio ( *g/C* ) | 0.21 | 0.15 | 0.15 | 0.12 | 0.20 | 0.20 | 0.54 | 0.54 | 0.54 | 0.60 | 0.62 | 0.62 |
| Capacity ( *c* ), veh/h | 341 | 277 | 268 | 219 | 701 | 312 | 1071 | 982 | 869 | 460 | 1116 | 1070 |
| Volume-to-Capacity Ratio ( *X* ) | 0.325 | 0.514 | 0.522 | 0.867 | 0.273 | 0.408 | 0.384 | 0.394 | 0.379 | 0.261 | 0.299 | 0.301 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 135 | 200 | 197 | 292 | 122 | 171 | 186 | 174 | 244 | 66 | 96 | 113 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 5.4 | 7.9 | 7.9 | 11.4 | 4.7 | 6.7 | 7.5 | 6.9 | 9.7 | 2.6 | 3.7 | 4.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 1.29 | 0.00 | 0.00 | 1.67 | 0.00 | 1.37 | 0.00 | 0.00 | 1.68 | 0.32 | 0.00 | 0.00 |
| Uniform Delay ( *d 1* ), s/veh | 42.9 | 51.2 | 51.2 | 56.4 | 44.2 | 45.5 | 9.9 | 9.6 | 17.0 | 11.6 | 4.9 | 6.5 |
| Incremental Delay ( *d 2* ), s/veh | 0.5 | 3.1 | 3.3 | 17.1 | 0.4 | 1.8 | 1.0 | 1.2 | 1.3 | 0.3 | 0.7 | 0.7 |
| Initial Queue Delay ( *d 3* ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 43.5 | 54.3 | 54.6 | 73.5 | 44.6 | 47.3 | 10.9 | 10.8 | 18.3 | 11.9 | 5.6 | 7.2 |
| Level of Service (LOS) | D | D | D | E | D | D | B | B | B | B | A | A |
| Approach Delay, s/veh / LOS | 51.3 | D | | 56.0 | E | | 13.0 | B | | 7.3 | A | |
| Intersection Delay, s/veh / LOS | 24.6 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.31 | B | 2.31 | B | 2.41 | B | 2.25 | B |
| Bicycle LOS Score / LOS | 0.81 | A | 0.91 | A | 1.42 | A | 1.13 | A |

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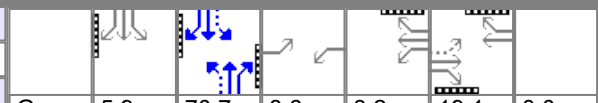
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

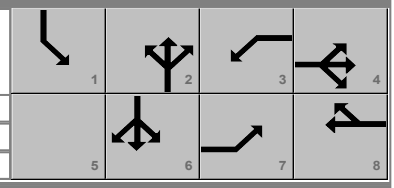


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 245 | 23 | 180 | 182 | 121 | 18 | 740 | 313 | 114 | 549 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.9 | 70.7 | 8.6 | 3.2 | 19.1 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



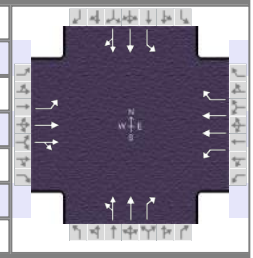
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.992 | 1.000 | 0.977 | 0.977 | 0.977 | 1.000 | 0.992 | 0.992 | 0.992 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.965 | 0.965 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.970 | 0.970 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.958 | 0.958 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3397 | 316 | 1860 | 3533 | 1572 | 88 | 3633 | 1598 | 1795 | 3126 | 420 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.07 | 0.15 | 0.15 | 0.12 | 0.20 | 0.20 | 0.54 | 0.73 | 0.54 | 0.05 | 0.82 | 0.62 |
| Incremental Delay Factor ($k$) | 0.11 | 0.23 | 0.23 | 0.21 | 0.23 | 0.23 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.21 | 0.15 | 0.12 | 0.20 | | 0.54 | 0.60 | 0.62 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 1210 | 0 | 0 | 0 | | 790 | 699 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 19.1 | 0.0 | 0.0 | 0.0 | | 70.7 | 72.7 | 0.0 |
| Permitted Service Time ($g_u$), s | 17.8 | 0.0 | 0.0 | 0.0 | | 70.7 | 60.0 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.1 | | | | | 0.0 | 2.6 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 33.6 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 10.5 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | 0 | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | 0.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.557 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.155 | 0.000 | 0.150 | 0.000 | 0.104 | 0.000 | 0.091 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 293.61 | 47.32 | 396.71 | 41.77 | 1088.07 | 13.51 | 1232.90 | 9.56 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.32 | -3.64 | 0.42 | -3.64 | 0.93 | -3.64 | 0.64 |

# HCS Signalized Intersection Results Graphical Summary

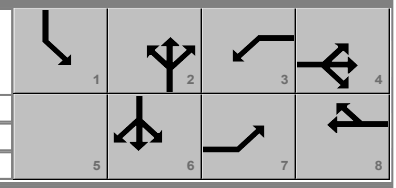
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2025 DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



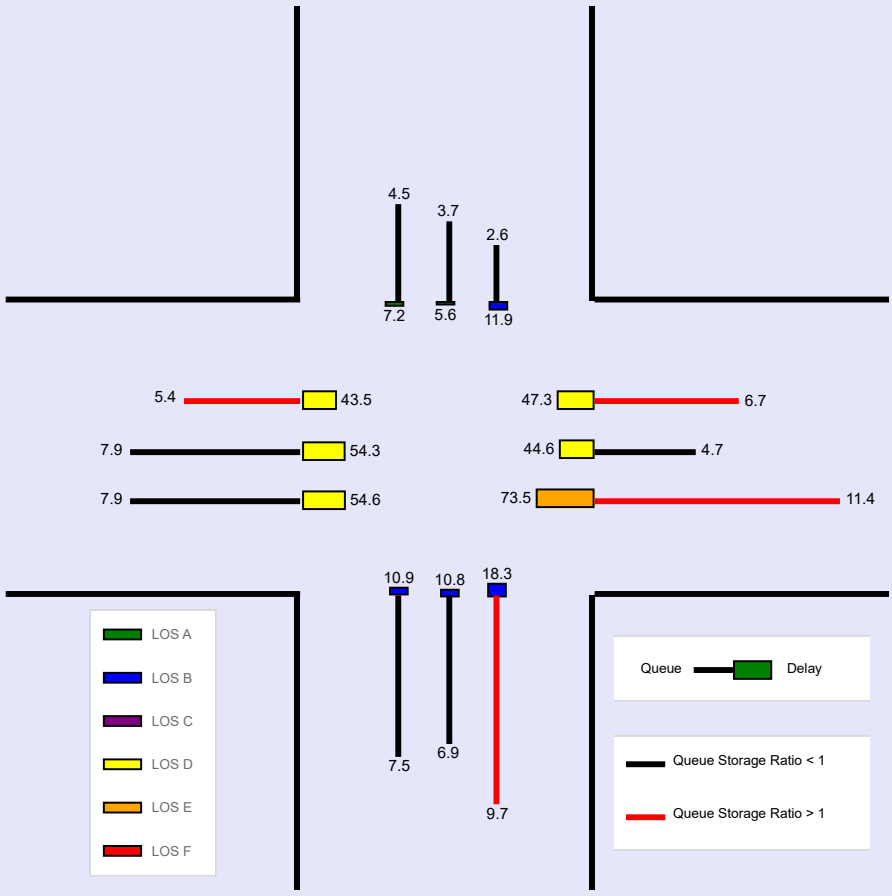
| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 245 | 23 | 180 | 182 | 121 | 18 | 740 | 313 | 114 | 549 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green | 5.9 | 70.7 | 8.6 | 3.2 | 19.1 | 0.0 | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 135 | 200 | 197 | 292 | 122 | 171 | 186 | 174 | 244 | 66 | 96 | 113 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 5.4 | 7.9 | 7.9 | 11.4 | 4.7 | 6.7 | 7.5 | 6.9 | 9.7 | 2.6 | 3.7 | 4.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 1.29 | 0.00 | 0.00 | 1.67 | 0.00 | 1.37 | 0.00 | 0.00 | 1.68 | 0.32 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | 43.5 | 54.3 | 54.6 | 73.5 | 44.6 | 47.3 | 10.9 | 10.8 | 18.3 | 11.9 | 5.6 | 7.2 |
| Level of Service (LOS) | D | D | D | E | D | D | B | B | B | B | A | A |
| Approach Delay, s/veh / LOS | 51.3 | D | | 56.0 | E | | 13.0 | B | | 7.3 | A | |
| Intersection Delay, s/veh / LOS | 24.6 | | | | | | C | | | | | |



## --- Messages ---

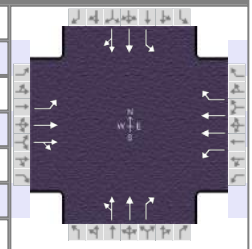
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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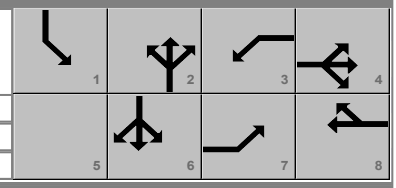
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 280 | 23 | 185 | 197 | 124 | 18 | 765 | 320 | 117 | 592 | 74 |

| Signal Information | | | | | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 | | | | | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | Green | 6.1 | 68.8 | 8.5 | 3.6 | 20.4 | 0.0 | | | | | | |
| Uncoordinated | No | Simult. Gap E/W | On | Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Force Mode | Fixed | Simult. Gap N/S | On | Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 105 | 280 | 23 | 185 | 197 | 124 | 18 | 765 | 320 | 117 | 592 | 74 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 1 | | 3 | 3 | 3 | | 1 | 1 | 1 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | 105 | 0 | | 175 | 0 | 125 | | 0 | 145 | 205 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 35 | 35 | 35 |

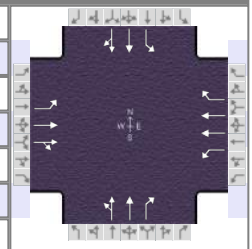
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.6 | 28.6 | 24.7 | 37.7 | | 57.2 | 19.5 | 76.7 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 8 | 3 | 8 | | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 5.0 | 3.0 | 5.0 | | 2.0 | 3.0 | 2.0 |
| Recall Mode | Off | Off | Off | Off | | Min | Off | Min |
| Dual Entry | No | Yes | No | Yes | | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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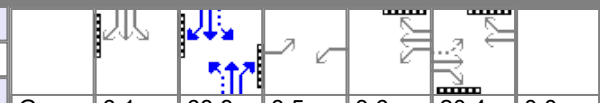
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

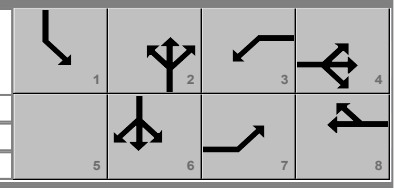


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 280 | 23 | 185 | 197 | 124 | 18 | 765 | 320 | 117 | 592 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 6.1 | 68.8 | 8.5 | 3.6 | 20.4 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 7 | 4 | 3 | 8 | | 2 | 1 | 6 |
| Case Number | 1.1 | 4.0 | 2.0 | 3.0 | | 7.3 | 1.0 | 4.0 |
| Phase Duration, s | 12.0 | 26.4 | 19.1 | 33.6 | | 74.8 | 9.6 | 84.4 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 8.9 | 4.0 | 8.9 | | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( $g_s$ ), s | 8.6 | 12.3 | 15.4 | 11.3 | | | 5.9 | |
| Green Extension Time ( $g_e$ ), s | 0.1 | 8.1 | 0.3 | 10.6 | | 0.0 | 0.3 | 0.0 |
| Phase Call Probability | 0.98 | 1.00 | 1.00 | 1.00 | | | 0.99 | |
| Max Out Probability | 1.00 | 0.65 | 0.26 | 0.39 | | | 0.00 | |

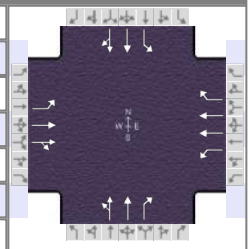
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | 111 | 161 | 158 | 195 | 207 | 131 | 425 | 400 | 337 | 123 | 357 | 344 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 1885 | 1835 | 1860 | 1766 | 1572 | 1914 | 1806 | 1598 | 1795 | 1811 | 1740 |
| Queue Service Time ( $g_s$ ), s | 6.6 | 10.2 | 10.3 | 13.4 | 6.4 | 9.3 | 0.0 | 12.0 | 16.4 | 3.9 | 6.8 | 8.3 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 6.6 | 10.2 | 10.3 | 13.4 | 6.4 | 9.3 | 11.7 | 12.0 | 16.4 | 3.9 | 6.8 | 8.3 |
| Green Ratio ( *g/C* ) | 0.22 | 0.16 | 0.16 | 0.12 | 0.21 | 0.21 | 0.53 | 0.53 | 0.53 | 0.59 | 0.60 | 0.60 |
| Capacity ( *c* ), veh/h | 350 | 296 | 288 | 224 | 749 | 334 | 1042 | 955 | 845 | 438 | 1093 | 1050 |
| Volume-to-Capacity Ratio ( *X* ) | 0.316 | 0.542 | 0.549 | 0.870 | 0.277 | 0.391 | 0.408 | 0.418 | 0.399 | 0.281 | 0.327 | 0.328 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 133 | 219 | 216 | 300 | 130 | 171 | 205 | 195 | 258 | 71 | 114 | 131 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 5.3 | 8.7 | 8.6 | 11.7 | 5.1 | 6.7 | 8.2 | 7.7 | 10.2 | 2.8 | 4.4 | 5.2 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 1.27 | 0.00 | 0.00 | 1.72 | 0.00 | 1.37 | 0.00 | 0.00 | 1.78 | 0.35 | 0.00 | 0.00 |
| Uniform Delay ( $d_1$ ), s/veh | 41.9 | 50.5 | 50.5 | 56.2 | 42.9 | 44.0 | 11.0 | 10.8 | 18.3 | 12.6 | 5.7 | 7.2 |
| Incremental Delay ( $d_2$ ), s/veh | 0.5 | 3.3 | 3.5 | 18.1 | 0.4 | 1.6 | 1.2 | 1.3 | 1.4 | 0.3 | 0.8 | 0.8 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 42.4 | 53.7 | 54.0 | 74.2 | 43.3 | 45.6 | 12.2 | 12.1 | 19.7 | 12.9 | 6.5 | 8.0 |
| Level of Service (LOS) | D | D | D | E | D | D | B | B | B | B | A | A |
| Approach Delay, s/veh / LOS | 50.9 | D | | 55.2 | E | | 14.3 | B | | 8.1 | A | |
| Intersection Delay, s/veh / LOS | 25.3 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.31 | B | 2.31 | B | 2.42 | B | 2.25 | B |
| Bicycle LOS Score / LOS | 0.84 | A | 0.93 | A | 1.45 | A | 1.17 | A |

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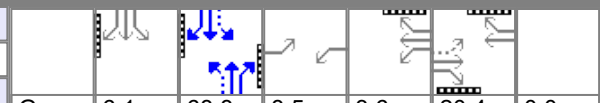
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

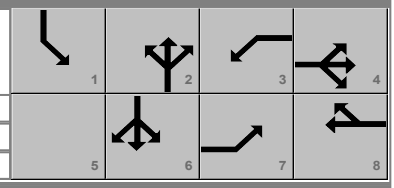


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 280 | 23 | 185 | 197 | 124 | 18 | 765 | 320 | 117 | 592 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 6.1 | 68.8 | 8.5 | 3.6 | 20.4 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



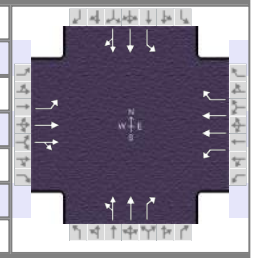

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.992 | 1.000 | 0.977 | 0.977 | 0.977 | 1.000 | 0.992 | 0.992 | 0.992 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.965 | 0.965 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.973 | 0.973 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.961 | 0.961 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3439 | 281 | 1860 | 3533 | 1572 | 85 | 3635 | 1598 | 1795 | 3157 | 394 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.07 | 0.16 | 0.16 | 0.12 | 0.21 | 0.21 | 0.53 | 0.71 | 0.53 | 0.05 | 0.80 | 0.60 |
| Incremental Delay Factor ($k$) | 0.11 | 0.23 | 0.23 | 0.22 | 0.23 | 0.23 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.22 | 0.16 | 0.12 | 0.21 | | 0.53 | 0.59 | 0.60 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 1193 | 0 | 0 | 0 | | 757 | 682 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 20.4 | 0.0 | 0.0 | 0.0 | | 68.8 | 70.8 | 0.0 |
| Permitted Service Time ($g_u$), s | 19.2 | 0.0 | 0.0 | 0.0 | | 68.8 | 56.8 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.1 | | | | | 0.0 | 3.1 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 33.1 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 11.7 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | 0 | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | 0.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.557 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.154 | 0.000 | 0.148 | 0.000 | 0.107 | 0.000 | 0.093 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 314.38 | 46.17 | 424.27 | 40.35 | 1058.17 | 14.41 | 1206.56 | 10.23 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.35 | -3.64 | 0.44 | -3.64 | 0.96 | -3.64 | 0.68 |

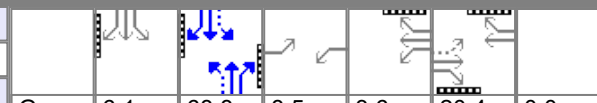
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 NB DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

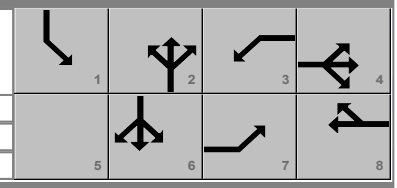


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 280 | 23 | 185 | 197 | 124 | 18 | 765 | 320 | 117 | 592 | 74 |

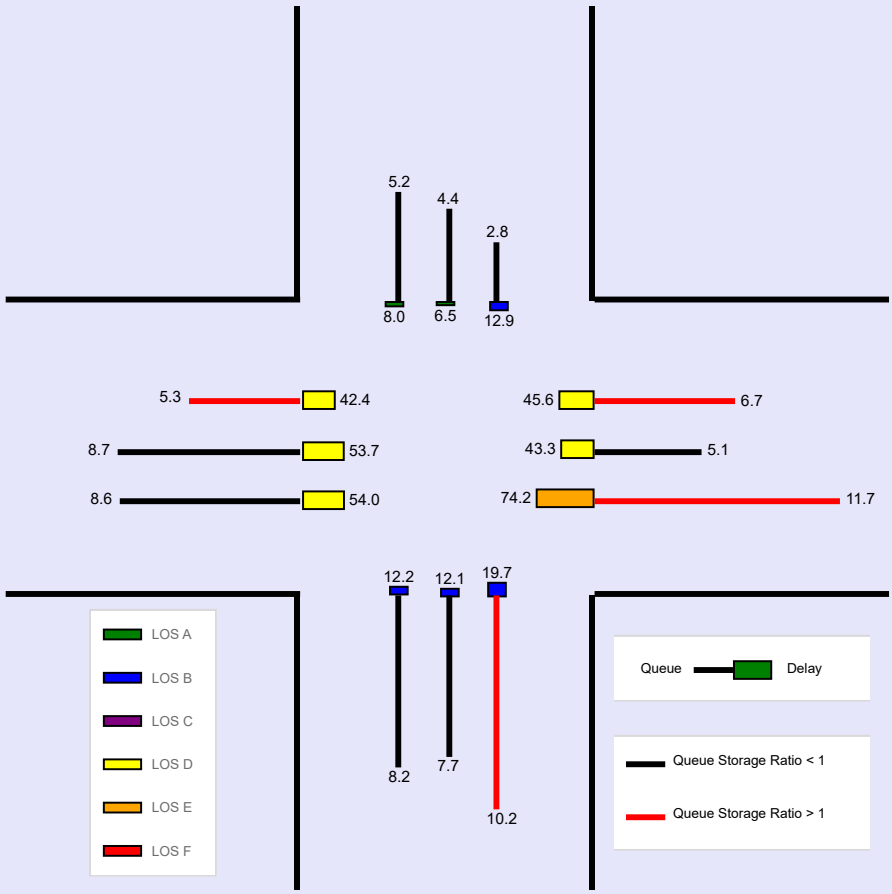
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 6.1 | 68.8 | 8.5 | 3.6 | 20.4 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 133 | 219 | 216 | 300 | 130 | 171 | 205 | 195 | 258 | 71 | 114 | 131 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 5.3 | 8.7 | 8.6 | 11.7 | 5.1 | 6.7 | 8.2 | 7.7 | 10.2 | 2.8 | 4.4 | 5.2 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 1.27 | 0.00 | 0.00 | 1.72 | 0.00 | 1.37 | 0.00 | 0.00 | 1.78 | 0.35 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | 42.4 | 53.7 | 54.0 | 74.2 | 43.3 | 45.6 | 12.2 | 12.1 | 19.7 | 12.9 | 6.5 | 8.0 |
| Level of Service (LOS) | D | D | D | E | D | D | B | B | B | B | A | A |
| Approach Delay, s/veh / LOS | 50.9 | D | | 55.2 | E | | 14.3 | B | | 8.1 | A | |
| Intersection Delay, s/veh / LOS | 25.3 | | | | | | C | | | | | |



## --- Messages ---

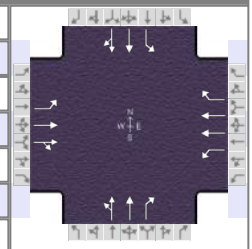
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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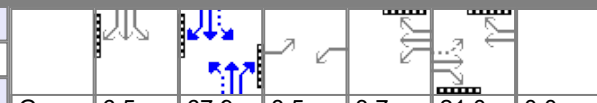
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

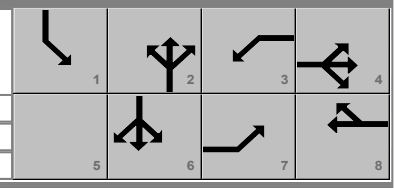


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 287 | 23 | 185 | 213 | 140 | 18 | 765 | 320 | 124 | 592 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 6.5 | 67.9 | 8.5 | 3.7 | 21.0 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 105 | 287 | 23 | 185 | 213 | 140 | 18 | 765 | 320 | 124 | 592 | 74 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 1 | | 3 | 3 | 3 | | 1 | 1 | 1 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | 105 | 0 | | 175 | 0 | 125 | | 0 | 145 | 205 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 35 | 35 | 35 |

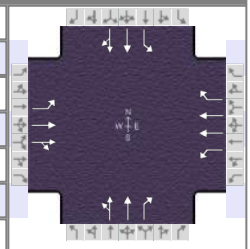
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.6 | 28.6 | 24.7 | 37.7 | | 57.2 | 19.5 | 76.7 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 8 | 3 | 8 | | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 5.0 | 3.0 | 5.0 | | 2.0 | 3.0 | 2.0 |
| Recall Mode | Off | Off | Off | Off | | Min | Off | Min |
| Dual Entry | No | Yes | No | Yes | | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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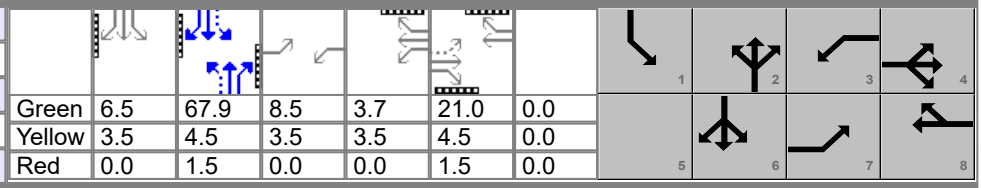
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 287 | 23 | 185 | 213 | 140 | 18 | 765 | 320 | 124 | 592 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 6.5 | 67.9 | 8.5 | 3.7 | 21.0 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |

| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 7 | 4 | 3 | 8 | | 2 | 1 | 6 |
| Case Number | 1.1 | 4.0 | 2.0 | 3.0 | | 7.3 | 1.0 | 4.0 |
| Phase Duration, s | 12.0 | 27.0 | 19.1 | 34.1 | | 73.9 | 10.0 | 83.9 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 8.9 | 4.0 | 8.9 | | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( $g_s$ ), s | 8.5 | 12.6 | 15.4 | 12.5 | | | 6.2 | |
| Green Extension Time ( $g_e$ ), s | 0.1 | 8.4 | 0.3 | 10.8 | | 0.0 | 0.3 | 0.0 |
| Phase Call Probability | 0.98 | 1.00 | 1.00 | 1.00 | | | 0.99 | |
| Max Out Probability | 1.00 | 0.68 | 0.26 | 0.45 | | | 0.00 | |

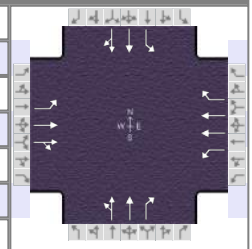
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | 111 | 164 | 162 | 195 | 224 | 147 | 425 | 400 | 337 | 131 | 357 | 344 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 1885 | 1836 | 1860 | 1766 | 1572 | 1914 | 1806 | 1598 | 1795 | 1811 | 1740 |
| Queue Service Time ( $g_s$ ), s | 6.5 | 10.4 | 10.6 | 13.4 | 6.9 | 10.5 | 0.0 | 12.4 | 16.6 | 4.2 | 7.0 | 8.4 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 6.5 | 10.4 | 10.6 | 13.4 | 6.9 | 10.5 | 12.0 | 12.4 | 16.6 | 4.2 | 7.0 | 8.4 |
| Green Ratio ( *g/C* ) | 0.23 | 0.16 | 0.16 | 0.12 | 0.22 | 0.22 | 0.52 | 0.52 | 0.52 | 0.59 | 0.60 | 0.60 |
| Capacity ( *c* ), veh/h | 347 | 304 | 296 | 224 | 764 | 340 | 1029 | 944 | 835 | 436 | 1085 | 1043 |
| Volume-to-Capacity Ratio ( *X* ) | 0.319 | 0.541 | 0.547 | 0.870 | 0.293 | 0.433 | 0.413 | 0.423 | 0.403 | 0.299 | 0.329 | 0.330 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 132 | 223 | 219 | 300 | 140 | 195 | 210 | 200 | 261 | 77 | 118 | 134 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 5.3 | 8.8 | 8.8 | 11.7 | 5.5 | 7.6 | 8.4 | 7.9 | 10.4 | 3.1 | 4.5 | 5.4 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 1.26 | 0.00 | 0.00 | 1.72 | 0.00 | 1.56 | 0.00 | 0.00 | 1.80 | 0.38 | 0.00 | 0.00 |
| Uniform Delay ( $d_1$ ), s/veh | 41.5 | 50.1 | 50.2 | 56.2 | 42.6 | 44.0 | 11.5 | 11.3 | 18.8 | 12.9 | 5.9 | 7.4 |
| Incremental Delay ( $d_2$ ), s/veh | 0.5 | 3.2 | 3.3 | 18.1 | 0.5 | 1.9 | 1.2 | 1.4 | 1.5 | 0.4 | 0.8 | 0.8 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 42.0 | 53.3 | 53.5 | 74.2 | 43.1 | 45.9 | 12.7 | 12.7 | 20.2 | 13.3 | 6.7 | 8.3 |
| Level of Service (LOS) | D | D | D | E | D | D | B | B | C | B | A | A |
| Approach Delay, s/veh / LOS | 50.5 | D | | 54.5 | D | | 14.9 | B | | 8.4 | A | |
| Intersection Delay, s/veh / LOS | 25.8 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.31 | B | 2.31 | B | 2.42 | B | 2.25 | B |
| Bicycle LOS Score / LOS | 0.85 | A | 0.95 | A | 1.45 | A | 1.17 | A |

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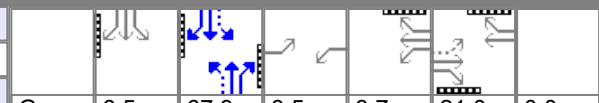
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

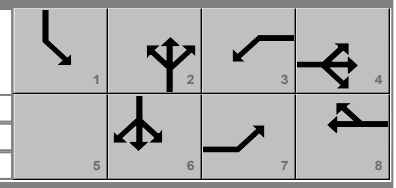


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 287 | 23 | 185 | 213 | 140 | 18 | 765 | 320 | 124 | 592 | 74 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 6.5 | 67.9 | 8.5 | 3.7 | 21.0 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



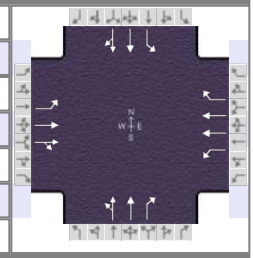

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.992 | 1.000 | 0.977 | 0.977 | 0.977 | 1.000 | 0.992 | 0.992 | 0.992 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.965 | 0.965 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.974 | 0.974 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.961 | 0.961 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3447 | 274 | 1860 | 3533 | 1572 | 85 | 3635 | 1598 | 1795 | 3157 | 394 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.07 | 0.16 | 0.16 | 0.12 | 0.22 | 0.22 | 0.52 | 0.70 | 0.52 | 0.05 | 0.80 | 0.60 |
| Incremental Delay Factor ($k$) | 0.11 | 0.23 | 0.23 | 0.22 | 0.23 | 0.23 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.23 | 0.16 | 0.12 | 0.22 | | 0.52 | 0.59 | 0.60 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 1175 | 0 | 0 | 0 | | 757 | 682 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 21.0 | 0.0 | 0.0 | 0.0 | | 67.9 | 69.9 | 0.0 |
| Permitted Service Time ($g_u$), s | 19.2 | 0.0 | 0.0 | 0.0 | | 67.9 | 55.6 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.2 | | | | | 0.0 | 3.4 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 32.7 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 12.0 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | 0 | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | 0.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.557 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.153 | 0.000 | 0.148 | 0.000 | 0.108 | 0.000 | 0.094 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 322.32 | 45.74 | 432.68 | 39.92 | 1045.24 | 14.81 | 1198.62 | 10.44 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.36 | -3.64 | 0.47 | -3.64 | 0.96 | -3.64 | 0.69 |

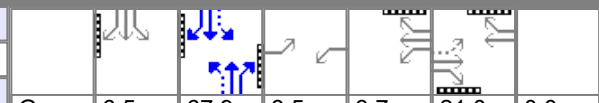
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ BUSSE | File Name | 2032 TOT DEMP-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

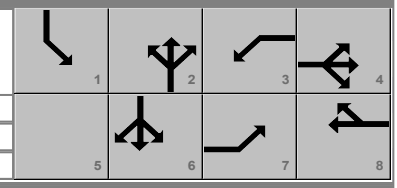


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 105 | 287 | 23 | 185 | 213 | 140 | 18 | 765 | 320 | 124 | 592 | 74 |

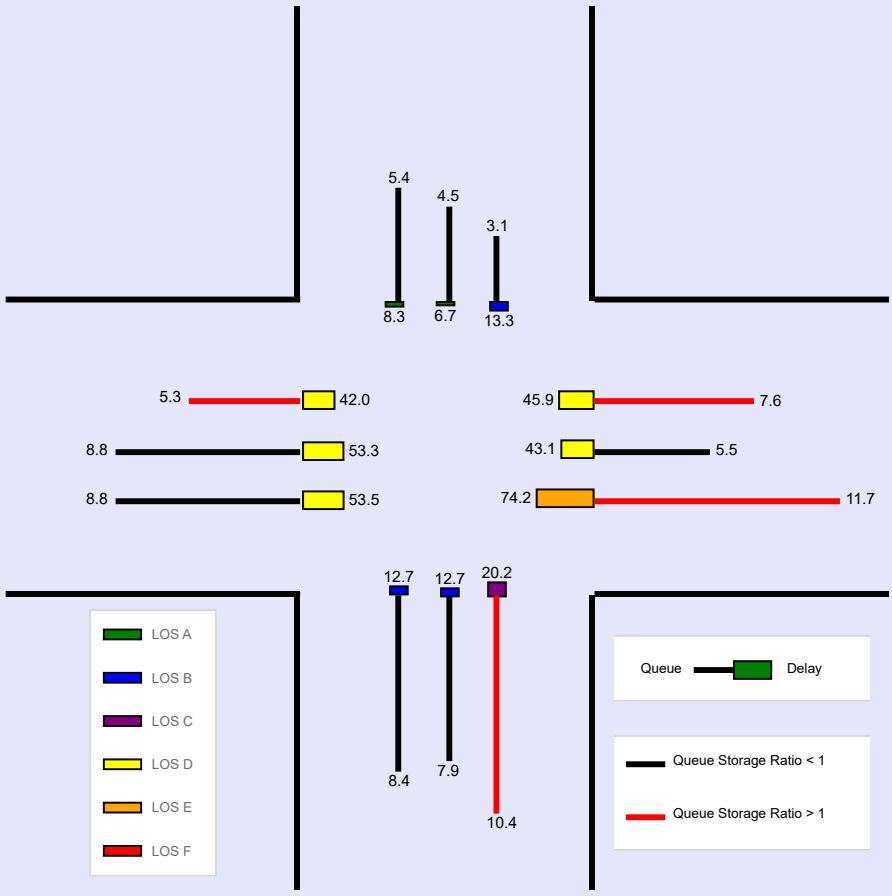
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 6.5 | 67.9 | 8.5 | 3.7 | 21.0 | 0.0 | | | | | | |
| Yellow | 3.5 | 4.5 | 3.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 132 | 223 | 219 | 300 | 140 | 195 | 210 | 200 | 261 | 77 | 118 | 134 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 5.3 | 8.8 | 8.8 | 11.7 | 5.5 | 7.6 | 8.4 | 7.9 | 10.4 | 3.1 | 4.5 | 5.4 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 1.26 | 0.00 | 0.00 | 1.72 | 0.00 | 1.56 | 0.00 | 0.00 | 1.80 | 0.38 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | 42.0 | 53.3 | 53.5 | 74.2 | 43.1 | 45.9 | 12.7 | 12.7 | 20.2 | 13.3 | 6.7 | 8.3 |
| Level of Service (LOS) | D | D | D | E | D | D | B | B | C | B | A | A |
| Approach Delay, s/veh / LOS | 50.5 | D | | 54.5 | D | | 14.9 | B | | 8.4 | A | |
| Intersection Delay, s/veh / LOS | 25.8 | | | | | | C | | | | | |



## --- Messages ---

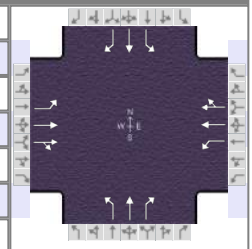
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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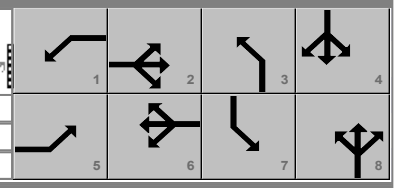
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 37 | 290 | 18 | 13 | 351 | 63 | 6 | 33 | 9 | 66 | 63 | 85 |

| Signal Information | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 44.6 | Reference Phase | 2 | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | Green | 0.5 | 0.7 | 15.0 | 0.2 | 1.8 | 7.4 | | |
| Force Mode | Fixed | Simult. Gap N/S | On | Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 37 | 290 | 18 | 13 | 351 | 63 | 6 | 33 | 9 | 66 | 63 | 85 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 8 | 4 | | 23 | 3 | | 0 | 0 | 0 | 3 | 0 | 4 |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Turn Bay Length, ft | 200 | 0 | | 140 | 0 | | 125 | 0 | 125 | 125 | 0 | 125 |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 30 | 30 |

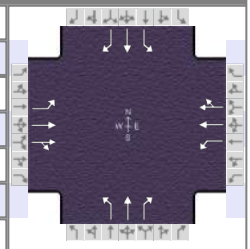
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 55.0 | 15.0 | 55.0 | 15.0 | 35.0 | 15.0 | 35.0 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | 3 | 8 | 3 | 8 |
| Start-Up Lost Time ( *lt*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Recall Mode | Off | Min | Off | Min | Off | Off | Off | Off |
| Dual Entry | No | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 23.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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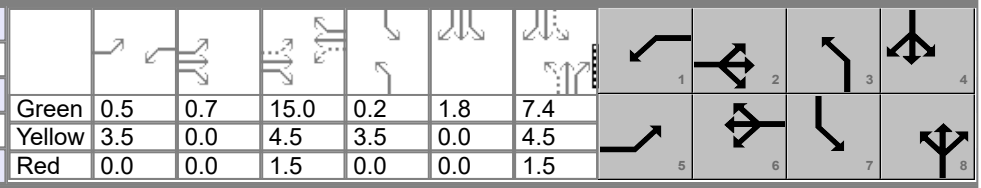
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 37 | 290 | 18 | 13 | 351 | 63 | 6 | 33 | 9 | 66 | 63 | 85 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.6 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.5 | 0.7 | 15.0 | 0.2 | 1.8 | 7.4 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |

| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | 3 | 8 | 7 | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 4.0 | 1.1 | 3.0 | 1.1 | 3.0 |
| Phase Duration, s | 4.7 | 21.7 | 4.0 | 21.0 | 3.7 | 13.4 | 5.5 | 15.2 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.6 | 4.0 | 6.6 | 4.1 | 8.2 | 4.1 | 8.2 |
| Queue Clearance Time ( $g_s$ ), s | 2.7 | 4.7 | 2.3 | 5.9 | 2.1 | 2.7 | 3.4 | 4.2 |
| Green Extension Time ( $g_e$ ), s | 0.0 | 8.9 | 0.0 | 8.9 | 0.0 | 2.9 | 0.1 | 2.8 |
| Phase Call Probability | 0.38 | 1.00 | 0.16 | 1.00 | 0.08 | 0.92 | 0.58 | 0.96 |
| Max Out Probability | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |

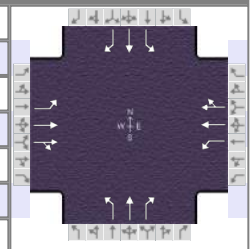
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 39 | 163 | 161 | 14 | 222 | 214 | 6 | 35 | 9 | 69 | 66 | 89 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1697 | 1938 | 1897 | 1485 | 1953 | 1850 | 1810 | 2000 | 1610 | 1767 | 2000 | 1560 |
| Queue Service Time ( $g_s$ ), s | 0.7 | 2.7 | 2.7 | 0.3 | 3.8 | 3.9 | 0.1 | 0.7 | 0.2 | 1.4 | 1.2 | 2.2 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.7 | 2.7 | 2.7 | 0.3 | 3.8 | 3.9 | 0.1 | 0.7 | 0.2 | 1.4 | 1.2 | 2.2 |
| Green Ratio ( *g/C* ) | 0.36 | 0.35 | 0.35 | 0.35 | 0.34 | 0.34 | 0.17 | 0.17 | 0.17 | 0.22 | 0.21 | 0.21 |
| Capacity ( *c* ), veh/h | 432 | 682 | 668 | 395 | 657 | 623 | 354 | 331 | 267 | 449 | 413 | 322 |
| Volume-to-Capacity Ratio ( *X* ) | 0.090 | 0.239 | 0.241 | 0.035 | 0.338 | 0.343 | 0.018 | 0.105 | 0.036 | 0.155 | 0.161 | 0.278 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 9 | 40 | 38 | 4 | 57 | 54 | 2 | 13 | 4 | 23 | 23 | 35 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.3 | 1.5 | 1.5 | 0.1 | 2.2 | 2.2 | 0.1 | 0.5 | 0.1 | 0.9 | 0.9 | 1.3 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.05 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.02 | 0.00 | 0.03 | 0.19 | 0.00 | 0.28 |
| Uniform Delay ( $d_1$ ), s/veh | 9.5 | 10.2 | 10.2 | 9.8 | 11.1 | 11.1 | 15.4 | 15.8 | 15.6 | 14.2 | 14.5 | 14.9 |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.3 | 0.1 | 0.2 | 0.4 | 1.0 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 9.5 | 10.3 | 10.3 | 9.8 | 11.2 | 11.2 | 15.4 | 16.1 | 15.7 | 14.3 | 14.9 | 15.9 |
| Level of Service (LOS) | A | B | B | A | B | B | B | B | B | B | B | B |
| Approach Delay, s/veh / LOS | 10.2 | B | | 11.2 | B | | 15.9 | B | | 15.1 | B | |
| Intersection Delay, s/veh / LOS | 11.9 | | | | | | B | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.08 | B | 2.08 | B | 2.27 | B | 2.26 | B |
| Bicycle LOS Score / LOS | 0.79 | A | 0.86 | A | 0.57 | A | 0.86 | A |

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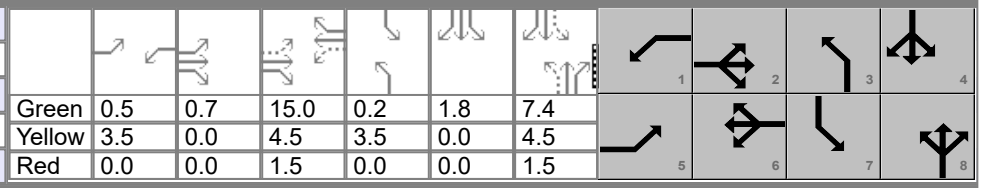
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 37 | 290 | 18 | 13 | 351 | 63 | 6 | 33 | 9 | 66 | 63 | 85 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.6 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.5 | 0.7 | 15.0 | 0.2 | 1.8 | 7.4 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |

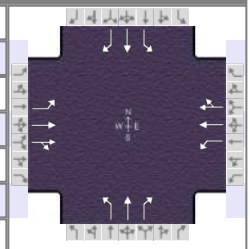
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.938 | 0.969 | 1.000 | 0.821 | 0.977 | 1.000 | 1.000 | 1.000 | 1.000 | 0.977 | 1.000 | 0.969 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.979 | 0.979 | | 0.947 | 0.947 | | 0.000 | 0.847 | | 0.000 | 0.847 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1697 | 3612 | 223 | 1485 | 3229 | 574 | 1810 | 2000 | 1610 | 1767 | 2000 | 1560 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.35 | 0.35 | 0.01 | 0.34 | 0.34 | 0.01 | 0.17 | 0.17 | 0.05 | 0.21 | 0.21 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | 0.11 | 0.23 | 0.23 | 0.11 | 0.23 | 0.23 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.36 | 0.35 | 0.35 | 0.34 | 0.17 | 0.17 | 0.22 | 0.21 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 908 | 0 | 880 | 0 | 1356 | 0 | 1363 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | | | |
| Permitted Effective Green Time ($g_p$), s | 15.0 | 0.0 | 15.0 | 0.0 | 7.4 | 0.0 | 7.7 | 0.0 |
| Permitted Service Time ($g_u$), s | 11.2 | 0.0 | 11.0 | 0.0 | 6.0 | 0.0 | 6.7 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.2 | | 0.1 | | 0.0 | | 0.1 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | | | 0 | | 0 |
| Protected Right Effective Green Time ($g_R$), s | | | | | | 0.0 | | 0.0 |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.389 | 0.000 | 1.389 | 0.000 | 1.557 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.090 | 0.000 | 0.092 | 0.000 | 0.110 | 0.000 | 0.106 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 703.65 | 9.36 | 673.09 | 9.81 | 331.19 | 15.52 | 412.71 | 14.04 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.30 | -3.64 | 0.37 | -3.64 | 0.08 | -3.64 | 0.37 |

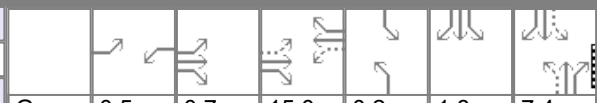
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



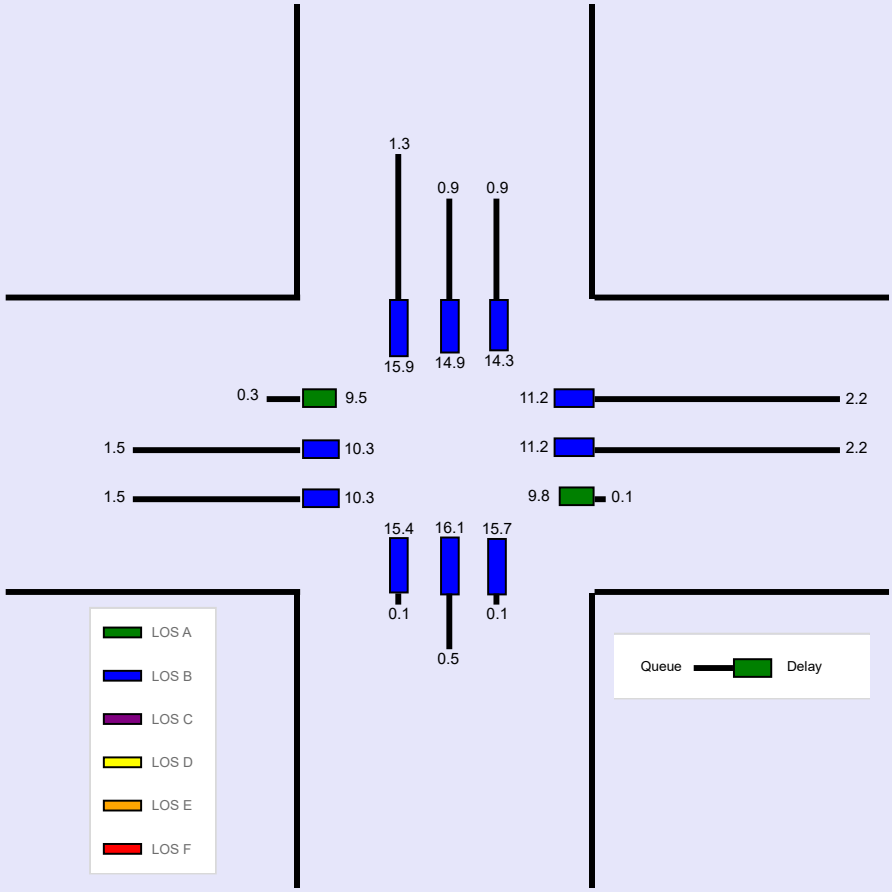
| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 37 | 290 | 18 | 13 | 351 | 63 | 6 | 33 | 9 | 66 | 63 | 85 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.6 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.5 | 0.7 | 15.0 | 0.2 | 1.8 | 7.4 | 1 | 2 | 3 | 4 | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 5 | 6 | 7 | 8 | | |

| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 9 | 40 | 38 | 4 | 57 | 54 | 2 | 13 | 4 | 23 | 23 | 35 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.3 | 1.5 | 1.5 | 0.1 | 2.2 | 2.2 | 0.1 | 0.5 | 0.1 | 0.9 | 0.9 | 1.3 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.05 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.02 | 0.00 | 0.03 | 0.19 | 0.00 | 0.28 |
| Control Delay ( *d* ), s/veh | 9.5 | 10.3 | 10.3 | 9.8 | 11.2 | 11.2 | 15.4 | 16.1 | 15.7 | 14.3 | 14.9 | 15.9 |
| Level of Service (LOS) | A | B | B | A | B | B | B | B | B | B | B | B |
| Approach Delay, s/veh / LOS | 10.2 | B | | 11.2 | B | | 15.9 | B | | 15.1 | B | |
| Intersection Delay, s/veh / LOS | 11.9 | | | | | | B | | | | | |



## --- Messages ---

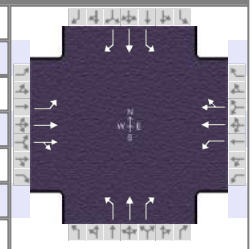
No errors or warnings exist.

## --- Comments ---

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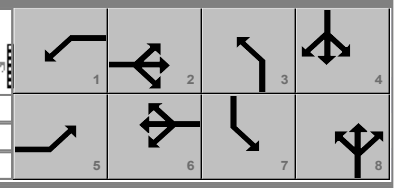
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 19 | 14 | 368 | 66 | 6 | 34 | 9 | 69 | 66 | 89 |

| Signal Information | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 54.4 | Reference Phase | 2 | | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | | | | | | | | | | |
| Force Mode | Float | Simult. Gap N/S | On | | | | | | | | | | |
| | | | | Green | 0.6 | 0.8 | 16.7 | 0.3 | 2.2 | 14.9 | | | |
| | | | | Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 39 | 309 | 19 | 14 | 368 | 66 | 6 | 34 | 9 | 69 | 66 | 89 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 8 | 4 | | 23 | 3 | | 0 | 0 | 0 | 3 | 0 | 4 |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Turn Bay Length, ft | 200 | 0 | | 140 | 0 | | 125 | 0 | 125 | 125 | 0 | 125 |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 30 | 30 |

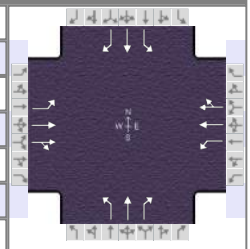
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 55.0 | 15.0 | 55.0 | 15.0 | 35.0 | 15.0 | 35.0 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | 3 | 8 | 3 | 8 |
| Start-Up Lost Time ( *lt*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Recall Mode | Off | Min | Off | Min | Off | Off | Off | Off |
| Dual Entry | No | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 23.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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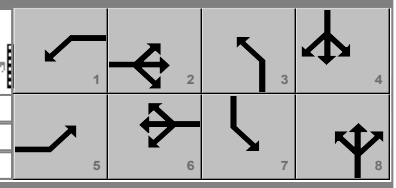
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 19 | 14 | 368 | 66 | 6 | 34 | 9 | 69 | 66 | 89 |

| Signal Information | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 54.4 | Reference Phase | 2 | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | Green | 0.6 | 0.8 | 16.7 | 0.3 | 2.2 | 14.9 | | |
| Force Mode | Float | Simult. Gap N/S | On | Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | 3 | 8 | 7 | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 4.0 | 1.1 | 3.0 | 1.1 | 3.0 |
| Phase Duration, s | 4.9 | 23.5 | 4.1 | 22.7 | 3.8 | 20.9 | 6.0 | 23.0 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.6 | 4.0 | 6.6 | 4.1 | 8.2 | 4.1 | 8.2 |
| Queue Clearance Time ( $g_s$ ), s | 2.9 | 5.7 | 2.4 | 7.2 | 2.1 | 2.7 | 3.6 | 4.4 |
| Green Extension Time ( $g_e$ ), s | 0.0 | 9.6 | 0.0 | 9.5 | 0.0 | 3.0 | 0.1 | 2.9 |
| Phase Call Probability | 0.46 | 1.00 | 0.20 | 1.00 | 0.09 | 0.96 | 0.67 | 0.99 |
| Max Out Probability | 0.00 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |

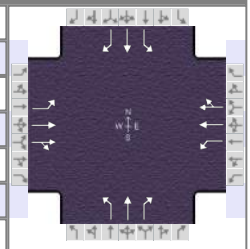
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 41 | 174 | 172 | 15 | 233 | 224 | 6 | 36 | 9 | 73 | 69 | 94 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1697 | 1938 | 1898 | 1485 | 1953 | 1850 | 1810 | 2000 | 1522 | 1767 | 2000 | 1560 |
| Queue Service Time ( $g_s$ ), s | 0.9 | 3.6 | 3.7 | 0.4 | 5.1 | 5.2 | 0.1 | 0.7 | 0.2 | 1.6 | 1.3 | 2.4 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.9 | 3.6 | 3.7 | 0.4 | 5.1 | 5.2 | 0.1 | 0.7 | 0.2 | 1.6 | 1.3 | 2.4 |
| Green Ratio ( *g/C* ) | 0.33 | 0.32 | 0.32 | 0.32 | 0.31 | 0.31 | 0.28 | 0.27 | 0.27 | 0.33 | 0.31 | 0.31 |
| Capacity ( *c* ), veh/h | 365 | 624 | 611 | 337 | 600 | 569 | 484 | 546 | 415 | 567 | 626 | 488 |
| Volume-to-Capacity Ratio ( *X* ) | 0.113 | 0.278 | 0.281 | 0.044 | 0.388 | 0.394 | 0.013 | 0.066 | 0.023 | 0.128 | 0.111 | 0.192 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 14 | 62 | 59 | 6 | 88 | 83 | 2 | 14 | 4 | 26 | 26 | 37 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.5 | 2.4 | 2.4 | 0.2 | 3.4 | 3.3 | 0.1 | 0.6 | 0.1 | 1.0 | 1.0 | 1.4 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.07 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.02 | 0.00 | 0.03 | 0.21 | 0.00 | 0.30 |
| Uniform Delay ( $d_1$ ), s/veh | 12.7 | 13.8 | 13.8 | 13.0 | 14.8 | 14.9 | 14.3 | 14.7 | 14.5 | 12.7 | 13.3 | 13.7 |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 | 0.4 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 12.8 | 13.8 | 13.9 | 13.0 | 15.0 | 15.0 | 14.3 | 14.8 | 14.5 | 12.8 | 13.5 | 14.1 |
| Level of Service (LOS) | B | B | B | B | B | B | B | B | B | B | B | B |
| Approach Delay, s/veh / LOS | 13.7 | B | | 14.9 | B | | 14.7 | B | | 13.5 | B | |
| Intersection Delay, s/veh / LOS | 14.2 | | | | | | B | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.09 | B | 2.09 | B | 2.26 | B | 2.26 | B |
| Bicycle LOS Score / LOS | 0.81 | A | 0.88 | A | 0.57 | A | 0.88 | A |

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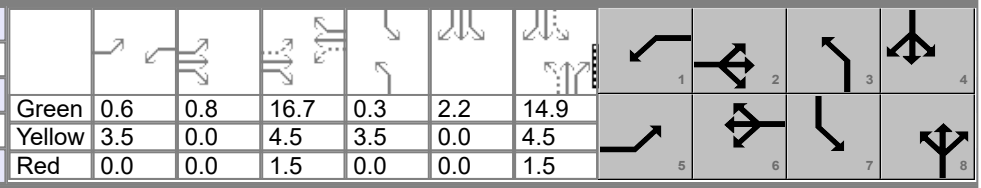
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 19 | 14 | 368 | 66 | 6 | 34 | 9 | 69 | 66 | 89 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 54.4 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Float | Simult. Gap N/S | On |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.6 | 0.8 | 16.7 | 0.3 | 2.2 | 14.9 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |

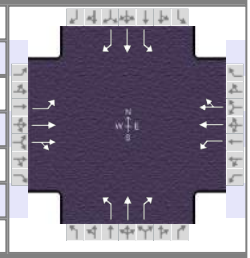
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.938 | 0.969 | 1.000 | 0.821 | 0.977 | 1.000 | 1.000 | 1.000 | 1.000 | 0.977 | 1.000 | 0.969 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.979 | 0.979 | | 0.947 | 0.947 | | 0.000 | 0.847 | | 0.000 | 0.847 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 0.952 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 0.945 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1697 | 3614 | 221 | 1485 | 3229 | 574 | 1810 | 2000 | 1522 | 1767 | 2000 | 1560 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.32 | 0.32 | 0.01 | 0.31 | 0.31 | 0.01 | 0.27 | 0.27 | 0.05 | 0.31 | 0.31 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | 0.11 | 0.23 | 0.23 | 0.11 | 0.23 | 0.23 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.33 | 0.32 | 0.32 | 0.31 | 0.28 | 0.27 | 0.33 | 0.31 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 890 | 0 | 863 | 0 | 1352 | 0 | 1362 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | | | |
| Permitted Effective Green Time ($g_p$), s | 16.7 | 0.0 | 16.7 | 0.0 | 14.9 | 0.0 | 15.6 | 0.0 |
| Permitted Service Time ($g_u$), s | 11.6 | 0.0 | 11.9 | 0.0 | 13.8 | 0.0 | 14.2 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.2 | | 0.1 | | 0.0 | | 0.1 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | | | 0 | | 0 |
| Protected Right Effective Green Time ($g_R$), s | | | | | | 0.0 | | 0.0 |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.389 | 0.000 | 1.389 | 0.000 | 1.557 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.101 | 0.000 | 0.103 | 0.000 | 0.107 | 0.000 | 0.102 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 643.82 | 12.51 | 614.79 | 13.06 | 545.66 | 14.39 | 625.91 | 12.85 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.32 | -3.64 | 0.39 | -3.64 | 0.09 | -3.64 | 0.39 |

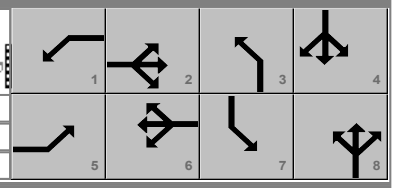
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



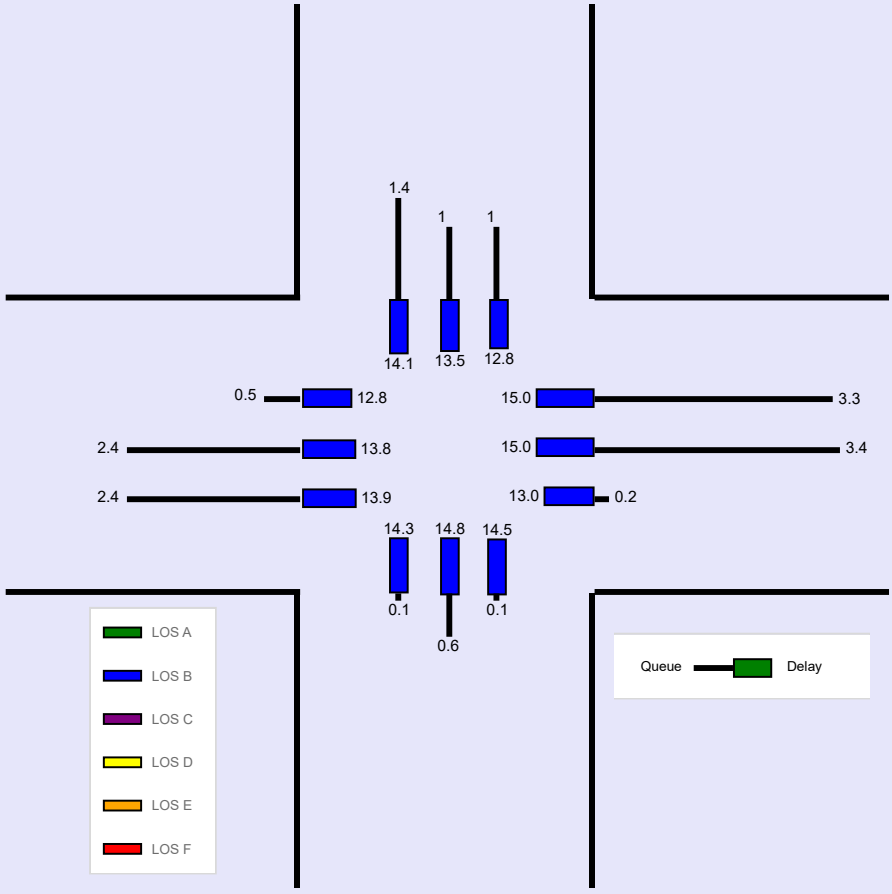
| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 19 | 14 | 368 | 66 | 6 | 34 | 9 | 69 | 66 | 89 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 54.4 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Float | Simult. Gap N/S | On |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.6 | 0.8 | 16.7 | 0.3 | 2.2 | 14.9 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |

| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 14 | 62 | 59 | 6 | 88 | 83 | 2 | 14 | 4 | 26 | 26 | 37 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.5 | 2.4 | 2.4 | 0.2 | 3.4 | 3.3 | 0.1 | 0.6 | 0.1 | 1.0 | 1.0 | 1.4 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.07 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.02 | 0.00 | 0.03 | 0.21 | 0.00 | 0.30 |
| Control Delay ( *d* ), s/veh | 12.8 | 13.8 | 13.9 | 13.0 | 15.0 | 15.0 | 14.3 | 14.8 | 14.5 | 12.8 | 13.5 | 14.1 |
| Level of Service (LOS) | B | B | B | B | B | B | B | B | B | B | B | B |
| Approach Delay, s/veh / LOS | 13.7 | B | | 14.9 | B | | 14.7 | B | | 13.5 | B | |
| Intersection Delay, s/veh / LOS | 14.2 | | | | | | B | | | | | |



## --- Messages ---

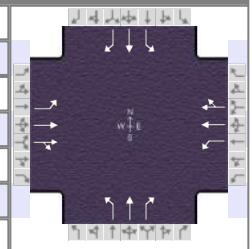
No errors or warnings exist.

## --- Comments ---

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# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

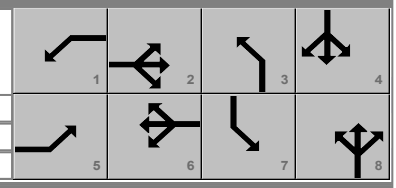


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 49 | 36 | 368 | 66 | 30 | 41 | 27 | 69 | 74 | 89 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 46.5 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Float | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 1.2 | 16.3 | 1.0 | 1.2 | 7.8 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 0.0 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 39 | 309 | 49 | 36 | 368 | 66 | 30 | 41 | 27 | 69 | 74 | 89 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 8 | 4 | | 23 | 3 | | 0 | 0 | 0 | 3 | 0 | 4 |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Turn Bay Length, ft | 200 | 0 | | 140 | 0 | | 125 | 0 | 125 | 125 | 0 | 125 |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 30 | 30 |

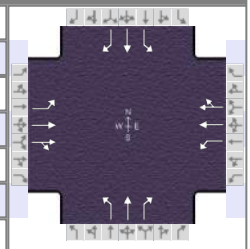
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 55.0 | 15.0 | 55.0 | 15.0 | 35.0 | 15.0 | 35.0 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | 3 | 8 | 3 | 8 |
| Start-Up Lost Time ( *lt*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Recall Mode | Off | Min | Off | Min | Off | Off | Off | Off |
| Dual Entry | No | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 23.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 49 | 36 | 368 | 66 | 30 | 41 | 27 | 69 | 74 | 89 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 46.5 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Float | Simult. Gap N/S | On |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 1.2 | 16.3 | 1.0 | 1.2 | 7.8 | 0.0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Yellow | 3.5 | 4.5 | 3.5 | 0.0 | 4.5 | 0.0 | | | | | | | | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | | | | | | | | |

| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | 3 | 8 | 7 | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 4.0 | 1.1 | 3.0 | 1.1 | 3.0 |
| Phase Duration, s | 4.7 | 22.3 | 4.7 | 22.3 | 4.5 | 13.8 | 5.7 | 15.0 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.6 | 4.0 | 6.6 | 4.1 | 8.2 | 4.1 | 8.2 |
| Queue Clearance Time ( $g_s$ ), s | 2.7 | 5.4 | 2.8 | 6.2 | 2.7 | 2.9 | 3.6 | 4.4 |
| Green Extension Time ( $g_e$ ), s | 0.0 | 10.1 | 0.0 | 10.1 | 0.0 | 3.5 | 0.1 | 3.5 |
| Phase Call Probability | 0.41 | 1.00 | 0.39 | 1.00 | 0.34 | 0.97 | 0.61 | 0.98 |
| Max Out Probability | 0.00 | 0.02 | 0.00 | 0.02 | 0.00 | 0.01 | 0.00 | 0.01 |

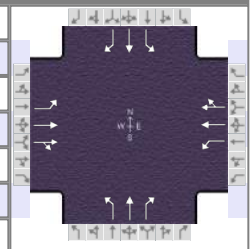
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 41 | 191 | 186 | 38 | 233 | 224 | 32 | 43 | 28 | 73 | 78 | 94 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1697 | 1938 | 1845 | 1485 | 1953 | 1850 | 1810 | 2000 | 1610 | 1767 | 2000 | 1560 |
| Queue Service Time ( $g_s$ ), s | 0.7 | 3.3 | 3.4 | 0.8 | 4.1 | 4.2 | 0.7 | 0.9 | 0.7 | 1.6 | 1.5 | 2.4 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.7 | 3.3 | 3.4 | 0.8 | 4.1 | 4.2 | 0.7 | 0.9 | 0.7 | 1.6 | 1.5 | 2.4 |
| Green Ratio ( *g/C* ) | 0.38 | 0.35 | 0.35 | 0.37 | 0.35 | 0.35 | 0.19 | 0.17 | 0.17 | 0.22 | 0.19 | 0.19 |
| Capacity ( *c* ), veh/h | 432 | 680 | 648 | 390 | 683 | 647 | 353 | 334 | 269 | 442 | 388 | 302 |
| Volume-to-Capacity Ratio ( *X* ) | 0.095 | 0.281 | 0.286 | 0.097 | 0.341 | 0.346 | 0.089 | 0.129 | 0.106 | 0.164 | 0.201 | 0.310 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 10 | 50 | 47 | 10 | 62 | 59 | 11 | 17 | 12 | 26 | 30 | 40 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.4 | 1.9 | 1.9 | 0.4 | 2.4 | 2.4 | 0.5 | 0.7 | 0.5 | 1.0 | 1.2 | 1.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.05 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 0.21 | 0.00 | 0.32 |
| Uniform Delay ( $d_1$ ), s/veh | 9.5 | 10.9 | 10.9 | 9.7 | 11.2 | 11.2 | 15.6 | 16.5 | 16.4 | 14.9 | 15.7 | 16.1 |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.2 | 0.5 | 1.2 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 9.6 | 11.0 | 11.0 | 9.8 | 11.3 | 11.3 | 15.7 | 16.9 | 16.8 | 15.1 | 16.3 | 17.3 |
| Level of Service (LOS) | A | B | B | A | B | B | B | B | B | B | B | B |
| Approach Delay, s/veh / LOS | 10.8 | B | | 11.2 | B | | 16.5 | B | | 16.3 | B | |
| Intersection Delay, s/veh / LOS | 12.5 | | | | | | B | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.08 | B | 2.08 | B | 2.27 | B | 2.27 | B |
| Bicycle LOS Score / LOS | 0.83 | A | 0.90 | A | 0.66 | A | 0.89 | A |

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# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

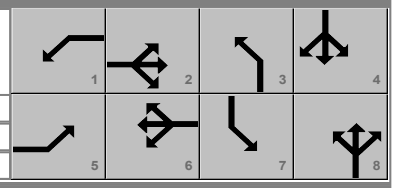


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 49 | 36 | 368 | 66 | 30 | 41 | 27 | 69 | 74 | 89 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 46.5 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Float | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 1.2 | 16.3 | 1.0 | 1.2 | 7.8 | 0.0 |
| Yellow | 3.5 | 4.5 | 3.5 | 0.0 | 4.5 | 0.0 |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 |



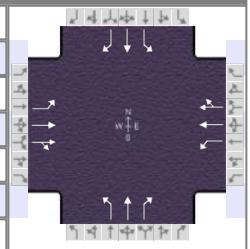

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.938 | 0.969 | 1.000 | 0.821 | 0.977 | 1.000 | 1.000 | 1.000 | 1.000 | 0.977 | 1.000 | 0.969 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.952 | 0.952 | | 0.947 | 0.947 | | 0.000 | 0.847 | | 0.000 | 0.847 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1697 | 3270 | 513 | 1485 | 3229 | 574 | 1810 | 2000 | 1610 | 1767 | 2000 | 1560 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.35 | 0.35 | 0.03 | 0.35 | 0.35 | 0.02 | 0.17 | 0.17 | 0.05 | 0.19 | 0.19 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | 0.11 | 0.23 | 0.23 | 0.11 | 0.23 | 0.23 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.38 | 0.35 | 0.37 | 0.35 | 0.19 | 0.17 | 0.22 | 0.19 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 890 | 0 | 839 | 0 | 1342 | 0 | 1353 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | | | |
| Permitted Effective Green Time ($g_p$), s | 16.3 | 0.0 | 16.3 | 0.0 | 7.8 | 0.0 | 7.8 | 0.0 |
| Permitted Service Time ($g_u$), s | 12.1 | 0.0 | 11.0 | 0.0 | 5.5 | 0.0 | 6.9 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.2 | | 0.2 | | 0.1 | | 0.0 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | | | 0 | | 0 |
| Protected Right Effective Green Time ($g_R$), s | | | | | | 0.0 | | 0.0 |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.389 | 0.000 | 1.389 | 0.000 | 1.557 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.091 | 0.000 | 0.092 | 0.000 | 0.112 | 0.000 | 0.109 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 702.03 | 9.79 | 698.87 | 9.84 | 334.26 | 16.13 | 387.51 | 15.12 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.34 | -3.64 | 0.41 | -3.64 | 0.17 | -3.64 | 0.40 |

# HCS Signalized Intersection Results Graphical Summary

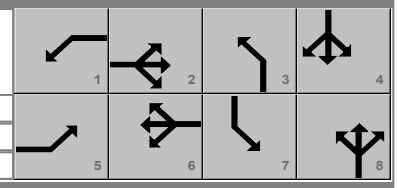
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | AM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



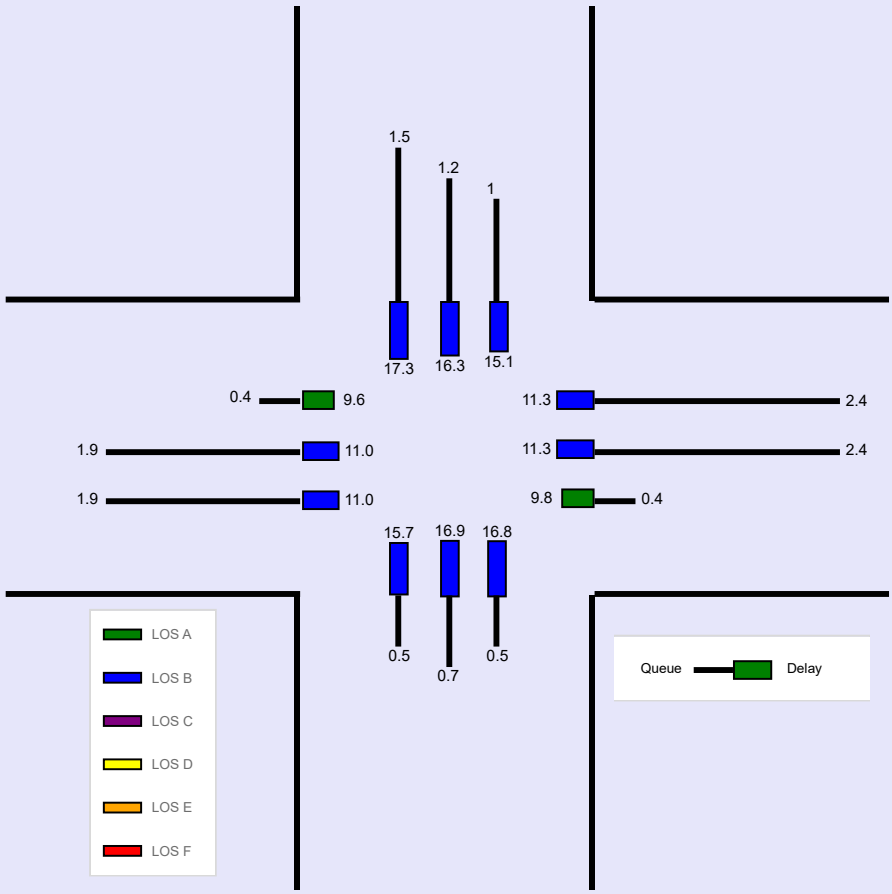
| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 39 | 309 | 49 | 36 | 368 | 66 | 30 | 41 | 27 | 69 | 74 | 89 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 46.5 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Float | Simult. Gap N/S | On |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green | 1.2 | 16.3 | 1.0 | 1.2 | 7.8 | 0.0 | |
| Yellow | 3.5 | 4.5 | 3.5 | 0.0 | 4.5 | 0.0 | |
| Red | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 10 | 50 | 47 | 10 | 62 | 59 | 11 | 17 | 12 | 26 | 30 | 40 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.4 | 1.9 | 1.9 | 0.4 | 2.4 | 2.4 | 0.5 | 0.7 | 0.5 | 1.0 | 1.2 | 1.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.05 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 | 0.21 | 0.00 | 0.32 |
| Control Delay ( *d* ), s/veh | 9.6 | 11.0 | 11.0 | 9.8 | 11.3 | 11.3 | 15.7 | 16.9 | 16.8 | 15.1 | 16.3 | 17.3 |
| Level of Service (LOS) | A | B | B | A | B | B | B | B | B | B | B | B |
| Approach Delay, s/veh / LOS | 10.8 | B | | 11.2 | B | | 16.5 | B | | 16.3 | B | |
| Intersection Delay, s/veh / LOS | 12.5 | | | | | | B | | | | | |



## --- Messages ---

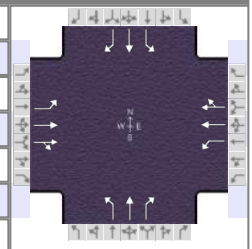
No errors or warnings exist.

## --- Comments ---

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# HCS Signalized Intersection Input Data

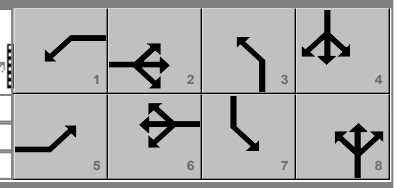
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 102 | 558 | 12 | 9 | 407 | 79 | 12 | 67 | 30 | 53 | 43 | 64 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 53.6 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.4 | 2.7 | 21.8 | 0.5 | 1.5 | 7.7 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 102 | 558 | 12 | 9 | 407 | 79 | 12 | 67 | 30 | 53 | 43 | 64 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 0 | | 11 | 3 | | 0 | 0 | 3 | 0 | 0 | 0 |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Turn Bay Length, ft | 200 | 0 | | 140 | 0 | | 125 | 0 | 125 | 125 | 0 | 125 |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 30 | 30 |

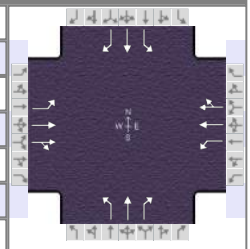
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 55.0 | 15.0 | 55.0 | 15.0 | 35.0 | 15.0 | 35.0 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | 3 | 8 | 3 | 8 |
| Start-Up Lost Time ( *lt*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Recall Mode | Off | Min | Off | Min | Off | Off | Off | Off |
| Dual Entry | No | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 23.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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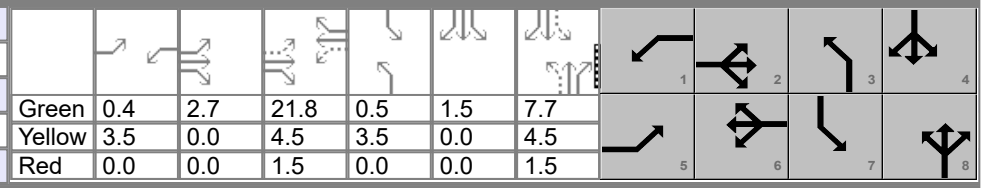
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 102 | 558 | 12 | 9 | 407 | 79 | 12 | 67 | 30 | 53 | 43 | 64 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 53.6 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green | 0.4 | 2.7 | 21.8 | 0.5 | 1.5 | 7.7 | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | |

| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | 3 | 8 | 7 | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 4.0 | 1.1 | 3.0 | 1.1 | 3.0 |
| Phase Duration, s | 6.6 | 30.5 | 3.9 | 27.8 | 4.0 | 13.7 | 5.5 | 15.2 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.6 | 4.0 | 6.6 | 4.1 | 8.4 | 4.1 | 8.4 |
| Queue Clearance Time ( $g_s$ ), s | 3.7 | 7.2 | 2.2 | 7.0 | 2.3 | 3.7 | 3.4 | 3.9 |
| Green Extension Time ( $g_e$ ), s | 0.2 | 14.8 | 0.0 | 14.8 | 0.0 | 3.1 | 0.1 | 3.1 |
| Phase Call Probability | 0.80 | 1.00 | 0.13 | 1.00 | 0.17 | 0.97 | 0.56 | 0.98 |
| Max Out Probability | 0.00 | 0.10 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.01 |

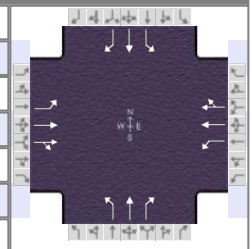
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 107 | 301 | 299 | 9 | 262 | 250 | 13 | 71 | 32 | 56 | 45 | 67 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 2000 | 1985 | 1654 | 1953 | 1843 | 1810 | 2000 | 1572 | 1810 | 2000 | 1610 |
| Queue Service Time ( $g_s$ ), s | 1.7 | 5.2 | 5.2 | 0.2 | 4.9 | 5.0 | 0.3 | 1.7 | 0.9 | 1.4 | 1.0 | 1.9 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 1.7 | 5.2 | 5.2 | 0.2 | 4.9 | 5.0 | 0.3 | 1.7 | 0.9 | 1.4 | 1.0 | 1.9 |
| Green Ratio ( *g/C* ) | 0.49 | 0.46 | 0.46 | 0.41 | 0.41 | 0.41 | 0.15 | 0.14 | 0.14 | 0.18 | 0.17 | 0.17 |
| Capacity ( *c* ), veh/h | 523 | 915 | 908 | 393 | 794 | 749 | 311 | 288 | 227 | 353 | 343 | 276 |
| Volume-to-Capacity Ratio ( *X* ) | 0.205 | 0.329 | 0.329 | 0.024 | 0.330 | 0.334 | 0.041 | 0.245 | 0.139 | 0.158 | 0.132 | 0.244 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 23 | 76 | 76 | 3 | 77 | 72 | 6 | 36 | 16 | 25 | 21 | 33 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.9 | 3.1 | 3.0 | 0.1 | 3.0 | 2.9 | 0.2 | 1.4 | 0.6 | 1.0 | 0.9 | 1.3 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.12 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 | 0.00 | 0.13 | 0.20 | 0.00 | 0.27 |
| Uniform Delay ( $d_1$ ), s/veh | 7.9 | 9.3 | 9.3 | 9.5 | 10.9 | 10.9 | 19.4 | 20.4 | 20.0 | 18.6 | 18.8 | 19.2 |
| Incremental Delay ( $d_2$ ), s/veh | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.9 | 0.6 | 0.2 | 0.4 | 1.0 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 8.1 | 9.4 | 9.4 | 9.5 | 11.0 | 11.0 | 19.4 | 21.3 | 20.6 | 18.8 | 19.2 | 20.2 |
| Level of Service (LOS) | A | A | A | A | B | B | B | C | C | B | B | C |
| Approach Delay, s/veh / LOS | 9.2 | A | | 11.0 | B | | 20.9 | C | | 19.5 | B | |
| Intersection Delay, s/veh / LOS | 11.8 | | | | | | B | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.07 | B | 2.08 | B | 2.28 | B | 2.27 | B |
| Bicycle LOS Score / LOS | 1.07 | A | 0.92 | A | 0.68 | A | 0.77 | A |

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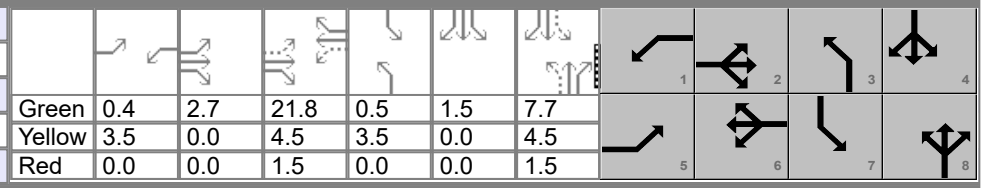
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 102 | 558 | 12 | 9 | 407 | 79 | 12 | 67 | 30 | 53 | 43 | 64 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 53.6 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.4 | 2.7 | 21.8 | 0.5 | 1.5 | 7.7 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |

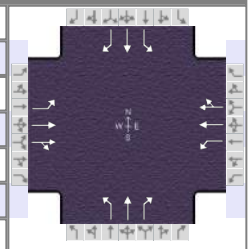
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 1.000 | 1.000 | 0.914 | 0.977 | 1.000 | 1.000 | 1.000 | 0.977 | 1.000 | 1.000 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.992 | 0.992 | | 0.944 | 0.944 | | 0.000 | 0.847 | | 0.000 | 0.847 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3901 | 84 | 1654 | 3183 | 613 | 1810 | 2000 | 1572 | 1810 | 2000 | 1610 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.06 | 0.46 | 0.46 | 0.01 | 0.41 | 0.41 | 0.01 | 0.14 | 0.14 | 0.04 | 0.17 | 0.17 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | 0.11 | 0.23 | 0.23 | 0.11 | 0.23 | 0.23 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.49 | 0.46 | 0.41 | 0.41 | 0.15 | 0.14 | 0.18 | 0.17 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 903 | 0 | 760 | 0 | 1382 | 0 | 1351 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | | | |
| Permitted Effective Green Time ($g_p$), s | 23.0 | 0.0 | 21.8 | 0.0 | 7.7 | 0.0 | 7.7 | 0.0 |
| Permitted Service Time ($g_u$), s | 16.8 | 0.0 | 17.4 | 0.0 | 6.2 | 0.0 | 6.1 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.8 | | 0.1 | | 0.0 | | 0.1 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | | | 0 | | 0 |
| Protected Right Effective Green Time ($g_R$), s | | | | | | 0.0 | | 0.0 |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.389 | 0.000 | 1.389 | 0.000 | 1.557 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.083 | 0.000 | 0.090 | 0.000 | 0.119 | 0.000 | 0.117 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 914.88 | 7.89 | 812.70 | 9.45 | 288.38 | 19.64 | 342.48 | 18.42 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.58 | -3.64 | 0.43 | -3.64 | 0.19 | -3.64 | 0.28 |

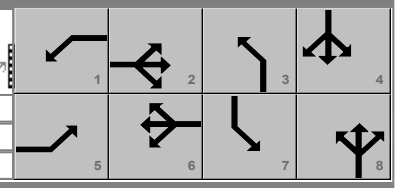
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2025 DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

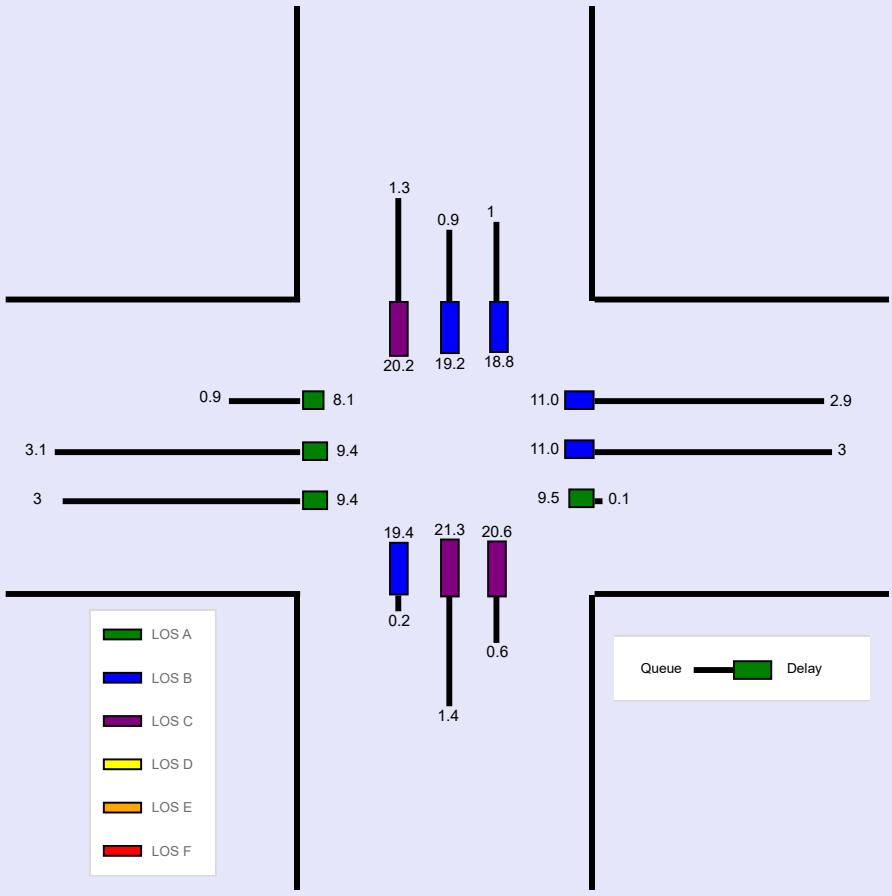


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 102 | 558 | 12 | 9 | 407 | 79 | 12 | 67 | 30 | 53 | 43 | 64 |

| Signal Information | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 53.6 | Reference Phase | 2 | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | | | | | | | | | |
| Force Mode | Fixed | Simult. Gap N/S | On | | | | | | | | | |
| | | | | Green | 0.4 | 2.7 | 21.8 | 0.5 | 1.5 | 7.7 | | |
| | | | | Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 23 | 76 | 76 | 3 | 77 | 72 | 6 | 36 | 16 | 25 | 21 | 33 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.9 | 3.1 | 3.0 | 0.1 | 3.0 | 2.9 | 0.2 | 1.4 | 0.6 | 1.0 | 0.9 | 1.3 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.12 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 | 0.00 | 0.13 | 0.20 | 0.00 | 0.27 |
| Control Delay ( *d* ), s/veh | 8.1 | 9.4 | 9.4 | 9.5 | 11.0 | 11.0 | 19.4 | 21.3 | 20.6 | 18.8 | 19.2 | 20.2 |
| Level of Service (LOS) | A | A | A | A | B | B | B | C | C | B | B | C |
| Approach Delay, s/veh / LOS | 9.2 | A | | 11.0 | B | | 20.9 | C | | 19.5 | B | |
| Intersection Delay, s/veh / LOS | 11.8 | | | | | | B | | | | | |



## --- Messages ---

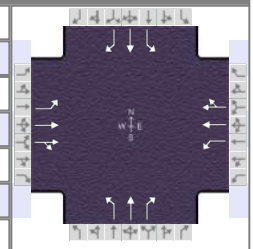
No errors or warnings exist.

## --- Comments ---

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# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

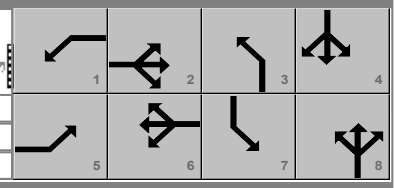


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 13 | 9 | 426 | 83 | 13 | 70 | 31 | 55 | 45 | 67 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.7 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.4 | 3.0 | 23.3 | 0.6 | 1.6 | 7.8 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 109 | 595 | 13 | 9 | 426 | 83 | 13 | 70 | 31 | 55 | 45 | 67 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 0 | | 11 | 3 | | 0 | 0 | 3 | 0 | 0 | 0 |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Turn Bay Length, ft | 200 | 0 | | 140 | 0 | | 125 | 0 | 125 | 125 | 0 | 125 |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 30 | 30 |

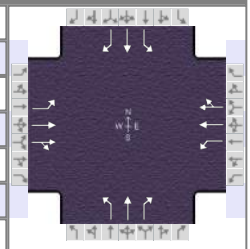
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 55.0 | 15.0 | 55.0 | 15.0 | 35.0 | 15.0 | 35.0 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | 3 | 8 | 3 | 8 |
| Start-Up Lost Time ( *lt*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Recall Mode | Off | Min | Off | Min | Off | Off | Off | Off |
| Dual Entry | No | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 23.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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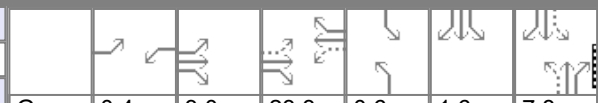
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

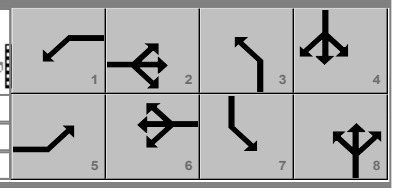


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 13 | 9 | 426 | 83 | 13 | 70 | 31 | 55 | 45 | 67 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.7 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.4 | 3.0 | 23.3 | 0.6 | 1.6 | 7.8 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | 3 | 8 | 7 | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 4.0 | 1.1 | 3.0 | 1.1 | 3.0 |
| Phase Duration, s | 6.9 | 32.3 | 3.9 | 29.3 | 4.1 | 13.8 | 5.6 | 15.4 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.6 | 4.0 | 6.6 | 4.1 | 8.4 | 4.1 | 8.4 |
| Queue Clearance Time ( $g_s$ ), s | 3.9 | 7.6 | 2.2 | 7.3 | 2.4 | 3.8 | 3.5 | 4.1 |
| Green Extension Time ( $g_e$ ), s | 0.2 | 16.0 | 0.0 | 16.0 | 0.0 | 3.3 | 0.1 | 3.3 |
| Phase Call Probability | 0.83 | 1.00 | 0.14 | 1.00 | 0.19 | 0.97 | 0.59 | 0.99 |
| Max Out Probability | 0.00 | 0.13 | 0.00 | 0.13 | 0.00 | 0.01 | 0.00 | 0.01 |

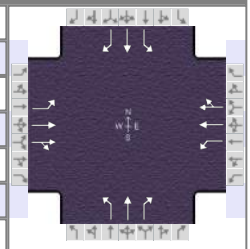
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 115 | 321 | 319 | 9 | 274 | 262 | 14 | 74 | 33 | 58 | 47 | 71 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 2000 | 1985 | 1654 | 1953 | 1842 | 1810 | 2000 | 1572 | 1810 | 2000 | 1610 |
| Queue Service Time ( $g_s$ ), s | 1.9 | 5.6 | 5.6 | 0.2 | 5.3 | 5.3 | 0.4 | 1.8 | 1.0 | 1.5 | 1.1 | 2.1 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 1.9 | 5.6 | 5.6 | 0.2 | 5.3 | 5.3 | 0.4 | 1.8 | 1.0 | 1.5 | 1.1 | 2.1 |
| Green Ratio ( *g/C* ) | 0.51 | 0.47 | 0.47 | 0.43 | 0.42 | 0.42 | 0.15 | 0.14 | 0.14 | 0.18 | 0.17 | 0.17 |
| Capacity ( *c* ), veh/h | 525 | 946 | 939 | 388 | 819 | 773 | 303 | 280 | 220 | 343 | 336 | 271 |
| Volume-to-Capacity Ratio ( *X* ) | 0.218 | 0.339 | 0.340 | 0.024 | 0.335 | 0.339 | 0.045 | 0.263 | 0.148 | 0.169 | 0.141 | 0.261 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 25 | 84 | 83 | 3 | 84 | 78 | 6 | 40 | 18 | 27 | 24 | 37 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 1.0 | 3.4 | 3.3 | 0.1 | 3.3 | 3.1 | 0.3 | 1.6 | 0.7 | 1.1 | 0.9 | 1.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.12 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 | 0.00 | 0.14 | 0.22 | 0.00 | 0.29 |
| Uniform Delay ( $d_1$ ), s/veh | 7.7 | 9.2 | 9.2 | 9.4 | 10.9 | 10.9 | 20.3 | 21.4 | 21.0 | 19.4 | 19.7 | 20.1 |
| Incremental Delay ( $d_2$ ), s/veh | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 1.1 | 0.7 | 0.2 | 0.4 | 1.1 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 7.9 | 9.3 | 9.3 | 9.4 | 11.0 | 11.0 | 20.3 | 22.4 | 21.7 | 19.6 | 20.1 | 21.2 |
| Level of Service (LOS) | A | A | A | A | B | B | C | C | C | B | C | C |
| Approach Delay, s/veh / LOS | 9.1 | A | | 11.0 | B | | 22.0 | C | | 20.4 | C | |
| Intersection Delay, s/veh / LOS | 12.0 | | | | | | B | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.07 | B | 2.08 | B | 2.28 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.11 | A | 0.94 | A | 0.69 | A | 0.78 | A |

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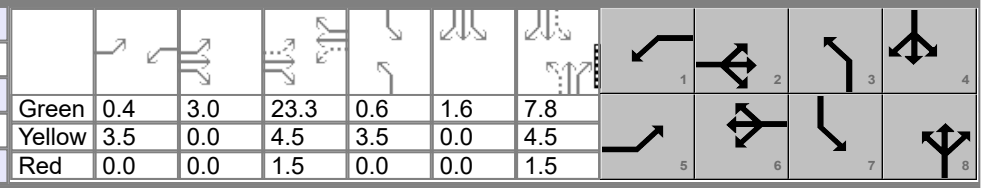
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 13 | 9 | 426 | 83 | 13 | 70 | 31 | 55 | 45 | 67 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.7 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.4 | 3.0 | | 23.3 | 0.6 | 1.6 | 7.8 | | | | | |
| Yellow | 3.5 | 0.0 | | 4.5 | 3.5 | 0.0 | 4.5 | | | | | |
| Red | 0.0 | 0.0 | | 1.5 | 0.0 | 0.0 | 1.5 | | | | | |

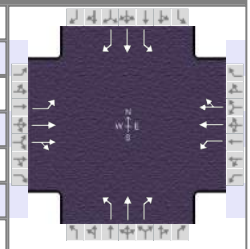
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 1.000 | 1.000 | 0.914 | 0.977 | 1.000 | 1.000 | 1.000 | 0.977 | 1.000 | 1.000 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.992 | 0.992 | | 0.943 | 0.943 | | 0.000 | 0.847 | | 0.000 | 0.847 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3900 | 85 | 1654 | 3180 | 615 | 1810 | 2000 | 1572 | 1810 | 2000 | 1610 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.06 | 0.47 | 0.47 | 0.01 | 0.42 | 0.42 | 0.01 | 0.14 | 0.14 | 0.04 | 0.17 | 0.17 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | 0.11 | 0.23 | 0.23 | 0.11 | 0.23 | 0.23 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.51 | 0.47 | 0.43 | 0.42 | 0.15 | 0.14 | 0.18 | 0.17 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 883 | 0 | 733 | 0 | 1380 | 0 | 1347 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | | | |
| Permitted Effective Green Time ($g_p$), s | 24.8 | 0.0 | 23.4 | 0.0 | 7.8 | 0.0 | 7.9 | 0.0 |
| Permitted Service Time ($g_u$), s | 18.0 | 0.0 | 18.7 | 0.0 | 6.3 | 0.0 | 6.0 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 1.0 | | 0.1 | | 0.0 | | 0.1 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | | | 0 | | 0 |
| Protected Right Effective Green Time ($g_R$), s | | | | | | 0.0 | | 0.0 |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.389 | 0.000 | 1.389 | 0.000 | 1.557 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.082 | 0.000 | 0.090 | 0.000 | 0.121 | 0.000 | 0.119 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 945.71 | 7.73 | 838.90 | 9.38 | 280.29 | 20.57 | 336.19 | 19.26 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.62 | -3.64 | 0.45 | -3.64 | 0.20 | -3.64 | 0.29 |

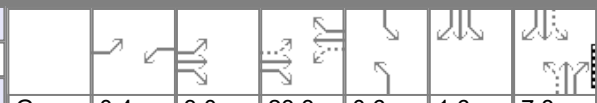
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 NB DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

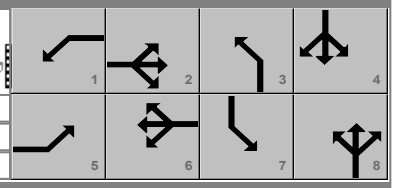


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 13 | 9 | 426 | 83 | 13 | 70 | 31 | 55 | 45 | 67 |

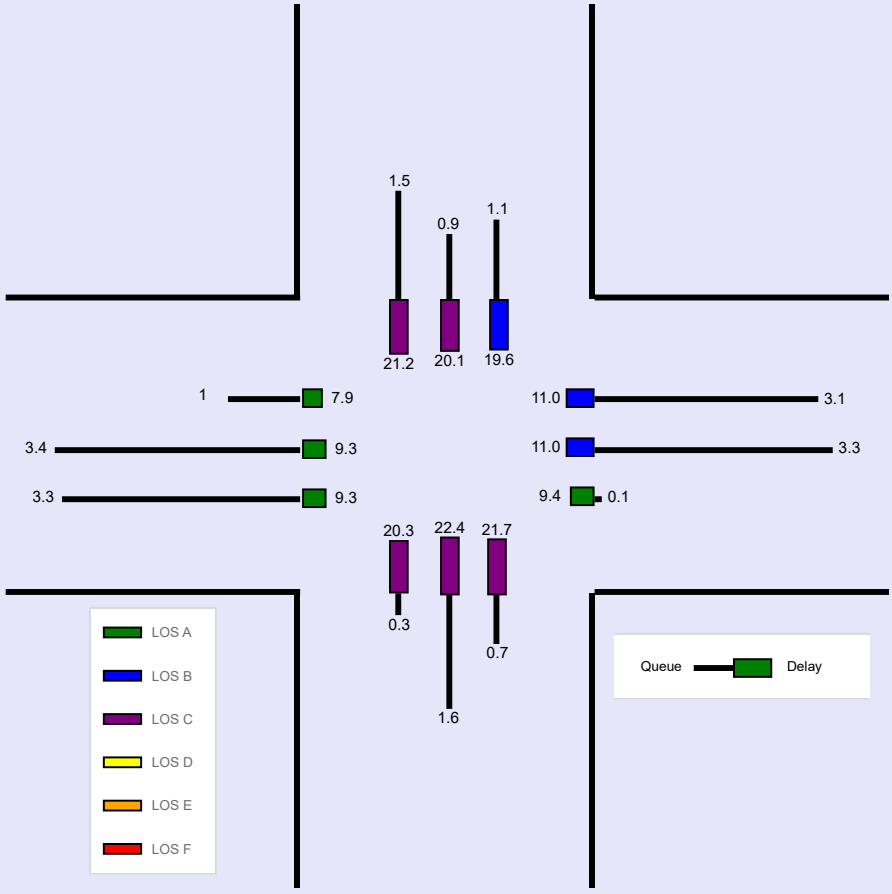
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.7 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.4 | 3.0 | 23.3 | 0.6 | 1.6 | 7.8 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 25 | 84 | 83 | 3 | 84 | 78 | 6 | 40 | 18 | 27 | 24 | 37 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 1.0 | 3.4 | 3.3 | 0.1 | 3.3 | 3.1 | 0.3 | 1.6 | 0.7 | 1.1 | 0.9 | 1.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.12 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 | 0.00 | 0.14 | 0.22 | 0.00 | 0.29 |
| Control Delay ( *d* ), s/veh | 7.9 | 9.3 | 9.3 | 9.4 | 11.0 | 11.0 | 20.3 | 22.4 | 21.7 | 19.6 | 20.1 | 21.2 |
| Level of Service (LOS) | A | A | A | A | B | B | C | C | C | B | C | C |
| Approach Delay, s/veh / LOS | 9.1 | A | | 11.0 | B | | 22.0 | C | | 20.4 | C | |
| Intersection Delay, s/veh / LOS | 12.0 | | | | | | B | | | | | |



## --- Messages ---

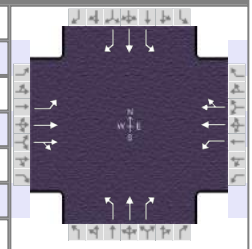
No errors or warnings exist.

## --- Comments ---

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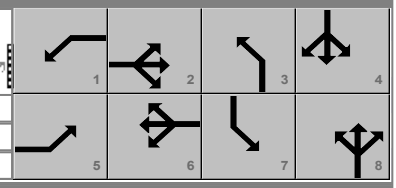
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 27 | 19 | 426 | 83 | 45 | 78 | 55 | 55 | 48 | 67 |

| Signal Information | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 56.2 | Reference Phase | 2 | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | Green | 0.8 | 2.6 | 23.7 | 1.7 | 0.4 | 7.9 | | |
| Force Mode | Fixed | Simult. Gap N/S | On | Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 109 | 595 | 27 | 19 | 426 | 83 | 45 | 78 | 55 | 55 | 48 | 67 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 0 | 0 | | 11 | 3 | | 0 | 0 | 3 | 0 | 0 | 0 |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Turn Bay Length, ft | 200 | 0 | | 140 | 0 | | 125 | 0 | 125 | 125 | 0 | 125 |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 30 | 30 |

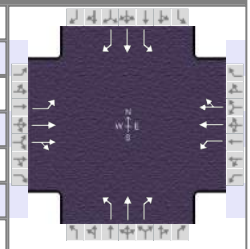
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 55.0 | 15.0 | 55.0 | 15.0 | 35.0 | 15.0 | 35.0 |
| Yellow Change Interval (*Y*), s | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | 3 | 8 | 3 | 8 |
| Start-Up Lost Time ( *lt*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | 3.0 | 5.0 | 3.0 | 5.0 |
| Recall Mode | Off | Min | Off | Min | Off | Off | Off | Off |
| Dual Entry | No | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 23.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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# HCS Signalized Intersection Results Summary

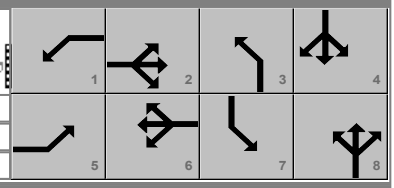
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 27 | 19 | 426 | 83 | 45 | 78 | 55 | 55 | 48 | 67 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 56.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.8 | 2.6 | 23.7 | 1.7 | 0.4 | 7.9 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | 3 | 8 | 7 | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 4.0 | 1.1 | 3.0 | 1.1 | 3.0 |
| Phase Duration, s | 6.9 | 32.3 | 4.3 | 29.7 | 5.2 | 13.9 | 5.7 | 14.4 |
| Change Period, ( $Y+R_c$ ), s | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.6 | 4.0 | 6.6 | 4.1 | 8.3 | 4.1 | 8.3 |
| Queue Clearance Time ( $g_s$ ), s | 3.9 | 7.9 | 2.4 | 7.4 | 3.3 | 4.1 | 3.5 | 4.2 |
| Green Extension Time ( $g_e$ ), s | 0.2 | 16.2 | 0.0 | 16.3 | 0.1 | 3.8 | 0.1 | 3.8 |
| Phase Call Probability | 0.83 | 1.00 | 0.27 | 1.00 | 0.52 | 0.99 | 0.60 | 0.99 |
| Max Out Probability | 0.00 | 0.14 | 0.00 | 0.14 | 0.00 | 0.01 | 0.00 | 0.01 |

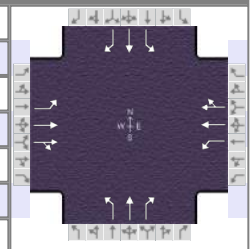
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 115 | 330 | 325 | 20 | 274 | 262 | 47 | 82 | 58 | 58 | 51 | 71 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1810 | 2000 | 1969 | 1654 | 1953 | 1842 | 1810 | 2000 | 1572 | 1810 | 2000 | 1610 |
| Queue Service Time ( $g_s$ ), s | 1.9 | 5.9 | 5.9 | 0.4 | 5.3 | 5.4 | 1.3 | 2.1 | 1.8 | 1.5 | 1.2 | 2.2 |
| Cycle Queue Clearance Time ( $g_c$ ), s | 1.9 | 5.9 | 5.9 | 0.4 | 5.3 | 5.4 | 1.3 | 2.1 | 1.8 | 1.5 | 1.2 | 2.2 |
| Green Ratio ( *g/C* ) | 0.50 | 0.47 | 0.47 | 0.44 | 0.42 | 0.42 | 0.17 | 0.14 | 0.14 | 0.18 | 0.15 | 0.15 |
| Capacity ( *c* ), veh/h | 526 | 936 | 922 | 389 | 823 | 777 | 310 | 282 | 222 | 337 | 297 | 239 |
| Volume-to-Capacity Ratio ( *X* ) | 0.218 | 0.352 | 0.353 | 0.051 | 0.333 | 0.337 | 0.153 | 0.291 | 0.261 | 0.172 | 0.170 | 0.295 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 25 | 89 | 88 | 6 | 84 | 79 | 23 | 45 | 33 | 28 | 26 | 39 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 1.0 | 3.6 | 3.5 | 0.2 | 3.3 | 3.2 | 0.9 | 1.8 | 1.3 | 1.1 | 1.1 | 1.6 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.13 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.18 | 0.00 | 0.26 | 0.22 | 0.00 | 0.31 |
| Uniform Delay ( $d_1$ ), s/veh | 7.9 | 9.5 | 9.5 | 9.3 | 10.9 | 11.0 | 19.9 | 21.6 | 21.5 | 19.6 | 20.9 | 21.3 |
| Incremental Delay ( $d_2$ ), s/veh | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 1.2 | 1.3 | 0.2 | 0.6 | 1.4 |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | 8.1 | 9.6 | 9.6 | 9.4 | 11.0 | 11.1 | 20.1 | 22.8 | 22.8 | 19.8 | 21.5 | 22.8 |
| Level of Service (LOS) | A | A | A | A | B | B | C | C | C | B | C | C |
| Approach Delay, s/veh / LOS | 9.4 | A | | 11.0 | B | | 22.1 | C | | 21.4 | C | |
| Intersection Delay, s/veh / LOS | 12.6 | | | | | | B | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.07 | B | 2.08 | B | 2.28 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.12 | A | 0.95 | A | 0.80 | A | 0.78 | A |

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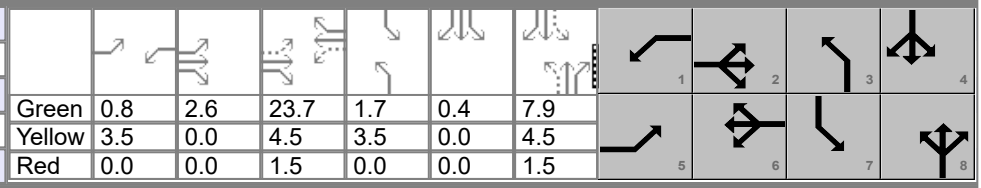
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 27 | 19 | 426 | 83 | 45 | 78 | 55 | 55 | 48 | 67 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 56.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.8 | 2.6 | 23.7 | 1.7 | 0.4 | 7.9 | | | | | | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | | | | | | |

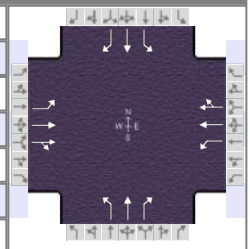
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 1.000 | 1.000 | 0.914 | 0.977 | 1.000 | 1.000 | 1.000 | 0.977 | 1.000 | 1.000 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.985 | 0.985 | | 0.943 | 0.943 | | 0.000 | 0.847 | | 0.000 | 0.847 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1810 | 3797 | 172 | 1654 | 3180 | 615 | 1810 | 2000 | 1572 | 1810 | 2000 | 1610 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.06 | 0.47 | 0.47 | 0.01 | 0.42 | 0.42 | 0.03 | 0.14 | 0.14 | 0.04 | 0.15 | 0.15 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | 0.11 | 0.23 | 0.23 | 0.11 | 0.23 | 0.23 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | 0.50 | 0.47 | 0.44 | 0.42 | 0.17 | 0.14 | 0.18 | 0.15 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 883 | 0 | 723 | 0 | 1376 | 0 | 1337 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | | | |
| Permitted Effective Green Time ($g_p$), s | 24.8 | 0.0 | 23.7 | 0.0 | 7.9 | 0.0 | 7.9 | 0.0 |
| Permitted Service Time ($g_u$), s | 18.3 | 0.0 | 18.4 | 0.0 | 5.1 | 0.0 | 5.9 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 1.0 | | 0.1 | | 0.1 | | 0.1 | |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | | | 0 | | 0 |
| Protected Right Effective Green Time ($g_R$), s | | | | | | 0.0 | | 0.0 |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.389 | 0.000 | 1.389 | 0.000 | 1.557 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.083 | 0.000 | 0.090 | 0.000 | 0.122 | 0.000 | 0.121 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 936.13 | 7.95 | 843.01 | 9.40 | 282.46 | 20.72 | 297.24 | 20.37 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.63 | -3.64 | 0.46 | -3.64 | 0.31 | -3.64 | 0.30 |

# HCS Signalized Intersection Results Graphical Summary

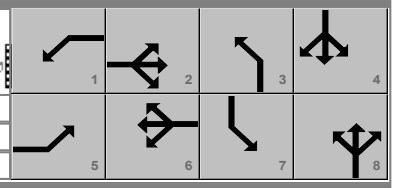
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | CCDOTH | Time Period | PM | PHF | 0.95 |
| Urban Street | DEMPSTER ST | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | DEMPSTER @ LINNEM… | File Name | 2032 TOT DEMP-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



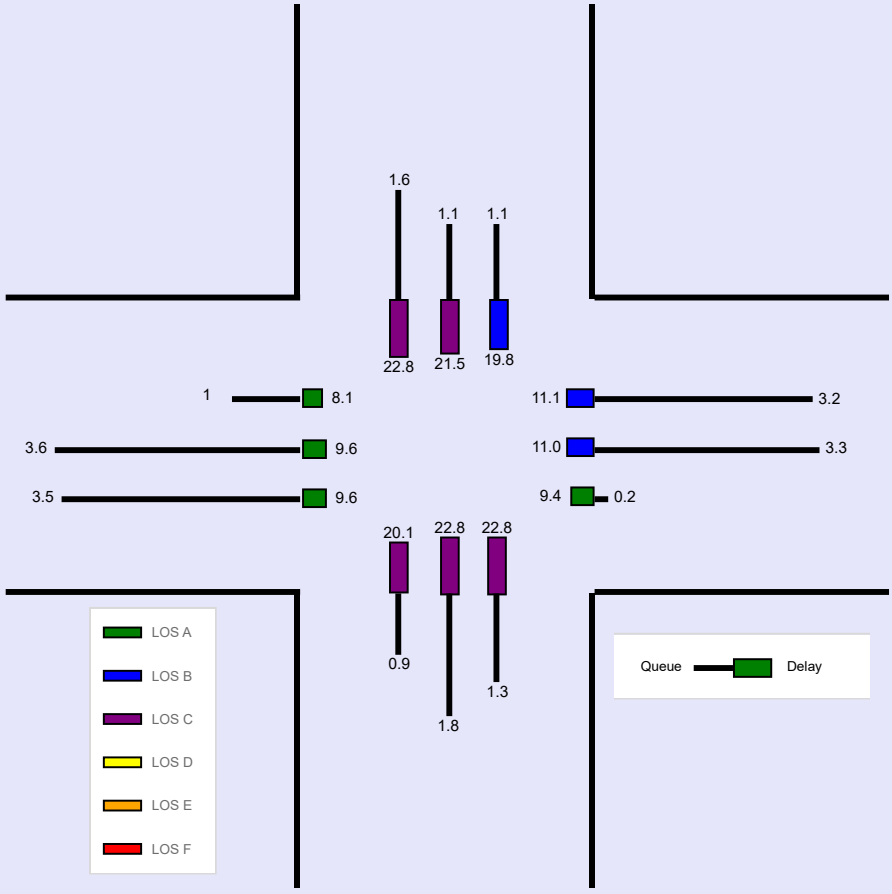
| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 109 | 595 | 27 | 19 | 426 | 83 | 45 | 78 | 55 | 55 | 48 | 67 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 56.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green | 0.8 | 2.6 | 23.7 | 1.7 | 0.4 | 7.9 | |
| Yellow | 3.5 | 0.0 | 4.5 | 3.5 | 0.0 | 4.5 | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 25 | 89 | 88 | 6 | 84 | 79 | 23 | 45 | 33 | 28 | 26 | 39 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 1.0 | 3.6 | 3.5 | 0.2 | 3.3 | 3.2 | 0.9 | 1.8 | 1.3 | 1.1 | 1.1 | 1.6 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.13 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.18 | 0.00 | 0.26 | 0.22 | 0.00 | 0.31 |
| Control Delay ( *d* ), s/veh | 8.1 | 9.6 | 9.6 | 9.4 | 11.0 | 11.1 | 20.1 | 22.8 | 22.8 | 19.8 | 21.5 | 22.8 |
| Level of Service (LOS) | A | A | A | A | B | B | C | C | C | B | C | C |
| Approach Delay, s/veh / LOS | 9.4 | A | | 11.0 | B | | 22.1 | C | | 21.4 | C | |
| Intersection Delay, s/veh / LOS | 12.6 | | | | | | B | | | | | |



## --- Messages ---

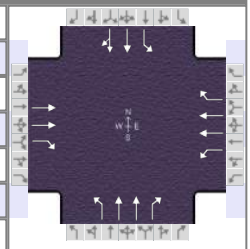
No errors or warnings exist.

## --- Comments ---

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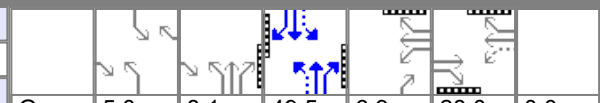
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.92 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

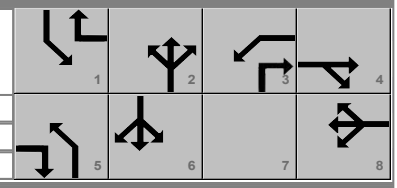


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 329 | 414 | 89 | 257 | 60 | 305 | 552 | 151 | 75 | 832 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.0 | 8.1 | 49.5 | 6.9 | 28.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | | 329 | 414 | 89 | 257 | 60 | 305 | 552 | 151 | 75 | 832 | 8 |
| Initial Queue ($Q_b$), veh/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | | 5 | 13 | 10 | 7 | 7 | 17 | 11 | 11 | 7 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | | 0 | 75 | 205 | 0 | 75 | 295 | 0 | 150 | 100 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | | 45 | 45 | 45 | 45 | 45 | 40 | 40 | 40 | 35 | 35 | 35 |

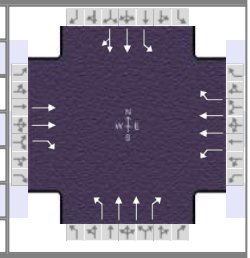
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | | 30.0 | 14.4 | 44.4 | 26.4 | 62.4 | 13.2 | 49.2 |
| Yellow Change Interval (*Y*), s | | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | | 15 | 3 | 15 | 3 | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | | 7.0 | 3.0 | 7.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| Recall Mode | | Off | Off | Off | Off | Min | Off | Min |
| Dual Entry | | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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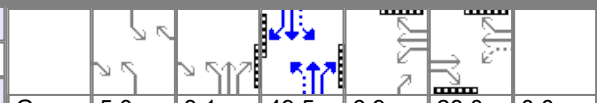
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.92 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

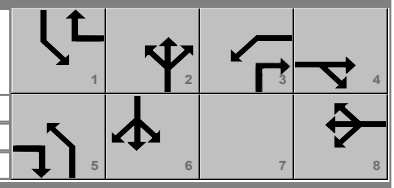


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 329 | 414 | 89 | 257 | 60 | 305 | 552 | 151 | 75 | 832 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.0 | 8.1 | 49.5 | 6.9 | 28.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Case Number | | 7.3 | 1.0 | 3.0 | 1.1 | 3.0 | 1.1 | 4.0 |
| Phase Duration, s | | 34.0 | 10.4 | 44.4 | 20.1 | 67.1 | 8.5 | 55.5 |
| Change Period, ( $Y+R_c$ ), s | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | | 9.9 | 4.0 | 9.9 | 4.0 | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( $g_s$ ), s | | 30.0 | 7.1 | 8.9 | 15.9 | | 5.3 | |
| Green Extension Time ( $g_e$ ), s | | 0.0 | 0.1 | 22.8 | 0.7 | 0.0 | 0.1 | 0.0 |
| Phase Call Probability | | 1.00 | 0.96 | 1.00 | 1.00 | | 0.93 | |
| Max Out Probability | | 1.00 | 1.00 | 0.76 | 0.20 | | 0.67 | |

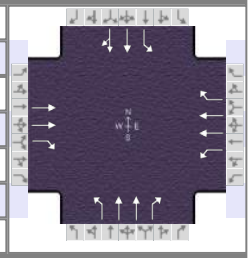
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | | 358 | 450 | 97 | 279 | 65 | 332 | 600 | 164 | 82 | 457 | 456 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | | 1830 | 1447 | 1668 | 1800 | 1522 | 1570 | 1741 | 1472 | 1711 | 1811 | 1805 |
| Queue Service Time ( $g_s$ ), s | | 10.0 | 28.0 | 5.1 | 6.9 | 3.4 | 13.9 | 8.6 | 6.5 | 3.3 | 20.5 | 20.6 |
| Cycle Queue Clearance Time ( $g_c$ ), s | | 10.0 | 28.0 | 5.1 | 6.9 | 3.4 | 13.9 | 8.6 | 6.5 | 3.3 | 20.5 | 20.6 |
| Green Ratio ( *g/C* ) | | 0.23 | 0.37 | 0.31 | 0.32 | 0.36 | 0.57 | 0.51 | 0.57 | 0.45 | 0.41 | 0.41 |
| Capacity ( *c* ), veh/h | | 854 | 537 | 300 | 1152 | 550 | 407 | 1773 | 834 | 456 | 748 | 745 |
| Volume-to-Capacity Ratio ( *X* ) | | 0.419 | 0.838 | 0.323 | 0.243 | 0.119 | 0.815 | 0.338 | 0.197 | 0.179 | 0.611 | 0.611 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 209 | 539 | 100 | 141 | 60 | 270 | 147 | 106 | 62 | 339 | 324 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 8.0 | 19.5 | 3.7 | 5.4 | 2.3 | 9.5 | 5.4 | 3.9 | 2.4 | 12.9 | 13.0 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 7.19 | 0.49 | 0.00 | 0.81 | 0.92 | 0.00 | 0.71 | 0.62 | 0.00 | 0.00 |
| Uniform Delay ( $d_1$ ), s/veh | | 39.1 | 34.4 | 31.2 | 30.1 | 25.6 | 19.6 | 10.8 | 12.7 | 18.7 | 20.4 | 20.6 |
| Incremental Delay ( $d_2$ ), s/veh | | 1.5 | 14.4 | 0.6 | 0.5 | 0.4 | 8.7 | 0.5 | 0.5 | 0.2 | 3.7 | 3.7 |
| Initial Queue Delay ( $d_3$ ), s/veh | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | | 40.6 | 48.9 | 31.8 | 30.6 | 26.0 | 28.3 | 11.3 | 13.2 | 18.9 | 24.2 | 24.3 |
| Level of Service (LOS) | | D | D | C | C | C | C | B | B | B | C | C |
| Approach Delay, s/veh / LOS | 45.2 | D | | 30.2 | C | | 16.8 | B | | 23.8 | C | |
| Intersection Delay, s/veh / LOS | 27.5 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.45 | B | 2.29 | B | 2.42 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.15 | A | 0.85 | A | 1.39 | A | 1.31 | A |

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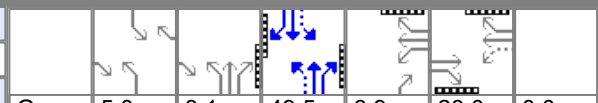
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.92 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

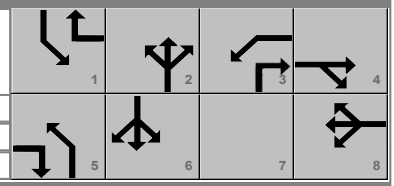


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 329 | 414 | 89 | 257 | 60 | 305 | 552 | 151 | 75 | 832 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.0 | 8.1 | 49.5 | 6.9 | 28.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |



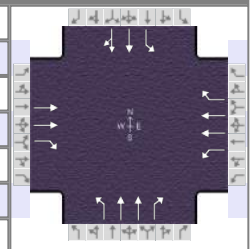

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.961 | 0.899 | 0.922 | 0.945 | 0.945 | 0.867 | 0.914 | 0.914 | 0.945 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 1.000 | 1.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.997 | 0.997 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | 1.00 | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 0 | 3752 | 1447 | 1668 | 3600 | 1522 | 1570 | 3481 | 1472 | 1711 | 3582 | 34 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.00 | 0.23 | 0.23 | 0.06 | 0.32 | 0.32 | 0.14 | 0.68 | 0.51 | 0.04 | 0.55 | 0.41 |
| Incremental Delay Factor ($k$) | | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.25 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | | 0.23 | 0.31 | 0.32 | 0.57 | 0.51 | 0.45 | 0.41 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | | 1117 | 959 | 0 | 539 | 0 | 786 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | 0 | | | | | | |
| Permitted Effective Green Time ($g_p$), s | | 0.0 | 30.0 | 0.0 | 51.6 | 0.0 | 49.6 | 0.0 |
| Permitted Service Time ($g_u$), s | | 0.0 | 18.0 | 0.0 | 29.0 | 0.0 | 49.6 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | | | 1.3 | | 29.0 | | 0.0 | |
| Time to First Blockage ($g_f$), s | | 28.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | 1447 | | 1522 | | 1472 | | |
| Protected Right Effective Green Time ($g_R$), s | | 16.6 | | 5.0 | | 6.9 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.710 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.143 | 0.000 | 0.133 | 0.000 | 0.107 | 0.000 | 0.121 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 466.61 | 35.27 | 639.92 | 27.75 | 1018.66 | 14.45 | 825.80 | 20.68 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.67 | -3.64 | 0.36 | -3.64 | 0.90 | -3.64 | 0.82 |

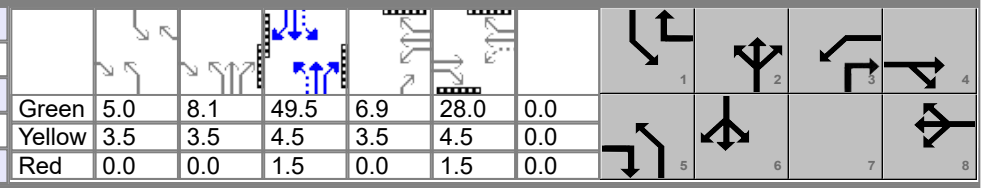
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.92 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |



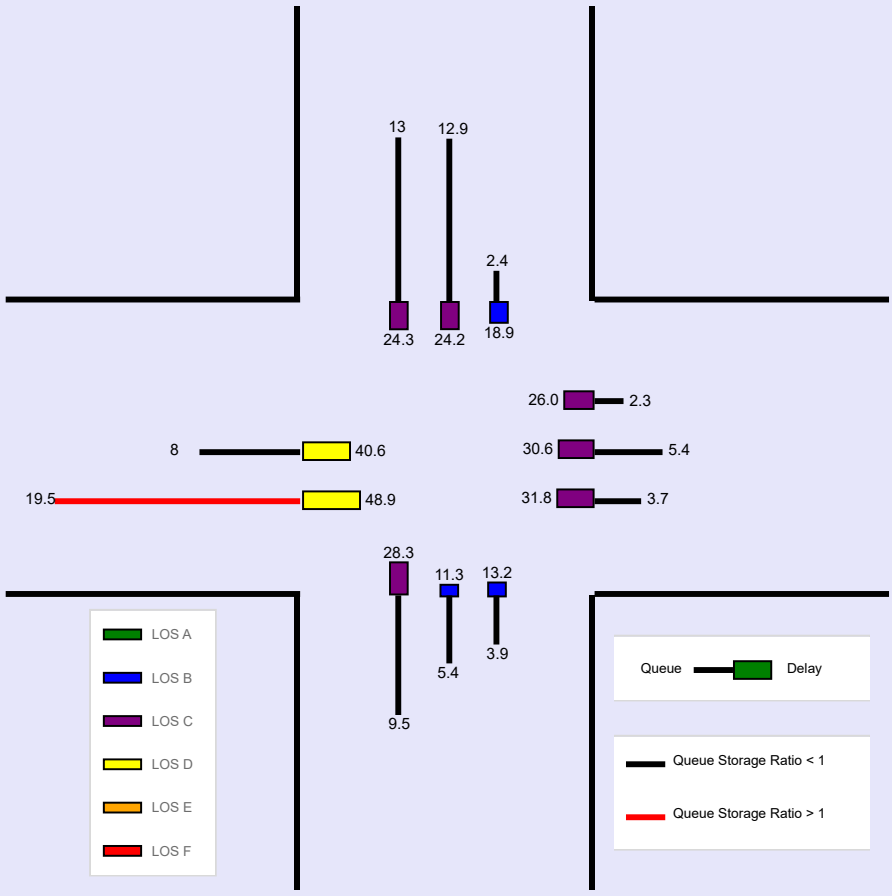
| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 329 | 414 | 89 | 257 | 60 | 305 | 552 | 151 | 75 | 832 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.0 | 8.1 | 49.5 | 6.9 | 28.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |

| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 209 | 539 | 100 | 141 | 60 | 270 | 147 | 106 | 62 | 339 | 324 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 8.0 | 19.5 | 3.7 | 5.4 | 2.3 | 9.5 | 5.4 | 3.9 | 2.4 | 12.9 | 13.0 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 7.19 | 0.49 | 0.00 | 0.81 | 0.92 | 0.00 | 0.71 | 0.62 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | | 40.6 | 48.9 | 31.8 | 30.6 | 26.0 | 28.3 | 11.3 | 13.2 | 18.9 | 24.2 | 24.3 |
| Level of Service (LOS) | | D | D | C | C | C | C | B | B | B | C | C |
| Approach Delay, s/veh / LOS | 45.2 | D | | 30.2 | C | | 16.8 | B | | 23.8 | C | |
| Intersection Delay, s/veh / LOS | 27.5 | | | | | | C | | | | | |



## --- Messages ---

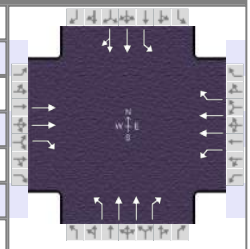
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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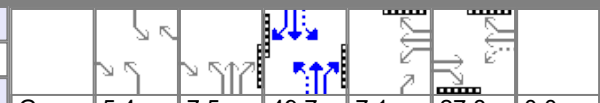
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

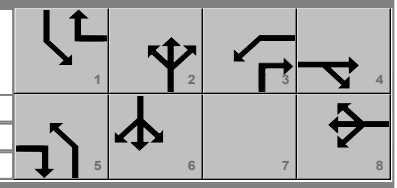


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 338 | 426 | 95 | 271 | 64 | 312 | 565 | 155 | 85 | 852 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.1 | 27.8 | 0.0 | | | | | | |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | | 338 | 426 | 95 | 271 | 64 | 312 | 565 | 155 | 85 | 852 | 8 |
| Initial Queue ($Q_b$), veh/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | | 5 | 13 | 10 | 7 | 7 | 17 | 11 | 11 | 7 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | | 0 | 75 | 205 | 0 | 75 | 295 | 0 | 150 | 100 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | | 45 | 45 | 45 | 45 | 45 | 40 | 40 | 40 | 35 | 35 | 35 |

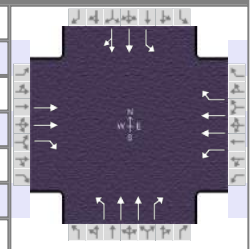
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | | 30.0 | 14.4 | 44.4 | 26.4 | 62.4 | 13.2 | 49.2 |
| Yellow Change Interval (*Y*), s | | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | | 15 | 3 | 15 | 3 | 15 | 3 | 15 |
| Start-Up Lost Time ( *lt*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | | 7.0 | 3.0 | 7.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| Recall Mode | | Off | Off | Off | Off | Min | Off | Min |
| Dual Entry | | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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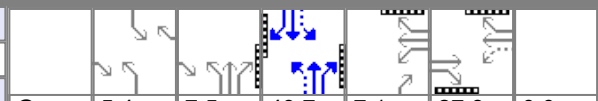
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

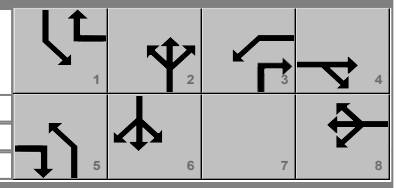


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 338 | 426 | 95 | 271 | 64 | 312 | 565 | 155 | 85 | 852 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.1 | 27.8 | 0.0 | | | | | | |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | | | | | | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Case Number | | 7.3 | 1.0 | 3.0 | 1.1 | 3.0 | 1.1 | 4.0 |
| Phase Duration, s | | 33.8 | 10.6 | 44.4 | 19.9 | 66.7 | 8.9 | 55.7 |
| Change Period, ( $Y+R_c$ ), s | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | | 9.9 | 4.0 | 9.9 | 4.0 | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( $g_s$ ), s | | 29.8 | 7.3 | 9.0 | 15.7 | | 5.6 | |
| Green Extension Time ( $g_e$ ), s | | 0.0 | 0.1 | 22.8 | 0.7 | 0.0 | 0.1 | 0.0 |
| Phase Call Probability | | 1.00 | 0.96 | 1.00 | 1.00 | | 0.95 | |
| Max Out Probability | | 1.00 | 1.00 | 0.76 | 0.18 | | 0.93 | |

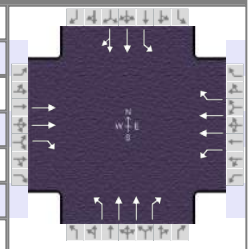
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | | 356 | 448 | 100 | 285 | 67 | 328 | 595 | 163 | 89 | 453 | 452 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | | 1830 | 1447 | 1668 | 1800 | 1522 | 1570 | 1741 | 1472 | 1711 | 1811 | 1805 |
| Queue Service Time ( $g_s$ ), s | | 9.9 | 27.8 | 5.3 | 7.0 | 3.5 | 13.7 | 8.6 | 6.5 | 3.6 | 20.2 | 20.3 |
| Cycle Queue Clearance Time ( $g_c$ ), s | | 9.9 | 27.8 | 5.3 | 7.0 | 3.5 | 13.7 | 8.6 | 6.5 | 3.6 | 20.2 | 20.3 |
| Green Ratio ( *g/C* ) | | 0.23 | 0.37 | 0.31 | 0.32 | 0.36 | 0.57 | 0.51 | 0.57 | 0.46 | 0.41 | 0.41 |
| Capacity ( *c* ), veh/h | | 847 | 533 | 302 | 1152 | 555 | 408 | 1762 | 832 | 464 | 750 | 748 |
| Volume-to-Capacity Ratio ( *X* ) | | 0.420 | 0.842 | 0.332 | 0.248 | 0.121 | 0.805 | 0.337 | 0.196 | 0.193 | 0.604 | 0.604 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 208 | 542 | 103 | 145 | 62 | 265 | 148 | 106 | 68 | 333 | 319 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 8.0 | 19.6 | 3.8 | 5.5 | 2.4 | 9.3 | 5.4 | 3.9 | 2.6 | 12.7 | 12.8 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 7.22 | 0.50 | 0.00 | 0.83 | 0.90 | 0.00 | 0.71 | 0.68 | 0.00 | 0.00 |
| Uniform Delay ( $d_1$ ), s/veh | | 39.2 | 34.7 | 31.3 | 30.1 | 25.3 | 19.3 | 11.0 | 12.7 | 18.5 | 20.2 | 20.4 |
| Incremental Delay ( $d_2$ ), s/veh | | 1.5 | 14.9 | 0.6 | 0.5 | 0.4 | 8.0 | 0.5 | 0.5 | 0.2 | 3.6 | 3.6 |
| Initial Queue Delay ( $d_3$ ), s/veh | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | | 40.8 | 49.6 | 31.9 | 30.7 | 25.8 | 27.3 | 11.6 | 13.3 | 18.7 | 23.8 | 24.0 |
| Level of Service (LOS) | | D | D | C | C | C | C | B | B | B | C | C |
| Approach Delay, s/veh / LOS | 45.7 | D | | 30.2 | C | | 16.6 | B | | 23.4 | C | |
| Intersection Delay, s/veh / LOS | 27.5 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.45 | B | 2.29 | B | 2.42 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.15 | A | 0.86 | A | 1.38 | A | 1.31 | A |

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# HCS Signalized Intersection Intermediate Values

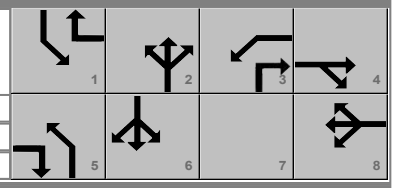
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 338 | 426 | 95 | 271 | 64 | 312 | 565 | 155 | 85 | 852 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.1 | 27.8 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |



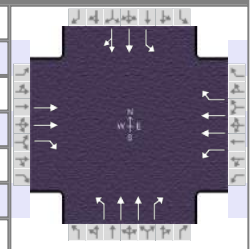

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.961 | 0.899 | 0.922 | 0.945 | 0.945 | 0.867 | 0.914 | 0.914 | 0.945 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 1.000 | 1.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.997 | 0.997 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | 1.00 | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 0 | 3752 | 1447 | 1668 | 3600 | 1522 | 1570 | 3481 | 1472 | 1711 | 3582 | 34 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.00 | 0.23 | 0.23 | 0.06 | 0.32 | 0.32 | 0.14 | 0.67 | 0.51 | 0.04 | 0.55 | 0.41 |
| Incremental Delay Factor ($k$) | | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.24 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | | 0.23 | 0.31 | 0.32 | 0.57 | 0.51 | 0.46 | 0.41 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | | 1111 | 960 | 0 | 543 | 0 | 790 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | 0 | | | | | | |
| Permitted Effective Green Time ($g_p$), s | | 0.0 | 29.8 | 0.0 | 51.7 | 0.0 | 49.7 | 0.0 |
| Permitted Service Time ($g_u$), s | | 0.0 | 17.8 | 0.0 | 29.5 | 0.0 | 49.7 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | | | 1.4 | | 29.5 | | 0.0 | |
| Time to First Blockage ($g_f$), s | | 27.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | 1447 | | 1522 | | 1472 | | |
| Protected Right Effective Green Time ($g_R$), s | | 16.4 | | 5.4 | | 7.1 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.710 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.143 | 0.000 | 0.133 | 0.000 | 0.108 | 0.000 | 0.121 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 463.17 | 35.43 | 639.93 | 27.75 | 1012.34 | 14.63 | 828.51 | 20.59 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.66 | -3.64 | 0.37 | -3.64 | 0.90 | -3.64 | 0.82 |

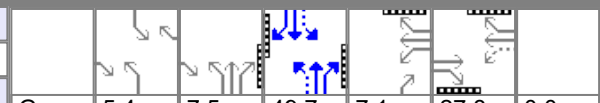
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

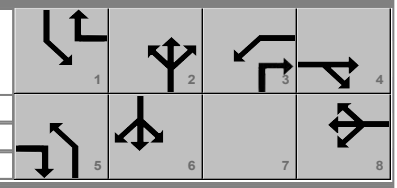


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 338 | 426 | 95 | 271 | 64 | 312 | 565 | 155 | 85 | 852 | 8 |

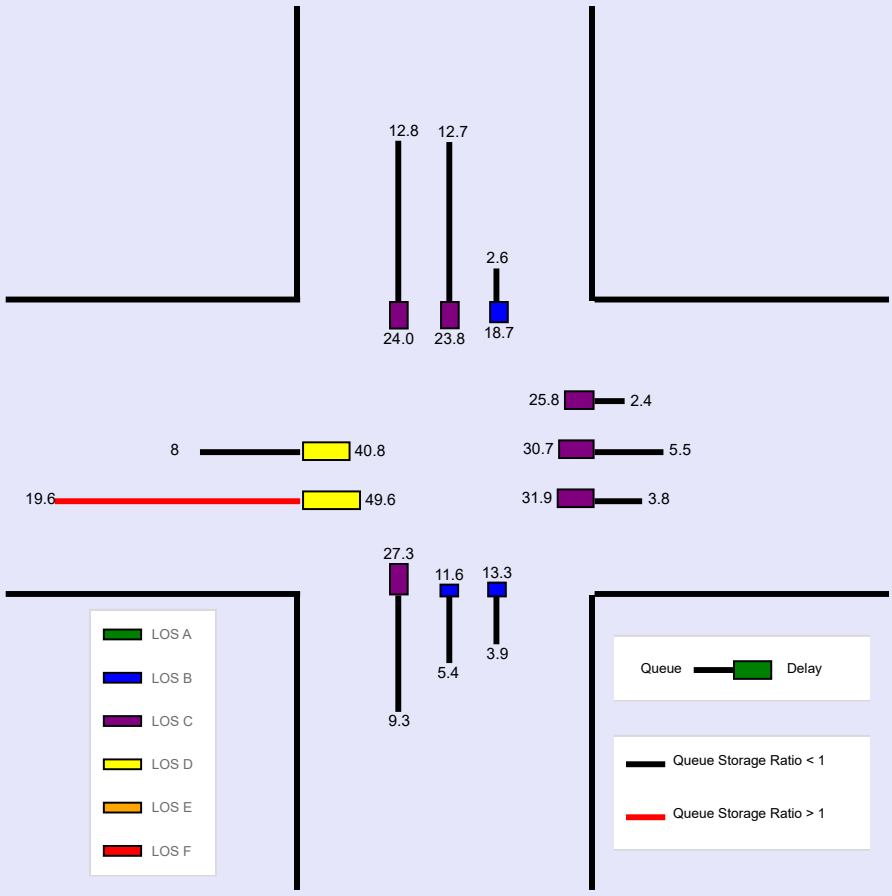
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.1 | 27.8 | 0.0 | | | | | | |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 208 | 542 | 103 | 145 | 62 | 265 | 148 | 106 | 68 | 333 | 319 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 8.0 | 19.6 | 3.8 | 5.5 | 2.4 | 9.3 | 5.4 | 3.9 | 2.6 | 12.7 | 12.8 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 7.22 | 0.50 | 0.00 | 0.83 | 0.90 | 0.00 | 0.71 | 0.68 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | | 40.8 | 49.6 | 31.9 | 30.7 | 25.8 | 27.3 | 11.6 | 13.3 | 18.7 | 23.8 | 24.0 |
| Level of Service (LOS) | | D | D | C | C | C | C | B | B | B | C | C |
| Approach Delay, s/veh / LOS | 45.7 | D | | 30.2 | C | | 16.6 | B | | 23.4 | C | |
| Intersection Delay, s/veh / LOS | 27.5 | | | | | | C | | | | | |



## --- Messages ---

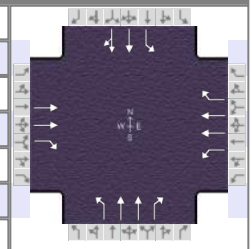
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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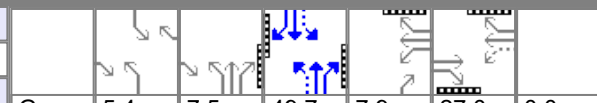
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

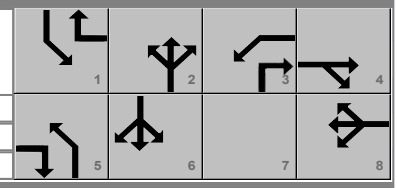


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 375 | 426 | 107 | 302 | 64 | 312 | 565 | 170 | 85 | 852 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.9 | 27.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | | 375 | 426 | 107 | 302 | 64 | 312 | 565 | 170 | 85 | 852 | 8 |
| Initial Queue ($Q_b$), veh/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | | 5 | 13 | 10 | 7 | 7 | 17 | 11 | 11 | 7 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | | 0 | 75 | 205 | 0 | 75 | 295 | 0 | 150 | 100 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | | 45 | 45 | 45 | 45 | 45 | 40 | 40 | 40 | 35 | 35 | 35 |

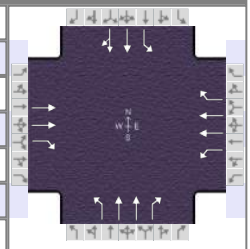
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | | 30.0 | 14.4 | 44.4 | 26.4 | 62.4 | 13.2 | 49.2 |
| Yellow Change Interval (*Y*), s | | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | | 15 | 3 | 15 | 3 | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | | 7.0 | 3.0 | 7.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| Recall Mode | | Off | Off | Off | Off | Min | Off | Min |
| Dual Entry | | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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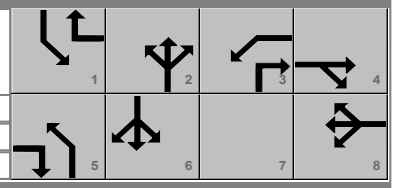
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 375 | 426 | 107 | 302 | 64 | 312 | 565 | 170 | 85 | 852 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.9 | 27.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |

| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Case Number | | 7.3 | 1.0 | 3.0 | 1.1 | 3.0 | 1.1 | 4.0 |
| Phase Duration, s | | 33.0 | 11.4 | 44.4 | 19.9 | 66.7 | 8.9 | 55.7 |
| Change Period, ( $Y+R_c$ ), s | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | | 10.0 | 4.0 | 10.0 | 4.0 | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( $g_s$ ), s | | 29.0 | 8.0 | 9.9 | 15.7 | | 5.6 | |
| Green Extension Time ( $g_e$ ), s | | 0.0 | 0.1 | 23.2 | 0.7 | 0.0 | 0.1 | 0.0 |
| Phase Call Probability | | 1.00 | 0.98 | 1.00 | 1.00 | | 0.95 | |
| Max Out Probability | | 1.00 | 1.00 | 0.81 | 0.18 | | 0.93 | |

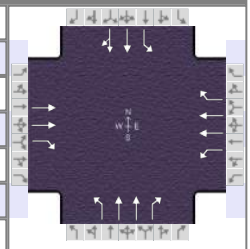
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | | 395 | 448 | 113 | 318 | 67 | 328 | 595 | 179 | 89 | 453 | 452 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | | 1830 | 1447 | 1668 | 1800 | 1522 | 1570 | 1741 | 1472 | 1711 | 1811 | 1805 |
| Queue Service Time ( $g_s$ ), s | | 11.2 | 27.0 | 6.0 | 7.9 | 3.5 | 13.7 | 8.6 | 7.1 | 3.6 | 20.2 | 20.3 |
| Cycle Queue Clearance Time ( $g_c$ ), s | | 11.2 | 27.0 | 6.0 | 7.9 | 3.5 | 13.7 | 8.6 | 7.1 | 3.6 | 20.2 | 20.3 |
| Green Ratio ( *g/C* ) | | 0.23 | 0.36 | 0.31 | 0.32 | 0.36 | 0.57 | 0.51 | 0.57 | 0.46 | 0.41 | 0.41 |
| Capacity ( *c* ), veh/h | | 823 | 523 | 291 | 1152 | 555 | 408 | 1762 | 842 | 464 | 750 | 748 |
| Volume-to-Capacity Ratio ( *X* ) | | 0.479 | 0.857 | 0.387 | 0.276 | 0.121 | 0.805 | 0.338 | 0.213 | 0.193 | 0.604 | 0.604 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 231 | 552 | 118 | 163 | 62 | 265 | 148 | 115 | 68 | 334 | 319 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 8.9 | 20.0 | 4.4 | 6.2 | 2.4 | 9.3 | 5.4 | 4.2 | 2.6 | 12.7 | 12.8 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 7.36 | 0.57 | 0.00 | 0.83 | 0.90 | 0.00 | 0.77 | 0.68 | 0.00 | 0.00 |
| Uniform Delay ( $d_1$ ), s/veh | | 40.4 | 35.4 | 31.7 | 30.4 | 25.3 | 19.3 | 11.0 | 12.5 | 18.5 | 20.2 | 20.4 |
| Incremental Delay ( $d_2$ ), s/veh | | 2.0 | 16.4 | 0.8 | 0.6 | 0.4 | 8.0 | 0.5 | 0.6 | 0.2 | 3.6 | 3.6 |
| Initial Queue Delay ( $d_3$ ), s/veh | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | | 42.4 | 51.9 | 32.5 | 31.0 | 25.8 | 27.3 | 11.6 | 13.1 | 18.7 | 23.8 | 24.0 |
| Level of Service (LOS) | | D | D | C | C | C | C | B | B | B | C | C |
| Approach Delay, s/veh / LOS | 47.4 | D | | 30.7 | C | | 16.5 | B | | 23.4 | C | |
| Intersection Delay, s/veh / LOS | 28.1 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.45 | B | 2.29 | B | 2.42 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.18 | A | 0.90 | A | 1.40 | A | 1.31 | A |

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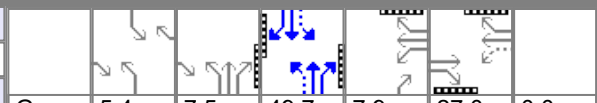
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

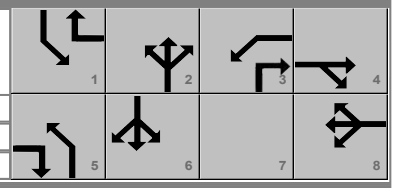


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 375 | 426 | 107 | 302 | 64 | 312 | 565 | 170 | 85 | 852 | 8 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.9 | 27.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |



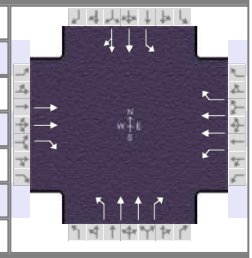

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.961 | 0.899 | 0.922 | 0.945 | 0.945 | 0.867 | 0.914 | 0.914 | 0.945 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 1.000 | 1.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.997 | 0.997 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | 1.00 | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 0 | 3752 | 1447 | 1668 | 3600 | 1522 | 1570 | 3481 | 1472 | 1711 | 3582 | 34 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.00 | 0.22 | 0.22 | 0.07 | 0.32 | 0.32 | 0.14 | 0.67 | 0.51 | 0.04 | 0.55 | 0.41 |
| Incremental Delay Factor ($k$) | | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.24 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | | 0.23 | 0.31 | 0.32 | 0.57 | 0.51 | 0.46 | 0.41 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | | 1079 | 927 | 0 | 543 | 0 | 790 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | 0 | | | | | | |
| Permitted Effective Green Time ($g_p$), s | | 0.0 | 29.0 | 0.0 | 51.7 | 0.0 | 49.7 | 0.0 |
| Permitted Service Time ($g_u$), s | | 0.0 | 15.7 | 0.0 | 29.5 | 0.0 | 49.7 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | | | 1.8 | | 29.5 | | 0.0 | |
| Time to First Blockage ($g_f$), s | | 27.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | 1447 | | 1522 | | 1472 | | |
| Protected Right Effective Green Time ($g_R$), s | | 16.4 | | 5.4 | | 7.9 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.710 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.144 | 0.000 | 0.133 | 0.000 | 0.108 | 0.000 | 0.121 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 450.00 | 36.04 | 639.94 | 27.75 | 1012.32 | 14.63 | 828.49 | 20.59 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.70 | -3.64 | 0.41 | -3.64 | 0.91 | -3.64 | 0.82 |

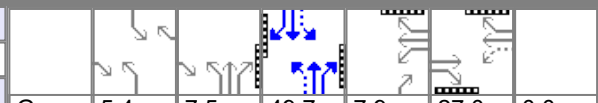
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS AM.xus | | |
| Project Description | CLOUD HQ | | | | |

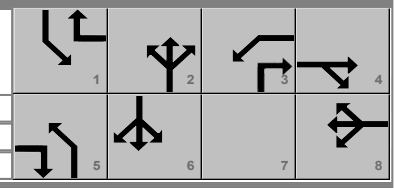


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 375 | 426 | 107 | 302 | 64 | 312 | 565 | 170 | 85 | 852 | 8 |

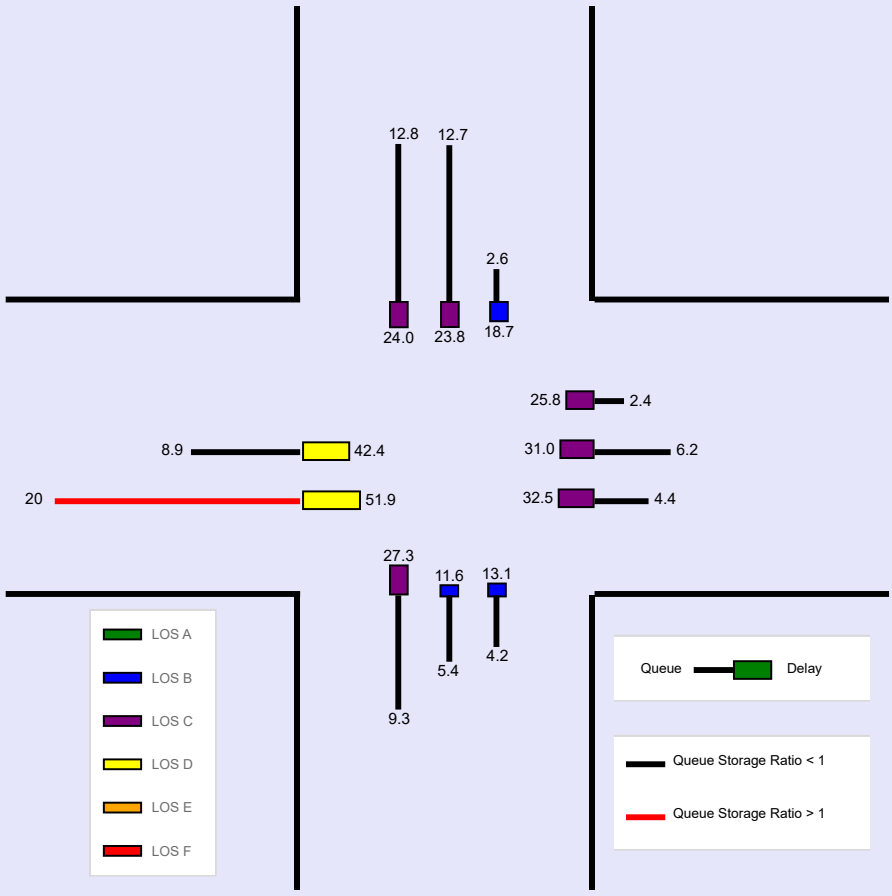
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 120.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 5.4 | 7.5 | 49.7 | 7.9 | 27.0 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 231 | 552 | 118 | 163 | 62 | 265 | 148 | 115 | 68 | 334 | 319 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 8.9 | 20.0 | 4.4 | 6.2 | 2.4 | 9.3 | 5.4 | 4.2 | 2.6 | 12.7 | 12.8 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 7.36 | 0.57 | 0.00 | 0.83 | 0.90 | 0.00 | 0.77 | 0.68 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | | 42.4 | 51.9 | 32.5 | 31.0 | 25.8 | 27.3 | 11.6 | 13.1 | 18.7 | 23.8 | 24.0 |
| Level of Service (LOS) | | D | D | C | C | C | C | B | B | B | C | C |
| Approach Delay, s/veh / LOS | 47.4 | D | | 30.7 | C | | 16.5 | B | | 23.4 | C | |
| Intersection Delay, s/veh / LOS | 28.1 | | | | | | C | | | | | |



## --- Messages ---

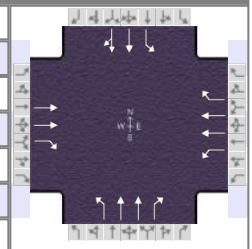
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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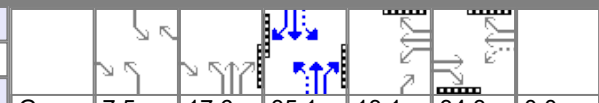
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

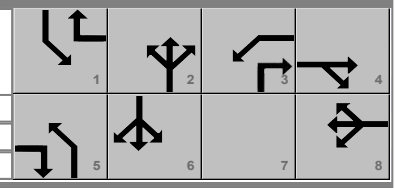


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 397 | 396 | 191 | 489 | 121 | 464 | 950 | 157 | 102 | 646 | 34 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 7.5 | 17.6 | 35.1 | 13.1 | 34.3 | 0.0 | | | | | | |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | | 397 | 396 | 191 | 489 | 121 | 464 | 950 | 157 | 102 | 646 | 34 |
| Initial Queue ($Q_b$), veh/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | | 4 | 4 | 6 | 3 | 2 | 2 | 1 | 10 | 1 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | | 0 | 75 | 205 | 0 | 75 | 295 | 0 | 150 | 100 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | | 45 | 45 | 45 | 45 | 45 | 40 | 40 | 40 | 35 | 35 | 35 |

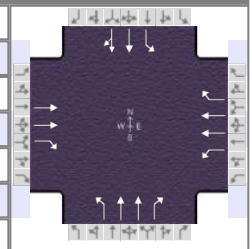
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | | 31.2 | 26.0 | 57.2 | 37.7 | 57.2 | 15.6 | 35.1 |
| Yellow Change Interval (*Y*), s | | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | | 15 | 3 | 15 | 3 | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | | 7.0 | 3.0 | 7.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| Recall Mode | | Off | Off | Off | Off | Min | Off | Min |
| Dual Entry | | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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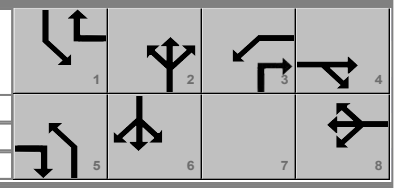
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 397 | 396 | 191 | 489 | 121 | 464 | 950 | 157 | 102 | 646 | 34 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |




| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.5 | 17.6 | 35.1 | 13.1 | 34.3 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |

| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Case Number | | 7.3 | 1.0 | 3.0 | 1.1 | 3.0 | 1.1 | 4.0 |
| Phase Duration, s | | 40.3 | 16.6 | 56.8 | 32.1 | 62.2 | 11.0 | 41.1 |
| Change Period, ( $Y+R_c$ ), s | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | | 10.1 | 4.0 | 10.1 | 4.0 | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( $g_s$ ), s | | 26.5 | 12.6 | 14.7 | 27.6 | | 7.6 | |
| Green Extension Time ( $g_e$ ), s | | 7.5 | 0.4 | 31.9 | 1.1 | 0.0 | 0.1 | 0.0 |
| Phase Call Probability | | 1.00 | 1.00 | 1.00 | 1.00 | | 0.98 | |
| Max Out Probability | | 1.00 | 0.01 | 0.86 | 0.30 | | 0.43 | |

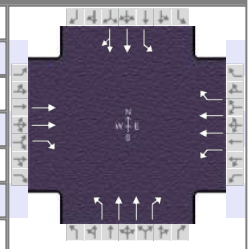
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | | 418 | 417 | 201 | 515 | 127 | 488 | 1000 | 165 | 107 | 361 | 355 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | | 1845 | 1560 | 1725 | 1859 | 1585 | 1781 | 1889 | 1485 | 1795 | 1811 | 1779 |
| Queue Service Time ( $g_s$ ), s | | 12.2 | 24.5 | 10.6 | 12.7 | 6.3 | 25.6 | 22.5 | 7.6 | 5.6 | 22.6 | 22.7 |
| Cycle Queue Clearance Time ( $g_c$ ), s | | 12.2 | 24.5 | 10.6 | 12.7 | 6.3 | 25.6 | 22.5 | 7.6 | 5.6 | 22.6 | 22.7 |
| Green Ratio ( *g/C* ) | | 0.26 | 0.48 | 0.38 | 0.39 | 0.45 | 0.51 | 0.43 | 0.53 | 0.33 | 0.27 | 0.27 |
| Capacity ( *c* ), veh/h | | 972 | 753 | 387 | 1453 | 711 | 518 | 1634 | 791 | 298 | 490 | 481 |
| Volume-to-Capacity Ratio ( *X* ) | | 0.430 | 0.553 | 0.519 | 0.354 | 0.179 | 0.943 | 0.612 | 0.209 | 0.361 | 0.737 | 0.737 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 245 | 366 | 205 | 244 | 108 | 498 | 343 | 129 | 112 | 418 | 398 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 9.5 | 14.2 | 7.8 | 9.5 | 4.3 | 19.6 | 13.6 | 4.8 | 4.5 | 15.9 | 15.9 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 4.88 | 1.00 | 0.00 | 1.45 | 1.69 | 0.00 | 0.86 | 1.12 | 0.00 | 0.00 |
| Uniform Delay ( $d_1$ ), s/veh | | 39.8 | 23.7 | 29.4 | 28.0 | 21.5 | 28.6 | 20.4 | 16.0 | 31.3 | 37.5 | 38.1 |
| Incremental Delay ( $d_2$ ), s/veh | | 1.4 | 2.9 | 1.1 | 0.7 | 0.6 | 21.9 | 1.7 | 0.6 | 0.7 | 9.5 | 9.7 |
| Initial Queue Delay ( $d_3$ ), s/veh | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | | 41.2 | 26.6 | 30.4 | 28.7 | 22.1 | 50.5 | 22.1 | 16.6 | 32.0 | 47.0 | 47.8 |
| Level of Service (LOS) | | D | C | C | C | C | D | C | B | C | D | D |
| Approach Delay, s/veh / LOS | 33.9 | C | | 28.1 | C | | 29.9 | C | | 45.4 | D | |
| Intersection Delay, s/veh / LOS | 33.4 | | | | | | C | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.45 | B | 2.28 | B | 2.43 | B | 2.30 | B |
| Bicycle LOS Score / LOS | 1.18 | A | 1.18 | A | 1.85 | B | 1.17 | A |

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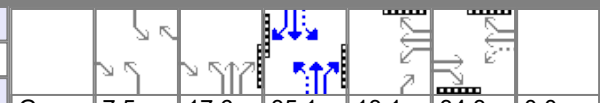
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

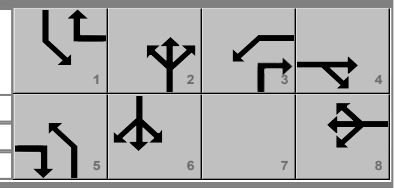


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 397 | 396 | 191 | 489 | 121 | 464 | 950 | 157 | 102 | 646 | 34 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.5 | 17.6 | 35.1 | 13.1 | 34.3 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |



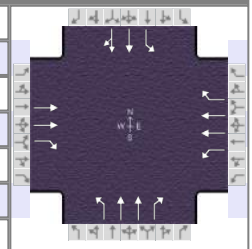

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.969 | 0.969 | 0.953 | 0.977 | 0.984 | 0.984 | 0.992 | 0.922 | 0.992 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 1.000 | 1.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.982 | 0.982 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | 1.00 | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 0 | 3782 | 1560 | 1725 | 3719 | 1585 | 1781 | 3778 | 1485 | 1795 | 3410 | 179 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.00 | 0.26 | 0.26 | 0.10 | 0.39 | 0.39 | 0.22 | 0.58 | 0.43 | 0.06 | 0.36 | 0.27 |
| Incremental Delay Factor ($k$) | | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.35 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | | 0.26 | 0.38 | 0.39 | 0.51 | 0.43 | 0.33 | 0.27 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | | 900 | 938 | 0 | 735 | 0 | 568 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | 0 | | | | | | |
| Permitted Effective Green Time ($g_p$), s | | 0.0 | 36.2 | 0.0 | 37.2 | 0.0 | 35.2 | 0.0 |
| Permitted Service Time ($g_u$), s | | 0.0 | 22.0 | 0.0 | 12.7 | 0.0 | 31.8 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | | | 3.9 | | 12.7 | | 0.8 | |
| Time to First Blockage ($g_f$), s | | 34.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | 1560 | | 1585 | | 1485 | | |
| Protected Right Effective Green Time ($g_R$), s | | 28.5 | | 7.5 | | 13.1 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.710 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.143 | 0.000 | 0.128 | 0.000 | 0.122 | 0.000 | 0.142 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 526.99 | 35.26 | 781.64 | 24.12 | 864.58 | 20.95 | 539.93 | 34.64 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.69 | -3.64 | 0.70 | -3.64 | 1.36 | -3.64 | 0.68 |

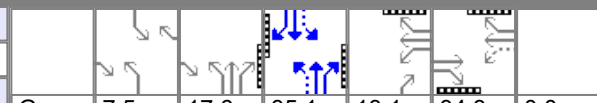
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2025 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

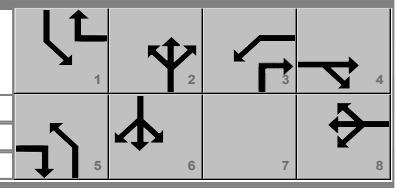


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 397 | 396 | 191 | 489 | 121 | 464 | 950 | 157 | 102 | 646 | 34 |

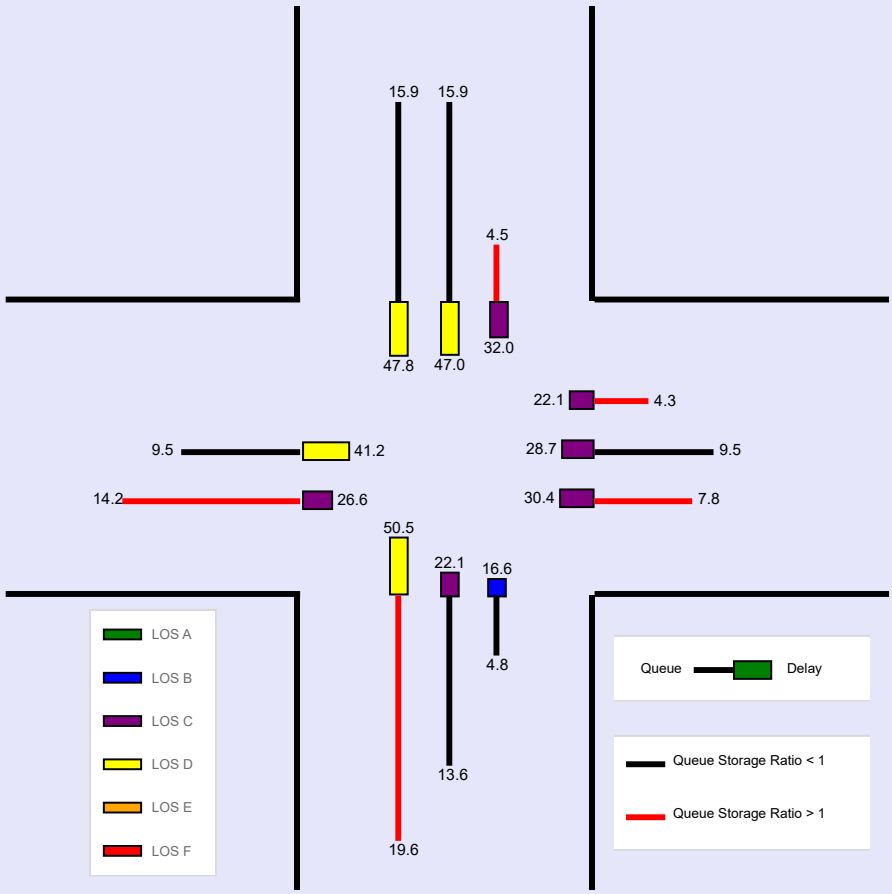
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.5 | 17.6 | 35.1 | 13.1 | 34.3 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 245 | 366 | 205 | 244 | 108 | 498 | 343 | 129 | 112 | 418 | 398 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 9.5 | 14.2 | 7.8 | 9.5 | 4.3 | 19.6 | 13.6 | 4.8 | 4.5 | 15.9 | 15.9 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 4.88 | 1.00 | 0.00 | 1.45 | 1.69 | 0.00 | 0.86 | 1.12 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | | 41.2 | 26.6 | 30.4 | 28.7 | 22.1 | 50.5 | 22.1 | 16.6 | 32.0 | 47.0 | 47.8 |
| Level of Service (LOS) | | D | C | C | C | C | D | C | B | C | D | D |
| Approach Delay, s/veh / LOS | 33.9 | C | | 28.1 | C | | 29.9 | C | | 45.4 | D | |
| Intersection Delay, s/veh / LOS | 33.4 | | | | | | C | | | | | |



## --- Messages ---

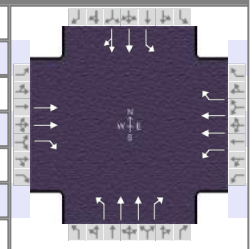
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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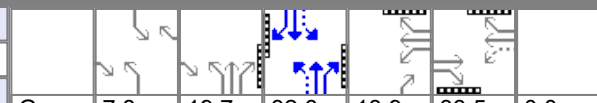
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

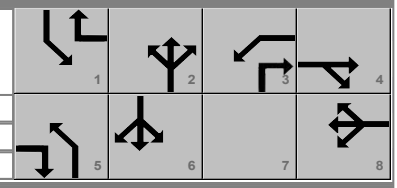


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 407 | 408 | 205 | 524 | 130 | 475 | 973 | 161 | 104 | 661 | 35 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.7 | 32.6 | 13.9 | 33.5 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | | 407 | 408 | 205 | 524 | 130 | 475 | 973 | 161 | 104 | 661 | 35 |
| Initial Queue ($Q_b$), veh/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | | 4 | 4 | 6 | 3 | 2 | 2 | 1 | 10 | 1 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | | 0 | 75 | 205 | 0 | 75 | 295 | 0 | 150 | 100 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | | 45 | 45 | 45 | 45 | 45 | 40 | 40 | 40 | 35 | 35 | 35 |

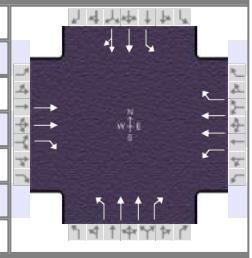
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | | 31.2 | 26.0 | 57.2 | 37.7 | 57.2 | 15.6 | 35.1 |
| Yellow Change Interval (*Y*), s | | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | | 15 | 3 | 15 | 3 | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | | 7.0 | 3.0 | 7.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| Recall Mode | | Off | Off | Off | Off | Min | Off | Min |
| Dual Entry | | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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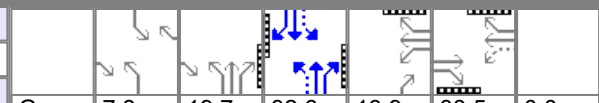
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

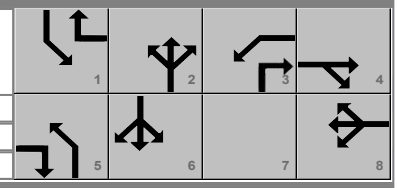


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 407 | 408 | 205 | 524 | 130 | 475 | 973 | 161 | 104 | 661 | 35 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.7 | 32.6 | 13.9 | 33.5 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Case Number | | 7.3 | 1.0 | 3.0 | 1.1 | 3.0 | 1.1 | 4.0 |
| Phase Duration, s | | 39.5 | 17.4 | 56.9 | 34.4 | 61.8 | 11.3 | 38.6 |
| Change Period, ( *Y+R c* ), s | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | | 10.2 | 4.0 | 10.2 | 4.0 | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( *g s* ), s | | 26.9 | 13.5 | 15.8 | 30.2 | | 7.8 | |
| Green Extension Time ( *g e* ), s | | 6.2 | 0.4 | 31.7 | 0.8 | 0.0 | 0.1 | 0.0 |
| Phase Call Probability | | 1.00 | 1.00 | 1.00 | 1.00 | | 0.98 | |
| Max Out Probability | | 1.00 | 0.03 | 0.89 | 0.91 | | 0.62 | |

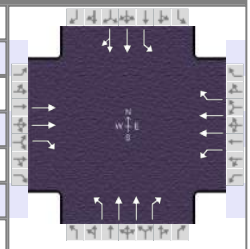
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | | 428 | 429 | 216 | 552 | 137 | 500 | 1024 | 169 | 109 | 369 | 363 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | | 1845 | 1560 | 1725 | 1859 | 1585 | 1781 | 1889 | 1485 | 1795 | 1811 | 1779 |
| Queue Service Time ( *g s* ), s | | 12.7 | 24.9 | 11.5 | 13.8 | 6.7 | 28.2 | 23.6 | 7.8 | 5.8 | 24.2 | 24.3 |
| Cycle Queue Clearance Time ( *g c* ), s | | 12.7 | 24.9 | 11.5 | 13.8 | 6.7 | 28.2 | 23.6 | 7.8 | 5.8 | 24.2 | 24.3 |
| Green Ratio ( *g/C* ) | | 0.26 | 0.50 | 0.38 | 0.39 | 0.45 | 0.50 | 0.43 | 0.54 | 0.31 | 0.25 | 0.25 |
| Capacity ( *c* ), veh/h | | 950 | 772 | 389 | 1457 | 716 | 526 | 1622 | 797 | 292 | 455 | 447 |
| Volume-to-Capacity Ratio ( *X* ) | | 0.451 | 0.556 | 0.555 | 0.379 | 0.191 | 0.950 | 0.631 | 0.213 | 0.375 | 0.811 | 0.812 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 253 | 369 | 219 | 260 | 117 | 551 | 358 | 131 | 118 | 460 | 438 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 9.8 | 14.3 | 8.3 | 10.2 | 4.6 | 21.7 | 14.2 | 4.9 | 4.7 | 17.6 | 17.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 4.92 | 1.07 | 0.00 | 1.55 | 1.87 | 0.00 | 0.87 | 1.18 | 0.00 | 0.00 |
| Uniform Delay ( *d 1* ), s/veh | | 40.5 | 22.9 | 29.6 | 28.2 | 21.4 | 31.9 | 20.9 | 15.8 | 32.9 | 40.4 | 40.9 |
| Incremental Delay ( *d 2* ), s/veh | | 1.5 | 2.9 | 1.2 | 0.8 | 0.6 | 24.7 | 1.9 | 0.6 | 0.8 | 14.5 | 14.8 |
| Initial Queue Delay ( *d 3* ), s/veh | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | | 42.1 | 25.7 | 30.9 | 29.0 | 22.0 | 56.6 | 22.8 | 16.4 | 33.7 | 54.9 | 55.7 |
| Level of Service (LOS) | | D | C | C | C | C | E | C | B | C | D | E |
| Approach Delay, s/veh / LOS | 33.9 | C | | 28.4 | C | | 32.1 | C | | 52.5 | D | |
| Intersection Delay, s/veh / LOS | 35.7 | | | | | | D | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.45 | B | 2.28 | B | 2.43 | B | 2.30 | B |
| Bicycle LOS Score / LOS | 1.20 | A | 1.23 | A | 1.88 | B | 1.18 | A |

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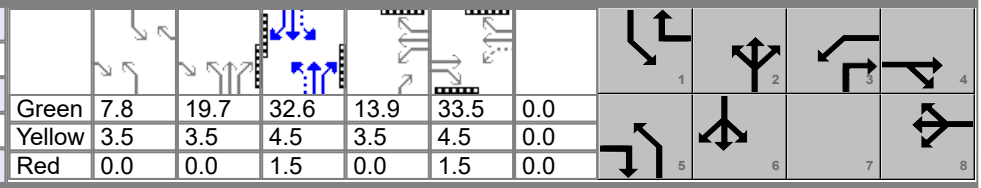
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 407 | 408 | 205 | 524 | 130 | 475 | 973 | 161 | 104 | 661 | 35 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.7 | 32.6 | 13.9 | 33.5 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |

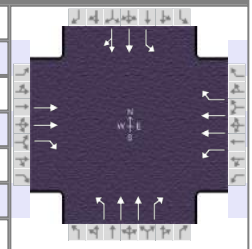
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.969 | 0.969 | 0.953 | 0.977 | 0.984 | 0.984 | 0.992 | 0.922 | 0.992 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 1.000 | 1.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.982 | 0.982 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | 1.00 | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 0 | 3782 | 1560 | 1725 | 3719 | 1585 | 1781 | 3778 | 1485 | 1795 | 3409 | 180 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.00 | 0.26 | 0.26 | 0.11 | 0.39 | 0.39 | 0.24 | 0.57 | 0.43 | 0.06 | 0.34 | 0.25 |
| Incremental Delay Factor ($k$) | | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.40 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | | 0.26 | 0.38 | 0.39 | 0.50 | 0.43 | 0.31 | 0.25 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | | 870 | 929 | 0 | 724 | 0 | 555 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | 0 | | | | | | |
| Permitted Effective Green Time ($g_p$), s | | 0.0 | 35.5 | 0.0 | 34.7 | 0.0 | 32.7 | 0.0 |
| Permitted Service Time ($g_u$), s | | 0.0 | 20.8 | 0.0 | 8.6 | 0.0 | 30.3 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | | | 4.5 | | 8.6 | | 0.6 | |
| Time to First Blockage ($g_f$), s | | 33.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | 1560 | | 1585 | | 1485 | | |
| Protected Right Effective Green Time ($g_R$), s | | 30.9 | | 7.8 | | 13.9 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.710 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.143 | 0.000 | 0.128 | 0.000 | 0.122 | 0.000 | 0.144 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 515.37 | 35.82 | 783.75 | 24.04 | 858.44 | 21.18 | 501.76 | 36.48 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.71 | -3.64 | 0.75 | -3.64 | 1.40 | -3.64 | 0.69 |

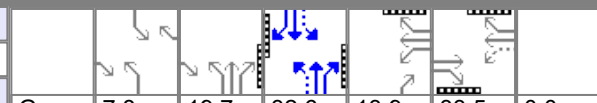
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 20, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 NB 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

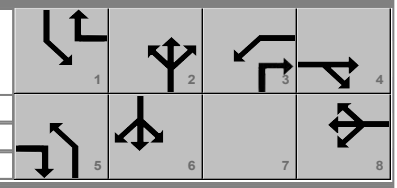


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 407 | 408 | 205 | 524 | 130 | 475 | 973 | 161 | 104 | 661 | 35 |

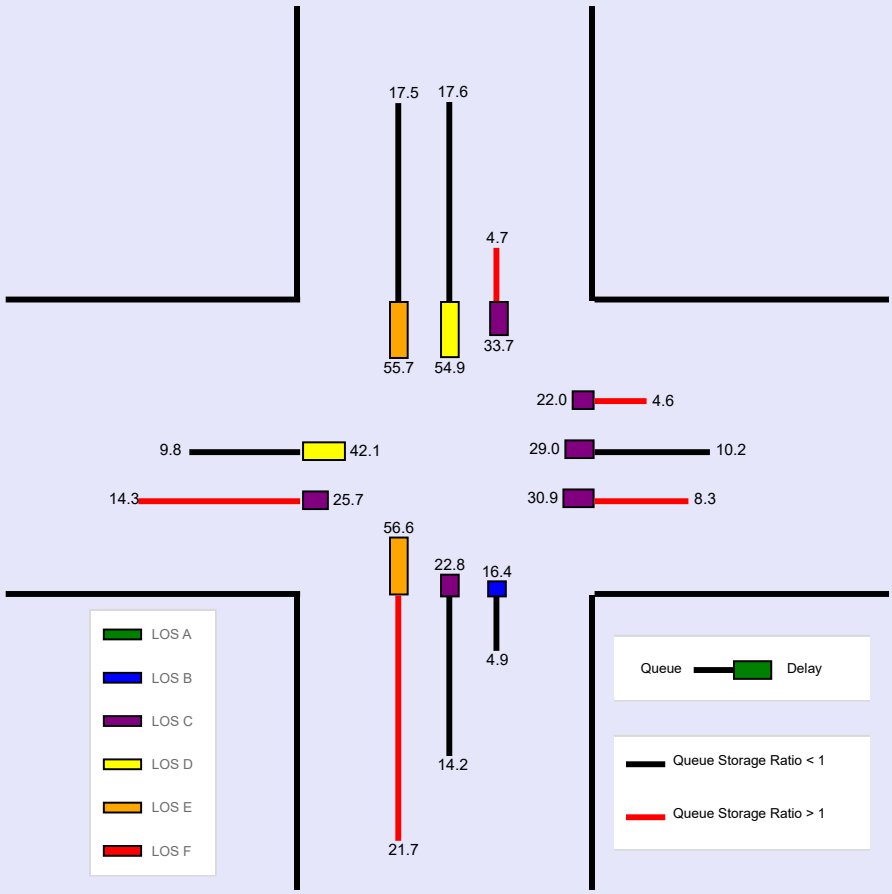
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.7 | 32.6 | 13.9 | 33.5 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 253 | 369 | 219 | 260 | 117 | 551 | 358 | 131 | 118 | 460 | 438 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 9.8 | 14.3 | 8.3 | 10.2 | 4.6 | 21.7 | 14.2 | 4.9 | 4.7 | 17.6 | 17.5 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 4.92 | 1.07 | 0.00 | 1.55 | 1.87 | 0.00 | 0.87 | 1.18 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | | 42.1 | 25.7 | 30.9 | 29.0 | 22.0 | 56.6 | 22.8 | 16.4 | 33.7 | 54.9 | 55.7 |
| Level of Service (LOS) | | D | C | C | C | C | E | C | B | C | D | E |
| Approach Delay, s/veh / LOS | 33.9 | C | | 28.4 | C | | 32.1 | C | | 52.5 | D | |
| Intersection Delay, s/veh / LOS | 35.7 | | | | | | D | | | | | |



## --- Messages ---

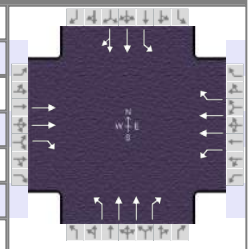
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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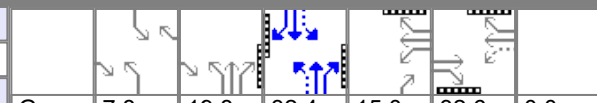
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

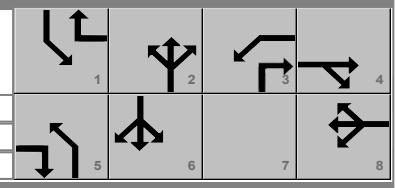


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 424 | 408 | 221 | 564 | 130 | 475 | 973 | 168 | 104 | 661 | 35 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.8 | 32.4 | 15.0 | 32.6 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | | 424 | 408 | 221 | 564 | 130 | 475 | 973 | 168 | 104 | 661 | 35 |
| Initial Queue ($Q_b$), veh/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | | 4 | 4 | 6 | 3 | 2 | 2 | 1 | 10 | 1 | 6 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| Upstream Filtering (*I*) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Turn Bay Length, ft | | 0 | 75 | 205 | 0 | 75 | 295 | 0 | 150 | 100 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | | 45 | 45 | 45 | 45 | 45 | 40 | 40 | 40 | 35 | 35 | 35 |

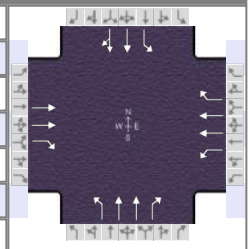
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | | 31.2 | 26.0 | 57.2 | 37.7 | 57.2 | 15.6 | 35.1 |
| Yellow Change Interval (*Y*), s | | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 | 4.5 |
| Red Clearance Interval ( $R_c$), s | | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 | 1.5 |
| Minimum Green ( $G_{min}$), s | | 15 | 3 | 15 | 3 | 15 | 3 | 15 |
| Start-Up Lost Time ( *l*t), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | | 7.0 | 3.0 | 7.0 | 3.0 | 2.0 | 3.0 | 2.0 |
| Recall Mode | | Off | Off | Off | Off | Min | Off | Min |
| Dual Entry | | Yes | No | Yes | No | Yes | No | Yes |
| Walk (*Walk*), s | | 7.0 | | 7.0 | | 7.0 | | 7.0 |
| Pedestrian Clearance Time (*PC*), s | | 20.0 | | 20.0 | | 20.0 | | 20.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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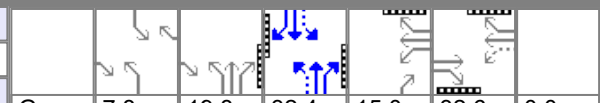
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

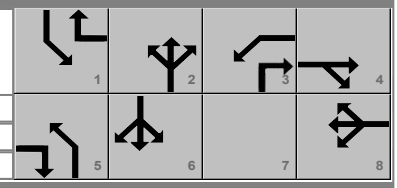


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 424 | 408 | 221 | 564 | 130 | 475 | 973 | 168 | 104 | 661 | 35 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.8 | 32.4 | 15.0 | 32.6 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Case Number | | 7.3 | 1.0 | 3.0 | 1.1 | 3.0 | 1.1 | 4.0 |
| Phase Duration, s | | 38.6 | 18.5 | 57.0 | 34.5 | 61.7 | 11.3 | 38.4 |
| Change Period, ( *Y+R c* ), s | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Max Allow Headway ( *MAH* ), s | | 10.2 | 4.0 | 10.2 | 4.0 | 0.0 | 4.0 | 0.0 |
| Queue Clearance Time ( *g s* ), s | | 27.3 | 14.5 | 17.0 | 30.3 | | 7.8 | |
| Green Extension Time ( *g e* ), s | | 4.9 | 0.4 | 31.2 | 0.8 | 0.0 | 0.1 | 0.0 |
| Phase Call Probability | | 1.00 | 1.00 | 1.00 | 1.00 | | 0.98 | |
| Max Out Probability | | 1.00 | 0.07 | 0.91 | 0.99 | | 0.69 | |

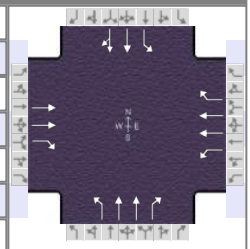
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Adjusted Flow Rate ( *v* ), veh/h | | 446 | 429 | 233 | 594 | 137 | 500 | 1024 | 177 | 109 | 369 | 363 |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | | 1845 | 1560 | 1725 | 1859 | 1585 | 1781 | 1889 | 1485 | 1795 | 1811 | 1779 |
| Queue Service Time ( *g s* ), s | | 13.4 | 25.3 | 12.5 | 15.0 | 6.7 | 28.3 | 23.7 | 8.0 | 5.8 | 24.3 | 24.4 |
| Cycle Queue Clearance Time ( *g c* ), s | | 13.4 | 25.3 | 12.5 | 15.0 | 6.7 | 28.3 | 23.7 | 8.0 | 5.8 | 24.3 | 24.4 |
| Green Ratio ( *g/C* ) | | 0.25 | 0.49 | 0.38 | 0.39 | 0.45 | 0.50 | 0.43 | 0.54 | 0.31 | 0.25 | 0.25 |
| Capacity ( *c* ), veh/h | | 924 | 762 | 388 | 1460 | 717 | 526 | 1619 | 807 | 291 | 453 | 445 |
| Volume-to-Capacity Ratio ( *X* ) | | 0.483 | 0.563 | 0.599 | 0.407 | 0.191 | 0.951 | 0.633 | 0.219 | 0.376 | 0.816 | 0.817 |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 265 | 374 | 234 | 279 | 116 | 552 | 359 | 135 | 118 | 463 | 440 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 10.3 | 14.5 | 8.9 | 10.9 | 4.6 | 21.8 | 14.2 | 5.0 | 4.7 | 17.7 | 17.6 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 4.99 | 1.14 | 0.00 | 1.55 | 1.87 | 0.00 | 0.90 | 1.18 | 0.00 | 0.00 |
| Uniform Delay ( *d 1* ), s/veh | | 41.6 | 23.5 | 30.0 | 28.5 | 21.3 | 32.1 | 21.0 | 15.4 | 33.0 | 40.6 | 41.2 |
| Incremental Delay ( *d 2* ), s/veh | | 1.8 | 3.0 | 1.5 | 0.8 | 0.6 | 24.9 | 1.9 | 0.6 | 0.8 | 14.9 | 15.3 |
| Initial Queue Delay ( *d 3* ), s/veh | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay ( *d* ), s/veh | | 43.4 | 26.5 | 31.5 | 29.4 | 21.9 | 57.0 | 22.9 | 16.0 | 33.8 | 55.6 | 56.4 |
| Level of Service (LOS) | | D | C | C | C | C | E | C | B | C | E | E |
| Approach Delay, s/veh / LOS | 35.1 | D | | 28.8 | C | | 32.2 | C | | 53.1 | D | |
| Intersection Delay, s/veh / LOS | 36.1 | | | | | | D | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 2.45 | B | 2.28 | B | 2.43 | B | 2.30 | B |
| Bicycle LOS Score / LOS | 1.21 | A | 1.28 | A | 1.89 | B | 1.18 | A |

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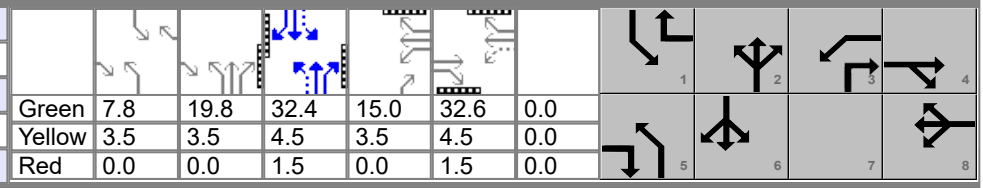
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 424 | 408 | 221 | 564 | 130 | 475 | 973 | 168 | 104 | 661 | 35 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.8 | 32.4 | 15.0 | 32.6 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |

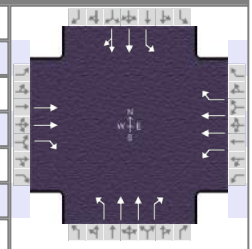
| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 1.000 | 0.969 | 0.969 | 0.953 | 0.977 | 0.984 | 0.984 | 0.992 | 0.922 | 0.992 | 0.953 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 1.000 | 1.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.952 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.000 | 0.847 | | 0.982 | 0.982 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | | | | 1.00 | | | 1.00 | | | 1.00 | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | 1.00 | | | | | | | | | | | |
| Movement Saturation Flow Rate ($s$), veh/h | 0 | 3782 | 1560 | 1725 | 3719 | 1585 | 1781 | 3778 | 1485 | 1795 | 3409 | 180 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.00 | 0.25 | 0.25 | 0.12 | 0.39 | 0.39 | 0.24 | 0.57 | 0.43 | 0.06 | 0.33 | 0.25 |
| Incremental Delay Factor ($k$) | | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.40 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 | 3.5 | 6.0 |
| Green Ratio ($g/C$) | | 0.25 | 0.38 | 0.39 | 0.50 | 0.43 | 0.31 | 0.25 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | | 837 | 914 | 0 | 724 | 0 | 555 | 0 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | 0 | | | | | | |
| Permitted Effective Green Time ($g_p$), s | | 0.0 | 34.5 | 0.0 | 34.5 | 0.0 | 32.5 | 0.0 |
| Permitted Service Time ($g_u$), s | | 0.0 | 19.1 | 0.0 | 8.3 | 0.0 | 30.1 | 0.0 |
| Permitted Queue Service Time ($g_{ps}$), s | | | 5.3 | | 8.3 | | 0.6 | |
| Time to First Blockage ($g_f$), s | | 32.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | 1560 | | 1585 | | 1485 | | |
| Protected Right Effective Green Time ($g_R$), s | | 31.0 | | 7.8 | | 15.0 | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 1.710 | 0.000 | 1.557 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.144 | 0.000 | 0.127 | 0.000 | 0.123 | 0.000 | 0.144 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 500.88 | 36.52 | 785.23 | 23.98 | 856.80 | 21.24 | 498.74 | 36.62 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.72 | -3.64 | 0.79 | -3.64 | 1.40 | -3.64 | 0.69 |

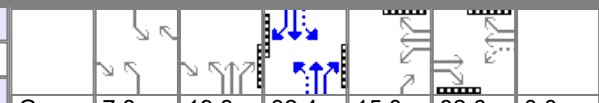
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ BUSSE | File Name | 2032 TOT 62-BUS PM.xus | | |
| Project Description | CLOUD HQ | | | | |

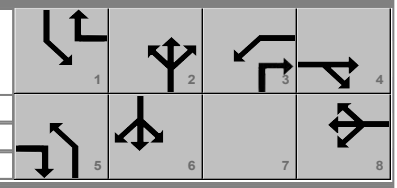


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | | 424 | 408 | 221 | 564 | 130 | 475 | 973 | 168 | 104 | 661 | 35 |

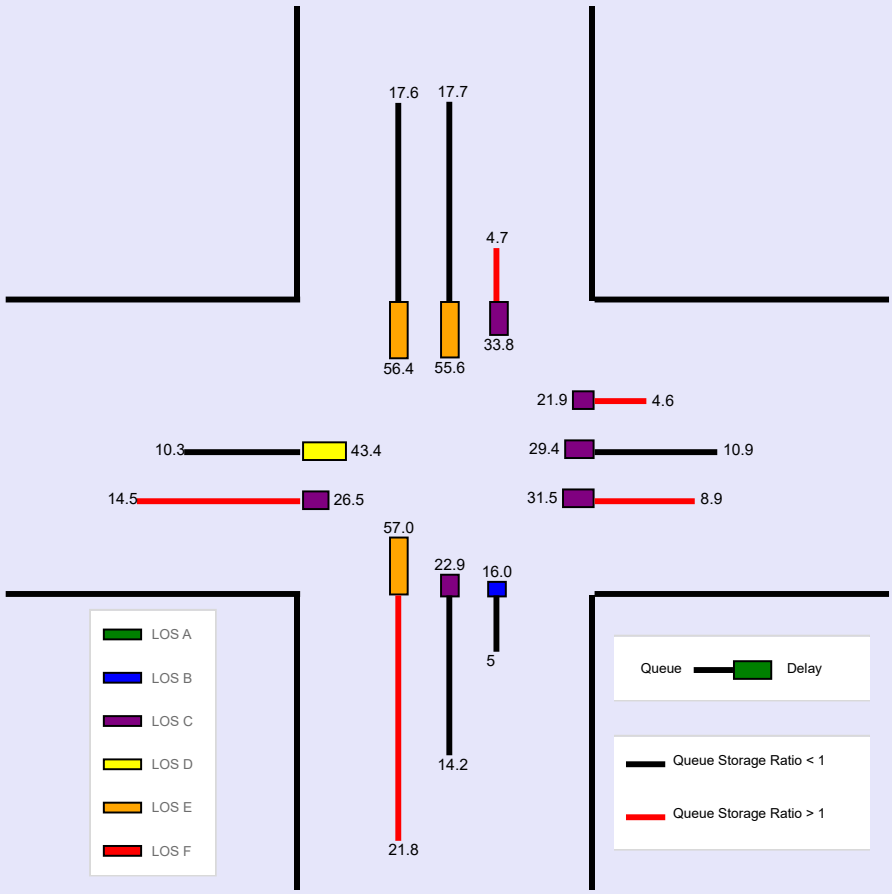
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 130.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | No | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 7.8 | 19.8 | 32.4 | 15.0 | 32.6 | 0.0 |
| Yellow | 3.5 | 3.5 | 4.5 | 3.5 | 4.5 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | | 265 | 374 | 234 | 279 | 116 | 552 | 359 | 135 | 118 | 463 | 440 |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | | 10.3 | 14.5 | 8.9 | 10.9 | 4.6 | 21.8 | 14.2 | 5.0 | 4.7 | 17.7 | 17.6 |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | | 0.00 | 4.99 | 1.14 | 0.00 | 1.55 | 1.87 | 0.00 | 0.90 | 1.18 | 0.00 | 0.00 |
| Control Delay ( *d* ), s/veh | | 43.4 | 26.5 | 31.5 | 29.4 | 21.9 | 57.0 | 22.9 | 16.0 | 33.8 | 55.6 | 56.4 |
| Level of Service (LOS) | | D | C | C | C | C | E | C | B | C | E | E |
| Approach Delay, s/veh / LOS | 35.1 | D | | 28.8 | C | | 32.2 | C | | 53.1 | D | |
| Intersection Delay, s/veh / LOS | 36.1 | | | | | | D | | | | | |



## --- Messages ---

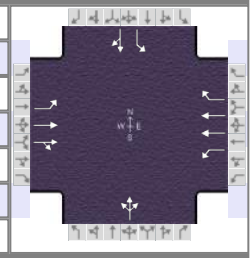
WARNING: Since queue spillover from turn lanes and spillback into upstream intersections is not accounted for in the HCM procedures, use of a simulation tool may be advised in situations where the Queue Storage Ratio exceeds 1.0.

## --- Comments ---

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# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

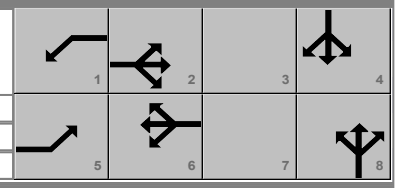


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 509 | 8 | 8 | 378 | 41 | 10 | 0 | 4 | 84 | 3 | 21 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 38.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 16.7 | 6.0 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 46 | 509 | 8 | 8 | 378 | 41 | 10 | 0 | 4 | 84 | 3 | 21 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 7 | 5 | | 13 | 7 | 7 | | 0 | | 5 | 33 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Turn Bay Length, ft | 225 | 0 | | 115 | 0 | 0 | | 0 | | 300 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

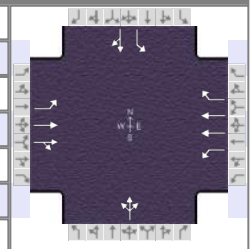
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 85.0 | 15.0 | 85.0 | | 20.0 | | 20.0 |
| Yellow Change Interval (*Y*), s | 3.0 | 4.5 | 3.0 | 4.5 | | 4.5 | | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | | 8 | | 8 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | | 5.0 | | 5.0 |
| Recall Mode | Off | Min | Off | Min | | Off | | Off |
| Dual Entry | No | Yes | No | Yes | | Yes | | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 20.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

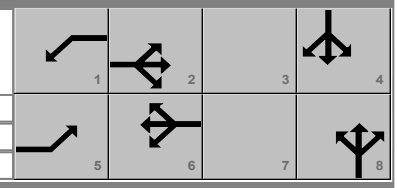


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 509 | 8 | 8 | 378 | 41 | 10 | 0 | 4 | 84 | 3 | 21 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 38.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 16.7 | 6.0 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | | 8 | | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 3.0 | | 8.0 | | 6.0 |
| Phase Duration, s | 4.2 | 23.7 | 3.3 | 22.7 | | 12.0 | | 12.0 |
| Change Period, ( $Y+R_c$ ), s | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.2 | 4.0 | 6.2 | | 6.7 | | 6.7 |
| Queue Clearance Time ( $g_s$ ), s | 2.6 | 5.5 | 2.1 | 4.8 | | 2.3 | | 4.5 |
| Green Extension Time ( $g_e$ ), s | 0.1 | 11.9 | 0.0 | 11.9 | | 0.9 | | 0.8 |
| Phase Call Probability | 0.41 | 1.00 | 0.09 | 1.00 | | 0.75 | | 0.75 |
| Max Out Probability | 0.00 | 0.00 | 0.00 | 0.00 | | 0.01 | | 0.02 |

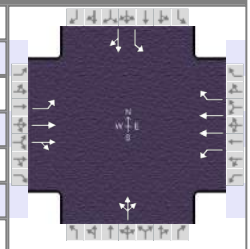
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 48 | 273 | 271 | 8 | 398 | 43 | | 15 | | 88 | 25 | |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1711 | 1922 | 1911 | 1626 | 1800 | 1522 | | 1505 | | 1379 | 1219 | |
| Queue Service Time ( $g_s$ ), s | 0.6 | 3.5 | 3.5 | 0.1 | 2.8 | 0.6 | | 0.0 | | 2.3 | 0.7 | |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.6 | 3.5 | 3.5 | 0.1 | 2.8 | 0.6 | | 0.3 | | 2.5 | 0.7 | |
| Green Ratio ( *g/C* ) | 0.46 | 0.45 | 0.45 | 0.44 | 0.43 | 0.43 | | 0.15 | | 0.15 | 0.15 | |
| Capacity ( *c* ), veh/h | 579 | 872 | 867 | 442 | 1543 | 653 | | 391 | | 389 | 188 | |
| Volume-to-Capacity Ratio ( *X* ) | 0.084 | 0.313 | 0.313 | 0.019 | 0.258 | 0.066 | | 0.038 | | 0.227 | 0.134 | |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 6 | 36 | 34 | 1 | 28 | 6 | | 4 | | 28 | 10 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.4 | 1.4 | 0.0 | 1.1 | 0.2 | | 0.2 | | 1.1 | 0.3 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.03 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.09 | 0.00 | |
| Uniform Delay ( $d_1$ ), s/veh | 5.9 | 6.8 | 6.8 | 6.5 | 7.1 | 6.5 | | 14.0 | | 15.1 | 14.2 | |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | | 0.1 | | 0.6 | 0.7 | |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Control Delay ( *d* ), s/veh | 6.0 | 6.9 | 6.9 | 6.5 | 7.2 | 6.6 | | 14.1 | | 15.7 | 14.9 | |
| Level of Service (LOS) | A | A | A | A | A | A | | B | | B | B | |
| Approach Delay, s/veh / LOS | 6.8 | A | | 7.1 | A | | 14.1 | B | | 15.5 | B | |
| Intersection Delay, s/veh / LOS | 7.8 | | | | | | A | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 1.64 | B | 1.87 | B | 2.42 | B | 2.26 | B |
| Bicycle LOS Score / LOS | 0.98 | A | 0.86 | A | 0.51 | A | 0.68 | A |

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# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

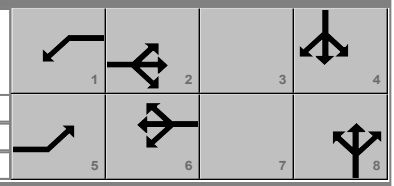


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 509 | 8 | 8 | 378 | 41 | 10 | 0 | 4 | 84 | 3 | 21 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 38.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 16.7 | 6.0 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |



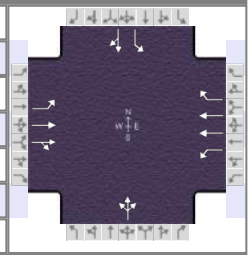

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.945 | 0.961 | 1.000 | 0.899 | 0.945 | 0.945 | 1.000 | 1.000 | 1.000 | 0.961 | 0.743 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.826 | 0.792 | | 0.726 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.994 | 0.994 | | 0.000 | 0.847 | | 0.000 | 0.792 | | 0.864 | 0.864 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | 1.00 | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1711 | 3774 | 59 | 1626 | 3600 | 1522 | 1075 | 0 | 430 | 1379 | 152 | 1067 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.45 | 0.45 | 0.01 | 0.43 | 0.43 | 0.15 | 0.00 | 0.15 | 0.15 | 0.15 | 0.15 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | | 0.23 | | 0.23 | 0.23 | |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Green Ratio ($g/C$) | 0.46 | 0.45 | 0.44 | 0.43 | | 0.15 | | 0.15 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 948 | 0 | 787 | 0 | | 1408 | | 1379 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 16.7 | 0.0 | 16.7 | 0.0 | | 6.0 | | 6.0 |
| Permitted Service Time ($g_u$), s | 14.0 | 0.0 | 12.2 | 0.0 | | 5.3 | | 5.8 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.1 | | 0.0 | | | 0.0 | | 2.3 |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 0.8 | | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 0.2 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 0.972 | 0.000 | 1.198 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.071 | 0.000 | 0.074 | 0.000 | 0.106 | 0.000 | 0.106 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 906.96 | 5.81 | 857.46 | 6.35 | 308.88 | 13.92 | 308.88 | 13.92 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.49 | -3.64 | 0.37 | -3.64 | 0.02 | -3.64 | 0.19 |

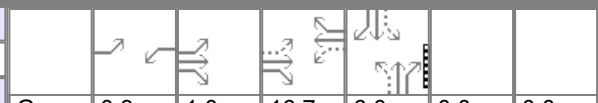
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

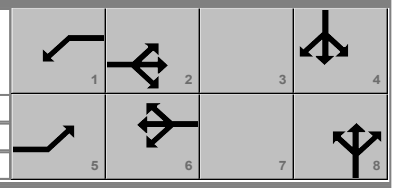


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 509 | 8 | 8 | 378 | 41 | 10 | 0 | 4 | 84 | 3 | 21 |

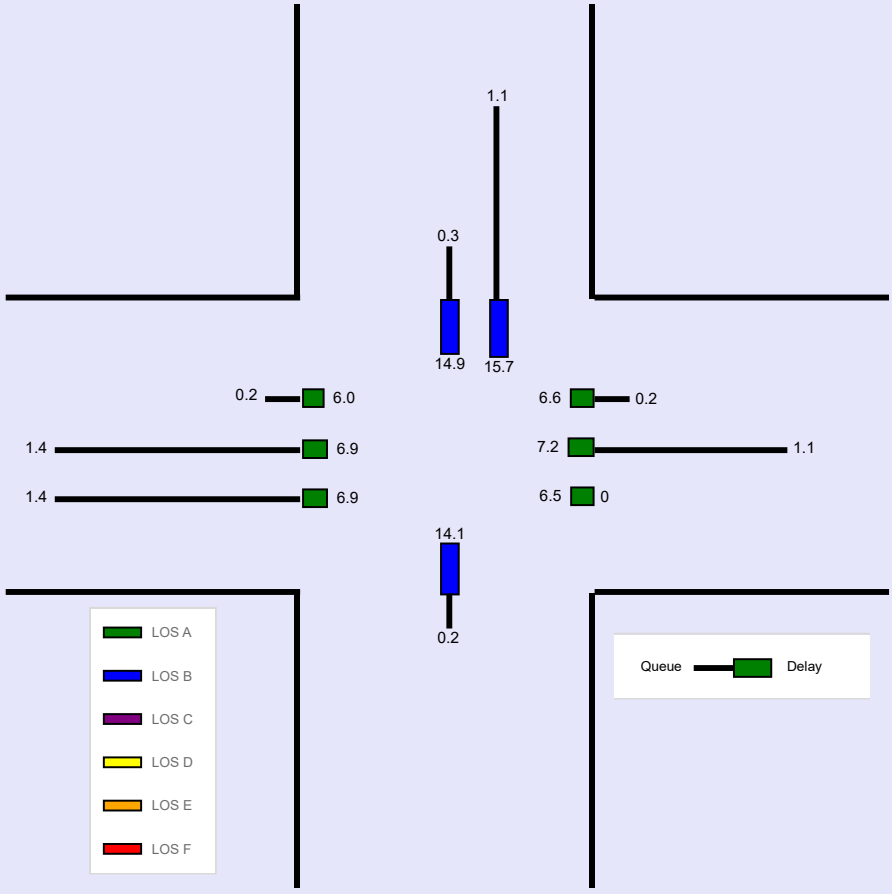
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 38.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | | 16.7 | 6.0 | | 0.0 | 0.0 | | | | |
| Yellow | 3.0 | 0.0 | | 4.5 | 4.5 | | 0.0 | 0.0 | | | | |
| Red | 0.0 | 0.0 | | 1.5 | 1.5 | | 0.0 | 0.0 | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 6 | 36 | 34 | 1 | 28 | 6 | | 4 | | 28 | 10 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.4 | 1.4 | 0.0 | 1.1 | 0.2 | | 0.2 | | 1.1 | 0.3 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.03 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.09 | 0.00 | |
| Control Delay ( *d* ), s/veh | 6.0 | 6.9 | 6.9 | 6.5 | 7.2 | 6.6 | | 14.1 | | 15.7 | 14.9 | |
| Level of Service (LOS) | A | A | A | A | A | A | | B | | B | B | |
| Approach Delay, s/veh / LOS | 6.8 | A | | 7.1 | A | | 14.1 | B | | 15.5 | B | |
| Intersection Delay, s/veh / LOS | 7.8 | | | | | | A | | | | | |



## --- Messages ---

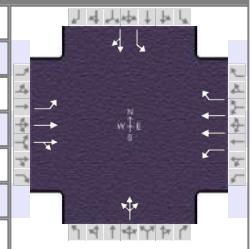
No errors or warnings exist.

## --- Comments ---

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# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

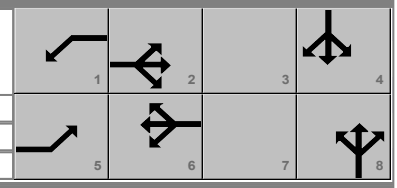


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 524 | 8 | 8 | 398 | 42 | 10 | 0 | 4 | 88 | 3 | 22 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 40.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 17.6 | 6.2 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 46 | 524 | 8 | 8 | 398 | 42 | 10 | 0 | 4 | 88 | 3 | 22 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 7 | 5 | | 13 | 7 | 7 | | 0 | | 5 | 33 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Turn Bay Length, ft | 225 | 0 | | 115 | 0 | 0 | | 0 | | 300 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

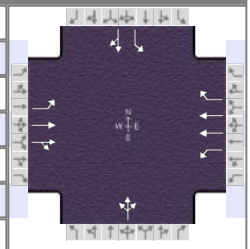
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 85.0 | 15.0 | 85.0 | | 20.0 | | 20.0 |
| Yellow Change Interval (*Y*), s | 3.0 | 4.5 | 3.0 | 4.5 | | 4.5 | | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | | 8 | | 8 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | | 5.0 | | 5.0 |
| Recall Mode | Off | Min | Off | Min | | Off | | Off |
| Dual Entry | No | Yes | No | Yes | | Yes | | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 20.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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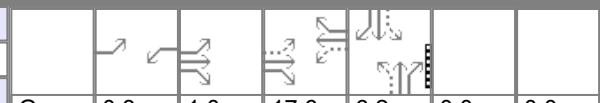
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

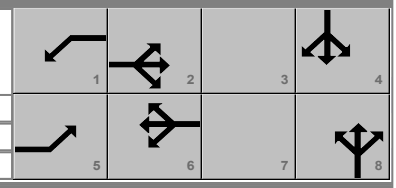


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 524 | 8 | 8 | 398 | 42 | 10 | 0 | 4 | 88 | 3 | 22 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 40.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 17.6 | 6.2 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | | 8 | | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 3.0 | | 8.0 | | 6.0 |
| Phase Duration, s | 4.3 | 24.6 | 3.3 | 23.6 | | 12.2 | | 12.2 |
| Change Period, ( $Y+R_c$ ), s | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.2 | 4.0 | 6.2 | | 6.7 | | 6.7 |
| Queue Clearance Time ( $g_s$ ), s | 2.6 | 5.7 | 2.1 | 5.0 | | 2.3 | | 4.7 |
| Green Extension Time ( $g_e$ ), s | 0.1 | 12.6 | 0.0 | 12.6 | | 0.9 | | 0.8 |
| Phase Call Probability | 0.42 | 1.00 | 0.09 | 1.00 | | 0.77 | | 0.77 |
| Max Out Probability | 0.00 | 0.00 | 0.00 | 0.00 | | 0.01 | | 0.02 |

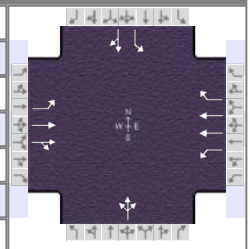
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 48 | 281 | 279 | 8 | 419 | 44 | | 15 | | 93 | 26 | |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1711 | 1922 | 1912 | 1626 | 1800 | 1522 | | 1503 | | 1379 | 1218 | |
| Queue Service Time ( $g_s$ ), s | 0.6 | 3.7 | 3.7 | 0.1 | 3.0 | 0.7 | | 0.0 | | 2.5 | 0.7 | |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.6 | 3.7 | 3.7 | 0.1 | 3.0 | 0.7 | | 0.3 | | 2.7 | 0.7 | |
| Green Ratio ( *g/C* ) | 0.47 | 0.46 | 0.46 | 0.45 | 0.44 | 0.44 | | 0.15 | | 0.15 | 0.15 | |
| Capacity ( *c* ), veh/h | 574 | 892 | 887 | 441 | 1582 | 669 | | 387 | | 385 | 189 | |
| Volume-to-Capacity Ratio ( *X* ) | 0.084 | 0.315 | 0.315 | 0.019 | 0.265 | 0.066 | | 0.038 | | 0.241 | 0.139 | |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 6 | 37 | 36 | 1 | 30 | 6 | | 4 | | 31 | 11 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.4 | 1.4 | 0.0 | 1.1 | 0.2 | | 0.2 | | 1.2 | 0.3 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.03 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.10 | 0.00 | |
| Uniform Delay ( $d_1$ ), s/veh | 5.9 | 6.7 | 6.7 | 6.5 | 7.1 | 6.5 | | 14.4 | | 15.6 | 14.6 | |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | | 0.1 | | 0.7 | 0.7 | |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Control Delay ( *d* ), s/veh | 6.0 | 6.8 | 6.8 | 6.5 | 7.2 | 6.5 | | 14.5 | | 16.3 | 15.3 | |
| Level of Service (LOS) | A | A | A | A | A | A | | B | | B | B | |
| Approach Delay, s/veh / LOS | 6.7 | A | | 7.1 | A | | 14.5 | B | | 16.0 | B | |
| Intersection Delay, s/veh / LOS | 7.9 | | | | | | A | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 1.64 | B | 1.87 | B | 2.42 | B | 2.26 | B |
| Bicycle LOS Score / LOS | 0.99 | A | 0.88 | A | 0.51 | A | 0.68 | A |

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# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

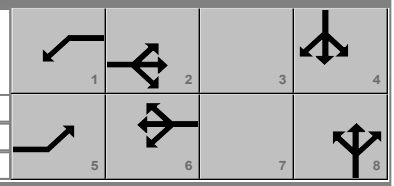


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 524 | 8 | 8 | 398 | 42 | 10 | 0 | 4 | 88 | 3 | 22 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 40.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 17.6 | 6.2 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |



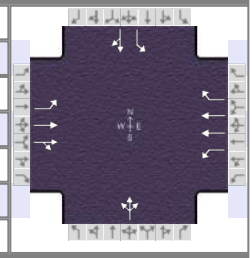

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.945 | 0.961 | 1.000 | 0.899 | 0.945 | 0.945 | 1.000 | 1.000 | 1.000 | 0.961 | 0.743 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.825 | 0.791 | | 0.726 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.995 | 0.995 | | 0.000 | 0.847 | | 0.000 | 0.791 | | 0.863 | 0.863 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | 1.00 | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1711 | 3776 | 58 | 1626 | 3600 | 1522 | 1074 | 0 | 429 | 1379 | 146 | 1072 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.46 | 0.46 | 0.01 | 0.44 | 0.44 | 0.15 | 0.00 | 0.15 | 0.15 | 0.15 | 0.15 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | | 0.23 | | 0.23 | 0.23 | |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Green Ratio ($g/C$) | 0.47 | 0.46 | 0.45 | 0.44 | | 0.15 | | 0.15 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 929 | 0 | 776 | 0 | | 1406 | | 1379 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 17.6 | 0.0 | 17.6 | 0.0 | | 6.2 | | 6.2 |
| Permitted Service Time ($g_u$), s | 14.7 | 0.0 | 12.9 | 0.0 | | 5.5 | | 6.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.2 | | 0.1 | | | 0.0 | | 2.5 |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 0.8 | | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 0.2 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 0.972 | 0.000 | 1.198 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.070 | 0.000 | 0.074 | 0.000 | 0.107 | 0.000 | 0.107 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 927.72 | 5.75 | 878.64 | 6.29 | 309.59 | 14.30 | 309.59 | 14.30 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.50 | -3.64 | 0.39 | -3.64 | 0.02 | -3.64 | 0.20 |

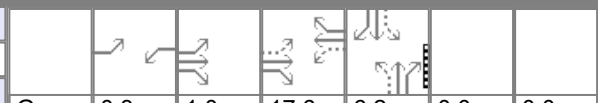
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

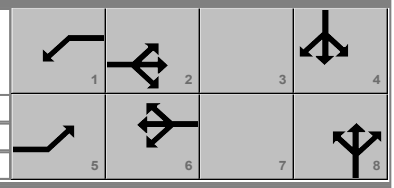


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 46 | 524 | 8 | 8 | 398 | 42 | 10 | 0 | 4 | 88 | 3 | 22 |

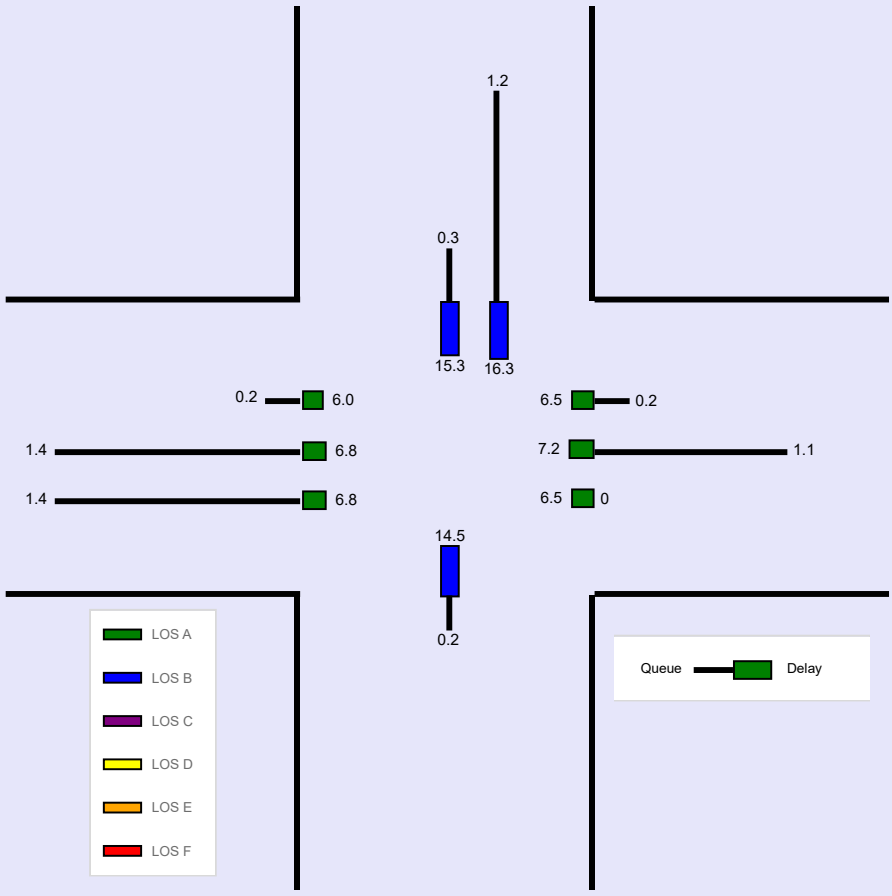
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 40.0 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.3 | 1.0 | 17.6 | 6.2 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 6 | 37 | 36 | 1 | 30 | 6 | | 4 | | 31 | 11 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.4 | 1.4 | 0.0 | 1.1 | 0.2 | | 0.2 | | 1.2 | 0.3 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.03 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.10 | 0.00 | |
| Control Delay ( *d* ), s/veh | 6.0 | 6.8 | 6.8 | 6.5 | 7.2 | 6.5 | | 14.5 | | 16.3 | 15.3 | |
| Level of Service (LOS) | A | A | A | A | A | A | | B | | B | B | |
| Approach Delay, s/veh / LOS | 6.7 | A | | 7.1 | A | | 14.5 | B | | 16.0 | B | |
| Intersection Delay, s/veh / LOS | 7.9 | | | | | | A | | | | | |



## --- Messages ---

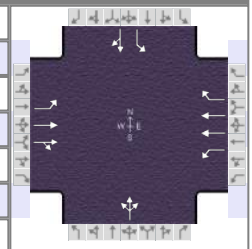
No errors or warnings exist.

## --- Comments ---

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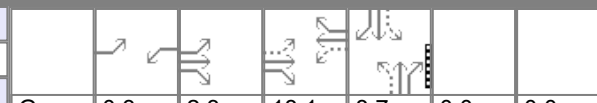
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

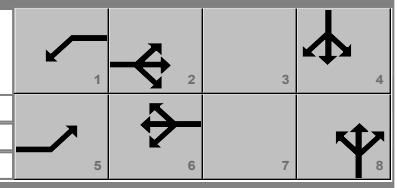


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 98 | 524 | 8 | 8 | 398 | 79 | 10 | 0 | 4 | 118 | 3 | 65 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.3 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 2.3 | 18.1 | 8.7 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 98 | 524 | 8 | 8 | 398 | 79 | 10 | 0 | 4 | 118 | 3 | 65 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 7 | 5 | | 13 | 7 | 7 | | 0 | | 5 | 33 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Turn Bay Length, ft | 225 | 0 | | 115 | 0 | 0 | | 0 | | 300 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

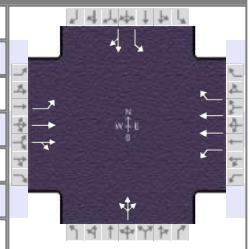
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 85.0 | 15.0 | 85.0 | | 20.0 | | 20.0 |
| Yellow Change Interval (*Y*), s | 3.0 | 4.5 | 3.0 | 4.5 | | 4.5 | | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | | 8 | | 8 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | | 5.0 | | 5.0 |
| Recall Mode | Off | Min | Off | Min | | Off | | Off |
| Dual Entry | No | Yes | No | Yes | | Yes | | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 20.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

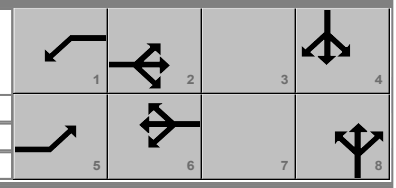


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 98 | 524 | 8 | 8 | 398 | 79 | 10 | 0 | 4 | 118 | 3 | 65 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.3 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.3 | 2.3 | 18.1 | 8.7 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | | 8 | | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 3.0 | | 8.0 | | 6.0 |
| Phase Duration, s | 5.6 | 26.4 | 3.3 | 24.1 | | 14.7 | | 14.7 |
| Change Period, ( $Y+R_c$ ), s | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.1 | 4.0 | 6.1 | | 7.2 | | 7.2 |
| Queue Clearance Time ( $g_s$ ), s | 3.4 | 6.1 | 2.1 | 5.4 | | 4.5 | | 8.2 |
| Green Extension Time ( $g_e$ ), s | 0.2 | 12.7 | 0.0 | 12.7 | | 1.7 | | 1.4 |
| Phase Call Probability | 0.72 | 1.00 | 0.10 | 1.00 | | 0.92 | | 0.92 |
| Max Out Probability | 0.00 | 0.00 | 0.00 | 0.00 | | 0.08 | | 0.26 |

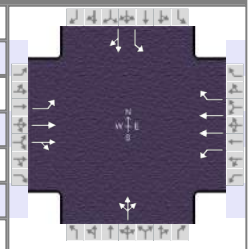
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 103 | 281 | 279 | 8 | 419 | 83 | | 15 | | 124 | 72 | |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1711 | 1922 | 1912 | 1626 | 1800 | 1522 | | 1174 | | 1379 | 1204 | |
| Queue Service Time ( $g_s$ ), s | 1.4 | 4.1 | 4.1 | 0.1 | 3.4 | 1.5 | | 0.0 | | 3.8 | 2.3 | |
| Cycle Queue Clearance Time ( $g_c$ ), s | 1.4 | 4.1 | 4.1 | 0.1 | 3.4 | 1.5 | | 2.5 | | 6.2 | 2.3 | |
| Green Ratio ( *g/C* ) | 0.49 | 0.46 | 0.46 | 0.41 | 0.41 | 0.41 | | 0.20 | | 0.20 | 0.20 | |
| Capacity ( *c* ), veh/h | 574 | 887 | 882 | 428 | 1476 | 624 | | 365 | | 351 | 230 | |
| Volume-to-Capacity Ratio ( *X* ) | 0.180 | 0.316 | 0.317 | 0.020 | 0.284 | 0.133 | | 0.040 | | 0.354 | 0.311 | |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 14 | 47 | 45 | 2 | 41 | 15 | | 5 | | 51 | 33 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.5 | 1.8 | 1.8 | 0.1 | 1.6 | 0.6 | | 0.2 | | 1.9 | 1.1 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.06 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.17 | 0.00 | |
| Uniform Delay ( $d_1$ ), s/veh | 6.2 | 7.5 | 7.5 | 7.7 | 8.7 | 8.1 | | 14.5 | | 18.1 | 15.3 | |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | | 0.1 | | 1.3 | 1.6 | |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Control Delay ( *d* ), s/veh | 6.4 | 7.6 | 7.6 | 7.7 | 8.7 | 8.1 | | 14.6 | | 19.4 | 16.9 | |
| Level of Service (LOS) | A | A | A | A | A | A | | B | | B | B | |
| Approach Delay, s/veh / LOS | 7.4 | A | | 8.6 | A | | 14.6 | B | | 18.5 | B | |
| Intersection Delay, s/veh / LOS | 9.5 | | | | | | A | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 1.65 | B | 1.88 | B | 2.42 | B | 2.26 | B |
| Bicycle LOS Score / LOS | 1.03 | A | 0.91 | A | 0.51 | A | 0.81 | A |

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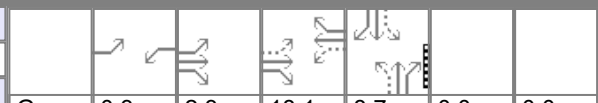
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |

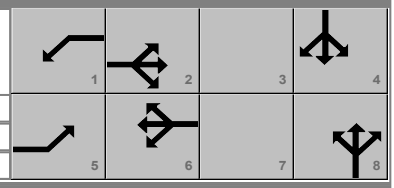


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 98 | 524 | 8 | 8 | 398 | 79 | 10 | 0 | 4 | 118 | 3 | 65 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.3 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.3 | 2.3 | 18.1 | 8.7 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |



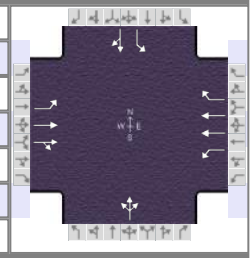

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.945 | 0.961 | 1.000 | 0.899 | 0.945 | 0.945 | 1.000 | 1.000 | 1.000 | 0.961 | 0.743 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.643 | 0.618 | | 0.726 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.995 | 0.995 | | 0.000 | 0.847 | | 0.000 | 0.618 | | 0.853 | 0.853 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | 1.00 | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1711 | 3776 | 58 | 1626 | 3600 | 1522 | 838 | 0 | 335 | 1379 | 53 | 1151 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.06 | 0.46 | 0.46 | 0.01 | 0.41 | 0.41 | 0.19 | 0.00 | 0.19 | 0.19 | 0.19 | 0.19 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | | 0.23 | | 0.23 | 0.23 | |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Green Ratio ($g/C$) | 0.49 | 0.46 | 0.41 | 0.41 | | 0.20 | | 0.20 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 929 | 0 | 776 | 0 | | 1350 | | 1379 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 19.3 | 0.0 | 18.1 | 0.0 | | 8.4 | | 8.4 |
| Permitted Service Time ($g_u$), s | 14.7 | 0.0 | 14.4 | 0.0 | | 6.0 | | 6.0 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.6 | | 0.0 | | | 0.0 | | 3.8 |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 0.8 | | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 0.2 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 0.972 | 0.000 | 1.198 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.075 | 0.000 | 0.082 | 0.000 | 0.107 | 0.000 | 0.107 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 918.40 | 6.48 | 815.66 | 7.77 | 391.44 | 14.33 | 391.44 | 14.33 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.55 | -3.64 | 0.42 | -3.64 | 0.02 | -3.64 | 0.32 |

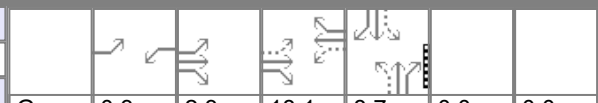
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | AM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN AM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 98 | 524 | 8 | 8 | 398 | 79 | 10 | 0 | 4 | 118 | 3 | 65 |

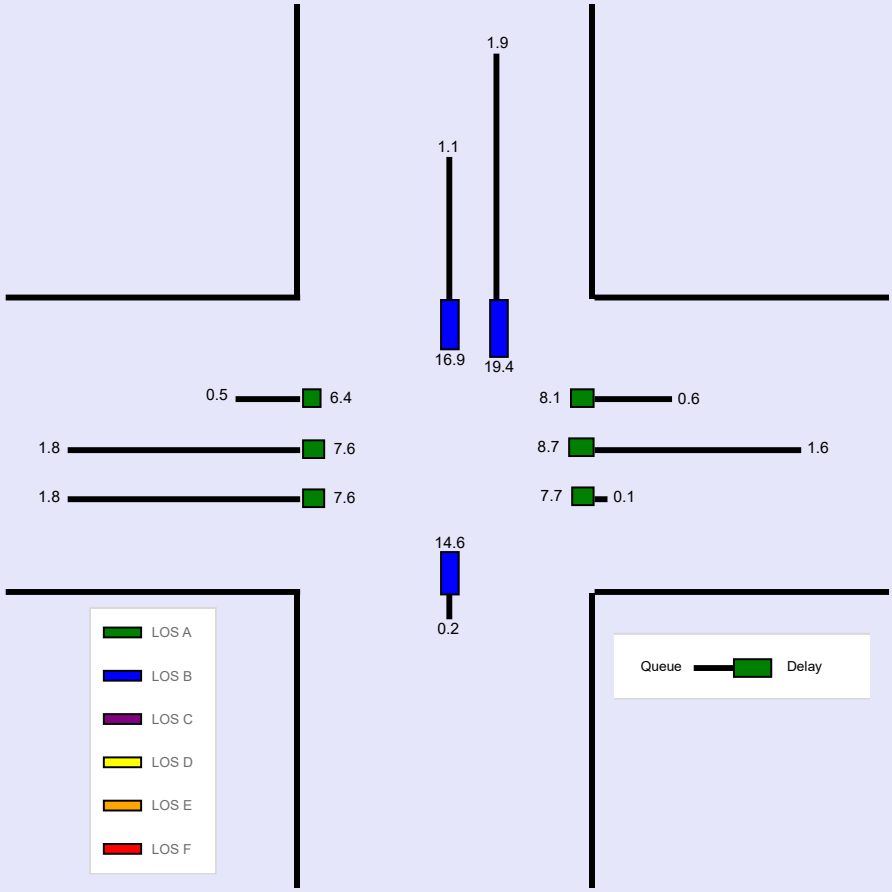
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 44.3 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 2.3 | 18.1 | 8.7 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 14 | 47 | 45 | 2 | 41 | 15 | | 5 | | 51 | 33 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.5 | 1.8 | 1.8 | 0.1 | 1.6 | 0.6 | | 0.2 | | 1.9 | 1.1 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.06 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.17 | 0.00 | |
| Control Delay ( *d* ), s/veh | 6.4 | 7.6 | 7.6 | 7.7 | 8.7 | 8.1 | | 14.6 | | 19.4 | 16.9 | |
| Level of Service (LOS) | A | A | A | A | A | A | | B | | B | B | |
| Approach Delay, s/veh / LOS | 7.4 | A | | 8.6 | A | | 14.6 | B | | 18.5 | B | |
| Intersection Delay, s/veh / LOS | 9.5 | | | | | | A | | | | | |



## --- Messages ---

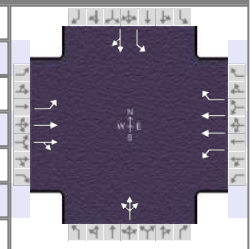
No errors or warnings exist.

## --- Comments ---

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# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

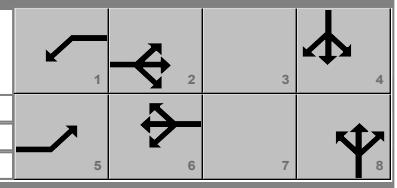


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 611 | 7 | 5 | 759 | 68 | 7 | 1 | 2 | 56 | 1 | 43 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.2 | 1.2 | 32.9 | 6.7 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 38 | 611 | 7 | 5 | 759 | 68 | 7 | 1 | 2 | 56 | 1 | 43 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 13 | 4 | | 60 | 3 | 1 | | 16 | | 9 | 0 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Turn Bay Length, ft | 225 | 0 | | 115 | 0 | 0 | | 0 | | 300 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

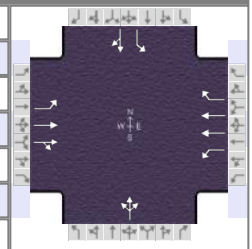
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 85.0 | 15.0 | 85.0 | | 20.0 | | 20.0 |
| Yellow Change Interval (*Y*), s | 3.0 | 4.5 | 3.0 | 4.5 | | 4.5 | | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | | 8 | | 8 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | | 5.0 | | 5.0 |
| Recall Mode | Off | Min | Off | Min | | Off | | Off |
| Dual Entry | No | Yes | No | Yes | | Yes | | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 20.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

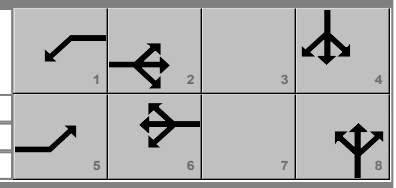


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 611 | 7 | 5 | 759 | 68 | 7 | 1 | 2 | 56 | 1 | 43 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.2 | 1.2 | 32.9 | 6.7 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | | 8 | | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 3.0 | | 8.0 | | 6.0 |
| Phase Duration, s | 4.4 | 40.0 | 3.2 | 38.9 | | 12.7 | | 12.7 |
| Change Period, ( $Y+R_c$ ), s | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.2 | 4.0 | 6.2 | | 7.5 | | 7.5 |
| Queue Clearance Time ( $g_s$ ), s | 2.5 | 6.4 | 2.1 | 8.3 | | 3.4 | | 5.7 |
| Green Extension Time ( $g_e$ ), s | 0.0 | 24.7 | 0.0 | 24.5 | | 0.9 | | 0.8 |
| Phase Call Probability | 0.46 | 1.00 | 0.08 | 1.00 | | 0.83 | | 0.83 |
| Max Out Probability | 0.00 | 0.08 | 0.00 | 0.09 | | 0.03 | | 0.06 |

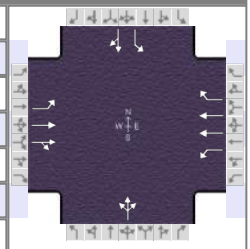
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 40 | 326 | 325 | 5 | 799 | 72 | | 11 | | 59 | 46 | |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1626 | 1938 | 1930 | 963 | 1859 | 1598 | | 1206 | | 1335 | 1616 | |
| Queue Service Time ( $g_s$ ), s | 0.5 | 4.4 | 4.4 | 0.1 | 6.3 | 1.1 | | 0.0 | | 2.3 | 1.5 | |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.5 | 4.4 | 4.4 | 0.1 | 6.3 | 1.1 | | 1.4 | | 3.7 | 1.5 | |
| Green Ratio ( *g/C* ) | 0.62 | 0.61 | 0.61 | 0.59 | 0.59 | 0.59 | | 0.12 | | 0.12 | 0.12 | |
| Capacity ( *c* ), veh/h | 464 | 1178 | 1174 | 341 | 2185 | 939 | | 254 | | 255 | 193 | |
| Volume-to-Capacity Ratio ( *X* ) | 0.086 | 0.277 | 0.277 | 0.015 | 0.366 | 0.076 | | 0.042 | | 0.231 | 0.240 | |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 5 | 46 | 45 | 1 | 67 | 10 | | 6 | | 34 | 25 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.8 | 1.8 | 0.0 | 2.6 | 0.4 | | 0.2 | | 1.3 | 1.0 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.12 | 0.00 | |
| Uniform Delay ( $d_1$ ), s/veh | 4.6 | 5.2 | 5.2 | 4.9 | 6.1 | 5.0 | | 21.8 | | 24.0 | 22.3 | |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.1 | | 1.0 | 1.4 | |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Control Delay ( *d* ), s/veh | 4.7 | 5.2 | 5.2 | 5.0 | 6.1 | 5.0 | | 22.0 | | 25.0 | 23.7 | |
| Level of Service (LOS) | A | A | A | A | A | A | | C | | C | C | |
| Approach Delay, s/veh / LOS | 5.2 | A | | 6.0 | A | | 22.0 | C | | 24.4 | C | |
| Intersection Delay, s/veh / LOS | 6.9 | | | | | | A | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 1.63 | B | 1.86 | B | 2.43 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.06 | A | 1.21 | A | 0.50 | A | 0.66 | A |

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# HCS Signalized Intersection Intermediate Values

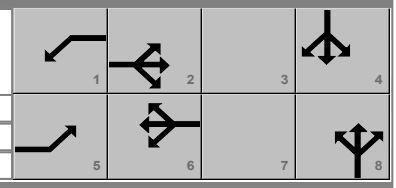
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 611 | 7 | 5 | 759 | 68 | 7 | 1 | 2 | 56 | 1 | 43 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 55.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.2 | 1.2 | 32.9 | 6.7 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |



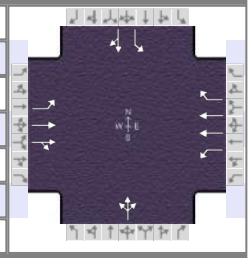

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.899 | 0.969 | 1.000 | 0.532 | 0.977 | 0.992 | 1.000 | 0.875 | 1.000 | 0.930 | 1.000 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.747 | 0.725 | | 0.703 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.996 | 0.996 | | 0.000 | 0.847 | | 0.000 | 0.725 | | 0.850 | 0.850 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | 1.00 | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1626 | 3824 | 44 | 963 | 3719 | 1598 | 844 | 121 | 241 | 1335 | 37 | 1579 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.02 | 0.61 | 0.61 | 0.00 | 0.59 | 0.59 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | | 0.23 | | 0.23 | 0.23 | |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Green Ratio ($g/C$) | 0.62 | 0.61 | 0.59 | 0.59 | | 0.12 | | 0.12 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 621 | 0 | 422 | 0 | | 1381 | | 1335 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 33.0 | 0.0 | 32.9 | 0.0 | | 6.7 | | 6.7 |
| Permitted Service Time ($g_u$), s | 26.6 | 0.0 | 27.6 | 0.0 | | 5.2 | | 5.3 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.4 | | 0.1 | | | 0.0 | | 2.3 |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 0.8 | | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 0.2 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 0.972 | 0.000 | 1.198 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.058 | 0.000 | 0.063 | 0.000 | 0.123 | 0.000 | 0.123 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 1216.28 | 4.29 | 1175.01 | 4.76 | 238.88 | 21.68 | 238.88 | 21.68 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.57 | -3.64 | 0.72 | -3.64 | 0.02 | -3.64 | 0.17 |

# HCS Signalized Intersection Results Graphical Summary

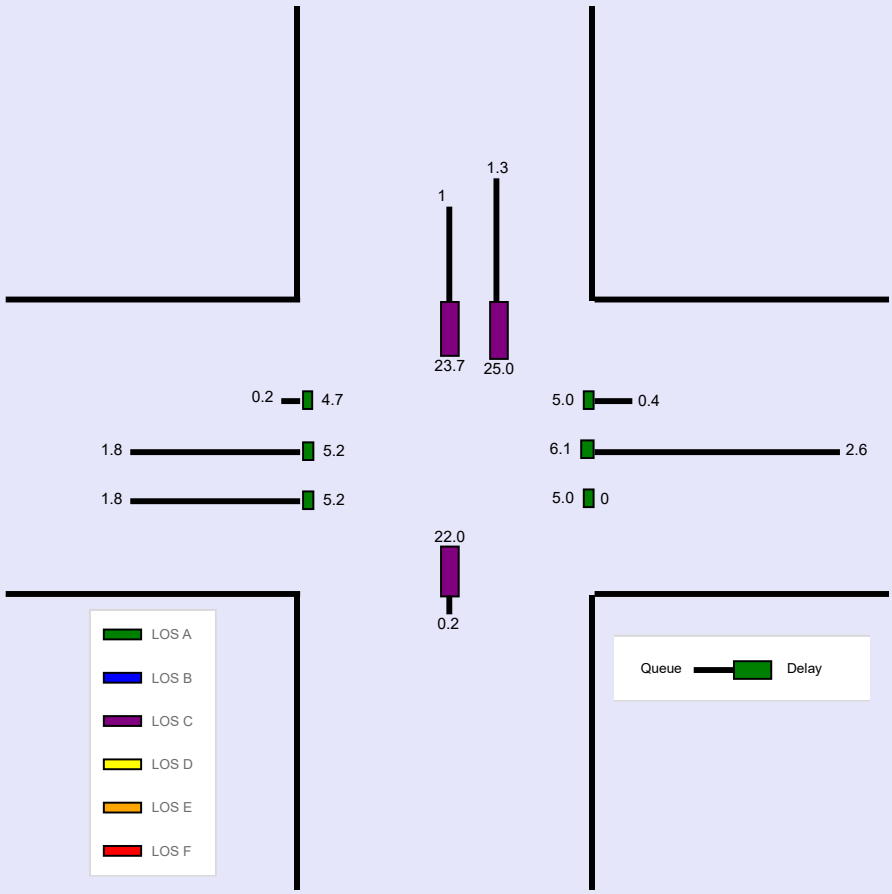
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | EXISTING 2025 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2025 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 611 | 7 | 5 | 759 | 68 | 7 | 1 | 2 | 56 | 1 | 43 |

| Signal Information | | | | | EB | | | WB | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 55.9 | Reference Phase | 2 | | | | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | Green | 0.2 | 1.2 | | 32.9 | 6.7 | 0.0 | 0.0 | | | | |
| Force Mode | Fixed | Simult. Gap N/S | On | Yellow | 3.0 | 0.0 | | 4.5 | 4.5 | 0.0 | 0.0 | | | | |
| | | | | Red | 0.0 | 0.0 | | 1.5 | 1.5 | 0.0 | 0.0 | | | | |

| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 5 | 46 | 45 | 1 | 67 | 10 | | 6 | | 34 | 25 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.8 | 1.8 | 0.0 | 2.6 | 0.4 | | 0.2 | | 1.3 | 1.0 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.12 | 0.00 | |
| Control Delay ( *d* ), s/veh | 4.7 | 5.2 | 5.2 | 5.0 | 6.1 | 5.0 | | 22.0 | | 25.0 | 23.7 | |
| Level of Service (LOS) | A | A | A | A | A | A | | C | | C | C | |
| Approach Delay, s/veh / LOS | 5.2 | A | | 6.0 | A | | 22.0 | C | | 24.4 | C | |
| Intersection Delay, s/veh / LOS | 6.9 | | | | | | A | | | | | |



## --- Messages ---

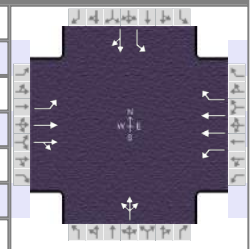
No errors or warnings exist.

## --- Comments ---

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# HCS Signalized Intersection Input Data

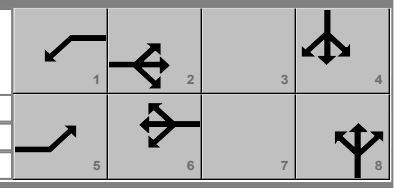
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 627 | 7 | 5 | 808 | 73 | 7 | 1 | 2 | 58 | 1 | 44 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 58.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green | 0.2 | 1.2 | 35.6 | 6.9 | 0.0 | 0.0 | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 38 | 627 | 7 | 5 | 808 | 73 | 7 | 1 | 2 | 58 | 1 | 44 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 13 | 4 | | 60 | 3 | 1 | | 16 | | 9 | 0 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Turn Bay Length, ft | 225 | 0 | | 115 | 0 | 0 | | 0 | | 300 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

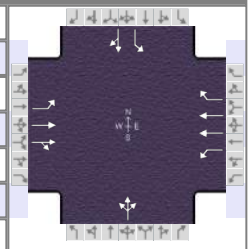
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 85.0 | 15.0 | 85.0 | | 20.0 | | 20.0 |
| Yellow Change Interval (*Y*), s | 3.0 | 4.5 | 3.0 | 4.5 | | 4.5 | | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | | 8 | | 8 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | | 5.0 | | 5.0 |
| Recall Mode | Off | Min | Off | Min | | Off | | Off |
| Dual Entry | No | Yes | No | Yes | | Yes | | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 20.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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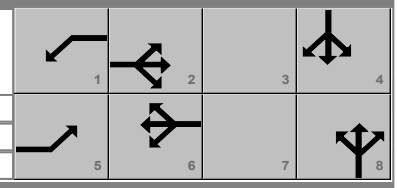
# HCS Signalized Intersection Results Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 627 | 7 | 5 | 808 | 73 | 7 | 1 | 2 | 58 | 1 | 44 |

| Signal Information | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 58.9 | Reference Phase | 2 | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | | | | | | | | | |
| Force Mode | Fixed | Simult. Gap N/S | On | | | | | | | | | |
| | | | | Green | 0.2 | 1.2 | 35.6 | 6.9 | 0.0 | 0.0 | | |
| | | | | Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | | 8 | | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 3.0 | | 8.0 | | 6.0 |
| Phase Duration, s | 4.4 | 42.8 | 3.2 | 41.6 | | 12.9 | | 12.9 |
| Change Period, ( $Y+R_c$ ), s | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.2 | 4.0 | 6.2 | | 7.5 | | 7.5 |
| Queue Clearance Time ( $g_s$ ), s | 2.5 | 6.6 | 2.1 | 8.9 | | 3.6 | | 6.1 |
| Green Extension Time ( $g_e$ ), s | 0.0 | 26.9 | 0.0 | 26.7 | | 0.9 | | 0.8 |
| Phase Call Probability | 0.48 | 1.00 | 0.08 | 1.00 | | 0.86 | | 0.86 |
| Max Out Probability | 0.00 | 0.11 | 0.00 | 0.11 | | 0.03 | | 0.08 |

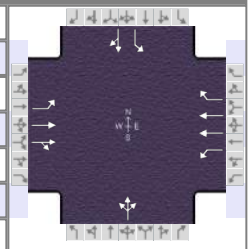
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 40 | 334 | 333 | 5 | 851 | 77 | | 11 | | 61 | 47 | |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1626 | 1938 | 1930 | 963 | 1859 | 1598 | | 1186 | | 1335 | 1616 | |
| Queue Service Time ( $g_s$ ), s | 0.5 | 4.6 | 4.6 | 0.1 | 6.9 | 1.2 | | 0.0 | | 2.6 | 1.6 | |
| Cycle Queue Clearance Time ( $g_c$ ), s | 0.5 | 4.6 | 4.6 | 0.1 | 6.9 | 1.2 | | 1.6 | | 4.1 | 1.6 | |
| Green Ratio ( *g/C* ) | 0.63 | 0.62 | 0.62 | 0.61 | 0.60 | 0.60 | | 0.12 | | 0.12 | 0.12 | |
| Capacity ( *c* ), veh/h | 451 | 1210 | 1205 | 340 | 2247 | 965 | | 242 | | 243 | 188 | |
| Volume-to-Capacity Ratio ( *X* ) | 0.089 | 0.276 | 0.276 | 0.016 | 0.378 | 0.080 | | 0.043 | | 0.251 | 0.252 | |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 6 | 49 | 48 | 1 | 75 | 11 | | 6 | | 39 | 27 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.9 | 1.9 | 0.0 | 2.9 | 0.4 | | 0.2 | | 1.4 | 1.1 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.13 | 0.00 | |
| Uniform Delay ( $d_1$ ), s/veh | 4.5 | 5.0 | 5.0 | 4.8 | 6.0 | 4.8 | | 23.1 | | 25.5 | 23.7 | |
| Incremental Delay ( $d_2$ ), s/veh | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.2 | | 1.1 | 1.5 | |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Control Delay ( *d* ), s/veh | 4.6 | 5.1 | 5.1 | 4.8 | 6.0 | 4.9 | | 23.3 | | 26.7 | 25.2 | |
| Level of Service (LOS) | A | A | A | A | A | A | | C | | C | C | |
| Approach Delay, s/veh / LOS | 5.0 | A | | 5.9 | A | | 23.3 | C | | 26.0 | C | |
| Intersection Delay, s/veh / LOS | 6.9 | | | | | | A | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 1.63 | B | 1.86 | B | 2.44 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.07 | A | 1.26 | A | 0.50 | A | 0.67 | A |

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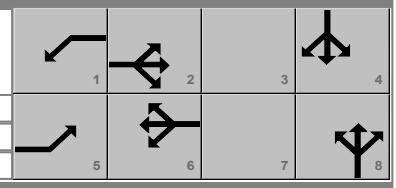
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 627 | 7 | 5 | 808 | 73 | 7 | 1 | 2 | 58 | 1 | 44 |

| Signal Information | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle, s | 58.9 | Reference Phase | 2 | | | | | | | | | |
| Offset, s | 0 | Reference Point | Begin | | | | | | | | | |
| Uncoordinated | Yes | Simult. Gap E/W | On | Green | 0.2 | 1.2 | 35.6 | 6.9 | 0.0 | 0.0 | | |
| Force Mode | Fixed | Simult. Gap N/S | On | Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | |
| | | | | Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | |



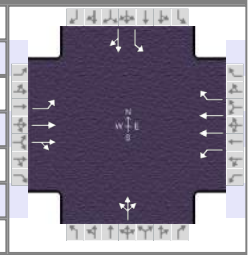

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.899 | 0.969 | 1.000 | 0.532 | 0.977 | 0.992 | 1.000 | 0.875 | 1.000 | 0.930 | 1.000 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.734 | 0.713 | | 0.703 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.996 | 0.996 | | 0.000 | 0.847 | | 0.000 | 0.713 | | 0.850 | 0.850 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | 1.00 | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1626 | 3825 | 43 | 963 | 3719 | 1598 | 830 | 119 | 237 | 1335 | 36 | 1580 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.02 | 0.62 | 0.62 | 0.00 | 0.60 | 0.60 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | | 0.23 | | 0.23 | 0.23 | |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Green Ratio ($g/C$) | 0.63 | 0.62 | 0.61 | 0.60 | | 0.12 | | 0.12 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 592 | 0 | 416 | 0 | | 1380 | | 1335 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 35.8 | 0.0 | 35.6 | 0.0 | | 6.9 | | 6.9 |
| Permitted Service Time ($g_u$), s | 28.7 | 0.0 | 30.2 | 0.0 | | 5.3 | | 5.3 |
| Permitted Queue Service Time ($g_{ps}$), s | 0.5 | | 0.1 | | | 0.0 | | 2.6 |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 0.8 | | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 0.3 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 0.972 | 0.000 | 1.198 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.057 | 0.000 | 0.061 | 0.000 | 0.126 | 0.000 | 0.126 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 1249.10 | 4.15 | 1208.54 | 4.61 | 233.01 | 22.98 | 233.01 | 22.98 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.58 | -3.64 | 0.77 | -3.64 | 0.02 | -3.64 | 0.18 |

# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Apr 21, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | NB 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 NB 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

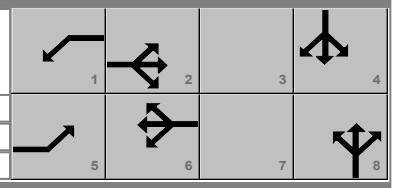


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 38 | 627 | 7 | 5 | 808 | 73 | 7 | 1 | 2 | 58 | 1 | 44 |

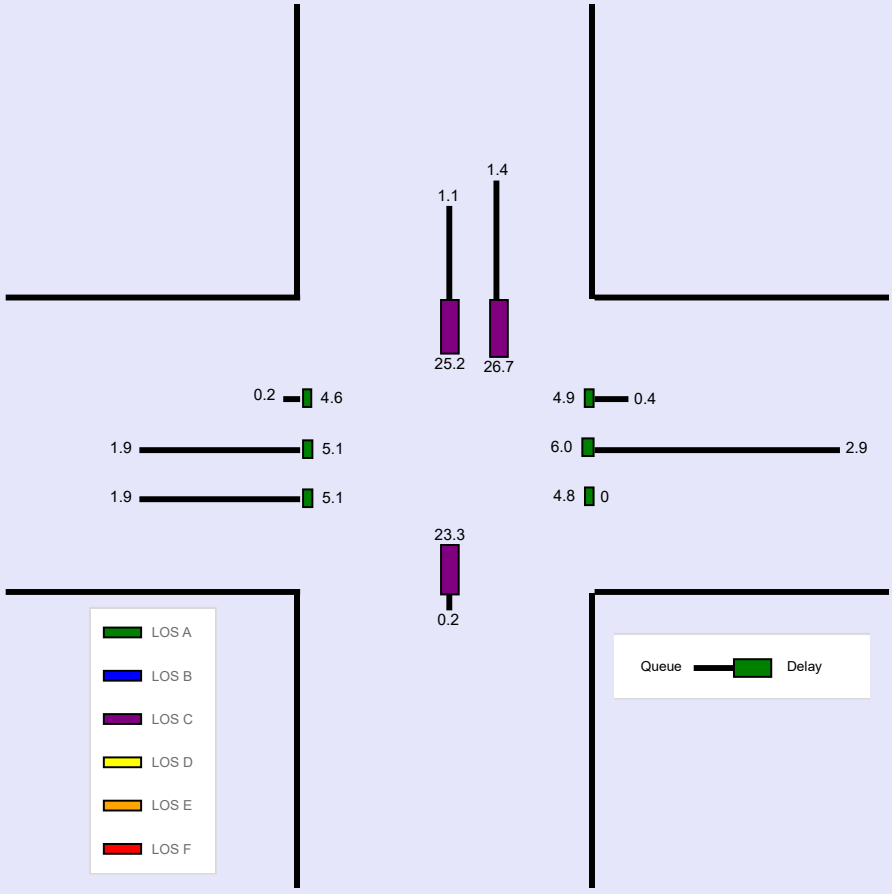
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 58.9 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | |
|---|---|---|---|---|---|---|
| Green | 0.2 | 1.2 | 35.6 | 6.9 | 0.0 | 0.0 |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 6 | 49 | 48 | 1 | 75 | 11 | | 6 | | 39 | 27 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.2 | 1.9 | 1.9 | 0.0 | 2.9 | 0.4 | | 0.2 | | 1.4 | 1.1 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.13 | 0.00 | |
| Control Delay ( *d* ), s/veh | 4.6 | 5.1 | 5.1 | 4.8 | 6.0 | 4.9 | | 23.3 | | 26.7 | 25.2 | |
| Level of Service (LOS) | A | A | A | A | A | A | | C | | C | C | |
| Approach Delay, s/veh / LOS | 5.0 | A | | 5.9 | A | | 23.3 | C | | 26.0 | C | |
| Intersection Delay, s/veh / LOS | 6.9 | | | | | | A | | | | | |



## --- Messages ---

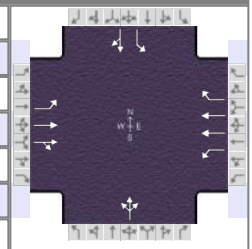
No errors or warnings exist.

## --- Comments ---

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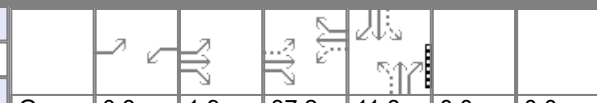
# HCS Signalized Intersection Input Data

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

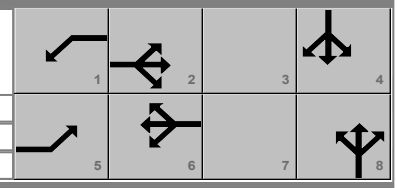


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 62 | 627 | 7 | 5 | 808 | 90 | 7 | 1 | 2 | 97 | 1 | 100 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 66.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.9 | 37.2 | 11.8 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |




| Traffic Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand (*v*), veh/h | 62 | 627 | 7 | 5 | 808 | 90 | 7 | 1 | 2 | 97 | 1 | 100 |
| Initial Queue ($Q_b$), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base Saturation Flow Rate ($s_o$), veh/h | 1900 | 2000 | 1900 | 1900 | 2000 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Parking ($N_m$), man/h | | None | | | None | | | None | | | None | |
| Heavy Vehicles ($P_{HV}$), % | 13 | 4 | | 60 | 3 | 1 | | 16 | | 9 | 0 | |
| Ped / Bike / RTOR, /h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses ($N_b$), buses/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arrival Type (*AT*) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Upstream Filtering (*I*) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Width ( *W* ), ft | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Turn Bay Length, ft | 225 | 0 | | 115 | 0 | 0 | | 0 | | 300 | 0 | |
| Grade (*Pg*), % | | 0 | | | 0 | | | 0 | | | 0 | |
| Speed Limit, mi/h | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

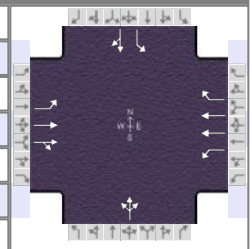
| Phase Information | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Maximum Green ($G_{max}$) or Phase Split, s | 15.0 | 85.0 | 15.0 | 85.0 | | 20.0 | | 20.0 |
| Yellow Change Interval (*Y*), s | 3.0 | 4.5 | 3.0 | 4.5 | | 4.5 | | 4.5 |
| Red Clearance Interval ( $R_c$), s | 0.0 | 1.5 | 0.0 | 1.5 | | 1.5 | | 1.5 |
| Minimum Green ( $G_{min}$), s | 3 | 15 | 3 | 15 | | 8 | | 8 |
| Start-Up Lost Time ( *l*t), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Extension of Effective Green (*e*), s | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Passage (*PT*), s | 3.0 | 2.0 | 3.0 | 2.0 | | 5.0 | | 5.0 |
| Recall Mode | Off | Min | Off | Min | | Off | | Off |
| Dual Entry | No | Yes | No | Yes | | Yes | | Yes |
| Walk (*Walk*), s | | 0.0 | | 0.0 | | 7.0 | | 0.0 |
| Pedestrian Clearance Time (*PC*), s | | 0.0 | | 0.0 | | 20.0 | | 0.0 |

| Multimodal Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85th % Speed / Rest in Walk / Corner Radius | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 | 0.0 | No | 25.0 |
| Walkway / Crosswalk Width / Length, ft | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 | 9.0 | 12.0 | 0.0 |
| Street Width / Island / Curb, ft | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No | 0.0 | 0 | No |
| Width Outside / Bike Lane / Shoulder, ft | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 | 12.0 | 5.0 | 2.0 |
| Pedestrian Signal / Occupied Parking | No | 0.50 | | No | 0.50 | | No | 0.50 | | No | 0.50 | |

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# HCS Signalized Intersection Results Summary

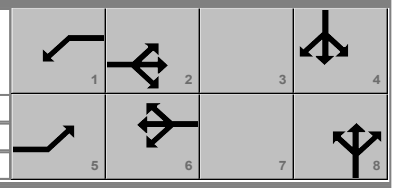
| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 62 | 627 | 7 | 5 | 808 | 90 | 7 | 1 | 2 | 97 | 1 | 100 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 66.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.9 | 37.2 | 11.8 | 0.0 | 0.0 | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | |




| Timer Results | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Assigned Phase | 5 | 2 | 1 | 6 | | 8 | | 4 |
| Case Number | 1.1 | 4.0 | 1.1 | 3.0 | | 8.0 | | 6.0 |
| Phase Duration, s | 5.2 | 45.1 | 3.3 | 43.2 | | 17.8 | | 17.8 |
| Change Period, ( $Y+R_c$ ), s | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Max Allow Headway ( *MAH* ), s | 4.0 | 6.2 | 4.0 | 6.2 | | 7.8 | | 7.8 |
| Queue Clearance Time ( $g_s$ ), s | 3.1 | 7.6 | 2.2 | 10.6 | | 5.9 | | 10.6 |
| Green Extension Time ( $g_e$ ), s | 0.1 | 26.9 | 0.0 | 26.6 | | 1.9 | | 1.5 |
| Phase Call Probability | 0.70 | 1.00 | 0.09 | 1.00 | | 0.98 | | 0.98 |
| Max Out Probability | 0.00 | 0.11 | 0.00 | 0.12 | | 0.20 | | 0.67 |

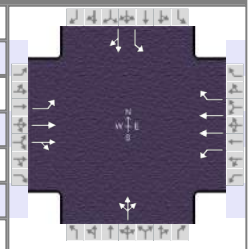
| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Assigned Movement | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Adjusted Flow Rate ( *v* ), veh/h | 65 | 334 | 333 | 5 | 851 | 95 | | 11 | | 102 | 106 | |
| Adjusted Saturation Flow Rate ( *s* ), veh/h/ln | 1626 | 1938 | 1930 | 963 | 1859 | 1598 | | 941 | | 1335 | 1613 | |
| Queue Service Time ( $g_s$ ), s | 1.1 | 5.6 | 5.6 | 0.2 | 8.6 | 1.8 | | 0.0 | | 4.8 | 3.8 | |
| Cycle Queue Clearance Time ( $g_c$ ), s | 1.1 | 5.6 | 5.6 | 0.2 | 8.6 | 1.8 | | 3.9 | | 8.6 | 3.8 | |
| Green Ratio ( *g/C* ) | 0.61 | 0.59 | 0.59 | 0.57 | 0.56 | 0.56 | | 0.18 | | 0.18 | 0.18 | |
| Capacity ( *c* ), veh/h | 420 | 1147 | 1142 | 312 | 2092 | 899 | | 259 | | 268 | 285 | |
| Volume-to-Capacity Ratio ( *X* ) | 0.155 | 0.292 | 0.292 | 0.017 | 0.407 | 0.105 | | 0.041 | | 0.380 | 0.372 | |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 13 | 74 | 72 | 2 | 115 | 21 | | 7 | | 74 | 65 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.5 | 2.9 | 2.9 | 0.0 | 4.5 | 0.8 | | 0.2 | | 2.8 | 2.6 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.06 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.25 | 0.00 | |
| Uniform Delay ( $d_1$ ), s/veh | 6.0 | 6.7 | 6.7 | 6.5 | 8.2 | 6.7 | | 22.6 | | 27.7 | 24.0 | |
| Incremental Delay ( $d_2$ ), s/veh | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | | 0.1 | | 1.9 | 1.7 | |
| Initial Queue Delay ( $d_3$ ), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Control Delay ( *d* ), s/veh | 6.2 | 6.7 | 6.7 | 6.5 | 8.2 | 6.7 | | 22.7 | | 29.6 | 25.7 | |
| Level of Service (LOS) | A | A | A | A | A | A | | C | | C | C | |
| Approach Delay, s/veh / LOS | 6.7 | A | | 8.1 | A | | 22.7 | C | | 27.6 | C | |
| Intersection Delay, s/veh / LOS | 9.8 | | | | | | A | | | | | |

| Multimodal Results | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian LOS Score / LOS | 1.64 | B | 1.87 | B | 2.43 | B | 2.28 | B |
| Bicycle LOS Score / LOS | 1.09 | A | 1.27 | A | 0.50 | A | 0.83 | A |

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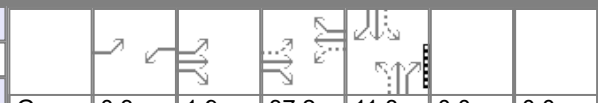
# HCS Signalized Intersection Intermediate Values

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |

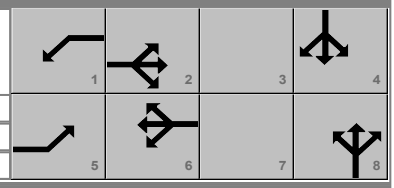


| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 62 | 627 | 7 | 5 | 808 | 90 | 7 | 1 | 2 | 97 | 1 | 100 |

| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 66.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.9 | 37.2 | 11.8 | 0.0 | 0.0 | | | | | | |
| Yellow | 3.0 | 0.0 | 4.5 | 4.5 | 0.0 | 0.0 | | | | | | |
| Red | 0.0 | 0.0 | 1.5 | 1.5 | 0.0 | 0.0 | | | | | | |



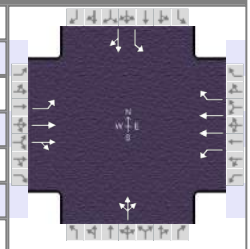

| Saturation Flow / Delay | L | T | R | L | T | R | L | T | R | L | T | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Width Adjustment Factor ($f_w$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles and Grade Factor ($f_{HVg}$) | 0.899 | 0.969 | 1.000 | 0.532 | 0.977 | 0.992 | 1.000 | 0.875 | 1.000 | 0.930 | 1.000 | 1.000 |
| Parking Activity Adjustment Factor ($f_p$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Bus Blockage Adjustment Factor ($f_{bb}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Area Type Adjustment Factor ($f_a$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Lane Utilization Adjustment Factor ($f_{LU}$) | 1.000 | 1.000 | 1.000 | 1.000 | 0.952 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Adjustment Factor ($f_{LT}$) | 0.952 | 0.000 | | 0.952 | 0.000 | | 0.582 | 0.566 | | 0.703 | 0.000 | |
| Right-Turn Adjustment Factor ($f_{RT}$) | | 0.996 | 0.996 | | 0.000 | 0.847 | | 0.000 | 0.566 | | 0.849 | 0.849 |
| Left-Turn Pedestrian Adjustment Factor ($f_{Lpb}$) | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 | | |
| Right-Turn Ped-Bike Adjustment Factor ($f_{Rpb}$) | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Work Zone Adjustment Factor ($f_{wz}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| DDI Factor ($f_{DDI}$) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$) | 1.00 | | | 1.00 | | | | | | | | |
| Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$) | | | | | | | 1.00 | | | 1.00 | | |
| Movement Saturation Flow Rate ($s$), veh/h | 1626 | 3825 | 43 | 963 | 3719 | 1598 | 659 | 94 | 188 | 1335 | 16 | 1597 |
| Proportion of Vehicles Arriving on Green ($P$) | 0.03 | 0.59 | 0.59 | 0.00 | 0.56 | 0.56 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Incremental Delay Factor ($k$) | 0.11 | 0.04 | 0.04 | 0.11 | 0.04 | 0.04 | | 0.23 | | 0.23 | 0.23 | |

| Signal Timing / Movement Groups | EBL | EBT/R | WBL | WBT/R | NBL | NBT/R | SBL | SBT/R |
|---|---|---|---|---|---|---|---|---|
| Lost Time ($t_L$) | 3.0 | 6.0 | 3.0 | 6.0 | | 6.0 | | 6.0 |
| Green Ratio ($g/C$) | 0.61 | 0.59 | 0.57 | 0.56 | | 0.18 | | 0.18 |
| Permitted Saturation Flow Rate ($s_p$), veh/h/ln | 592 | 0 | 416 | 0 | | 1308 | | 1335 |
| Shared Saturation Flow Rate ($s_{sh}$), veh/h/ln | | | | | | 0 | | |
| Permitted Effective Green Time ($g_p$), s | 38.1 | 0.0 | 37.2 | 0.0 | | 11.7 | | 11.7 |
| Permitted Service Time ($g_u$), s | 28.7 | 0.0 | 31.6 | 0.0 | | 7.8 | | 7.9 |
| Permitted Queue Service Time ($g_{ps}$), s | 1.2 | | 0.1 | | | 0.0 | | 4.8 |
| Time to First Blockage ($g_f$), s | 0.0 | 0.0 | 0.0 | 0.0 | | 0.9 | | 0.0 |
| Queue Service Time Before Blockage ($g_{fs}$), s | | | | | | 0.3 | | |
| Protected Right Saturation Flow ($s_R$), veh/h/ln | | | | 0 | | | | |
| Protected Right Effective Green Time ($g_R$), s | | | | 0.0 | | | | |

| Multimodal | EB | | WB | | NB | | SB | |
|---|---|---|---|---|---|---|---|---|
| Pedestrian $F_w$ / $F_v$ | 0.972 | 0.000 | 1.198 | 0.000 | 1.710 | 0.000 | 1.557 | 0.000 |
| Pedestrian $F_s$ / $F_{delay}$ | 0.000 | 0.069 | 0.000 | 0.074 | 0.000 | 0.125 | 0.000 | 0.125 |
| Pedestrian $M_{corner}$ / $M_{cw}$ | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Bicycle $c_b$ / $d_b$ | 1182.13 | 5.53 | 1123.53 | 6.35 | 356.16 | 22.35 | 356.16 | 22.35 |
| Bicycle $F_w$ / $F_v$ | -3.64 | 0.60 | -3.64 | 0.78 | -3.64 | 0.02 | -3.64 | 0.34 |

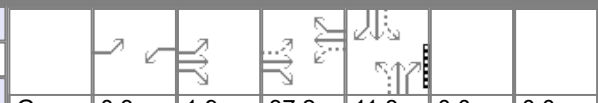
# HCS Signalized Intersection Results Graphical Summary

| General Information | | | | Intersection Information | |
|---|---|---|---|---|---|
| Agency | GHA | | | Duration, h | 0.250 |
| Analyst | MKP | Analysis Date | Jul 2, 2025 | Area Type | Other |
| Jurisdiction | IDOT | Time Period | PM | PHF | 0.95 |
| Urban Street | IL RTE 62 ALGONQUIN… | Analysis Year | TOTAL 2032 | Analysis Period | 1> 7:00 |
| Intersection | IL 62 @ LINNEMAN | File Name | 2032 TOT 62-LIN PM.xus | | |
| Project Description | CLOUD HQ | | | | |



| Demand Information | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Demand ( *v* ), veh/h | 62 | 627 | 7 | 5 | 808 | 90 | 7 | 1 | 2 | 97 | 1 | 100 |

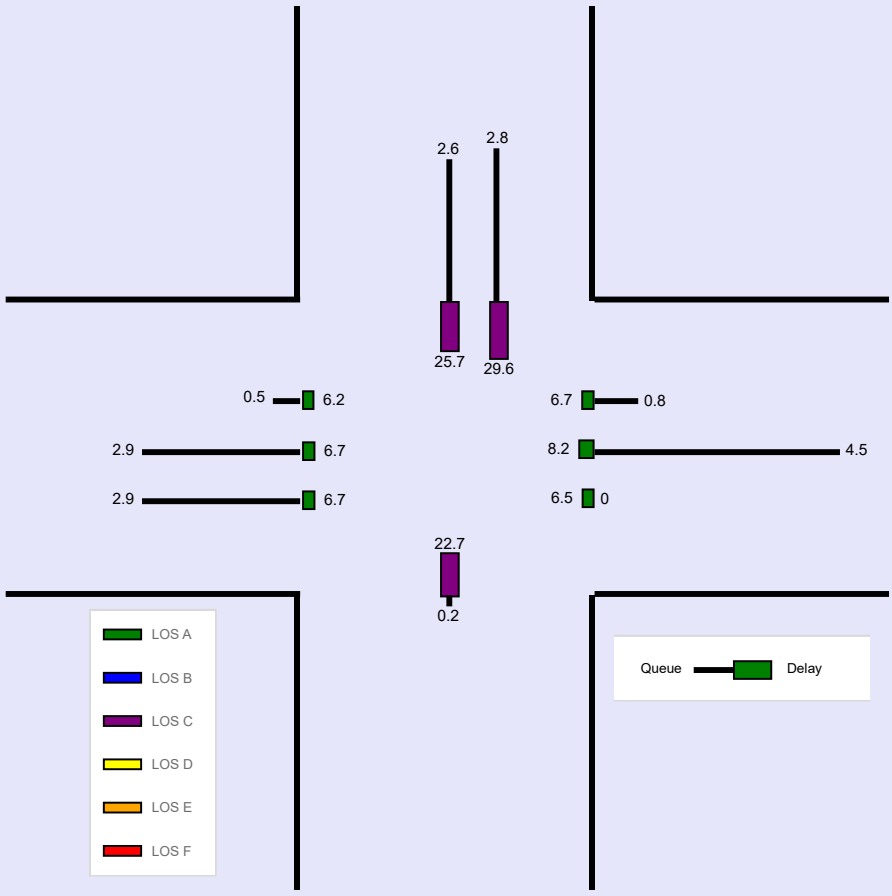
| Signal Information | | | |
|---|---|---|---|
| Cycle, s | 66.2 | Reference Phase | 2 |
| Offset, s | 0 | Reference Point | Begin |
| Uncoordinated | Yes | Simult. Gap E/W | On |
| Force Mode | Fixed | Simult. Gap N/S | On |



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Green | 0.3 | 1.9 | | 37.2 | 11.8 | 0.0 | 0.0 | | | | | |
| Yellow | 3.0 | 0.0 | | 4.5 | 4.5 | 0.0 | 0.0 | | | | | |
| Red | 0.0 | 0.0 | | 1.5 | 1.5 | 0.0 | 0.0 | | | | | |




| Movement Group Results | EB | | | WB | | | NB | | | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Back of Queue ( *Q* ), ft/ln ( 95 th percentile) | 13 | 74 | 72 | 2 | 115 | 21 | | 7 | | 74 | 65 | |
| Back of Queue ( *Q* ), veh/ln ( 95 th percentile) | 0.5 | 2.9 | 2.9 | 0.0 | 4.5 | 0.8 | | 0.2 | | 2.8 | 2.6 | |
| Queue Storage Ratio ( *RQ* ) ( 95 th percentile) | 0.06 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | | 0.00 | | 0.25 | 0.00 | |
| Control Delay ( *d* ), s/veh | 6.2 | 6.7 | 6.7 | 6.5 | 8.2 | 6.7 | | 22.7 | | 29.6 | 25.7 | |
| Level of Service (LOS) | A | A | A | A | A | A | | C | | C | C | |
| Approach Delay, s/veh / LOS | 6.7 | A | | 8.1 | A | | 22.7 | C | | 27.6 | C | |
| Intersection Delay, s/veh / LOS | 9.8 | | | | | | A | | | | | |



## --- Messages ---

No errors or warnings exist.

## --- Comments ---

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# HCS Two-Way Stop-Control Report

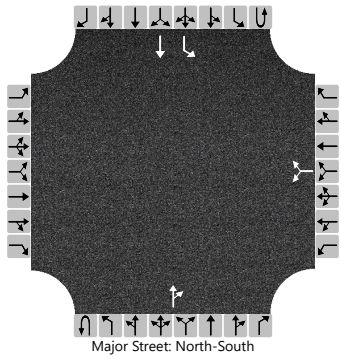
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 4/22/2025 |
| Analysis Year | 2025 |
| Time Analyzed | 2025 EXIST AM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN-ACCESS |
| Jurisdiction | LOCAL |
| East/West Street | ACCESS |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | | LR | | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 17 | | 2 | | | 46 | 41 | | 3 | 91 | |
| Percent Heavy Vehicles (%) | | | | | | 3 | | 3 | | | | | | 3 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.43 | | 6.23 | | | | | | 4.13 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.53 | | 3.33 | | | | | | 2.23 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | | 20 | | | | | | | 3 | | |
| Capacity, c (veh/h) | | | | | | | 903 | | | | | | | 1497 | | |
| v/c Ratio | | | | | | | 0.02 | | | | | | | 0.00 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 0.1 | | | | | | | 0.0 | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | | | | | 2.6 | | | | | | | 0.0 | | |
| Control Delay (s/veh) | | | | | | | 9.1 | | | | | | | 7.4 | | |
| Level of Service (LOS) | | | | | | | A | | | | | | | A | | |
| Approach Delay (s/veh) | | | | | | 9.1 | | | | | | | | 0.2 | | |
| Approach LOS | | | | | | A | | | | | | | | A | | |

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# HCS Two-Way Stop-Control Report

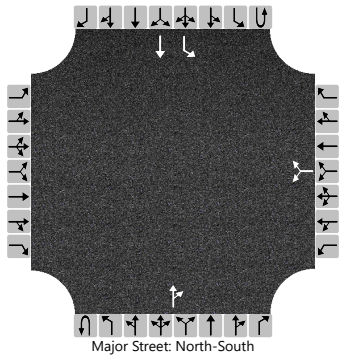
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 4/22/2025 |
| Analysis Year | 2032 |
| Time Analyzed | 2032 NB AM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN-ACCESS |
| Jurisdiction | LOCAL |
| East/West Street | ACCESS |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | | LR | | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 17 | | 2 | | | 47 | 41 | | 3 | 96 | |
| Percent Heavy Vehicles (%) | | | | | | 3 | | 3 | | | | | | 3 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.43 | | 6.23 | | | | | | 4.13 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.53 | | 3.33 | | | | | | 2.23 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | | 20 | | | | | | | 3 | | |
| Capacity, c (veh/h) | | | | | | | 899 | | | | | | | 1496 | | |
| v/c Ratio | | | | | | | 0.02 | | | | | | | 0.00 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 0.1 | | | | | | | 0.0 | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | | | | | 2.6 | | | | | | | 0.0 | | |
| Control Delay (s/veh) | | | | | | | 9.1 | | | | | | | 7.4 | | |
| Level of Service (LOS) | | | | | | | A | | | | | | | A | | |
| Approach Delay (s/veh) | | | | | | 9.1 | | | | | | | | 0.2 | | |
| Approach LOS | | | | | | A | | | | | | | | A | | |

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# HCS Two-Way Stop-Control Report

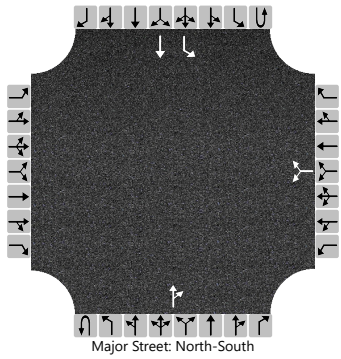
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 07/02/2025 |
| Analysis Year | 2032 |
| Time Analyzed | 2032 TOT AM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN-ACCESS |
| Jurisdiction | LOCAL |
| East/West Street | ACCESS |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | | LR | | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 17 | | 2 | | | 136 | 41 | | 3 | 169 | |
| Percent Heavy Vehicles (%) | | | | | | 3 | | 3 | | | | | | 3 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.43 | | 6.23 | | | | | | 4.13 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.53 | | 3.33 | | | | | | 2.23 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | | 20 | | | | | | | 3 | | |
| Capacity, c (veh/h) | | | | | | | 810 | | | | | | | 1382 | | |
| v/c Ratio | | | | | | | 0.02 | | | | | | | 0.00 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 0.1 | | | | | | | 0.0 | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | | | | | 2.6 | | | | | | | 0.0 | | |
| Control Delay (s/veh) | | | | | | | 9.6 | | | | | | | 7.6 | | |
| Level of Service (LOS) | | | | | | | A | | | | | | | A | | |
| Approach Delay (s/veh) | | | | | | 9.6 | | | | | | | | 0.1 | | |
| Approach LOS | | | | | | A | | | | | | | | A | | |

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# HCS Two-Way Stop-Control Report

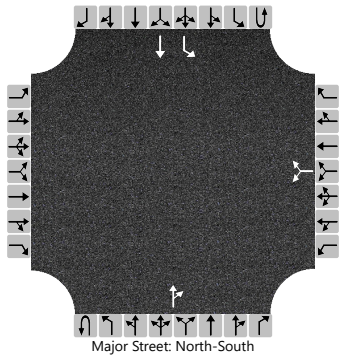
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 4/22/2025 |
| Analysis Year | 2025 |
| Time Analyzed | 2025 EXIST AM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN-ACCESS |
| Jurisdiction | LOCAL |
| East/West Street | ACCESS |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | | LR | | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 36 | | 7 | | | 102 | 5 | | 0 | 64 | |
| Percent Heavy Vehicles (%) | | | | | | 3 | | 3 | | | | | | 3 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.43 | | 6.23 | | | | | | 4.13 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.53 | | 3.33 | | | | | | 2.23 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | | 45 | | | | | | | 0 | | |
| Capacity, c (veh/h) | | | | | | | 898 | | | | | | | 1471 | | |
| v/c Ratio | | | | | | | 0.05 | | | | | | | 0.00 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 0.2 | | | | | | | 0.0 | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | | | | | 5.1 | | | | | | | | | |
| Control Delay (s/veh) | | | | | | | 9.2 | | | | | | | 7.4 | | |
| Level of Service (LOS) | | | | | | | A | | | | | | | A | | |
| Approach Delay (s/veh) | | | | | | 9.2 | | | | | | | | 0.0 | | |
| Approach LOS | | | | | | A | | | | | | | | A | | |

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# HCS Two-Way Stop-Control Report

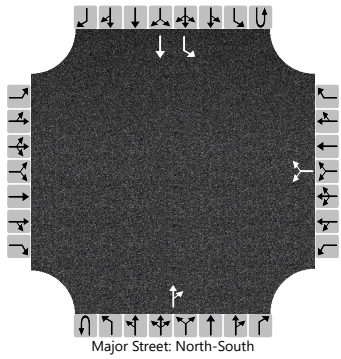
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 4/22/2025 |
| Analysis Year | 2032 |
| Time Analyzed | 2032 NB PM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN-ACCESS |
| Jurisdiction | LOCAL |
| East/West Street | ACCESS |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | | LR | | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 36 | | 7 | | | 107 | 5 | | 0 | 67 | |
| Percent Heavy Vehicles (%) | | | | | | 3 | | 3 | | | | | | 3 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.43 | | 6.23 | | | | | | 4.13 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.53 | | 3.33 | | | | | | 2.23 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | | 45 | | | | | | | 0 | | |
| Capacity, c (veh/h) | | | | | | | 893 | | | | | | | 1464 | | |
| v/c Ratio | | | | | | | 0.05 | | | | | | | 0.00 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 0.2 | | | | | | | 0.0 | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | | | | | 5.1 | | | | | | | | | |
| Control Delay (s/veh) | | | | | | | 9.2 | | | | | | | 7.5 | | |
| Level of Service (LOS) | | | | | | | A | | | | | | | A | | |
| Approach Delay (s/veh) | | | | | | 9.2 | | | | | | | | 0.0 | | |
| Approach LOS | | | | | | A | | | | | | | | A | | |

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# HCS Two-Way Stop-Control Report

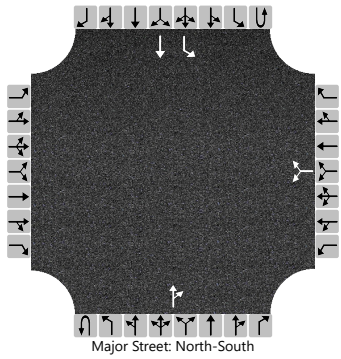
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 07/02/2025 |
| Analysis Year | 2032 |
| Time Analyzed | 2032 TOT PM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN-ACCESS |
| Jurisdiction | LOCAL |
| East/West Street | ACCESS |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | | LR | | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 36 | | 7 | | | 148 | 5 | | 0 | 162 | |
| Percent Heavy Vehicles (%) | | | | | | 3 | | 3 | | | | | | 3 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.43 | | 6.23 | | | | | | 4.13 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.53 | | 3.33 | | | | | | 2.23 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | | 45 | | | | | | | 0 | | |
| Capacity, c (veh/h) | | | | | | | 825 | | | | | | | 1412 | | |
| v/c Ratio | | | | | | | 0.05 | | | | | | | 0.00 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 0.2 | | | | | | | 0.0 | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | | | | | 5.1 | | | | | | | | | |
| Control Delay (s/veh) | | | | | | | 9.6 | | | | | | | 7.5 | | |
| Level of Service (LOS) | | | | | | | A | | | | | | | A | | |
| Approach Delay (s/veh) | | | | | | 9.6 | | | | | | | | 0.0 | | |
| Approach LOS | | | | | | A | | | | | | | | A | | |

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# HCS Two-Way Stop-Control Report

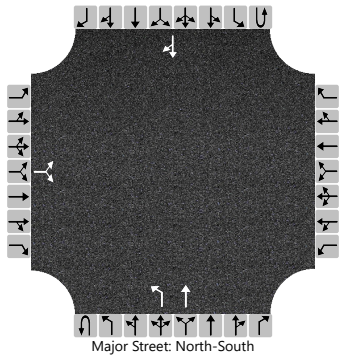
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 07/02/2025 |
| Analysis Year | 2032 |
| Time Analyzed | 2032 TOTAL AM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN - SITE |
| Jurisdiction | LOCAL |
| East/West Street | CLOUD |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | L | T | | | | | TR |
| Volume (veh/h) | | 49 | | 73 | | | | | | 89 | 49 | | | | 99 | 60 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 3 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.13 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.23 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 128 | | | | | | | 94 | | | | | | |
| Capacity, c (veh/h) | | | 828 | | | | | | | 1404 | | | | | | |
| v/c Ratio | | | 0.16 | | | | | | | 0.07 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.5 | | | | | | | 0.2 | | | | | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | 12.8 | | | | | | | 5.1 | | | | | | |
| Control Delay (s/veh) | | | 10.1 | | | | | | | 7.7 | 0.1 | | | | | |
| Level of Service (LOS) | | | B | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 10.1 | | | | | | | | 5.0 | | | | | | |
| Approach LOS | | B | | | | | | | | A | | | | | | |

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# HCS Two-Way Stop-Control Report

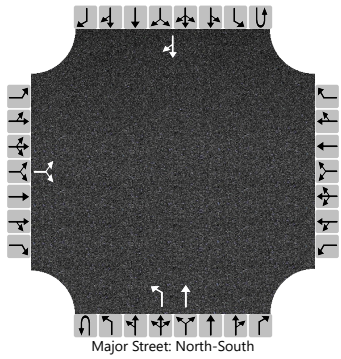
## General Information

| | |
|---|---|
| Analyst | MKP |
| Agency/Co. | GHA |
| Date Performed | 07/02/2025 |
| Analysis Year | 2032 |
| Time Analyzed | 2032 TOTAL PM |
| Intersection Orientation | North-South |
| Project Description | CLOUD HQ |

## Site Information

| | |
|---|---|
| Intersection | LINNEMAN - SITE |
| Jurisdiction | LOCAL |
| East/West Street | CLOUD |
| North/South Street | LINNEMAN |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | L | T | | | | | TR |
| Volume (veh/h) | | 64 | | 95 | | | | | | 41 | 114 | | | | 67 | 27 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 3 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Left Only | | | | | | | | 5 | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.13 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.23 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 167 | | | | | | | 43 | | | | | | |
| Capacity, c (veh/h) | | | 887 | | | | | | | 1488 | | | | | | |
| v/c Ratio | | | 0.19 | | | | | | | 0.03 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.7 | | | | | | | 0.1 | | | | | | |
| 95% Queue Length, $Q_{95}$ (ft) | | | 17.9 | | | | | | | 2.6 | | | | | | |
| Control Delay (s/veh) | | | 10.0 | | | | | | | 7.5 | 0.1 | | | | | |
| Level of Service (LOS) | | | A | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 10.0 | | | | | | | | 2.1 | | | | | | |
| Approach LOS | | A | | | | | | | | A | | | | | | |

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GEWALT HAMILTON ASSOCIATES, INC.

# Preliminary/Final PUD Stormwater Management Report

## Mount Prospect Technology Campus
## Mount Prospect, Illinois

Prepared For:

CloudHQ LLC
1212 New York Avenue NW, Suite 1000
Washington, DC 20005

Prepared By:
Monica Hue, P.E.
625 Forest Edge Drive
Vernon Hills, Illinois 60061




GHA Project #5253.220

August 29, 2025

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**2 Existing Conditions ..... 1**
**3 Proposed Stormwater Management ..... 2**
**4 Summary ..... 4**

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Exhibit 2 – FEMA Flood Hazard Map
Exhibit 3 – Proposed Drainage Exhibit – Full Build-Out Concept

# List of Appendices

Appendix A – Required Detention and Volume Control Calculations
Appendix B – Provided Detention and Volume Control Calculations
Appendix C – SHGWL Confirmation Email and Soil Boring Logs
Appendix D – Preliminary Storm Sewer Calculations

# 1 Introduction

The following is a summary report of the stormwater management improvements proposed for the development of a technology campus at 1200 E. Algonquin Road in the Village of Mount Prospect, Illinois. The entire property will be reconstructed. There will be new data centers and associated site work (CloudHQ portion) as well as a new substation yard northwest of the property (ComEd portion). The property redevelopment of the technology campus will be split into phases.

The development of the technology campus was originally approved under MWRD Permit #23-015 and MWRD Permit Revision RL #24-035. However, the geometry of the full build-out within the campus along with the location of the stormwater storage facilities have changed, requiring new PUD approval and permits to be applied for the revised development. Note the construction of the substation development east of Linneman Road under MWRD Permit #23-015 and Revision RL #24-035 has been complete, and closeout for this substation development is underway with the Village and MWRD. This stormwater report therefore only focuses on the revised technology campus development west of Linneman Road.

This report includes documentation of the procedures, assumptions and data used to design the proposed stormwater management facilities in compliance with the requirements of both the Village of Mount Prospect and the Metropolitan Water Reclamation District (MWRD) Watershed Management Ordinance (WMO). The detention and volume control design satisfies the full-build out development.

# 2 Existing Conditions

The existing 43.44-acre property at 1200 E. Algonquin Road is located in a separate sewer area of the Village of Mount Prospect. The existing conditions of the entire property has been demolished under the issued MWRD Earthwork Permit #22-6002. A new MWRD Earthwork Permit is under review for the relocation of the temporary sediment basin in preparation for the revised site plan.

Prior to the demolition, the site was occupied by United Airlines and contained several existing buildings, asphalt parking areas, interior drives, pedestrian pathways, and a detention pond as shown in Exhibit 1. The owner purchased the eastern portion of the United Airlines property as outlined in the exhibit. The detention pond at the east end of the site was built prior to 1972. Per MWRD Permit #1986-0760, this pond provided detention for a portion (25.78 acres) of the eastern end of the site. The restricted/detention service area for the basin prior to demolition covers around half of the 43.44-acre property. The control structure discharged stormwater from the pond east to an existing Village of Mount Prospect sewer on Linneman Road. Per MWRD Permit #2012-0282, the detention basin northwest of the property and south of Dempster only services the adjacent United Airlines property to the west.

Exhibit 2 shows the FEMA Flood Hazard map for the site. There is no regulatory floodplain, wetlands, and riparian environments on or within 100 feet of the development. The site does not have sub-surface contamination.

# 3 Proposed Stormwater Management

Detention and Volume Control Design

As shown in Exhibit 3, the CloudHQ portion with 40.34 acres of project area assumes there will be 82% of impervious area. A fully walled basin and an underground vault are proposed for detention and volume control storage for the CloudHQ portion. The two facilities have the same detention high water level (HWL) elevation at 668. The volume control is provided within 18" of soil media mix and 9" of surface storage within Basin #1. The detention and volume control storage for Basin #1 is between elevations 661 and 668. The detention and volume control storage for the underground vault is between elevations 662.33 and 668.

There is only 0.51 acre of unrestricted area around the northern and eastern perimeters of the property, including a small portion of the new entrance drive. This unrestricted area is small and less than 5% of the detention service area. The unrestricted release is therefore negligible and can be ignored.

The control structure for the CloudHQ portion will be located around the same location as the control structure from the pond of the pre-existing site, which will connect to the existing Village storm sewer on Linneman Road.

The proposed substation (ComEd) portion with 3.10 acres of project area assumes there will be 82% of impervious area. The substation will have its own detention basins (Basins #2A and #2B) for detention and volume control storage. The basins are also proposed to be fully walled. The detention storage in the basins are between elevations 663.5 and 668 via surface storage and between elevations 662.5 to 663 via soil media mix. Volume control is provided in the soil media mix and surface storage from 662.5 and 663.5. The control structure for the substation is located east of Basin #2A, which then ties into the downstream end of the CloudHQ portion's control structure prior to discharging to the Village storm sewer on Linneman Road.

The table below summarizes the stormwater requirements and provided storage for the CloudHQ and ComEd developments. Since the disturbance area is a complete redevelopment, regular MWRD Schedule D with Bulletin 75 rainfall data is used to compute the required detention volume. The allowable release rate for detention uses 0.20 cfs/acre within the Des Plaines River watershed. Detention and volume control calculations are enclosed. Detention and volume control calculations are provided in Appendices A and B.

**Table 1: Proposed Detention and Volume Control Summary**

| Stormwater Requirements | | |
|---|---|---|
| | **CloudHQ Development** | **Substation – ComEd** |
| Project Area (AC) | 40.34 | 3.10 |
| Impervious Area (AC) | 33.08 | 2.53 |
| Required Volume Control (AC-FT) | 2.76 | 0.21 |
| Required Detention (AC-FT) | 12.90 | 1.18 |

| | | |
|---|---|---|
| **Required Total Storage (Volume Control + Detention) (AC-FT)** | **15.66** | **1.39** |
| | | |
| Provided Detention Storage (AC-FT) | 13.81 | 2.24 |
| Provided Volume Control Storage (AC-FT) | 2.97 | 0.27 |
| **Total Provided Storage (AC-FT)** | **16.78** | **2.51** |
| | | |
| Allowable Release (0.20 cfs/ac) (CFS) | 8.07 | 0.62 |
| Actual Release at HWL (CFS) | 8.06 | 0.62 |
| Actual Restrictor Size | 9.9” | 3.3” |

Based on a confirmation email on the seasonal high groundwater levels (SHGWL) of the basin at the campus from the geotechnical engineer, there is at least a 2’ separation between the bottom of the volume control and SHGWL. The confirmation email and soil boring logs are enclosed in Appendix C. The table below summarizes the SHGWL and the bottom of the volume control facilities for the CloudHQ and substation ComEd developments.

**Table 2: Seasonal High Groundwater Levels Summary**

| | ECS Bore # | SHGWL | Bottom of Volume Control |
|---|---|---|---|
| Vault | B-12 | 659 | 662.33 |
| Basin #1 | B-9 | 659 | 661 |
| Basin #2A | P-5 | 660.5 | 662.5 |
| Basin #2B | P-5 | 660.5 | 662.5 |

Storm Sewer Design

The proposed storm sewers will be adequately sized to carry the 10-year storm when there are overland flow routes and 100-year storm when overland flows to the basin are not feasible. Storm sewers are routed to the stormwater facilities, which then discharges to the control structures.

Refer to Appendix D for the preliminary storm sewer calculations for the ORD1 site improvements (phases 1 and 2) located on the south half of the campus that drain to the underground vault and CloudHQ Basin #1. Overland flow route is provided for the ORD1 site improvements to the stormwater facilities, so the proposed storm sewers are only sized for the 10-year storm.

Note the engineering plans also show ORD2 site improvements (phase 3) for PUD submission. ORD2 site improvements are conceptual at this point as the ORD2 building may change in the future. The design in the engineering plans has primarily been for the ORD1 site improvements. Therefore, storm sewer calculations for ORD2 site improvements are not provided at this time.

Overflows

A 100-year emergency overflow route generally flows east, from the substation site to Basin #1. The overland flow route from Basin #1 is then conveyed via a large box culvert from Basin #1 to the

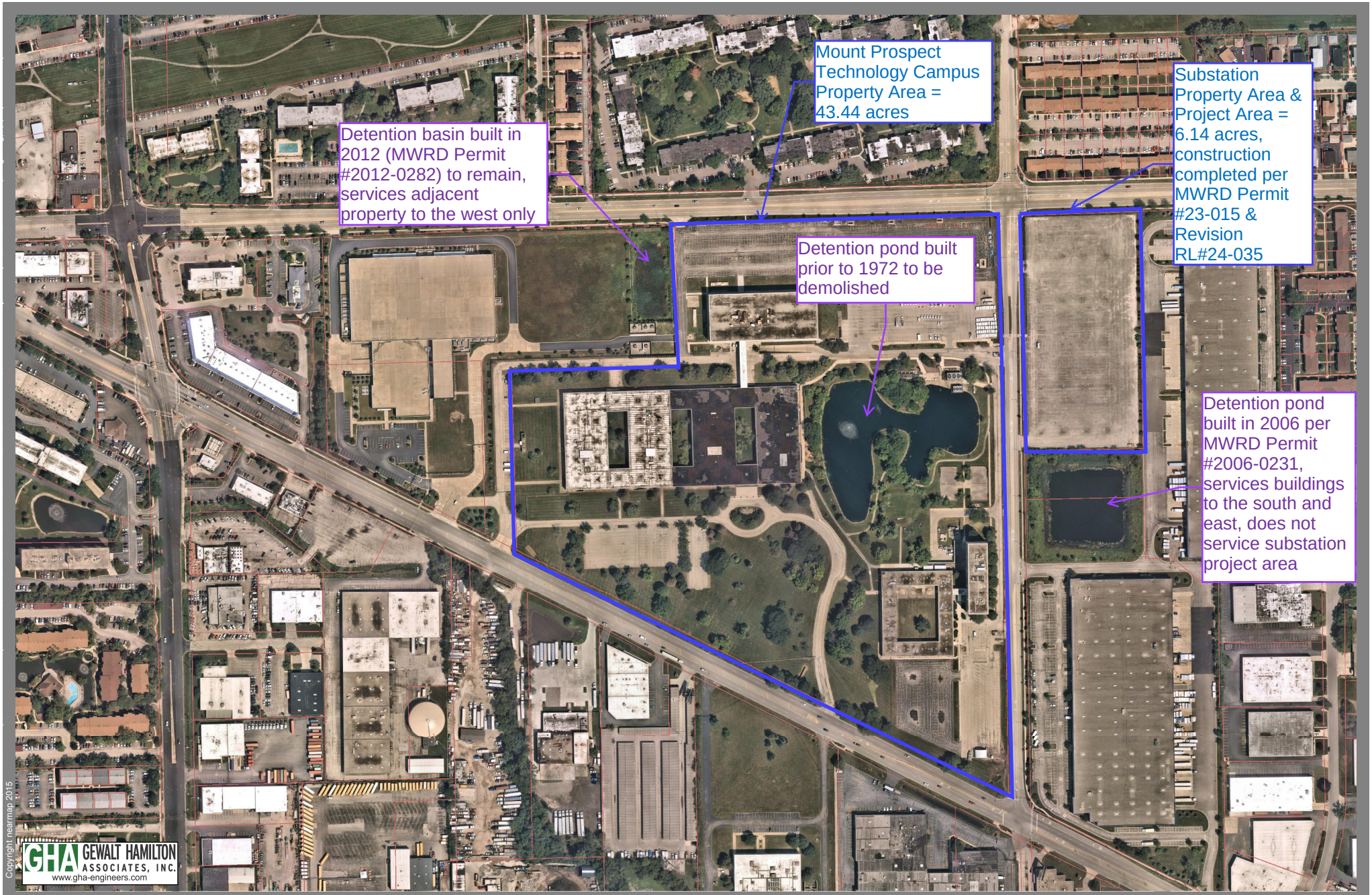
upstream end of the CloudHQ control structure to the box culvert running north-south along the northeast parking lot. Once the stormwater exceeds the HWL during overflow conditions, stormwater will surcharge out of the structures along the northeast parking lot and overflow east along the back of curb to Linneman Road at the overflow weir elevation 668. Note there is also parking lot surface storage at the northeast lot that can be treated as additional surplus detention storage with approximately 9” of ponding up to the HWL 668.

# 4 Summary

The stormwater management improvements proposed as part of the Mount Prospect Technology Campus and substation site improvement project are designed to comply with the Village of Mount Prospect stormwater regulations and the MWRD WMO requirements for detention storage, volume control storage, and release rates.

# Exhibit 1

# Location Map




N

1 in = 400 ft

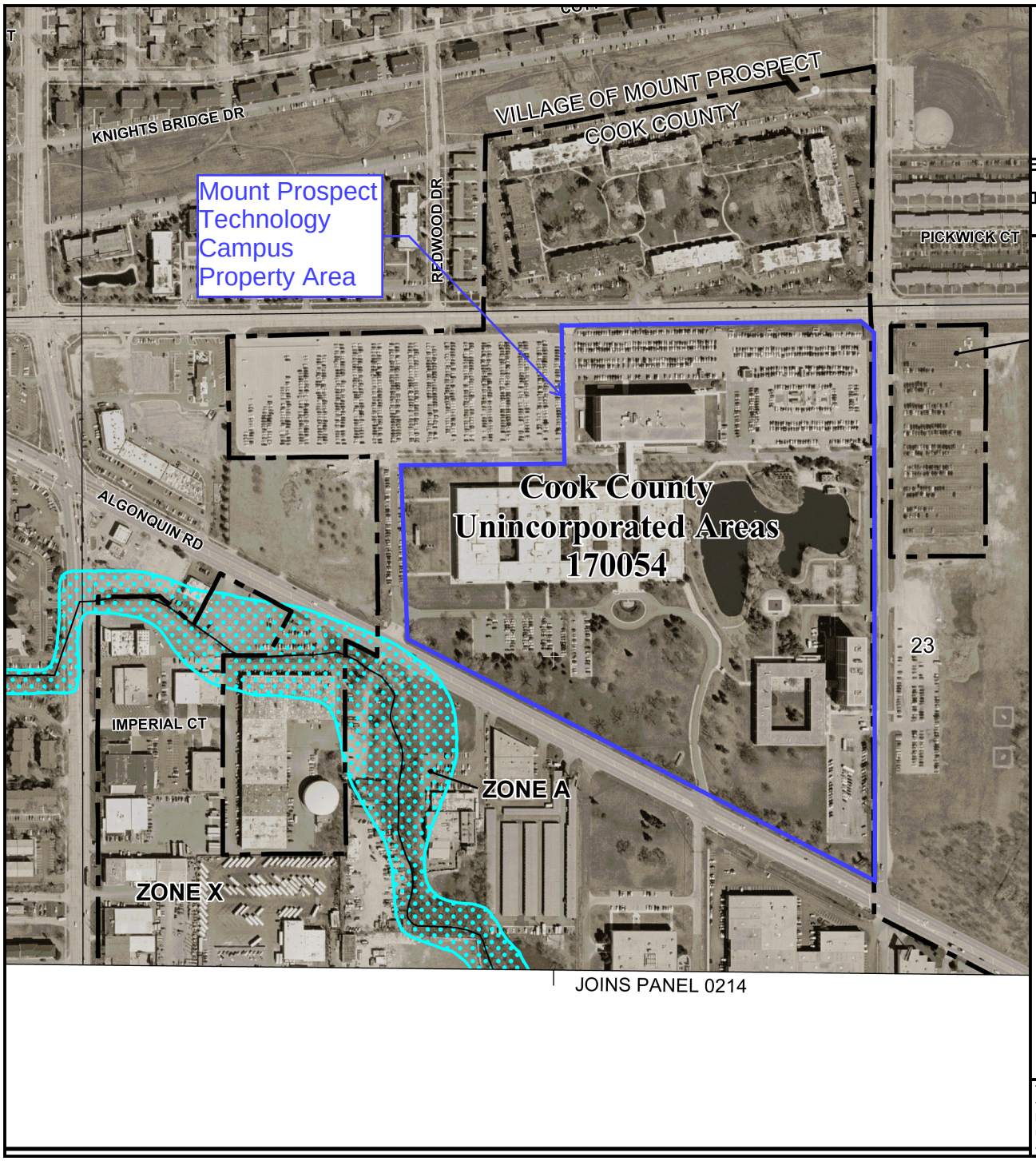
# Exhibit 1: Location Map

**1200 E. Algonquin Road, Mount Prospect**

This exhibit is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes.

# Exhibit 2

# FEMA Flood Hazard Map




MAP SCALE 1" = 500'

0 500 1000 FEET

0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0212J

# FIRM

## FLOOD INSURANCE RATE MAP

## COOK COUNTY, ILLINOIS

AND INCORPORATED AREAS

**PANEL 212 OF 832**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| ARLINGTON HEIGHTS, VILLAGE OF | 170056 | 0212 | J |
| COOK COUNTY | 170054 | 0212 | J |
| DES PLAINES, CITY OF | 170081 | 0212 | J |
| MOUNT PROSPECT, VILLAGE OF | 170129 | 0212 | J |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**
**17031C0212J**

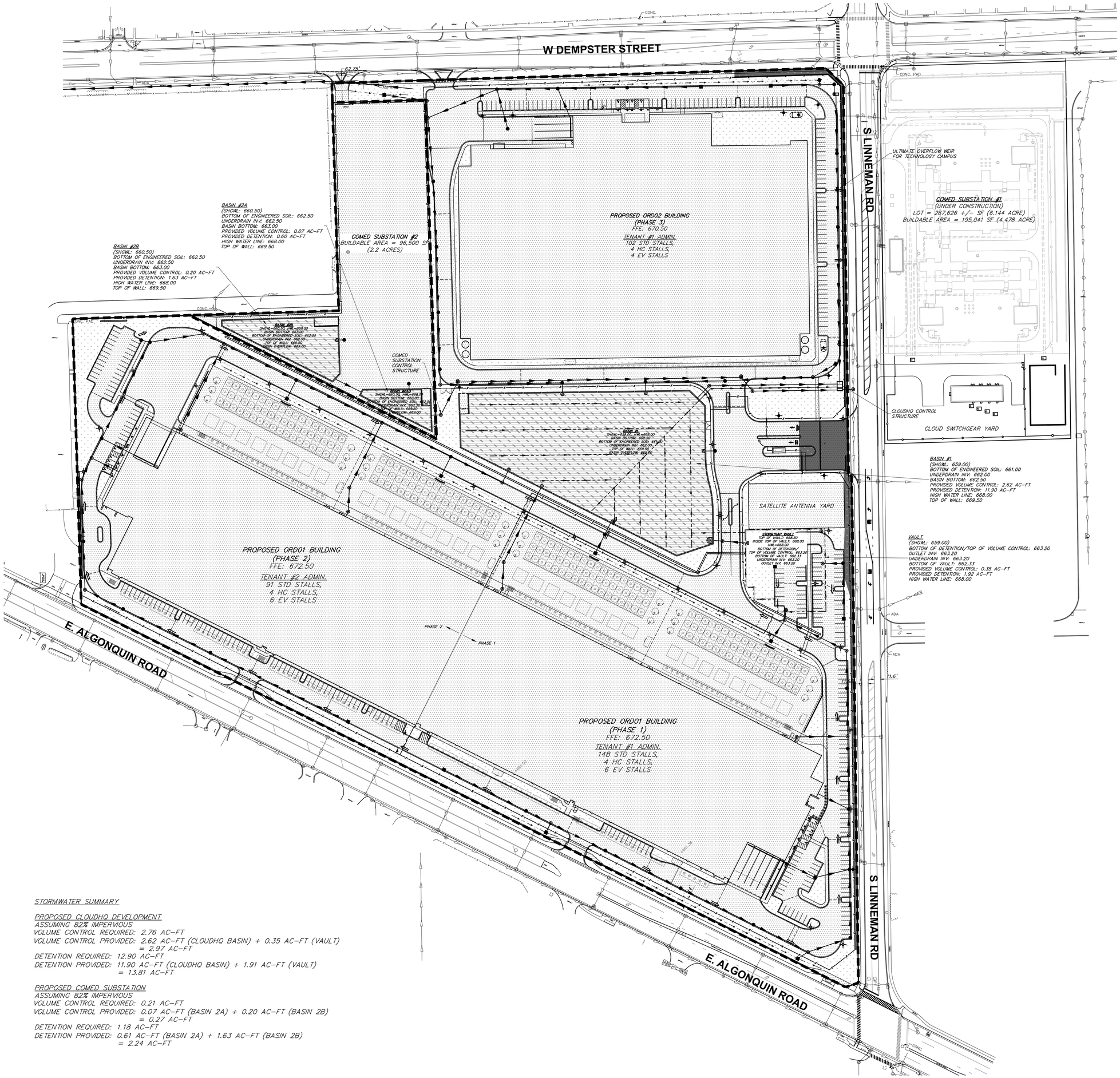
**MAP REVISED**
**AUGUST 19, 2008**

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

# Exhibit 3

# Drainage Exhibit




STORMWATER SUMMARY

PROPOSED CLOUDHQ DEVELOPMENT
ASSUMING 82% IMPERVIOUS
VOLUME CONTROL REQUIRED: 2.76 AC-FT
VOLUME CONTROL PROVIDED: 2.62 AC-FT (CLOUDHQ BASIN) + 0.35 AC-FT (VAULT)
= 2.97 AC-FT
DETENTION REQUIRED: 12.90 AC-FT
DETENTION PROVIDED: 11.90 AC-FT (CLOUDHQ BASIN) + 1.91 AC-FT (VAULT)
= 13.81 AC-FT

PROPOSED COMED SUBSTATION
ASSUMING 82% IMPERVIOUS
VOLUME CONTROL REQUIRED: 0.21 AC-FT
VOLUME CONTROL PROVIDED: 0.07 AC-FT (BASIN 2A) + 0.20 AC-FT (BASIN 2B)
= 0.27 AC-FT
DETENTION REQUIRED: 1.18 AC-FT
DETENTION PROVIDED: 0.61 AC-FT (BASIN 2A) + 1.63 AC-FT (BASIN 2B)
= 2.24 AC-FT

N

GRAPHIC SCALE
60 0 30 60
( IN FEET )
1 inch = 60ft.

## LEGEND

### CLOUDHQ DEVELOPMENT
- PROPERTY AREA (40.34 AC)
- PROJECT LIMITS (40.34 AC)
- IMPERVIOUS AREAS (33.08 AC)
- DETENTION BASIN AREA NATIVE PLANTINGS (2.46 AC)
- PERVIOUS AREA (4.80 AC)
- UNRESTRICTED AREA (0.51 AC)

### SUBSTATION - COMED
- PROPERTY AREA (3.10 AC)
- PROJECT LIMITS (3.10 AC)
- IMPERVIOUS AREAS / COMPACTED GRAVEL (2.53 AC)
- DETENTION BASIN AREA NATIVE PLANTINGS (0.48 AC)
- PERVIOUS AREA (0.09 AC)

⇒ OVERLAND FLOW ROUTE

CORGAN

kW Mission Critical Engineering
Member of WSP

PASE
408.957.9220 www.pase.com

GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS

ISSUES

| | | |
|---|---|---|
| 1 | 08.05.2024 | CONCEPT DESIGN |
| 2 | 10.31.2024 | SCHEMATIC DESIGN |
| 3 | 02.21.2025 | ISSUED FOR 100% DD |
| 4 | 04.22.2025 | PROGRESS SET - DESIGN TEAM |
| 5 | 06.30.2025 | CONCEPT PUD RESUBMITTAL |
| 6 | 08.29.2025 | ISSUED FOR PREL./FINAL PUD |

REVISIONS

This Document was produced by or under the authority of Registered Engineer: Donald E. Dixon

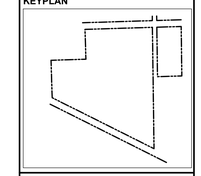
This Document is incomplete and may not be used for regulatory approval, permit or construction.

SIGNED: P.E.
DONALD E. DIXON
Date: 08.29.2025

# MOUNT PROSPECT TECHNOLOGY CAMPUS

1200 E. ALGONQUIN RD.
MOUNT PROSPECT, IL

KEYPLAN



PROPOSED DRAINAGE EXHIBIT - FULL BUILD-OUT CONCEPT

**JOB** 5253.220
**SHEET**

**C10-00**

# Appendix A

# Required Detention and Volume Control Calculations

# COMPOSITE RUNOFF CURVE NUMBER (*CN*)

**PROJECT:** **M.P. Technology Campus - CloudHQ** **PERMIT NUMBER:**

**LOCATION:** **Mount Prospect** **DATE:** **8/29/2025**

**TYPE OF AREA (SELECT WITH DROP-DOWN)**

**X** DETAINED AREA

UNRESTRICTED AREA

UPSTREAM AREA

MAJOR STORMWATER SYSTEM

OTHER:

**CONDITION (SELECT WITH DROP-DOWN)**

**X** PROPOSED CONDITION

EXISTING CONDITION

**RUNOFF CURVE NUMBER**

| Surface Description | Hydrologic Soil Group (HSG) | CN | Area (acres) | Product (CN)(Area) |
|---|---|---|---|---|
| Impervious Area | D | 98 | 33.08 | 3241.84 |
| Pervious Area | D | 80 | 4.80 | 384.00 |
| Native Plantings | D | 77 | 2.46 | 189.42 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| TOTALS: | | | 40.34 | 3815.26 |

**COMPOSITE RUNOFF CURVE NUMBER**

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{3815.26}{40.34} \rightarrow \textbf{Composite CN} = \textbf{94.58}$$

# ADJUSTED COMPOSITE RUNOFF CURVE NUMBER ($CN_{ADJ}$)

**PROJECT:** M.P. Technology Campus - CloudHQ **PERMIT NUMBER:**

**LOCATION:** Mount Prospect **DATE:** 8/29/2025

## DEVELOPMENT INFORMTION

| | | | |
|---|---|---|---|
| 1. | Area Detained, *A* | 40.340 | acres |
| 2. | Total Impervious Area | 33.080 | acres |
| 3. | Composite CN | 94.58 | |
| 4. | Volume Control Storage Provided, $VC_P$ | 2.966 | ac-ft |
| 5. | Depth of Rainfall, *P* | 8.57 | inches |

## RUNOFF VOLUME (NRCS EQUATIONS)

| | | | | |
|---|---|---|---|---|
| 6. | Maximum Retention, *S* | $S = \frac{1000}{CN} - 10$ | 0.57 | inches |
| 7. | Runoff Depth, $Q_D$ | $Q_D = \frac{(P - 0.2S)^2}{(P + 0.8S)}$ | 7.92 | inches |
| 8. | Runoff Volume, $V_R$ | $V_R = Q_D A \left(\frac{1}{12\frac{in}{ft}}\right)$ | 26.62 | ac-ft |

## VOLUME CONTROL STORAGE

| | | | |
|---|---|---|---|
| 9. | Volume Control Storage Required, $VC_R$ | 2.757 | ac-ft |
| 10. | Additional Volume Control Storage Provided | 0.209 | ac-ft |

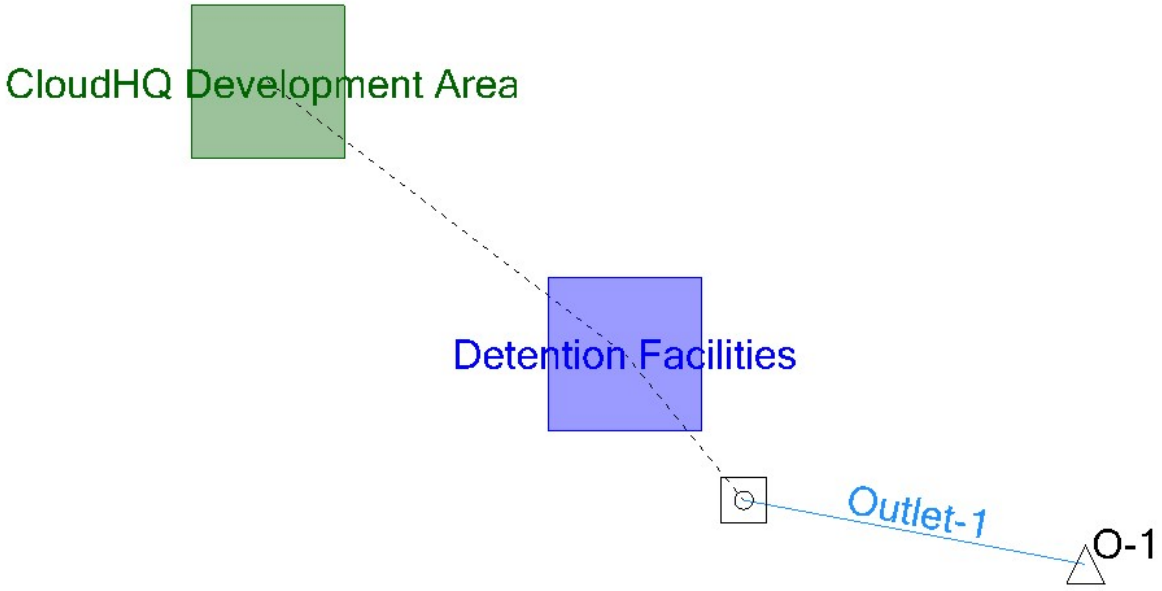
## ADJUSTED RUNOFF VOLUME

| | | | | |
|---|---|---|---|---|
| 11. | Adjusted Runoff Volume, $V_{ADJ}$ | $V_{ADJ} = V_R - VC_P$ | 23.654 | ac-ft |
| 12. | Adjusted Runoff Depth, $Q_{ADJ}$ | | 7.04 | inches |
| 13. | Adjusted Maximum Retention, $S_{ADJ}$ | | 1.46 | inches |

## ADJUSTED COMPOSITE RUNOFF CURVE NUMBER

| | | | |
|---|---|---|---|
| 14. | Adjusted Runoff Curve Number, $CN_{ADJ}$ | **87.26** | |

# CloudHQ Portion Required Detention
# PondPack Model



# CloudHQ Portion Required Detention

| Project Summary | |
|---|---|
| Title | CloudHQ Development Area |
| Engineer | Monica Hue, P.E. |
| Company | Gewalt Hamilton Associates, Inc. |
| Date | 8/29/2025 |

Notes

# Table of Contents


| | | |
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| | Master Network Summary | 2 |
| 100 yr (B75) | Time-Depth Curve, 100.00 years (100 yr 24 hr) | 3 |
| CloudHQ Development Area | Time of Concentration Calculations, 100.00 years (100 yr 24 hr) | 4 |
| CloudHQ Development Area | Runoff CN-Area, 100.00 years (100 yr 24 hr) | 6 |
| Detention Facilities | Elevation vs. Volume Curve, 100.00 years (100 yr 24 hr) | 7 |
| Composite Outlet Structure - 1 | | |
| | Outlet Input Data, 100.00 years (100 yr 24 hr) | 8 |
| | Composite Rating Curve, 100.00 years (100 yr 24 hr) | 10 |

# CloudHQ Portion Required Detention

Subsection: Master Network Summary

## Catchments Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| CloudHQ Development Area | 100 yr 24 hr | 100.00 | 23.55 | 15.35 | 28.169 |

## Node Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) |
|---|---|---|---|---|---|
| O-1 | 100 yr 24 hr | 100.00 | 23.55 | 20.30 | 8.068 |

## Pond Summary

| Label | Scenario | Return Event (years) | Hydrograph Volume (ac-ft) | Time to Peak (hours) | Peak Flow (ft³/s) | Maximum Water Surface Elevation (ft) | Maximum Pond Storage (ac-ft) |
|---|---|---|---|---|---|---|---|
| Detention Facilities (IN) | 100 yr 24 hr | 100.00 | 23.55 | 15.35 | 28.169 | (N/A) | (N/A) |
| Detention Facilities (OUT) | 100 yr 24 hr | 100.00 | 23.55 | 20.30 | 8.068 | 667.68 | 12.90 |

# CloudHQ Portion Required Detention

Subsection: Time-Depth Curve
Label: 100 yr (B75)
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| Time-Depth Curve: 24 hr 100 yr | |
|---|---|
| Label | 24 hr 100 yr |
| Start Time | 0.00 hours |
| Increment | 0.96 hours |
| End Time | 24.00 hours |
| Return Event | 100.00 years |

**CUMULATIVE RAINFALL (in)**
**Output Time Increment = 0.96 hours**
**Time on left represents time for first value in each row.**

| Time (hours) | Depth (in) | Depth (in) | Depth (in) | Depth (in) | Depth (in) |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.09 | 0.31 | 0.56 | 0.80 |
| 4.80 | 1.01 | 1.20 | 1.37 | 1.56 | 1.79 |
| 9.60 | 2.08 | 2.46 | 2.92 | 3.48 | 4.10 |
| 14.40 | 4.78 | 5.48 | 6.17 | 6.80 | 7.34 |
| 19.20 | 7.76 | 8.04 | 8.20 | 8.28 | 8.34 |
| 24.00 | 8.57 | (N/A) | (N/A) | (N/A) | (N/A) |

# CloudHQ Portion Required Detention

Subsection: Time of Concentration Calculations
Label: CloudHQ Development Area
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

Time of Concentration Results

| Segment #1: User Defined Tc | |
|---|---|
| Time of Concentration | 0.17 hours |

| Time of Concentration (Composite) | |
|---|---|
| Time of Concentration (Composite) | 0.17 hours |

# CloudHQ Portion Required Detention

Subsection: Time of Concentration Calculations
Label: CloudHQ Development Area
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

**==== User Defined**

| | |
|---|---|
| Tc = | Value entered by user |
| Where: | Tc= Time of concentration, hours |

# CloudHQ Portion Required Detention

Subsection: Runoff CN-Area
Label: CloudHQ Development Area
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

## Runoff Curve Number Data

| Soil/Surface Description | CN | Area (acres) | C (%) | UC (%) | Adjusted CN |
|---|---|---|---|---|---|
| Development Adjusted CN | 87.260 | 40.34000 | 0.0 | 0.0 | 87.260 |
| COMPOSITE AREA & WEIGHTED CN ---> | (N/A) | 40.34000 | (N/A) | (N/A) | 87.260 |

# CloudHQ Portion Required Detention

Subsection: Elevation vs. Volume Curve
Label: Detention Facilities
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

## Elevation-Volume

| Pond Elevation (ft) | Pond Volume (ac-ft) |
|---|---|
| 658.10 | 0.00 |
| 662.00 | 0.00 |
| 662.50 | 0.15 |
| 663.25 | 0.17 |
| 664.00 | 2.32 |
| 665.00 | 5.19 |
| 666.00 | 8.06 |
| 667.00 | 10.94 |
| 668.00 | 13.81 |

# CloudHQ Portion Required Detention

Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| Requested Pond Water Surface Elevations | |
|---|---|
| Minimum (Headwater) | 658.10 ft |
| Increment (Headwater) | 0.50 ft |
| Maximum (Headwater) | 668.00 ft |

## Outlet Connectivity

| Structure Type | Outlet ID | Direction | Outfall | E1 (ft) | E2 (ft) |
|---|---|---|---|---|---|
| Orifice-Circular | Orifice - 1 | Forward | TW | 658.10 | 668.00 |
| Tailwater Settings | Tailwater | | | (N/A) | (N/A) |

# CloudHQ Portion Required Detention

Subsection: Outlet Input Data
Label: Composite Outlet Structure - 1
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

| Structure ID: Orifice - 1<br>Structure Type: Orifice-Circular | |
|---|---|
| Number of Openings | 1 |
| Elevation | 658.10 ft |
| Orifice Diameter | 9.993 in |
| Orifice Coefficient | 0.610 |

| Structure ID: TW<br>Structure Type: TW Setup, DS Channel | |
|---|---|
| Tailwater Type | Free Outfall |

| Convergence Tolerances | |
|---|---|
| Maximum Iterations | 30 |
| Tailwater Tolerance (Minimum) | 0.01 ft |
| Tailwater Tolerance (Maximum) | 0.50 ft |
| Headwater Tolerance (Minimum) | 0.01 ft |
| Headwater Tolerance (Maximum) | 0.50 ft |
| Flow Tolerance (Minimum) | 0.001 ft³/s |
| Flow Tolerance (Maximum) | 10.000 ft³/s |

# CloudHQ Portion Required Detention

Subsection: Composite Rating Curve
Label: Composite Outlet Structure - 1
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

Composite Outflow Summary

| Water Surface Elevation (ft) | Flow ($ft^3/s$) | Tailwater Elevation (ft) | Convergence Error (ft) |
|---|---|---|---|
| 658.10 | 0.000 | (N/A) | 0.00 |
| 658.60 | 0.678 | (N/A) | 0.00 |
| 659.10 | 2.036 | (N/A) | 0.00 |
| 659.60 | 2.774 | (N/A) | 0.00 |
| 660.10 | 3.354 | (N/A) | 0.00 |
| 660.60 | 3.847 | (N/A) | 0.00 |
| 661.10 | 4.283 | (N/A) | 0.00 |
| 661.60 | 4.680 | (N/A) | 0.00 |
| 662.10 | 5.045 | (N/A) | 0.00 |
| 662.60 | 5.385 | (N/A) | 0.00 |
| 663.10 | 5.705 | (N/A) | 0.00 |
| 663.60 | 6.008 | (N/A) | 0.00 |
| 664.10 | 6.297 | (N/A) | 0.00 |
| 664.60 | 6.573 | (N/A) | 0.00 |
| 665.10 | 6.838 | (N/A) | 0.00 |
| 665.60 | 7.093 | (N/A) | 0.00 |
| 666.10 | 7.339 | (N/A) | 0.00 |
| 666.60 | 7.577 | (N/A) | 0.00 |
| 667.10 | 7.807 | (N/A) | 0.00 |
| 667.60 | 8.032 | (N/A) | 0.00 |
| 668.00 | 8.207 | (N/A) | 0.00 |

| Contributing Structures |
|---|
| None Contributing |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
| Orifice - 1 |
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| Orifice - 1 |
| Orifice - 1 |

# CloudHQ Portion Required Detention

Subsection: Composite Rating Curve
Label: Composite Outlet Structure - 1
Scenario: 100 yr 24 hr

Return Event: 100.00 years
Storm Event: 24 hr 100 yr

Composite Outflow Summary

| Contributing Structures |
| --- |
| Orifice - 1 |

# CloudHQ Portion Required Detention

## Index

1

100 yr (B75) (Time-Depth Curve, 100.00 years (100 yr 24 hr))...3

C

CloudHQ Development Area  (Runoff CN-Area, 100.00 years (100 yr 24 hr))...6

CloudHQ Development Area  (Time of Concentration Calculations, 100.00 years (100 yr 24 hr))...4, 5

Composite Outlet Structure - 1 (Composite Rating Curve, 100.00 years (100 yr 24 hr))...10, 11

Composite Outlet Structure - 1 (Outlet Input Data, 100.00 years (100 yr 24 hr))...8, 9

D

Detention Facilities (Elevation vs. Volume Curve, 100.00 years (100 yr 24 hr))...7

M

Master Network Summary...2

# COMPOSITE RUNOFF CURVE NUMBER (*CN*)

**PROJECT:** **M.P. Technology Campus - ComEd** **PERMIT NUMBER:**

**LOCATION:** **Mount Prospect** **DATE:** **8/29/2025**

**TYPE OF AREA (SELECT WITH DROP-DOWN)**

**X** DETAINED AREA

UNRESTRICTED AREA

UPSTREAM AREA

MAJOR STORMWATER SYSTEM

OTHER:

**CONDITION (SELECT WITH DROP-DOWN)**

**X** PROPOSED CONDITION

EXISTING CONDITION

**RUNOFF CURVE NUMBER**

| Surface Description | Hydrologic Soil Group (HSG) | CN | Area (acres) | Product (CN)(Area) |
|---|---|---|---|---|
| Impervious Area/ Compacted Gravel | D | 98 | 2.53 | 247.94 |
| Pervious Area | D | 80 | 0.09 | 7.20 |
| Native Plantings | D | 77 | 0.48 | 36.96 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| TOTALS: | | | 3.10 | 292.10 |

**COMPOSITE RUNOFF CURVE NUMBER**

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{292.10}{3.10} \rightarrow \textbf{Composite CN} = \textbf{94.23}$$

# ADJUSTED COMPOSITE RUNOFF CURVE NUMBER ($CN_{ADJ}$)

**PROJECT:** M.P. Technology Campus - ComEd **PERMIT NUMBER:**

**LOCATION:** Mount Prospect **DATE:** 8/29/2025

## DEVELOPMENT INFORMTION

| | | | |
|---|---|---|---|
| 1. | Area Detained, *A* | 3.100 | acres |
| 2. | Total Impervious Area | 2.530 | acres |
| 3. | Composite CN | 94.23 | |
| 4. | Volume Control Storage Provided, $VC_P$ | 0.269 | ac-ft |
| 5. | Depth of Rainfall, *P* | 8.57 | inches |

## RUNOFF VOLUME (NRCS EQUATIONS)

| | | | | |
|---|---|---|---|---|
| 6. | Maximum Retention, *S* | $S = \frac{1000}{CN} - 10$ | 0.61 | inches |
| 7. | Runoff Depth, $Q_D$ | $Q_D = \frac{(P - 0.2S)^2}{(P + 0.8S)}$ | 7.88 | inches |
| 8. | Runoff Volume, $V_R$ | $V_R = Q_D A \left(\frac{1}{12\frac{in}{ft}}\right)$ | 2.03 | ac-ft |

## VOLUME CONTROL STORAGE

| | | | |
|---|---|---|---|
| 9. | Volume Control Storage Required, $VC_R$ | 0.211 | ac-ft |
| 10. | Additional Volume Control Storage Provided | 0.058 | ac-ft |

## ADJUSTED RUNOFF VOLUME

| | | | | |
|---|---|---|---|---|
| 11. | Adjusted Runoff Volume, $V_{ADJ}$ | $V_{ADJ} = V_R - VC_P$ | 1.766 | ac-ft |
| 12. | Adjusted Runoff Depth, $Q_{ADJ}$ | | 6.84 | inches |
| 13. | Adjusted Maximum Retention, $S_{ADJ}$ | | 1.68 | inches |

## ADJUSTED COMPOSITE RUNOFF CURVE NUMBER

| | | | |
|---|---|---|---|
| 14. | Adjusted Runoff Curve Number, $CN_{ADJ}$ | **85.59** | |

# NOMOGRAPH: BULLETIN 75 RAINFALL DATA

**PROJECT:** M.P. Technology Campus - ComEd **PERMIT NUMBER:**

**LOCATION:** Mount Prospect **DATE:** 8/29/2025

**DEVELOPMENT INFORMATION**

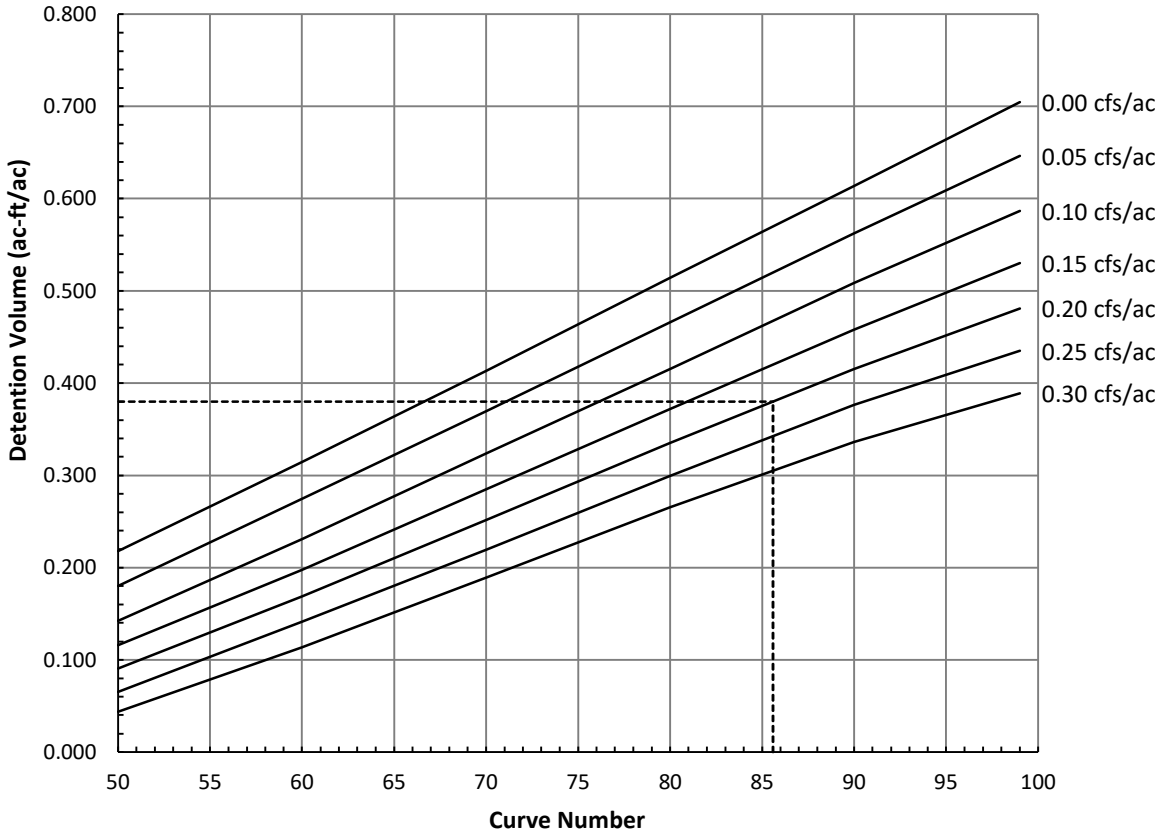
| | | | |
|---|---|---|---|
| 1. | Detained Area | 3.100 | acres |
| 2. | Curve Number | 85.59 | |
| 3. | Actual Release Rate | **0.620** | cfs |

**REQUIRED DETENTION VOLUME**

| | | | |
|---|---|---|---|
| 4. | Required Detention Volume | **1.178** | ac-ft |

**NOMOGRAPH**

## NOMOGRAPH: BULLETIN 75



# Appendix B

# Provided Detention and Volume Control Calculations

**Job Number: 5253.220** | **File Name:**
**Project Name: Mount Prospect Technology Campus - CloudHQ** | **Date: 08/29/25**
***Calculated by: MXH***

## Proposed Storage Calculations - CloudHQ Walled Basin

| ELEV. USGS datum) | ELEV. DIFF. (ft) | AREA (sq ft) | MEAN AREA (sq ft) | Vol (cu-ft) | Cumm Vol (cu-ft) | AREA (acre) | MEAN AREA (acre) | Vol (ac-ft) | Cumm Vol (ac-ft) |
|---|---|---|---|---|---|---|---|---|---|
| 663.25 | | 107483 | | | | 2.467 | | | |
| | 0.75 | | 107513 | 80635 | **80635** | | 2.47 | 1.85 | **1.851** |
| 664.00 | | 107544 | | | | 2.469 | | | |
| | 1.00 | | 107585 | 107585 | **188220** | | 2.47 | 2.47 | **4.321** |
| 665.00 | | 107626 | | | | 2.471 | | | |
| | 1.00 | | 107667 | 107667 | **295887** | | 2.47 | 2.47 | **6.793** |
| 666.00 | | 107708 | | | | 2.473 | | | |
| | 1.00 | | 107790 | 107790 | **403677** | | 2.47 | 2.47 | **9.267** |
| 667.00 | | 107790 | | | | 2.475 | | | |
| | 1.00 | | 107831 | 107831 | **511508** | | 2.48 | 2.48 | **11.743** |
| 668.00 | | 107872 | | | | 2.476 | | | |

(**Engineered Soils Detention:** 662.0 to 662.5 (107,299 SF x 0.5 FT = 53,650 CF, 53,650 CF is 1.232 ac-ft * 0.25 * 0.5 = **0.154 ac-ft - detention**)

**Total Detention (CloudHQ Basin): 11.897 ac-ft**

(**Engineered Soils VC:** 661.00 to 662.0 (107,299 SF x 1.0 FT = 107,299 CF, 107,299 CF is 2.463 ac-ft * 0.25 = **0.616 ac-ft - VC**)
662.0 to 662.5 (107,299 SF x 0.5 FT = 53,650 CF, 53,650 CF is 1.232 ac-ft * 0.25 * 0.5 = **0.154 ac-ft - VC**)
(**Open VC:** 662.5 to 663.25 (107,391 SF x 0.75' = 80,543 CF, 80,543 CF is **1.849 ac-ft - VC**)

**Total Volume Control (CloudHQ Basin): 2.619 ac-ft**

## Detention Volume Provided

**Stormwater Detention - StormTrap**

| Volume Type | Elevations | | Depth | Surface Area | Porosity | Storage Volume | Media Volume | |
|---|---|---|---|---|---|---|---|---|
| | High | Low | (feet) | (sf) | | Formula | $V_d$ (cf) | |
| Vault Storage (Above Outlet) | 668.00 | 663.20 | 4.80 | 19,382.1393 | 0.896803593331233 | Porosity x Vd | 83,433.47 | |
| | | | | | | Total Provided | 83,433.47 | (CF) |
| | | | | | | | **1.92** | (Ac-ft) |

**DETENTION VOLUME PROVIDED: 1.92 (Ac-Ft)**

## Volume Control Volume Provided

**Volume Control - StormTrap**

| Volume Type | Elevations | | Depth | Surface Area | Porosity | Storage Volume | Media Volume | |
|---|---|---|---|---|---|---|---|---|
| | High | Low | (feet) | (sf) | | Formula | $V_d$ (cf) | |
| Vault Storage (Below Outlet) | 663.20 | 662.33 | 0.87 | 19,382.1393 | 0.896803593331233 | Porosity x Vd | 15,122.32 | |
| | | | | | | Total Provided | 15,122.32 | (CF) |
| | | | | | | | **0.35** | (Ac-ft) |

**VOLUME CONTROL VOLUME PROVIDED: 0.35 (Ac-Ft)**

# ORIFICE DISCHARGE RATE

**PROJECT:** M.P. Technology Campus - CloudHQ **PERMIT NUMBER:**

**LOCATION:** Mount Prospect **DATE:** 8/29/2025

## RESTRICTOR INFORMTION

| | | | | |
|---|---|---|---|---|
| 1. | Orifice Number | 1 | | |
| 2. | Orifice diameter, *d* | 9.90 | in | |
| 3. | Discharge Coefficient, $C_d$ | 0.61 | | |
| 4. | Invert Elevation | 658.10 | ft | |
| 5. | High Water Elevation, HWL | 668.00 | ft | |
| 6. | Tail Water Elevation | | ft | |

## ACTUAL RELEASE RATE

| | | | | |
|---|---|---|---|---|
| 6. | Free Flow Actual Release Rate at HWL | **8.06** | cfs | |
| 7. | Submerged Actual Release Rate at HWL | | cfs | |

## STAGE-DISCHARGE TABLE CONDITION (SELECT FROM DROP-DOWN)

Free-flow

## STAGE-DISCHARGE TABLE

| Elevation (ft) | Orifice 1 (cfs) | Orifice 2 (cfs) | Total (cfs) | |
|---|---|---|---|---|
| 658.10 | 0.00 | | 0.00 | |
| 659.00 | 1.83 | | 1.83 | |
| 660.00 | 3.19 | | 3.19 | |
| 661.00 | 4.13 | | 4.13 | |
| 662.00 | 4.89 | | 4.89 | |
| 663.00 | 5.54 | | 5.54 | |
| 664.00 | 6.13 | | 6.13 | |
| 665.00 | 6.67 | | 6.67 | |
| 666.00 | 7.16 | | 7.16 | |
| 667.00 | 7.62 | | 7.62 | |
| 668.00 | 8.06 | | 8.06 | HWL |
| 669.00 | 8.47 | | 8.47 | |
| 670.00 | 8.87 | | 8.87 | |

**Job Number: 5253.220** | **File Name:**
**Project Name: Mount Prospect Technology Campus - CloudHQ** | **Date: 08/27/25**
***Calculated by: MXH***

## Proposed Storage Calculations - ComEd Walled Basin #2A

| ELEV. USGS datum) | ELEV. DIFF. (ft) | AREA (sq ft) | MEAN AREA (sq ft) | Vol (cu-ft) | Cumm Vol (cu-ft) | AREA (acre) | MEAN AREA (acre) | Vol (ac-ft) | Cumm Vol (ac-ft) |
|---|---|---|---|---|---|---|---|---|---|
| 663.50 | | 5563 | | | | 0.128 | | | |
| | 0.50 | | 5593 | 2796 | **2796** | | 0.13 | 0.06 | **0.064** |
| 664.00 | | 5623 | | | | 0.129 | | | |
| | 1.00 | | 5663 | 5663 | **8459** | | 0.13 | 0.13 | **0.194** |
| 665.00 | | 5703 | | | | 0.131 | | | |
| | 1.00 | | 5743 | 5743 | **14202** | | 0.13 | 0.13 | **0.326** |
| 666.00 | | 5783 | | | | 0.133 | | | |
| | 1.00 | | 5863 | 5863 | **20065** | | 0.13 | 0.13 | **0.461** |
| 667.00 | | 5863 | | | | 0.135 | | | |
| | 1.00 | | 5903 | 5903 | **25968** | | 0.14 | 0.14 | **0.596** |
| 668.00 | | 5943 | | | | 0.136 | | | |

(**Engineered Soils Detention:** 662.50 to 663.0 (5,491 SF x 0.5 FT = 2,746 CF, 2,746 CF is 0.063 ac-ft * 0.25 *0.5 = **0.008 ac-ft - detention**)

**Total Detention (ComEd Basin #2A): 0.604 ac-ft**

(**Engineered Soils VC:** 662.50 to 663.0 (5,491 SF x 0.5 FT = 2,746 CF, 2,746 CF is 0.063 ac-ft * 0.25 *0.5 = **0.008 ac-ft - VC**)
(**Open VC:** 663.0 to 663.5 (5,527 SF x 0.5' = 2,764 CF, 2,764 CF is **0.063 ac-ft - VC**)

**Total Volume Control (ComEd Basin #2A): 0.071 ac-ft**

**Job Number: 5253.220** | **File Name:**
**Project Name: Mount Prospect Technology Campus - CloudHQ** | **Date: 08/27/25**
***Calculated by: MXH***

## Proposed Storage Calculations - ComEd Walled Basin #2B

| ELEV. USGS datum) | ELEV. DIFF. (ft) | AREA (sq ft) | MEAN AREA (sq ft) | Vol (cu-ft) | Cumm Vol (cu-ft) | AREA (acre) | MEAN AREA (acre) | Vol (ac-ft) | Cumm Vol (ac-ft) |
|---|---|---|---|---|---|---|---|---|---|
| 663.50 | | 15391 | | | | 0.353 | | | |
| | 0.50 | | 15421 | 7710 | 7710 | | 0.35 | 0.18 | 0.177 |
| 664.00 | | 15451 | | | | 0.355 | | | |
| | 1.00 | | 15491 | 15491 | 23201 | | 0.36 | 0.36 | 0.533 |
| 665.00 | | 15531 | | | | 0.357 | | | |
| | 1.00 | | 15571 | 15571 | 38772 | | 0.36 | 0.36 | 0.890 |
| 666.00 | | 15611 | | | | 0.358 | | | |
| | 1.00 | | 15691 | 15691 | 54463 | | 0.36 | 0.36 | 1.250 |
| 667.00 | | 15691 | | | | 0.360 | | | |
| | 1.00 | | 15731 | 15731 | 70194 | | 0.36 | 0.36 | 1.611 |
| 668.00 | | 15771 | | | | 0.362 | | | |

(**Engineered Soils Detention:** 662.5 to 663.0 (15,339 SF x 0.5 FT = 7,670 CF, 7,670 CF is 0.176 ac-ft * 0.25*0.5 = **0.022 ac-ft - detention**)

**Total Detention (ComEd Basin #2B): 1.633 ac-ft**

(**Engineered Soils VC:** 662.5 to 663.0 (15,339 SF x 0.5 FT = 7,670 CF, 7,670 CF is 0.176 ac-ft * 0.25*0.5 = **0.022 ac-ft - VC**)
(**Open VC:** 663.0 to 663.5 (15,365 SF x 0.5' = 7,682 CF, 7,682 CF is **0.176 ac-ft - VC**)

**Total Volume Control (ComEd Basin #2B): 0.198 ac-ft**

# ORIFICE DISCHARGE RATE

**PROJECT:** M.P. Technology Campus - ComEd **PERMIT NUMBER:**

**LOCATION:** Mount Prospect **DATE:** 8/29/2025

## RESTRICTOR INFORMTION

| | | | |
|---|---|---|---|
| 1. Orifice Number | 1 | | |
| 2. Orifice diameter, *d* | 3.30 | in | |
| 3. Discharge Coefficient, $C_d$ | 0.61 | | |
| 4. Invert Elevation | 663.38 | ft | |
| 5. High Water Elevation, HWL | 668.00 | ft | |
| 6. Tail Water Elevation | | ft | |

## ACTUAL RELEASE RATE

| | | | |
|---|---|---|---|
| 6. Free Flow Actual Release Rate at HWL | **0.62** | cfs | |
| 7. Submerged Actual Release Rate at HWL | | cfs | |

## STAGE-DISCHARGE TABLE CONDITION (SELECT FROM DROP-DOWN)

Free-flow

## STAGE-DISCHARGE TABLE

| Elevation (ft) | Orifice 1 (cfs) | Orifice 2 (cfs) | Total (cfs) | |
|---|---|---|---|---|
| 658.10 | 0.00 | | 0.00 | |
| 659.00 | 0.00 | | 0.00 | |
| 660.00 | 0.00 | | 0.00 | |
| 661.00 | 0.00 | | 0.00 | |
| 662.00 | 0.00 | | 0.00 | |
| 663.00 | 0.00 | | 0.00 | |
| 664.00 | 0.20 | | 0.20 | |
| 665.00 | 0.35 | | 0.35 | |
| 666.00 | 0.46 | | 0.46 | |
| 667.00 | 0.54 | | 0.54 | |
| 668.00 | 0.62 | | 0.62 | HWL |
| 669.00 | 0.68 | | 0.68 | |
| 670.00 | 0.74 | | 0.74 | |

# Appendix C

# SHGWL Confirmation Email and Soil Boring Logs

# Re: ECS proposal for Monitoring Wells and Borings - Mount Prospect Technology Campus

Scott R. Bierbaum <SBierbaum@ecslimited.com>
Mon 1/16/2023 4:22 PM

To: Don Dixon <ddixon@gha-engineers.com>;Darin Maciolek, P.E. <DMaciolek@ecslimited.com>

Cc: Tymon Maurer <tmaurer@gha-engineers.com>;Anthony Corona <acorona@gha-engineers.com>;Brett Burnette <bburnette@cloudhq.com>;jcalcagno@cloudhq.com <jcalcagno@cloudhq.com>;Monica Hue <mhue@gha-engineers.com>;Amaneh Kenarsari, PhD, P.E. <AKenarsari@ecslimited.com>

Don
I do recall Kalyan mentioning to me that you and he had discussed SHGWL (seasonal high ground water level) on a call as well as having been previously copied on the enclosed table. We concur that the attached spreadsheet (highlighted cells) reflects the consensus reached between GHA & ECS on SHGWL for the 6 pond locations.

Respectively

**SCOTT R. BIERBAUM** | Office Manager
**ECS MIDWEST, LLC** | **T** 847.279.0366 **D** 847.465.9436 **C** 708.417.7897
SBierbaum@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

---

**From:** Don Dixon <ddixon@gha-engineers.com>
**Sent:** Wednesday, January 4, 2023 2:30 PM
**To:** Darin Maciolek, P.E. <DMaciolek@ecslimited.com>; Scott R. Bierbaum <SBierbaum@ecslimited.com>
**Cc:** Tymon Maurer <tmaurer@gha-engineers.com>; Anthony Corona <acorona@gha-engineers.com>; Brett Burnette <bburnette@cloudhq.com>; jcalcagno@cloudhq.com <jcalcagno@cloudhq.com>; Monica Hue <mhue@gha-engineers.com>
**Subject:** [EXTERNAL] FW: ECS proposal for Monitoring Wells and Borings - Mount Prospect Technology Campus

Darin & Scott,

We discussed the seasonal high ground water level on a call back in June. I'm forwarding an email from a call with Kal Chandhuri on which Scott was originally included. The attached spreadsheet reflects the SHGWL that GHA & ECS agreed upon. I will need something in writing (an email is sufficient) to submit to MWRD supporting these elevations. Amaneh was on the referenced call and was identified as the primary project contact, but I don't have her email address. Please forward to her or other contact as appropriate.

---

**From:** Anthony Corona <acorona@gha-engineers.com>
**Sent:** Wednesday, January 4, 2023 1:55 PM
**To:** Don Dixon <ddixon@gha-engineers.com>
**Subject:** Fw: ECS proposal for Monitoring Wells and Borings

Is this the email you were looking for?

Anthony Corona
Engineering Technician

**An Employee Owned Company**
**625 Forest Edge Drive | Vernon Hills, Illinois 60061**
**Office: (847) 478-9700 | Fax: (847) 478-9701**
**Direct: (847) 821-6258 | Email: acorona@gha-engineers.com**
**www.gha-engineers.com**

---

**From:** Don Dixon <ddixon@gha-engineers.com>
**Sent:** Saturday, February 26, 2022 10:12 AM
**To:** Kalyan (Kal) Chandhuri, P.E. <KChandhuri@ecslimited.com>; Brett Burnette <bburnette@cloudhq.com>
**Cc:** Scott R. Bierbaum <SBierbaum@ecslimited.com>; Jonathan Hagenow <jhagenow@gha-engineers.com>; Anthony Corona <acorona@gha-engineers.com>
**Subject:** RE: ECS proposal for Monitoring Wells and Borings

Kal,
Please find attached the excel spreadsheet that I shared with you for the analysis of the SHGWL. I highlighted the elevations that we agreed to on the call.

The proposal looks acceptable to GHA. We can send over our latest substation layout and utility locations that we have for review early next week.

---

**From:** Kalyan (Kal) Chandhuri, P.E. <KChandhuri@ecslimited.com>
**Sent:** Friday, February 25, 2022 4:30 PM
**To:** Brett Burnette <bburnette@cloudhq.com>; Don Dixon <ddixon@gha-engineers.com>
**Cc:** Scott R. Bierbaum <SBierbaum@ecslimited.com>
**Subject:** ECS proposal for Monitoring Wells and Borings
**Importance:** High

Gentlemen,

Please find our proposal attached. Let me know if you have any questions.

Thanks,

**KALYAN (KAL) CHANDHURI, P.E.** | Geotechnical Department Manager
**T** 847.279.0366 | **D** 847.465.8490 | **C** 224.277.3175
1575 Barclay Boulevard | Buffalo Grove | IL | 60089

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## ENGINEER'S COMPARISON OF SOIL BORES

**Project Name:** **Mount Prospect Techn**
**Location:** **Mount Prospect**
**Client:** **CHQ**
GHA Project #: 5253.220
Prepared By: Jonathan Hagenow
Date: February 24, 2022
Checked By: Donald E. Dixon, P.E.
Date: February 24, 2022

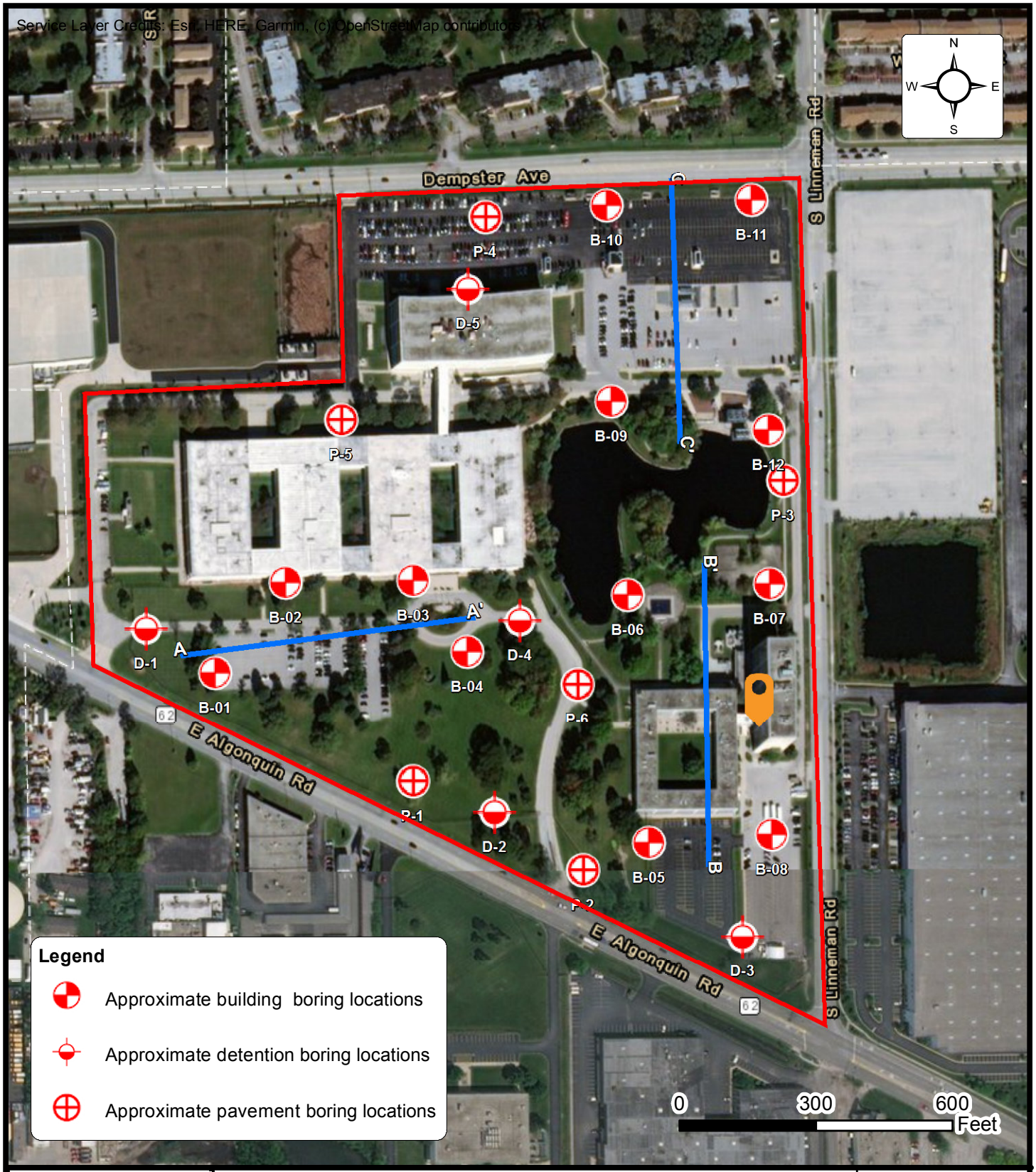
GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS
625 Forest Edge Drive, Vernon Hills, IL 60061
Tel 847.478.9700 ■ Fax 847.478.9701
www.gha-engineers.com

D=dry
W=wet

| Basin | ECS Bore # | Existing Grd Elev. | Depth drilled | Hole Cond./Depth to water | WSEL | PUD Site Plan Bottom ELEV | Basin Depth | Design SHGWL | ECS Adjsuted Elevations Bottom ELEV | Basin Depth | ECS SHGWL | SHGWL Delta | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 (North) | D5 | 672 | 15 | D | N/A | 664 | 8 | 660.5 | 664.5 | 7.5 | 661.0 | 0.5 | |
| 2 (West) | D1 | 674 | 15 | D | N/A | 665 | 9 | 661.5 | 667 | 7 | 663.5 | 2 | |
| 3 (Center) | D4 | 670 | 15 | D | N/A | 661 | 9 | 657.5 | 665 | 5 | 661.5 | 4 | 659 |
| 4 (East) | D4 | 666 | 15 | D | N/A | 661 | 5 | 657.5 | 665 | 1 | 661.5 | 4 | 659 |
| 5 (South) | D2 | 672 | 15 | D | N/A | 661 | 11 | 657.5 | 663 | 9 | 659.0 | 2 | |
| 6 (SE) | D3 | 668 | 15 | 7.3 | 660.7 | 661 | 7 | 657.5 | 663 | 5 | 659.5 | 2 | |

**Note: Highlighted values reflect SHGWL agreed to with ECS on 2022-02-24**

| Basin | Adj Bldg ECS Bore # | Existing Grd Elev. | Depth drilled | Hole Cond./Depth to water | WSEL | Avg WSEL | | ECS SHGWL | SHGWL - Avg WSEL | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 (North) | P4 | 672 | 15 | D | N/A | Too Shallow for GWL | | 661.0 | N/A | 660.5 |
| 1 (North) | P5 | 672 | 15 | | | Too Shallow for GWL | | 661.0 | N/A | 660.5 |
| 2 (West) | B1 | 674 | 40 | D | N/A | | | 663.5 | | 661.5 |
| 2 (West) | B2 | 673 | 65 | 48.5 | 624.5 | 624.5 | | 663.5 | 39.0 | 661.5 |
| 3 (Center) | B-3 | 673 | 40 | 38.7 | 634.3 | 637.65 | | 661.5 | 23.9 | |
| 3 (Center) | B-4 | 672.5 | 65 | 31.5 | 641 | 637.65 | : | 661.5 | 23.9 | |
| 4 (East) | B-9 | 666 | 40 | 33.1 | 632.9 | 637.2 | | 661.5 | 24.3 | 659 |
| 4 (East) | B-12 | 667 | 65 | 25.5 | 641.5 | 637.2 | | 661.5 | 24.3 | 659 |
| 5 (South) | B-2 | 673 | 65 | 48.5 | 624.5 | 624.5 | | 659.0 | N/A | 657.5 |
| 6 (SE) | B-5 | 672 | 40 | 17.3 | 654.7 | 647.6 | | 659.5 | 11.9 | 657.5 |
| 6 (SE) | B-8 | 671 | | 30.5 | 640.5 | 647.6 | | 659.5 | 11.9 | 657.5 |
| | | | | | AVG | 636.7 | | | | |




# BORING LOCATION DIAGRAM
# CLOUD HQ - MOUNT PROSPECT, IL

**1200 EAST ALGONQUIN ROAD, MT PROSPECT,**

**CLOUD HQ**

| | |
|---|---|
| ENGINEER | KSC |
| SCALE | AS NOTED |
| PROJECT NO. | 16:13881 |
| SHEET | 1 OF 1 |
| DATE | 8/17/2021 |

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-09** | **1 of 2** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | LOSS OF CIRCULATION |
| NORTHING: **1955868.8** | EASTING: **1087794.3** | STATION: | SURFACE ELEVATION: **671.0** |
| | | | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | Asphalt Thickness[5.5"] | | | |
| | | | | | Concrete Thickness[8.5"] | | | |
| | S-1 | SS | 18 | 14 | (CL POSSIBLE FILL) POSSIBLE FILL, SANDY CLAY, trace gravel, brown, moist, hard | | | 3-3-3 (6) |
| | S-2 | SS | 18 | 16 | (CL) LEAN CLAY, trace gravel, brown, moist, hard to very stiff | | 666 | 3-4-4 (8) |
| 5 | S-3 | SS | 18 | 18 | | | | 3-4-4 (8) |
| | S-4 | SS | 18 | 18 | | | 661 | 3-4-5 (9) |
| 10 | S-5 | SS | 18 | 6 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff<br><br>Occasional silt seams from 18 to 20 ft. | ▽ | | 7-5-4 (9) |
| | S-6 | SS | 18 | 18 | | | 656 | 3-4-5 (9) |
| 15 | | | | | | | | |
| | S-7 | SS | 18 | 18 | | | 651 | 4-5-5 (10) |
| 20 | | | | | | | | |
| | S-8 | SS | 18 | 18 | | | 646 | 2-3-4 (7) |
| 25 | | | | | | | | |
| | S-9 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, hard to firm to very stiff<br><br>Occasional sand seams | | 641 | 4-5-6 (11) |
| 30 | | | | | | | | |

**CONTINUED ON NEXT PAGE**

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

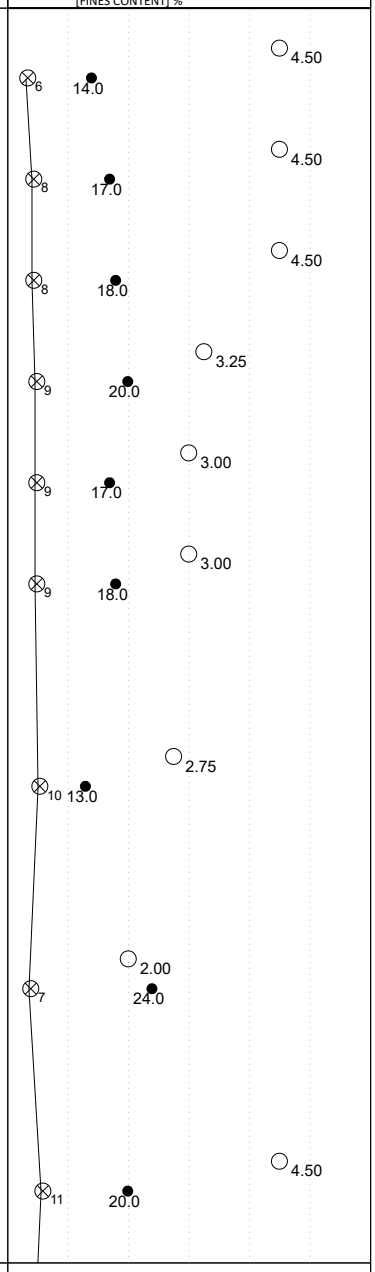
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) **11.00** | BORING STARTED: **Jul 26 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) **33.10** | BORING COMPLETED: **Jul 26 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-09** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955868.8** | **1087794.3** | | **671.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, hard to firm to very stiff<br><br>Occasional sand seams | ▼ | 636 | 4-4-4 (8) |
| 40 | S-11 | SS | 18 | 16 | **END OF DRILLING AT 40.0 FT** | | 631 | 5-6-10 (16) |
| 45 | | | | | | | 626 | |
| 50 | | | | | | | 621 | |
| 55 | | | | | | | 616 | |
| 60 | | | | | | | 611 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

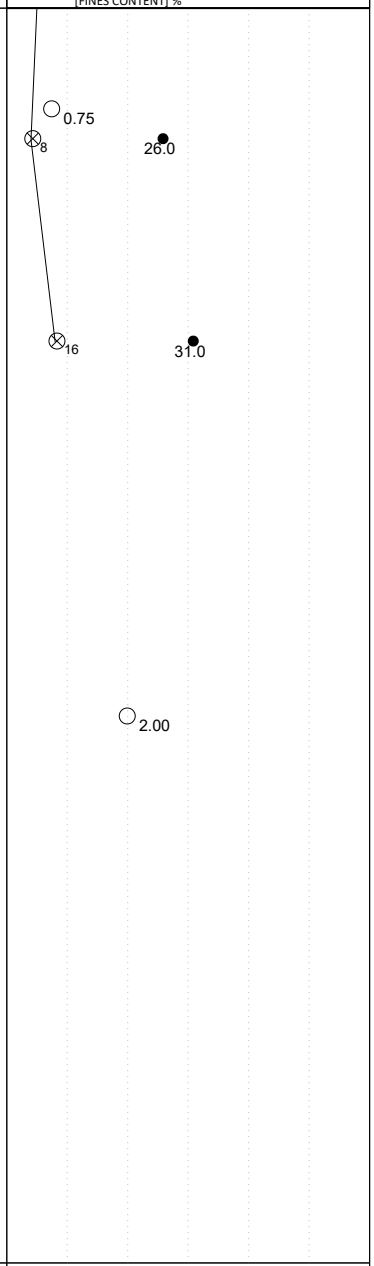
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **11.00** | BORING STARTED: **Jul 26 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **33.10** | BORING COMPLETED: **Jul 26 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-12** | **1 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955805.5** | **1088139.6** | | **667.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 16 | (CL FILL) FILL, LEAN CLAY with SAND, trace gravel, dark brown, moist, hard | | 667 | 4-4-5 (9) |
| | S-2 | SS | 18 | 16 | (CL) SANDY CLAY, trace gravel, brown, moist, hard | | 662 | 5-7-7 (14) |
| 5 | S-3 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff<br><br>Occasional sand seams below 28 ft. | | | 3-4-6 (10) |
| | S-4 | SS | 18 | 18 | | | 657 | 4-5-6 (11) |
| 10 | S-5 | SS | 18 | 10 | | | | 3-5-5 (10) |
| | S-6 | SS | 18 | 18 | | | 652 | 3-4-5 (9) |
| 15 | | | | | | | | |
| | S-7 | SS | 18 | 14 | | | 647 | 3-4-4 (8) |
| 20 | | | | | | | | |
| | S-8 | SS | 18 | 18 | | ▼ | 642 | 2-3-4 (7) |
| 25 | | | | | | | | |
| | S-9 | SS | 18 | 18 | | | 637 | 3-4-6 (10) |
| 30 | | | | | | | | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

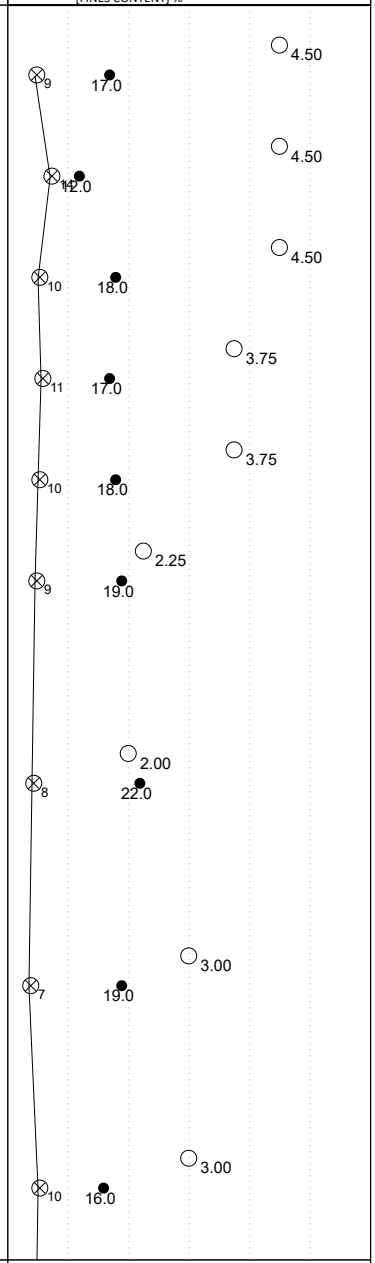
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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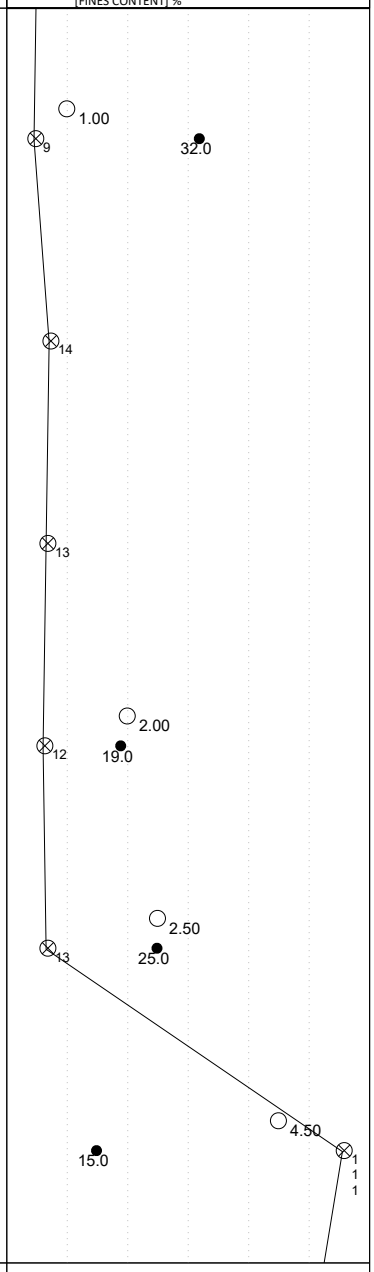
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **34.00** | BORING STARTED: | **Jul 26 2021** | CAVE IN DEPTH: | **39.90** |
| ▼ WL (Completion) | **25.50** | BORING COMPLETED: | **Jul 26 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-12** | **2 of 3** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | LOSS OF CIRCULATION |
| NORTHING: **1955805.5** | EASTING: **1088139.6** | STATION: | SURFACE ELEVATION: **667.0** |
| | | | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff<br><br>Occasional sand seams below 28 ft. | ▽ | 632 | 3-5-4 (9) |
| 40 | S-11 | SS | 18 | 14 | (SP-SM) MEDIUM TO COARSE SAND WITH SILT AND GRAVEL, gray, moist to wet, medium dense | | 627 | 8-8-6 (14) |
| 45 | S-12 | SS | 18 | 16 | | | 622 | 4-6-7 (13) |
| 50 | S-13 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff | | 617 | 5-6-6 (12) |
| 55 | S-14 | SS | 18 | 18 | | | 612 | 5-6-7 (13) |
| 60 | S-15 | SS | 18 | 16 | (SP-SM) FINE SAND with SILT, gray, moist, very dense | | 607 | 18-42-69 (111) |




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **34.00** | BORING STARTED: **Jul 26 2021** | | CAVE IN DEPTH: **39.90** |
| ▼ WL (Completion) | **25.50** | BORING COMPLETED: **Jul 26 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-12** | **3 of 3** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955805.5** | **1088139.6** | | **667.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (SP-SM) FINE SAND with SILT, gray, moist, very dense | | | |
| 65 | S-16 | SS | 18 | 18 | (ML) SILT, gray, moist, very dense | | 602 | 37-48-52 (100/12") |
| | | | | | **END OF DRILLING AT 65.0 FT** | | | |
| 70 | | | | | | | 597 | |
| 75 | | | | | | | 592 | |
| 80 | | | | | | | 587 | |
| 85 | | | | | | | 582 | |
| 90 | | | | | | | 577 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ **STANDARD PENETRATION BLOWS/FT**

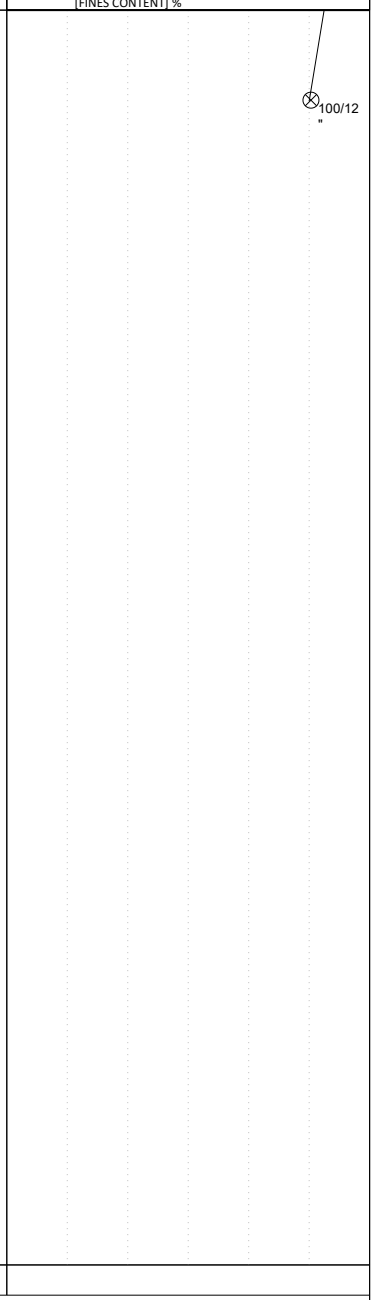
**ROCK QUALITY DESIGNATION & RECOVERY**

**RQD**

**REC**

○ **CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **34.00** | BORING STARTED: | **Jul 26 2021** | CAVE IN DEPTH: | **39.90** |
| ▼ WL (Completion) | **25.50** | BORING COMPLETED: | **Jul 26 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-5** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955828.7** | **1087200.9** | | **673.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 14 | (OL POSSIBLE FILL) POSSIBLE FILL, ORGANIC LEAN CLAY, black, moist, hard, earthy odor<br><br>LOI = 6.4% | | 673 | 5-6-5 (11) |
| 5 | S-2 | SS | 18 | 6 | (CL) SANDY CLAY, trace gravel, brown, moist, very stiff to hard | | 668 | 4-6-4 (10) |
| | S-3 | SS | 18 | 16 | | | | 4-4-4 (8) |
| | | | | | **END OF DRILLING AT 7.5 FT** | | | |
| 10 | | | | | | | 663 | |
| 15 | | | | | | | 658 | |
| 20 | | | | | | | 653 | |
| 25 | | | | | | | 648 | |
| 30 | | | | | | | 643 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

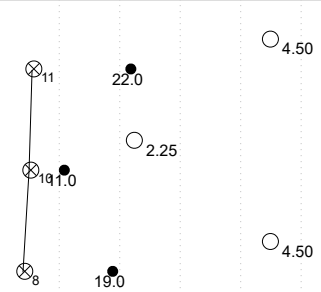
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 27 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 27 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

# Appendix D

# Preliminary Storm Sewer Calculations

GHA GEWALT HAMILTON ASSOCIATES, INC.

Project Name: Mount Prospect Technology Campus ORD1 Site Improvements
GHA Project #: 5253.220

Calculated by: MGW
Checked by:

# Storm Sewer Design

**DESIGN STORM: 10 YEAR STORM**

| From | To | Local Area | | Cumulative | | CA | Tc | Total | I10 | **Total** | Pipe | n | Pipe | Pipe | Pipe | **Pipe** | Velocity | U/S Rim | Cover | Pipe Invert | | Travel | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area | C | Area | C | | | Tc | | **Flow** | Dia | | Length | Area | Slope | **Capacity** | | Elev. | | U/S | D/S | Time | |
| | | (Ac.) | Factor | (Ac.) | Factor | | (min) | (min) | (in/hr) | **(cfs)** | (in) | | (ft) | (sq.ft) | % | **(cfs)** | (ft/sec) | (ft) | (ft) | (ft) | (ft) | (min.) | |
| 216 | 215 | 0.38 | 0.7 | 0.38 | 0.70 | 0.27 | 10 | 10 | 6.48 | **1.73** | 12 | 0.013 | 180 | 0.79 | 0.50 | **2.51** | 3.20 | 670.85 | 1.80 | 667.80 | 666.90 | 0.94 | |
| 215 | 214 | 0.32 | 0.71 | 0.70 | 0.70 | 0.49 | | 11 | 6.30 | **3.09** | 15 | 0.013 | 54 | 1.23 | 0.50 | **4.56** | 3.72 | 671.40 | 3.00 | 666.90 | 666.63 | 0.24 | |
| 214 | 213 | 0.00 | 0 | 0.77 | 0.41 | 0.31 | | 11 | 6.30 | **1.97** | 15 | 0.013 | 119 | 1.23 | 0.51 | **4.62** | 3.76 | 670.95 | 2.82 | 666.63 | 666.02 | 0.53 | |
| 213 | 212 | 0.30 | 0.85 | 1.07 | 0.53 | 0.57 | | 12 | 6.11 | **3.47** | 18 | 0.013 | 165 | 1.77 | 0.24 | **5.17** | 2.93 | 671.10 | 3.33 | 666.02 | 665.62 | 0.94 | |
| 212 | 211 | 0.20 | 0.81 | 1.27 | 0.58 | 0.73 | | 13 | 5.93 | **4.34** | 18 | 0.013 | 159 | 1.77 | 0.24 | **5.13** | 2.90 | 670.95 | 3.58 | 665.62 | 665.24 | 0.91 | |
| 211 | 210 | 0.19 | 0.88 | 1.46 | 0.61 | 0.90 | | 14 | 5.74 | **5.15** | 21 | 0.013 | 119 | 2.40 | 0.20 | **7.11** | 2.96 | 670.80 | 3.56 | 665.24 | 665.00 | 0.67 | |
| 210 | 209 | 0.00 | 0 | 1.82 | 0.61 | 1.11 | | 14 | 5.74 | **6.35** | 24 | 0.013 | 87 | 3.14 | 0.18 | **9.70** | 3.09 | 671.15 | 4.00 | 664.90 | 664.74 | 0.47 | |
| 209 | 208 | 0.34 | 0.8 | 2.16 | 0.64 | 1.37 | | 15 | 5.56 | **7.63** | 24 | 0.013 | 134 | 3.14 | 0.18 | **9.57** | 3.05 | 670.70 | 3.71 | 664.74 | 664.50 | 0.73 | |
| 208 | 207 | 0.43 | 0.82 | 2.84 | 0.68 | 1.93 | | 15 | 5.56 | **10.74** | 30 | 0.013 | 66 | 4.91 | 0.18 | **17.50** | 3.57 | 670.70 | 3.45 | 664.50 | 664.38 | 0.31 | |
| 207 | 206 | 0.00 | 0 | 5.24 | 0.78 | 4.09 | | 16 | 5.44 | **22.27** | 36 | 0.013 | 52 | 7.07 | 0.12 | **22.68** | 3.21 | 671.00 | 3.47 | 664.28 | 664.22 | 0.27 | |
| 206 | 205 | 0.19 | 0.85 | 5.88 | 0.79 | 4.66 | | 16 | 5.44 | **25.35** | 42 | 0.013 | 118 | 9.62 | 0.12 | **34.71** | 3.61 | 670.50 | 2.53 | 664.22 | 664.08 | 0.54 | |
| 205 | 204 | 0.16 | 0.79 | 6.04 | 0.79 | 4.78 | | 17 | 5.33 | **25.49** | 42 | 0.013 | 24 | 9.62 | 0.13 | **35.63** | 3.71 | 670.40 | 2.57 | 664.08 | 664.05 | 0.11 | |
| 204 | 203 | 0.00 | 0 | 8.44 | 0.82 | 6.94 | | 17 | 5.33 | **37.00** | 48 | 0.013 | 94 | 12.56 | 0.11 | **46.95** | 3.74 | 671.40 | 3.10 | 664.05 | 663.95 | 0.42 | |
| 203 | 202 | 0.14 | 0.83 | 8.58 | 0.82 | 7.06 | | 17 | 5.33 | **37.62** | 48 | 0.013 | 74 | 12.56 | 0.09 | **44.28** | 3.53 | 670.30 | 2.10 | 663.95 | 663.88 | 0.35 | |
| 202 | 201 | 0.00 | 0 | 8.58 | 0.82 | 7.06 | | 17 | 5.33 | **37.62** | 48 | 0.013 | 135 | 12.56 | 0.11 | **47.99** | 3.82 | 671.00 | 2.87 | 663.88 | 663.73 | 0.59 | |
| 201 | STORMTRAP | 0.25 | 0.78 | 10.15 | 0.83 | 8.38 | | 18 | 5.21 | **43.66** | 48 | 0.013 | 18 | 12.56 | 0.44 | **95.97** | 7.64 | 670.40 | 2.52 | 663.63 | 663.55 | 0.04 | |
| 214A | 214 | 0.07 | 0.63 | 0.07 | 0.63 | 0.05 | | 10 | 6.48 | **0.30** | 12 | 0.013 | 20 | 0.79 | 2.50 | **5.62** | 7.16 | 671.25 | 2.00 | 668.00 | 667.50 | 0.05 | |
| 210A | 210 | 0.36 | 0.58 | 0.36 | 0.58 | 0.21 | | 10 | 6.48 | **1.36** | 12 | 0.013 | 24 | 0.79 | 2.08 | **5.13** | 6.53 | 669.00 | 0.75 | 667.00 | 666.50 | 0.06 | |
| 208B | 208A | 0.05 | 0.9 | 0.05 | 0.90 | 0.04 | 10 | 10 | 6.48 | **0.26** | 8 | 0.013 | 81 | 0.35 | 1.01 | **1.21** | 3.47 | 668.33 | 0.91 | 666.50 | 665.68 | 0.39 | |
| 208A | 208 | 0.25 | 0.82 | 0.25 | 0.82 | 0.21 | 10 | 10 | 6.48 | **1.33** | 12 | 0.013 | 68 | 0.79 | 1.00 | **3.55** | 4.53 | 670.80 | 4.37 | 665.18 | 664.50 | 0.25 | |
| 201A | 201 | 1.32 | 0.85 | 1.32 | 0.85 | 1.12 | 10 | 10 | 6.48 | **7.27** | 15 | 0.013 | 51 | 1.23 | 1.71 | **8.42** | 6.87 | 669.15 | 1.58 | 666.07 | 665.20 | 0.12 | |
| 115 | 114 | 0.36 | 0.76 | 0.36 | 0.76 | 0.27 | 10 | 10 | 6.48 | **1.75** | 12 | 0.013 | 131 | 0.79 | 0.60 | **2.74** | 3.49 | 670.80 | 1.91 | 667.64 | 666.86 | 0.62 | |
| 114 | 113 | 0.36 | 0.78 | 0.71 | 0.77 | 0.55 | | 11 | 6.30 | **3.44** | 15 | 0.013 | 170 | 1.23 | 0.60 | **5.00** | 4.07 | 670.70 | 2.34 | 666.86 | 665.84 | 0.70 | |
| 113 | 112 | 0.38 | 0.78 | 1.09 | 0.77 | 0.85 | | 11 | 6.30 | **5.32** | 21 | 0.013 | 191 | 2.40 | 0.20 | **7.06** | 2.94 | 670.55 | 2.71 | 665.84 | 665.46 | 1.08 | |
| 112 | 111 | 0.40 | 0.75 | 1.49 | 0.77 | 1.14 | | 12 | 6.11 | **6.98** | 24 | 0.013 | 83 | 3.14 | 0.19 | **9.93** | 3.16 | 670.40 | 2.69 | 665.46 | 665.30 | 0.44 | |
| 111 | 110 | 0.00 | 0 | 1.49 | 0.77 | 1.14 | | 13 | 5.93 | **6.77** | 24 | 0.013 | 94 | 3.14 | 0.17 | **9.33** | 2.97 | 672.50 | 5.05 | 665.20 | 665.04 | 0.53 | |
| 110 | 109 | 0.23 | 0.86 | 1.72 | 0.78 | 1.34 | | 13 | 5.93 | **7.94** | 24 | 0.013 | 121 | 3.14 | 0.18 | **9.64** | 3.07 | 670.50 | 3.21 | 665.04 | 664.82 | 0.66 | |
| 109 | 108 | 0.00 | 0 | 1.72 | 0.78 | 1.34 | | 14 | 5.74 | **7.69** | 24 | 0.013 | 47 | 3.14 | 0.38 | **14.00** | 4.46 | 671.10 | 4.13 | 664.72 | 664.54 | 0.18 | |
| 108 | 107 | 0.00 | 0 | 1.97 | 0.79 | 1.56 | | 14 | 5.74 | **8.97** | 30 | 0.013 | 43 | 4.91 | 0.14 | **15.33** | 3.12 | 670.30 | 3.01 | 664.54 | 664.48 | 0.23 | |
| 107 | 106 | 0.49 | 0.75 | 2.49 | 0.79 | 1.97 | | 14 | 5.74 | **11.29** | 30 | 0.013 | 210 | 4.91 | 0.13 | **14.99** | 3.05 | 670.05 | 2.82 | 664.48 | 664.20 | 1.15 | |
| 106 | 105 | 0.00 | 0.8 | 2.91 | 0.77 | 2.25 | | 16 | 5.44 | **12.23** | 30 | 0.013 | 106 | 4.91 | 0.13 | **14.92** | 3.04 | 669.80 | 2.85 | 664.20 | 664.06 | 0.58 | |
| 105 | 104 | 0.66 | 0.8 | 3.57 | 0.78 | 2.77 | | 16 | 5.44 | **15.11** | 30 | 0.013 | 44 | 4.91 | 0.14 | **15.16** | 3.09 | 670.15 | 3.44 | 663.96 | 663.90 | 0.24 | |
| 104 | 103 | 0.00 | 0 | 5.92 | 0.83 | 4.89 | | 16 | 5.44 | **26.62** | 42 | 0.013 | 158 | 9.62 | 0.08 | **27.78** | 2.89 | 671.15 | 3.50 | 663.90 | 663.78 | 0.91 | |
| 103 | 102 | 0.36 | 0.48 | 7.58 | 0.81 | 6.17 | | 17 | 5.33 | **32.86** | 48 | 0.013 | 187 | 12.56 | 0.07 | **37.96** | 3.02 | 669.45 | 1.42 | 663.78 | 663.65 | 1.03 | |
| 102 | 101 | 0.00 | 0 | 8.88 | 0.82 | 7.27 | | 18 | 5.21 | **37.90** | 48 | 0.013 | 150 | 12.56 | 0.09 | **42.38** | 3.37 | 670.21 | 2.31 | 663.65 | 663.52 | 0.74 | |
| 101 | 100 | 0.36 | 0.75 | 10.53 | 0.72 | 7.53 | | 18 | 5.21 | **39.27** | 48 | 0.013 | 113 | 12.56 | 0.08 | **40.63** | 3.23 | 669.35 | 1.58 | 663.52 | 663.43 | 0.58 | |
| 100 | BASIN#1 | 0.00 | 0 | 10.53 | 0.72 | 7.53 | | 19 | 5.10 | **38.39** | 48 | 0.013 | 26 | 12.56 | 0.38 | **89.28** | 7.11 | 669.84 | 2.16 | 663.43 | 663.33 | 0.06 | |
| 108A | 108 | 0.25 | 0.9 | 0.25 | 0.90 | 0.22 | 10 | 10 | 6.48 | **1.44** | 10 | 0.013 | 60 | 0.55 | 1.67 | **2.82** | 5.17 | 672.50 | 2.12 | 669.30 | 668.30 | 0.19 | |
| 107A | 107 | 0.04 | 0.9 | 0.04 | 0.90 | 0.04 | 10 | 10 | 6.48 | **0.26** | 8 | 0.013 | 73 | 0.35 | 1.03 | **1.22** | 3.50 | 668.33 | 1.11 | 666.30 | 665.55 | 0.35 | |
| 106A | 106 | 0.41 | 0.68 | 0.41 | 0.68 | 0.28 | 10 | 10 | 6.48 | **1.82** | 12 | 0.013 | 18 | 0.79 | 1.11 | **3.75** | 4.77 | 670.40 | 2.15 | 667.00 | 666.80 | 0.06 | |
| 104B | 104A | 2.35 | 0.9 | 2.35 | 0.90 | 2.12 | 10 | 10 | 6.48 | **13.71** | 16 | 0.013 | 8 | 1.40 | 3.50 | **14.33** | 10.27 | 672.39 | 4.28 | 666.53 | 666.25 | 0.01 | |
| 104A | 104 | 0.00 | 0 | 2.35 | 0.90 | 2.12 | | 10 | 6.48 | **13.71** | 18 | 0.013 | 188 | 1.77 | 1.25 | **11.73** | 6.64 | 672.39 | 4.39 | 666.25 | 663.90 | 0.47 | |

GHA GEWALT HAMILTON ASSOCIATES, INC.

Project Name: Mount Prospect Technology Campus ORD1 Site Improvements
GHA Project #: 5253.220

Calculated by: MGW
Checked by:

# Storm Sewer Design

**DESIGN STORM: 10 YEAR STORM**

| From | To | Local Area | | Cumulative | | CA | Tc | Total | I10 | **Total** | Pipe | n | Pipe | Pipe | Pipe | **Pipe** | Velocity | U/S Rim | Cover | Pipe Invert | | Travel | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area | C | Area | C | | | Tc | | **Flow** | Dia | | Length | Area | Slope | **Capacity** | | Elev. | | U/S | D/S | Time | |
| | | (Ac.) | Factor | (Ac.) | Factor | | (min) | (min) | (in/hr) | **(cfs)** | (in) | | (ft) | (sq.ft) | % | **(cfs)** | (ft/sec) | (ft) | (ft) | (ft) | (ft) | (min.) | |
| 103A | 103 | 1.30 | 0.85 | 1.30 | 0.85 | 1.11 | 10 | 10 | 6.48 | **7.16** | 15 | 0.013 | 40 | 1.23 | 3.50 | **12.06** | 9.84 | 669.15 | 1.58 | 666.07 | 664.67 | 0.07 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 102C | 102B | 1.30 | 0.85 | 1.30 | 0.85 | 1.11 | 10 | 10 | 6.48 | **7.16** | 16 | 0.013 | 11 | 1.40 | 1.18 | **8.33** | 5.97 | 672.35 | 4.24 | 666.53 | 666.40 | 0.03 | |
| 102B | 102A | 0.00 | 0 | 1.30 | 0.85 | 1.11 | | 10 | 6.48 | **7.16** | 18 | 0.013 | 47 | 1.77 | 1.06 | **10.82** | 6.13 | 671.91 | 3.86 | 666.30 | 665.80 | 0.13 | |
| 102A | 102 | 0.00 | 0 | 1.30 | 0.85 | 1.11 | | 10 | 6.48 | **7.16** | 18 | 0.013 | 142 | 1.77 | 0.85 | **9.65** | 5.46 | 671.91 | 4.46 | 665.70 | 664.50 | 0.43 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 101A | 101 | 1.29 | 0.85 | 1.29 | 0.85 | 1.10 | 10 | 10 | 6.48 | **7.11** | 15 | 0.013 | 40 | 1.23 | 3.50 | **12.06** | 9.84 | 669.15 | 1.58 | 666.07 | 664.67 | 0.07 | |

Notes:
1. Refer to engineering plans or exhibits for tributary areas, pipe diameter, length, and slope.
2. Manning's roughness coefficient: n = 0.013 for RCP; n = 0.011 for PVC pipe.
3. I10 (10-year Storm Rainfall Intensity) is taken from Bulletin 75, Illinois State Water Survey.
4. Flow Q (cfs) = C I A
5. Pipe Capacity (cfs) is calculated by Manning's Equation.
6. Velocity (fps) = Q/A
7. Travel Time (min.) = Pipe length / Velocity / 60



Report of

# Subsurface Environmental Investigation

Prepared for:
Cloud HQ

1200 E Algonquin Road
Mt. Prospect, Cook County, Illinois

October 4, 2021

ECS Midwest, LLC
1575 Barclay Blvd
Buffalo Grove, Illinois 60089
847-279-0366

October 4, 2021

Mr. Chris Warnke
Cloud HQ
1212 New York Avenue
Washington DC
Email: cwarnke@cloudhq.com

ECS Project No. 53-2861-B

RE: **Subsurface Environmental Investigation – 1200 E Algonquin Road, Mt. Prospect, Cook County, Illinois**

Dear Mr. Warnke,

Please find enclosed one copy of the Subsurface Environmental Investigation completed by ECS for the above referenced property. If you have any questions concerning the information contained in this report, please contact either of the undersigned at (847) 279-0366. Thank you for retaining ECS for this assessment.

Respectfully Submitted,

**ECS MIDWEST, LLC**



Mike V. McGee, PG
Project Manager



Jason Warren, REM
Principal

I:\Office 53 Environmental\Phase II\Phase II\Illinois\2861-B United Airlines Corporate Campus SSI

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**APPENDIX**

Appendix I Boring Logs
Appendix II Laboratory Reports

## 1.0 INTRODUCTION

ECS Midwest, LLC (ECS) was retained to perform a subsurface environmental investigation at the property located at 1200 E Algonquin Road, Mt. Prospect, Cook County, Illinois (subject property). A site plan/topographic map is provided as Figure 1 and an Aerial Photograph is provided as Figure 2.

The 49.72 acre subject property is identified by the Cook County Assessor's Office as numbers 08-23-100-018 and 08-23-200-052 and is listed as owned by United Airlines, Inc. The subject property is developed with one, approximately 225,000 square foot two-story building (Building A), one, approximately 60,000 square foot two story building (Building B), one, approximately 175,000 square foot eight-story building (Building C), and one, approximately 50,000 square foot four-story building, and an underground data center. The on-site buildings are mainly utilized for office space and conference/training; however, Buildings C and D also containing hotels rooms and suites. The remainder of the subject property is either landscaped or paved for parking.

### 1.1 Purpose of Investigation

ECS conducted a Phase I Environmental Site Assessment on the subject property (dated August 11, 2021). As noted within our report, the following recognized environmental conditions were identified:

- ECS identities the potential use and/or generation of hazardous chemicals on the subject property as a recognized environmental condition.
- ECS identities the former LUST incident, without associated documents and NFR letter, as a recognized environmental condition.
- ECS identities the former and current on-site USTs to represent a recognized environmental condition to the subject property.
- ECS identifies the possible use of pesticides on the subject property (with associated violations) as a recognized environmental condition.
- ECS identifies the known spills on the subject property, without regulatory closure, as a recognized environmental condition.
- Staining was observed on the floor in the areas of chemical storage, battery charging, and/or diesel generators. ECS identifies the staining as a recognized environmental condition.

### 1.2 Objectives and Scope of Work

In order to obtain the requested samples, ECS performed a subsurface investigation. The subsurface investigation consisted of the collection of thirty-two soil samples and four soil/gas samples. Please note that ECS originally proposed to collect four groundwater samples; however, due to the fact that groundwater was not encountered to the maximum depth explored, groundwater samples were not collected and two deeper soil samples were collected in lieu of groundwater samples.

## 2.0 SUBSURFACE EXPLORATION

The subsurface investigation activities included soil and soil/gas sampling and analysis as described below.

### 2.1 Soil Sampling Program

In August 2021, in order to evaluate subsurface soil conditions, ECS collected up to one to two soil samples from thirty-eight soil borings (B-1 through B-38) advanced on the subject property. Please note that, based on observed site conditions, ECS did not collect samples from each soil boring. The locations of the soil borings are shown in Figure 3. The soil borings were advanced by using a direct-push hydraulic probe (Geoprobe) and were advanced continuously from the ground surface to the bottom of the borings (approximately 15 feet) by pushing a 2-inch diameter by 5 foot long hollow-barreled sampler into/through the soil. Soil samples were collected in dedicated, disposal plastic liners contained in the sampler. Following sample collection, the soil boring holes were backfilled with granular bentonite and/or the soil cuttings to match the existing ground surface. Drilling equipment, including the sampling rods, was decontaminated prior to sampling and in between boring locations using a high-pressure steam cleaner. All drilling activities were conducted by Environmental Soil Probing Corp. of Saint Charles, Illinois under the supervision of an ECS geologist. Please note that ECS originally planned to collect four groundwater samples from temporary monitoring wells installed on the subject property. However, as groundwater was not encountered at any of the boring locations a "deep" sample (approximately 15 feet below ground surface (bgs) was sampled in lieu of groundwater.

### 2.2 Soil/Gas Sampling Program

ECS installed four soil/gas sample collection points (SG-1 through SG-4) and collected soil/gas samples directly from on-site shallow soils. Sampling and analysis was conducted in general accordance with Illinois EPA regulations. Figure 3 provides the locations of the soil/gas sampling points.

The soil/gas samples were collected from a depth of 3 feet below the ground surface and above the saturation zone. The soil/gas monitoring points were installed using the truck mounted, direct-push hydraulic probe with an expendable tip and/or a jackhammer drill, to the desired depth (approximately 3 feet below ground surface – as required by the Illinois EPA). Once the desired depth was reached, a ⅛ inch outside diameter post-run nylon tubing was connected to the expendable point holders. The rods were then pulled up three to six inches to create cavities to collect the soil/gas samples. The rods were sealed at the surface with bentonite clay to prevent air from entering around the rods.

Following installation, the monitoring points were purged of approximately five volumes of air prior to soil/gas sample collection. Upon completion of purging activities and prior to sample collection, leak tests, utilizing helium tracer gas, were performed in order to confirm that there were no leaks within the sampling trains. Upon verification that no leaks existed within the sampling trains, soil/gas samples were collected over an 8 minute period utilizing an 8 minute regulator and stainless steel summa canister (calibrated and certified clean by the analytical laboratory). Soil/gas sampling was not conducted within 48 hours after a rainfall event of ½ inch or greater, in standing or ponded water areas or where soil is constantly watered by an irrigation system.

### 2.3 Soil and Soil/Gas Analytical Program

Thirty-two soil samples and four soil/gas samples were collected and analyzed for the parameters listed below:

| Number of Samples | Analytical Parameters |
|---|---|
| **Soil** | |
| 16 | VOCs, SVOCs, Pesticides, PCBs, TAL Metals/Cyanide, pH, and/or TCLP Metals |
| 10 | VOCs, SVOCs, RCRA Metals, pH |
| 6 | BTEX, PNAs, Lead, pH |
| **Soil/Gas** | |
| 4 | VOCs |

VOCs – Volatile organic compounds via Method 5035/8260B, TO-15)
SVOCs – Polynuclear aromatic hydrocarbons via Method 8270
TAL/RCRA/TCLP Metals – Via Method 6010B/7471B/1311
Pesticides – via Method 8081
PCBs – Polycyclic Biphenyls via Method 8082
pH – Via Method 9045D

The soil and soil/gas analysis was performed by Test America of University Park, Illinois on a standard laboratory turnaround basis.

## 3.0 RESULTS OF SUBSURFACE EXPLORATION

### 3.1 Soil Conditions

Soil samples were examined for overburden classification as well as for visual evidence of contamination. Soil type, consistency, and the thickness and depth of the units were used to define the site stratigraphy. The following soils were encountered:

During drilling, the stratigraphy of the subject property was defined to a depth of approximately 15 feet for the exterior samples and approximately 5 feet for the interior samples, the depth of the deepest soil borings. Generally, the interior samples (B-23 through B-32, B-35 through B-38) comprised of a concrete and subbase from the top of the boring to approximately six inches. This upper layer was generally underlain by grey clay/silty clay to an approximate depth of 5 feet bgs. The remaining exterior locations typically contained an organic-rich topsoil from the surface to approximately 1 foot bgs. This layer was generally underlain by brown silty clay to a depth of ten feet. The remainder of the soils consisted of brown/grey clay to a depth of fifteen feet. Boring logs are included in Appendix I.

Headspace vapor measurements were taken in the field on separate split samples (i.e. not on the portion of the sample preserved for subsequent analysis) to estimate the VOC content of the samples using a Ray Systems Mini-Ray® photoionization detector (PID). The PID was calibrated with a 100-$ppm_{v/v}$ isobutylene-in-air commercial grade gas standard. The headspace samples were prepared by filling a new airtight plastic bag approximately half full with a sample of the soil collected from the respective sample interval. The airtight bag was then sealed and allowed to equilibrate at ambient temperature and out of direct sunlight for at least 15 minutes. The sample headspace was screened for VOCs by inserting the PID probe through the plastic approximately 1 inch into the airtight bag.

PID readings were observed to be at or below background levels at each of the soil boring locations.

### 3.2 Results of Soil Analysis

Soil samples were collected and analyzed for VOCs, SVOCs, RCRA/TAL/TCLP Metals, PCBs, Pesticides, and/or pH. The locations of the soil borings are shown on Figure 3 and the results of the soil analysis are summarized in Tables 1 through 13. Copies of the laboratory report and chain of custody document are included in Appendix I.

The results of the soil analysis were compared to the Illinois EPA Tier 1 Soil Remediation Objectives (SROs), and/or documented background concentrations, as cited in Title 35 Illinois Administrative Code 742 (35 IAC 742). Given the use of the subject property (industrial-commercial), these comparisons were based upon an industrial/commercial classification and construction worker scenarios for the soil ingestion and outdoor soil inhalation exposure pathways. The soil component to groundwater ingestion (SCGI) exposure pathway was based upon a Class I groundwater designation, as the actual class of groundwater has not been determined for the subject property.

The results of the investigation are as follows:

**VOCs** were not detected at concentrations exceeding applicable SROs.

**SVOCs** were not detected at concentrations exceeding applicable SROs, with the exception of the following:

- **Benzo[a]anthracene** was detected at boring locations B-14 (2.5 mg/kg), B-24 (2.2 mg/kg), and B-34 (4.3 mg/kg) which exceeded the Class I Soil Component of the Groundwater Ingestion Exposure Route (SCGI) of 2.0 mg/kg.
- **Benzo[a]pyrene** was detected at boring locations B-14 (2.8 mg/kg) and B-34 (4.4 mg/kg), which exceeded the industrial/commercial soil ingestion remediation objective of 2.1 mg/kg.
- **Benzo[b]fluoranthene** was detected at soil boring location B-34 (6.1 mg/kg), which exceeded the Class I SCGI of 5.0 mg/kg.
- **Carbazole** was detected at B-24 (0.75 mg/kg) and B-34 (1.1 mg/kg), which exceeded the Class I SCGI of 0.6 mg/kg.

**Metals** were not detected at concentrations exceeding applicable SROs, with the exception of the following:

- **TCLP Aluminum** was detected at boring locations B-6 (4.1 mg/L), which exceeded the Class I SCGI of 3.5 mg/L.
- **Arsenic** was detected at boring location B-15 (17 mg/kg), which exceeded the industrial/commercial soil ingestion remediation objective of 13 mg/kg.
- **TCLP Manganese** was detected at soil boring location B-15 (0.83 mg/L), which exceeded the Class I SCGI of 0.15 mg/L.
- **Mercury** was detected at soil boring B-34 (0.11 mg/kg), which exceeded its Construction Worker Inhalation remediation objective of 0.1 mg/kg.

**Pesticides** were not detected at concentrations exceeding applicable SROs.

**PCBs** were not detected at concentrations exceeding applicable SROs.

### 3.3 Results of Soil/Gas Analysis

Soil/gas samples were collected and analyzed for VOCs. The locations of the soil/gas sampling points are shown in Figure 3. The results of the soil/gas analysis are summarized in Table 14. Copies of the laboratory report and chain of custody document are included in Appendix I. The results of the soil/gas sampling were compared to the Remediation Objectives (ROs) for the Indoor Inhalation Exposure Route and Construction Worker Exposure Route, for industrial/commercial properties, as identified in Table H of *Part 742 Tiered Approach to Corrective Action Objectives (TACO)*.

- **VOCs** were not detected at concentrations exceeding applicable industrial/commercial ROs; however, there were detections of various VOCs that exceeded laboratory detection limits.

## 4.0 CONCLUSIONS

### 4.1 Summary and Recommendations

ECS Midwest, LLC (ECS) was retained to perform a subsurface environmental investigation at the property located at 1200 E Algonquin Road, Mt. Prospect, Cook County, Illinois. The objective of the subsurface environmental investigation was to determine if the previously identified RECs have negatively impacted the subject property. To meet this objective, ECS collected 32 soil samples and four soil/gas samples for chemical analysis. The findings of our subsurface investigation are noted below.

As indicated in the attached tables, exceedances of the following exposure pathways were identified:

- **Industrial-Commercial Ingestion**
  **SVOCs:** benzo[a]pyrene
  **Metals:** arsenic

- **Soil Component to Class I Groundwater Ingestion**
  **SVOCs:** benzo[a]anthracene, benzo[b]fluoranthene, carbazole
  **Metals:** aluminum, manganese

- **Construction Worker (inhalation)**
  **Metals:** mercury

In our opinion, the detected soil concentrations are most likely not associated with a reportable release, but more likely associated with the naturally occurring background concentrations. As such no reporting requirements apply.

The residential soil ingestion exceedances could be addressed during future redevelopment through reliance on the use of engineered barriers (asphalt/concrete pavement, building foundation/floor slab, or at least 3 feet of clean soil).

In order to address the Class I/SCGI SRO exceedances, the subject property could establish and rely upon a site-specific groundwater use deed restriction which bans the use of groundwater on the subject property.

In order to address the construction worker exceedance, ECS recommends that any workers who will be conducting subsurface work at the subject property are notified of the exceedance through implementation of a worker notification and health and safety plan consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, OSHA regulation (29 CFR 1910 and 1926), state and location regulations, and other available USEPA guidance documents.

As noted in the attached tables, industrial/commercial RO exceedances of the indoor inhalation exposure pathway were not observed within the soil/gas samples collected from the subject property; however, detections of various VOCs were observed. Given the results, while a building control system, as defined in IL 742.1210 (sub-slab or sub-membrane depressurization systems, membrane barrier system, and/or vented raised floor), does not appear to be warranted for the future building, the future building should maintain full concrete walls and floors, with the additional requirement of either no sumps or a sealed sump system.

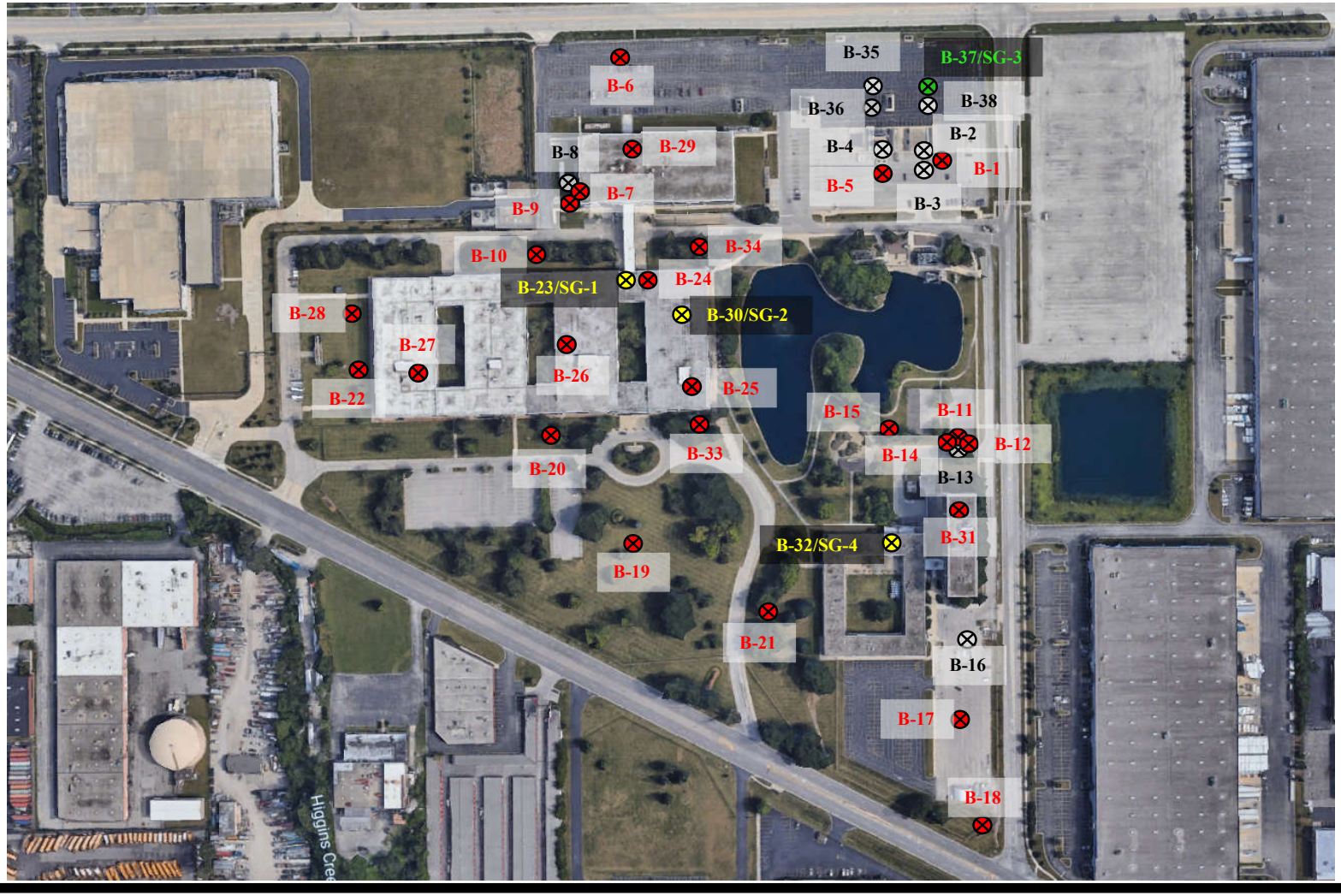
While not required, if a No Further Remediation (NFR) letter from the IEPA is desired, the Subject Property should be enrolled in the IEPA Voluntary Site Remediation Program (SRP) for regulatory closure purposes. The SRP is a voluntary cleanup program that provides Remediation Applicants (property owners) the opportunity to receive IEPA review, technical assistance, and No Further Remediation (NFR) determinations. The NFR letter signifies a release from further responsibilities under the Illinois Environmental Protection Act.

If future development will require disposal of onsite soils, please note that based on the elevated contaminant concentrations detected, shallow soils from the subject property currently appear to not be suitable for disposal at a CCDD landfill or soils only landfill and will have to be disposed of at a landfill that is licensed to accept this type of waste stream (Sub-Title D landfill or similar). However, performing the TCLP analysis at the boring locations where metals concentrations were detected in excess of Tier 1 SROs, could get the majority of excavation spoils generated from the subject property to qualify for acceptance into a CCDD, or soils only facility.

## 5.0 LIMITATIONS

The conclusions presented herein are based on field observations and analytical data obtained by ECS at the subject property. The opinions presented here are based on our understanding of existing environmental statutes and regulations. No representation is made or intended relative to future environmental statutes, regulations, or objectives. This report represents our professional judgment and opinion. No warranty is expressed or implied.

**FIGURES**




Approximate Soil Sample Locations

Approximate Soil/Gas Sample Locations

Approximate Soil and Soil/Gas Sample Locations

Approximate Soil Boring Locations Not Sampled

**Legend –** As Shown

United Airlines Corporate Campus SSI
Mt. Prospect, Cook County, Illinois

Figure 3
Sample Location Diagram
ECS Project No. 53: 2861-B
August 2021

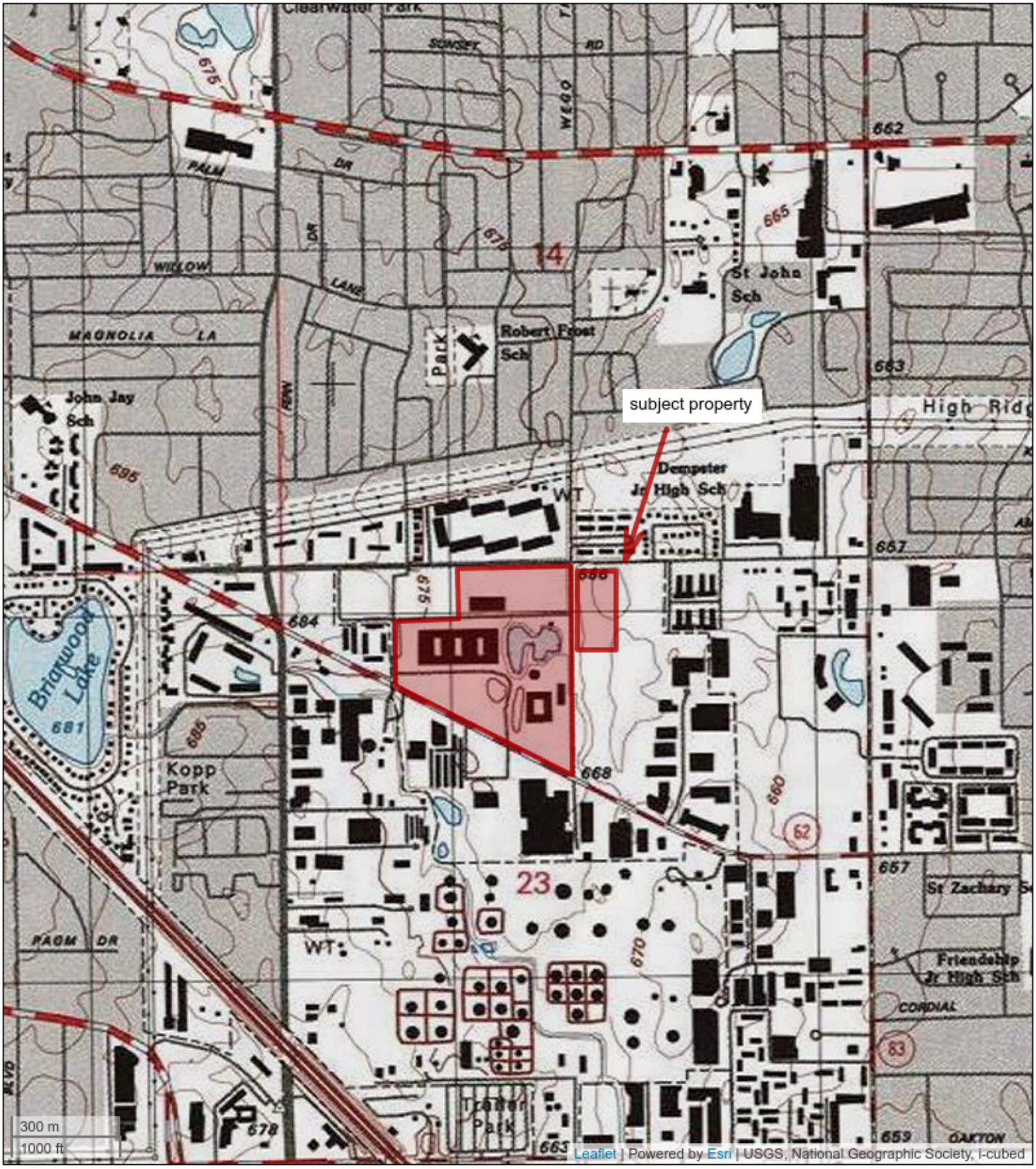



**Figure 1 - Topographic Map**

Site Location Map
United Airline Headquarters Property
1200 E Algonquin Rd.
Mt. Prospect, Illinois 60016




**Figure 2 - Aerial Photograph**

USGS Topographic Map
United Airline Headquarters Property
1200 E Algonquin Rd.
Mt. Prospect, Illinois 60016

**TABLES**

# Table 1. Summary of VOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | | | | | | | | | | | |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | B-1 | B-5 | B-6 | B-7 | B-7D | B-9 | B-10 | B-11 | B-12 | B-14 | B-15 |
| | | | | | | 2-4 | 2-4 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | NRO | 1200 | 2 | NRO | 1200 | --- | --- | <0.00072 | <0.00063 | <0.00045 | --- | <0.00084 | --- | --- | --- | <0.00062 |
| 1,1,2,2-Tetrachloroethane | 27 | 1.2 | 0.0035 | 620 | 1.7 | --- | --- | <0.00068 | <0.00060 | <0.00042 | --- | <0.00080 | --- | --- | --- | <0.00059 |
| 1,1,2-Trichloroethane | 8200 | 1800 | 0.02 | 8200 | 1800 | --- | --- | <0.00092 | <0.00080 | <0.00057 | --- | <0.0011 | --- | --- | --- | <0.00079 |
| 1,1-Dichloroethane | 200000 | 1700 | 23 | 200000 | 130 | --- | --- | <0.00073 | <0.00064 | <0.00045 | --- | <0.00086 | --- | --- | --- | <0.00063 |
| 1,1-Dichloroethene | 100000 | 470 | 0.06 | 10000 | 3 | --- | --- | <0.00074 | <0.00064 | <0.00046 | --- | <0.00086 | --- | --- | --- | <0.00063 |
| 1,2-Dichloroethane | 63 | 0.7 | 0.02 | 1400 | 0.99 | --- | --- | <0.0017 | <0.0015 | <0.0010 | --- | <0.0019 | --- | --- | --- | <0.0014 |
| 1,2-Dichloropropane | 84 | 23 | 0.03 | 1800 | 0.5 | --- | --- | <0.00055 | <0.00048 | <0.00034 | --- | <0.00065 | --- | --- | --- | <0.00048 |
| 1,3-Dichloropropene, Total | 57 | 2.1 | 0.004 | 1200 | 0.39 | --- | --- | <0.00075 | <0.00065 | <0.00047 | --- | <0.00088 | --- | --- | --- | <0.00065 |
| 2-Hexanone | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.0017 | <0.0015 | <0.0010 | --- | <0.0019 | --- | --- | --- | <0.0014 |
| Acetone | NRO | 100000 | 25 | NRO | 100000 | --- | --- | 0.12 | <0.0081 | 0.011 | --- | <0.011 | --- | --- | --- | 0.034 |
| Benzene | 100 | 1.6 | 0.03 | 2300 | 2.2 | <0.0068 | <0.0072 | <0.00055 | <0.00048 | <0.00034 | <0.0076 | <0.00064 | <0.0077 | <0.0072 | <0.0097 | <0.00047 |
| Bromodichloromethane | 92 | 3000 | 0.6 | 2000 | 3000 | --- | --- | <0.00044 | <0.00038 | <0.00027 | --- | <0.00051 | --- | --- | --- | <0.00037 |
| Bromoform | 720 | 100 | 0.8 | 16000 | 140 | --- | --- | <0.00062 | <0.00054 | <0.00039 | --- | <0.00073 | --- | --- | --- | <0.00054 |
| Bromomethane | 2900 | 15 | 0.2 | 1000 | 3.9 | --- | --- | <0.0020 | <0.0018 | <0.0013 | --- | <0.0024 | --- | --- | --- | <0.0017 |
| Carbon disulfide | 200000 | 720 | 32 | 20000 | 9 | --- | --- | <0.0011 | <0.00097 | 0.0025 | --- | <0.0013 | --- | --- | --- | <0.00096 |
| Carbon tetrachloride | 44 | 0.64 | 0.07 | 410 | 0.9 | --- | --- | <0.00062 | <0.00054 | <0.00039 | --- | <0.00072 | --- | --- | --- | <0.00053 |
| Chlorobenzene | 41000 | 210 | 1 | 4100 | 1.3 | --- | --- | <0.00079 | <0.00069 | <0.00049 | --- | <0.00092 | --- | --- | --- | <0.00068 |
| Chloroethane | NRO | 1500 | NRO | 20000 | 39 | --- | --- | <0.0016 | <0.0014 | <0.00098 | --- | <0.0018 | --- | --- | --- | <0.0014 |
| Chloroform | 940 | 0.54 | 0.6 | 2000 | 0.76 | --- | --- | <0.00074 | <0.00065 | <0.00046 | --- | <0.00087 | --- | --- | --- | <0.00064 |
| Chloromethane | NRO | 180 | NRO | NRO | 5 | --- | --- | <0.0021 | <0.0019 | <0.0013 | --- | <0.0025 | --- | --- | --- | <0.0019 |
| cis-1,2-Dichloroethene | 20000 | 1200 | 0.4 | 20000 | 1200 | --- | --- | <0.00060 | <0.00052 | <0.00037 | --- | <0.00070 | --- | --- | --- | <0.00051 |
| cis-1,3-Dichloropropene | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.00064 | <0.00056 | <0.00040 | --- | <0.00075 | --- | --- | --- | <0.00056 |
| Dibromochloromethane | 41000 | 1300 | 0.4 | 41000 | 1300 | --- | --- | <0.00070 | <0.00061 | <0.00043 | --- | <0.00082 | --- | --- | --- | <0.00060 |
| Ethylbenzene | 200000 | 400 | 13 | 20000 | 58 | <0.0085 | <0.0091 | <0.0010 | <0.00089 | <0.00064 | <0.0095 | <0.0012 | <0.0096 | <0.0091 | <0.012 | <0.00088 |
| Methyl Ethyl Ketone | 1000000 | 25000 | 17 | 120000 | 730 | --- | --- | 0.023 | <0.0021 | <0.0015 | --- | <0.0028 | --- | --- | --- | 0.0054 |
| methyl isobutyl ketone | NRO | 3100 | NRO | NRO | 340 | --- | --- | <0.0016 | <0.0014 | <0.00098 | --- | <0.0018 | --- | --- | --- | <0.0014 |
| Methyl tert-butyl ether | 20000 | 8800 | 0.32 | 2000 | 140 | --- | --- | <0.00063 | <0.00055 | <0.00039 | --- | <0.00073 | --- | --- | --- | <0.00054 |
| Methylene Chloride | 760 | 24 | 0.02 | 12000 | 34 | --- | --- | <0.0021 | <0.0018 | <0.0013 | --- | <0.0025 | --- | --- | --- | <0.0018 |
| Styrene | 410000 | 1500 | 4 | 41000 | 430 | --- | --- | <0.00065 | <0.00056 | <0.00040 | --- | <0.00075 | --- | --- | --- | <0.00056 |
| Tetrachloroethene | 110 | 20 | 0.06 | 2400 | 28 | --- | --- | <0.00073 | <0.00064 | <0.00045 | --- | <0.00085 | --- | --- | --- | <0.00063 |
| Toluene | 410000 | 650 | 12 | 410000 | 42 | <0.0069 | <0.0073 | <0.00054 | <0.00047 | <0.00034 | <0.0077 | <0.00063 | <0.0077 | <0.0073 | <0.0098 | <0.00047 |
| trans-1,2-Dichloroethene | 41000 | 3100 | 0.7 | 41000 | 3100 | --- | --- | <0.00095 | <0.00083 | <0.00059 | --- | <0.0011 | --- | --- | --- | <0.00082 |
| trans-1,3-Dichloropropene | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.00075 | <0.00065 | <0.00047 | --- | <0.00088 | --- | --- | --- | <0.00065 |
| Trichloroethene | 520 | 8.9 | 0.06 | 1200 | 12 | --- | --- | <0.00072 | <0.00063 | <0.00045 | --- | <0.00084 | --- | --- | --- | <0.00062 |
| Vinyl chloride | 7.9 | 1.1 | 0.01 | 170 | 1.1 | --- | --- | <0.00095 | <0.00083 | <0.00059 | --- | <0.0011 | --- | --- | --- | <0.00082 |
| Xylenes, Total | 410000 | 320 | 150 | 41000 | 5.6 | <0.010 | <0.011 | <0.00068 | <0.00060 | <0.00042 | <0.011 | <0.00080 | <0.012 | <0.011 | <0.015 | <0.00059 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**

**Exceeded SROs are shaded green**

NRO – No Remediation Objective Listed in 35 IAC 742

VOCs via USEPA Method SW8260B/5035

ECS Project # 2861-B
UA Corporate Campus SSI

## Table 2. Summary of VOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-17 | B-18 | B-18D | B-19 | B-20 | B-20D | B-21 | B-22 | B-23 | B-23D | B-24 | B-25 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 15 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | NRO | 1200 | 2 | NRO | 1200 | <0.00063 | <0.017 | <0.00057 | <0.00063 | <0.00054 | <0.00053 | <0.00050 | <0.00056 | <0.00056 | <0.00048 | <0.00060 | <0.00057 |
| 1,1,2,2-Tetrachloroethane | 27 | 1.2 | 0.0035 | 620 | 1.7 | <0.00060 | <0.018 | <0.00054 | <0.00060 | <0.00051 | <0.00050 | <0.00048 | <0.00054 | <0.00053 | <0.00046 | <0.00057 | <0.00054 |
| 1,1,2-Trichloroethane | 8200 | 1800 | 0.02 | 8200 | 1800 | <0.00081 | <0.016 | <0.00073 | <0.00081 | <0.00069 | <0.00067 | <0.00064 | <0.00072 | <0.00071 | <0.00061 | <0.00076 | <0.00072 |
| 1,1-Dichloroethane | 200000 | 1700 | 23 | 200000 | 130 | <0.00064 | <0.019 | <0.00058 | <0.00065 | <0.00055 | <0.00054 | <0.00051 | <0.00058 | <0.00057 | <0.00049 | <0.00061 | <0.00058 |
| 1,1-Dichloroethene | 100000 | 470 | 0.06 | 10000 | 3 | <0.00065 | <0.018 | <0.00059 | <0.00065 | <0.00055 | <0.00054 | <0.00052 | <0.00058 | <0.00057 | <0.00049 | <0.00061 | <0.00058 |
| 1,2-Dichloroethane | 63 | 0.7 | 0.02 | 1400 | 0.99 | <0.0015 | <0.018 | <0.0013 | <0.0015 | <0.0012 | <0.0012 | <0.0012 | <0.0013 | <0.0013 | <0.0011 | <0.0014 | <0.0013 |
| 1,2-Dichloropropane | 84 | 23 | 0.03 | 1800 | 0.5 | <0.00049 | <0.020 | <0.00044 | <0.00049 | <0.00041 | <0.00041 | <0.00039 | <0.00043 | <0.00043 | <0.00037 | <0.00046 | <0.00044 |
| 1,3-Dichloropropene, Total | 57 | 2.1 | 0.004 | 1200 | 0.39 | <0.00066 | <0.019 | <0.00060 | <0.00066 | <0.00056 | <0.00055 | <0.00053 | <0.00059 | <0.00058 | <0.00050 | <0.00063 | <0.00059 |
| 2-Hexanone | NRO | NRO | NRO | NRO | NRO | <0.0015 | <0.071 | <0.0013 | <0.0015 | <0.0012 | <0.0012 | <0.0012 | <0.0013 | <0.0013 | <0.0011 | <0.0014 | <0.0013 |
| Acetone | NRO | 100000 | 25 | NRO | 100000 | 0.052 | <0.079 | 0.040 | <0.0082 | <0.0070 | 0.0096 | 0.014 | 0.013 | 0.0096 | 0.011 | 0.017 | 0.010 |
| Benzene | 100 | 1.6 | 0.03 | 2300 | 2.2 | <0.00048 | <0.0067 | <0.00043 | <0.00048 | <0.00041 | <0.00040 | <0.00038 | <0.00043 | <0.00042 | <0.00036 | <0.00045 | <0.00043 |
| Bromodichloromethane | 92 | 3000 | 0.6 | 2000 | 3000 | <0.00038 | <0.017 | <0.00035 | <0.00039 | <0.00033 | <0.00032 | <0.00031 | <0.00034 | <0.00034 | <0.00029 | <0.00036 | <0.00034 |
| Bromoform | 720 | 100 | 0.8 | 16000 | 140 | <0.00055 | <0.022 | <0.00050 | <0.00055 | <0.00047 | <0.00046 | <0.00044 | <0.00049 | <0.00049 | <0.00042 | <0.00052 | <0.00049 |
| Bromomethane | 2900 | 15 | 0.2 | 1000 | 3.9 | <0.0018 | <0.036 | <0.0016 | <0.0018 | <0.0015 | <0.0015 | <0.0014 | <0.0016 | <0.0016 | <0.0014 | <0.0017 | <0.0016 |
| Carbon disulfide | 200000 | 720 | 32 | 20000 | 9 | <0.00098 | <0.037 | <0.00089 | <0.00098 | <0.00083 | 0.0017 | <0.00078 | <0.00087 | <0.00086 | 0.0012 | <0.00093 | <0.00088 |
| Carbon tetrachloride | 44 | 0.64 | 0.07 | 410 | 0.9 | <0.00054 | <0.018 | <0.00049 | <0.00055 | <0.00046 | <0.00046 | <0.00044 | <0.00049 | <0.00048 | <0.00041 | <0.00052 | <0.00049 |
| Chlorobenzene | 41000 | 210 | 1 | 4100 | 1.3 | <0.00069 | <0.018 | <0.00063 | <0.00070 | <0.00059 | <0.00058 | <0.00055 | <0.00062 | <0.00061 | <0.00053 | <0.00066 | <0.00062 |
| Chloroethane | NRO | 1500 | NRO | 20000 | 39 | <0.0014 | <0.023 | <0.0013 | <0.0014 | <0.0012 | <0.0012 | <0.0011 | <0.0012 | <0.0012 | <0.0011 | <0.0013 | <0.0012 |
| Chloroform | 940 | 0.54 | 0.6 | 2000 | 0.76 | <0.00065 | <0.017 | <0.00059 | <0.00066 | <0.00056 | <0.00055 | <0.00052 | <0.00058 | <0.00058 | <0.00050 | <0.00062 | <0.00059 |
| Chloromethane | NRO | 180 | NRO | NRO | 5 | <0.0019 | <0.015 | <0.0017 | <0.0019 | <0.0016 | <0.0016 | <0.0015 | <0.0017 | <0.0017 | <0.0014 | <0.0018 | <0.0017 |
| cis-1,2-Dichloroethene | 20000 | 1200 | 0.4 | 20000 | 1200 | <0.00052 | <0.019 | <0.00048 | <0.00053 | <0.00045 | <0.00044 | <0.00042 | <0.00047 | <0.00046 | <0.00040 | <0.00050 | <0.00047 |
| cis-1,3-Dichloropropene | NRO | NRO | NRO | NRO | NRO | <0.00057 | <0.019 | <0.00051 | <0.00057 | <0.00048 | <0.00047 | <0.00045 | <0.00051 | <0.00050 | <0.00043 | <0.00054 | <0.00051 |
| Dibromochloromethane | 41000 | 1300 | 0.4 | 41000 | 1300 | <0.00061 | <0.022 | <0.00056 | <0.00062 | <0.00052 | <0.00051 | <0.00049 | <0.00055 | <0.00054 | <0.00047 | <0.00058 | <0.00055 |
| Ethylbenzene | 200000 | 400 | 13 | 20000 | 58 | <0.00090 | <0.0084 | <0.00082 | <0.00091 | <0.00077 | <0.00075 | <0.00072 | <0.00080 | <0.00080 | <0.00068 | <0.00085 | <0.00081 |
| Methyl Ethyl Ketone | 1000000 | 25000 | 17 | 120000 | 730 | 0.0074 | <0.097 | 0.0057 | <0.0021 | <0.0018 | <0.0017 | <0.0017 | <0.0019 | <0.0018 | <0.0016 | <0.0020 | <0.0019 |
| methyl isobutyl ketone | NRO | 3100 | NRO | NRO | 340 | <0.0014 | <0.098 | <0.0013 | <0.0014 | <0.0012 | <0.0012 | <0.0011 | <0.0012 | <0.0012 | <0.0011 | <0.0013 | <0.0012 |
| Methyl tert-butyl ether | 20000 | 8800 | 0.32 | 2000 | 140 | <0.00055 | <0.018 | <0.00050 | <0.00056 | <0.00047 | <0.00046 | <0.00044 | <0.00049 | <0.00049 | <0.00042 | <0.00052 | <0.00050 |
| Methylene Chloride | 760 | 24 | 0.02 | 12000 | 34 | <0.0018 | <0.075 | <0.0017 | <0.0019 | <0.0016 | <0.0015 | <0.0015 | <0.0017 | <0.0016 | <0.0014 | <0.0018 | <0.0017 |
| Styrene | 410000 | 1500 | 4 | 41000 | 430 | <0.00057 | <0.018 | <0.00051 | <0.00057 | <0.00048 | <0.00047 | <0.00045 | <0.00051 | <0.00050 | <0.00043 | <0.00054 | <0.00051 |
| Tetrachloroethene | 110 | 20 | 0.06 | 2400 | 28 | <0.00064 | <0.017 | <0.00058 | <0.00064 | <0.00054 | <0.00054 | <0.00051 | <0.00057 | <0.00057 | <0.00049 | <0.00061 | <0.00057 |
| Toluene | 410000 | 650 | 12 | 410000 | 42 | <0.00047 | <0.0067 | <0.00043 | <0.00048 | <0.00040 | <0.00040 | <0.00038 | <0.00042 | <0.00042 | <0.00036 | <0.00045 | <0.00043 |
| trans-1,2-Dichloroethene | 41000 | 3100 | 0.7 | 41000 | 3100 | <0.00083 | <0.016 | <0.00076 | <0.00084 | <0.00071 | <0.00070 | <0.00067 | <0.00074 | <0.00074 | <0.00063 | <0.00079 | <0.00075 |
| trans-1,3-Dichloropropene | NRO | NRO | NRO | NRO | NRO | <0.00066 | <0.017 | <0.00060 | <0.00066 | <0.00056 | <0.00055 | <0.00053 | <0.00059 | <0.00058 | <0.00050 | <0.00063 | <0.00059 |
| Trichloroethene | 520 | 8.9 | 0.06 | 1200 | 12 | <0.00063 | <0.0075 | <0.00058 | <0.00064 | <0.00054 | <0.00053 | <0.00051 | <0.00057 | <0.00056 | <0.00048 | <0.00060 | <0.00057 |
| Vinyl chloride | 7.9 | 1.1 | 0.01 | 170 | 1.1 | <0.00083 | <0.012 | <0.00075 | <0.00084 | <0.00071 | <0.00070 | <0.00066 | <0.00074 | <0.00074 | <0.00063 | <0.00079 | <0.00075 |
| Xylenes, Total | 410000 | 320 | 150 | 41000 | 5.6 | <0.00060 | <0.010 | <0.00055 | <0.00061 | <0.00051 | <0.00050 | <0.00048 | <0.00054 | <0.00053 | <0.00046 | <0.00057 | <0.00054 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
VOCs via USEPA Method SW8260B/5035

# Table 3. Summary of VOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-26 | B-27 | B-28 | B-29 | B-30 | B-31 | B-32 | B-33 | B-34 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | NRO | 1200 | 2 | NRO | 1200 | <0.00050 | <0.00054 | <0.00059 | <0.00069 | <0.00052 | <0.00064 | <0.00056 | <0.00078 | <0.00085 |
| 1,1,2,2-Tetrachloroethane | 27 | 1.2 | 0.0035 | 620 | 1.7 | <0.00048 | <0.00051 | <0.00056 | <0.00066 | <0.00050 | <0.00061 | <0.00054 | <0.00075 | <0.00081 |
| 1,1,2-Trichloroethane | 8200 | 1800 | 0.02 | 8200 | 1800 | <0.00064 | <0.00069 | <0.00075 | <0.00088 | <0.00067 | <0.00082 | <0.00072 | <0.0010 | <0.0011 |
| 1,1-Dichloroethane | 200000 | 1700 | 23 | 200000 | 130 | <0.00051 | <0.00055 | <0.00060 | <0.00070 | <0.00053 | <0.00065 | <0.00058 | <0.00080 | <0.00087 |
| 1,1-Dichloroethene | 100000 | 470 | 0.06 | 10000 | 3 | <0.00051 | <0.00055 | <0.00060 | <0.00071 | <0.00053 | <0.00066 | <0.00058 | <0.00080 | <0.00087 |
| 1,2-Dichloroethane | 63 | 0.7 | 0.02 | 1400 | 0.99 | <0.0012 | <0.0012 | <0.0014 | <0.0016 | <0.0012 | <0.0015 | <0.0013 | <0.0018 | <0.0020 |
| 1,2-Dichloropropane | 84 | 23 | 0.03 | 1800 | 0.5 | <0.00039 | <0.00041 | <0.00045 | <0.00053 | <0.00040 | <0.00049 | <0.00043 | <0.00060 | <0.00066 |
| 1,3-Dichloropropene, Total | 57 | 2.1 | 0.004 | 1200 | 0.39 | <0.00052 | <0.00056 | <0.00061 | <0.00072 | <0.00055 | <0.00067 | <0.00059 | <0.00082 | <0.00089 |
| 2-Hexanone | NRO | NRO | NRO | NRO | NRO | <0.0012 | <0.0012 | <0.0014 | <0.0016 | <0.0012 | <0.0015 | <0.0013 | <0.0018 | <0.0020 |
| Acetone | NRO | 100000 | 25 | NRO | 100000 | <0.0065 | 0.0075 | 0.0093 | 0.011 | 0.025 | 0.014 | <0.0073 | <0.010 | 0.012 |
| Benzene | 100 | 1.6 | 0.03 | 2300 | 2.2 | <0.00038 | <0.00041 | <0.00045 | <0.00052 | <0.00040 | <0.00049 | <0.00043 | <0.00060 | <0.00065 |
| Bromodichloromethane | 92 | 3000 | 0.6 | 2000 | 3000 | <0.00030 | <0.00033 | <0.00036 | <0.00042 | <0.00032 | <0.00039 | <0.00034 | <0.00048 | <0.00052 |
| Bromoform | 720 | 100 | 0.8 | 16000 | 140 | <0.00044 | <0.00047 | <0.00051 | <0.00060 | <0.00045 | <0.00056 | <0.00049 | <0.00068 | <0.00074 |
| Bromomethane | 2900 | 15 | 0.2 | 1000 | 3.9 | <0.0014 | <0.0015 | <0.0017 | <0.0019 | <0.0015 | <0.0018 | <0.0016 | <0.0022 | <0.0024 |
| Carbon disulfide | 200000 | 720 | 32 | 20000 | 9 | <0.00078 | <0.00083 | <0.00091 | <0.0011 | <0.00081 | <0.00099 | <0.00087 | 0.0018 | 0.0062 |
| Carbon tetrachloride | 44 | 0.64 | 0.07 | 410 | 0.9 | <0.00043 | <0.00046 | <0.00051 | <0.00060 | <0.00045 | <0.00055 | <0.00049 | <0.00068 | <0.00074 |
| Chlorobenzene | 41000 | 210 | 1 | 4100 | 1.3 | <0.00055 | <0.00059 | <0.00065 | <0.00076 | <0.00057 | <0.00071 | <0.00062 | <0.00086 | <0.00094 |
| Chloroethane | NRO | 1500 | NRO | 20000 | 39 | <0.0011 | <0.0012 | <0.0013 | <0.0015 | <0.0011 | <0.0014 | <0.0012 | <0.0017 | <0.0019 |
| Chloroform | 940 | 0.54 | 0.6 | 2000 | 0.76 | <0.00052 | <0.00056 | <0.00061 | <0.00071 | <0.00054 | <0.00066 | <0.00058 | <0.00081 | <0.00088 |
| Chloromethane | NRO | 180 | NRO | NRO | 5 | <0.0015 | <0.0016 | <0.0018 | <0.0021 | <0.0016 | <0.0019 | <0.0017 | <0.0023 | <0.0026 |
| cis-1,2-Dichloroethene | 20000 | 1200 | 0.4 | 20000 | 1200 | <0.00042 | <0.00045 | <0.00049 | <0.00057 | <0.00043 | <0.00053 | <0.00047 | <0.00065 | <0.00071 |
| cis-1,3-Dichloropropene | NRO | NRO | NRO | NRO | NRO | <0.00045 | <0.00048 | <0.00053 | <0.00062 | <0.00047 | <0.00058 | <0.00051 | <0.00070 | <0.00077 |
| Dibromochloromethane | 41000 | 1300 | 0.4 | 41000 | 1300 | <0.00049 | <0.00052 | <0.00057 | <0.00067 | <0.00051 | <0.00062 | <0.00055 | <0.00076 | <0.00083 |
| Ethylbenzene | 200000 | 400 | 13 | 20000 | 58 | <0.00071 | <0.00077 | <0.00084 | <0.00098 | <0.00074 | <0.00091 | <0.00081 | <0.0011 | <0.0012 |
| Methyl Ethyl Ketone | 1000000 | 25000 | 17 | 120000 | 730 | <0.0017 | <0.0018 | <0.0019 | <0.0023 | <0.0017 | <0.0021 | <0.0019 | <0.0026 | <0.0028 |
| methyl isobutyl ketone | NRO | 3100 | NRO | NRO | 340 | <0.0011 | <0.0012 | <0.0013 | <0.0015 | <0.0011 | <0.0014 | <0.0012 | <0.0017 | <0.0019 |
| Methyl tert-butyl ether | 20000 | 8800 | 0.32 | 2000 | 140 | <0.00044 | <0.00047 | <0.00051 | <0.00060 | <0.00046 | <0.00056 | <0.00049 | <0.00069 | <0.00075 |
| Methylene Chloride | 760 | 24 | 0.02 | 12000 | 34 | <0.0015 | <0.0016 | <0.0017 | <0.0020 | <0.0015 | <0.0019 | <0.0017 | <0.0023 | <0.0025 |
| Styrene | 410000 | 1500 | 4 | 41000 | 430 | <0.00045 | <0.00048 | <0.00053 | <0.00062 | <0.00047 | <0.00058 | <0.00051 | <0.00071 | <0.00077 |
| Tetrachloroethene | 110 | 20 | 0.06 | 2400 | 28 | <0.00051 | <0.00054 | <0.00060 | <0.00070 | <0.00053 | <0.00065 | <0.00057 | <0.00079 | <0.00087 |
| Toluene | 410000 | 650 | 12 | 410000 | 42 | <0.00038 | <0.00040 | <0.00044 | <0.00052 | <0.00039 | <0.00048 | <0.00042 | <0.00059 | <0.00064 |
| trans-1,2-Dichloroethene | 41000 | 3100 | 0.7 | 41000 | 3100 | <0.00066 | <0.00071 | <0.00078 | <0.00091 | <0.00069 | <0.00085 | <0.00075 | <0.0010 | <0.0011 |
| trans-1,3-Dichloropropene | NRO | NRO | NRO | NRO | NRO | <0.00052 | <0.00056 | <0.00061 | <0.00072 | <0.00055 | <0.00067 | <0.00059 | <0.00082 | <0.00089 |
| Trichloroethene | 520 | 8.9 | 0.06 | 1200 | 12 | <0.00050 | <0.00054 | <0.00059 | <0.00069 | <0.00053 | <0.00065 | <0.00057 | <0.00079 | <0.00086 |
| Vinyl chloride | 7.9 | 1.1 | 0.01 | 170 | 1.1 | <0.00066 | <0.00071 | <0.00078 | <0.00091 | <0.00069 | <0.00085 | <0.00074 | <0.0010 | <0.0011 |
| Xylenes, Total | 410000 | 320 | 150 | 41000 | 5.6 | <0.00048 | <0.00051 | <0.00056 | <0.00066 | <0.00050 | <0.00061 | <0.00054 | <0.00075 | <0.00081 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**

**Exceeded SROs are shaded green**

NRO – No Remediation Objective Listed in 35 IAC 742

VOCs via USEPA Method SW8260B/5035

# Table 4. Summary of SVOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-1 | B-5 | B-6 | B-7 | B-7D | B-9 | B-10 | B-11 | B-12 | B-14 | B-15 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 2-4 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 20000 | 3200 | 5 | 2000 | 920 | --- | --- | <0.043 | <0.041 | <0.040 | --- | <0.042 | --- | --- | --- | <0.045 |
| 1,2-Dichlorobenzene | 180000 | 560 | 17 | 18000 | 310 | --- | --- | <0.048 | <0.046 | <0.044 | --- | <0.046 | --- | --- | --- | <0.050 |
| 1,3-Dichlorobenzene | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.045 | <0.043 | <0.041 | --- | <0.044 | --- | --- | --- | <0.047 |
| 1,4-Dichlorobenzene | NRO | 11000 | 2 | NRO | 340 | --- | --- | <0.051 | <0.049 | <0.047 | --- | <0.050 | --- | --- | --- | <0.053 |
| 2,2'-oxybis[1-chloropropane] | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.046 | <0.044 | <0.043 | --- | <0.045 | --- | --- | --- | <0.048 |
| 2,4,5-Trichlorophenol | 200000 | NRO | 64-230 | 200000 | NRO | --- | --- | <0.091 | <0.088 | <0.084 | --- | <0.088 | --- | --- | --- | <0.095 |
| 2,4,6-Trichlorophenol | 520 | 200 | 0.07-0.13 | 11000 | 540 | --- | --- | <0.14 | <0.13 | <0.13 | --- | <0.13 | --- | --- | --- | <0.14 |
| 2,4-Dichlorophenol | 6100 | NRO | 0.69-1 | 610 | NRO | --- | --- | <0.095 | <0.091 | <0.087 | --- | <0.092 | --- | --- | --- | <0.099 |
| 2,4-Dimethylphenol | 41000 | NRO | 9 | 41000 | NRO | --- | --- | <0.15 | <0.15 | <0.14 | --- | <0.15 | --- | --- | --- | <0.16 |
| 2,4-Dinitrophenol | 4100 | NRO | 0.2 | 410 | NRO | --- | --- | <0.70 | <0.68 | <0.65 | --- | <0.68 | --- | --- | --- | <0.73 |
| 2,4-Dinitrotoluene | 8.4 | NRO | 0.0008 | 180 | NRO | --- | --- | <0.064 | <0.061 | <0.059 | --- | <0.062 | --- | --- | --- | <0.066 |
| 2,6-Dinitrotoluene | 8.4 | NRO | 0.0007 | 180 | NRO | --- | --- | <0.079 | <0.075 | <0.072 | --- | <0.076 | --- | --- | --- | <0.082 |
| 2-Chloronaphthalene | 160000 | NRO | 49 | 160000 | NRO | --- | --- | <0.044 | <0.042 | <0.041 | --- | <0.043 | --- | --- | --- | <0.046 |
| 2-Chlorophenol | 10000 | 53000 | 3.1-3.9 | 10000 | 53000 | --- | --- | <0.068 | <0.066 | <0.063 | --- | <0.066 | --- | --- | --- | <0.071 |
| 2-Methylnaphthalene | 8200 | NRO | 1.9 | 820 | NRO | --- | --- | <0.0074 | <0.0071 | 0.0096 | --- | <0.0071 | --- | --- | --- | <0.0077 |
| 2-Methylphenol | 100000 | NRO | 15 | 100000 | NRO | --- | --- | <0.064 | <0.062 | <0.059 | --- | <0.062 | --- | --- | --- | <0.067 |
| 2-Nitroaniline | 6100 | 35 | 0.14 | 610 | 3.6 | --- | --- | <0.054 | <0.052 | <0.050 | --- | <0.052 | --- | --- | --- | <0.056 |
| 2-Nitrophenol | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.094 | <0.091 | <0.087 | --- | <0.092 | --- | --- | --- | <0.098 |
| 3 & 4 Methylphenol | 10000 | NRO | 0.2 | 1000 | NRO | --- | --- | <0.067 | <0.064 | <0.061 | --- | <0.065 | --- | --- | --- | <0.069 |
| 3,3'-Dichlorobenzidine | 13 | NRO | 0.007 | 280 | NRO | --- | --- | <0.056 | <0.054 | <0.052 | --- | <0.054 | --- | --- | --- | <0.058 |
| 3-Nitroaniline | 610 | 250 | 0.01 | 61 | 26 | --- | --- | <0.12 | <0.12 | <0.11 | --- | <0.12 | --- | --- | --- | <0.13 |
| 4,6-Dinitro-2-methylphenol | 200 | NRO | 0.0031 | 820 | NRO | --- | --- | <0.32 | <0.31 | <0.30 | --- | <0.31 | --- | --- | --- | <0.33 |
| 4-Bromophenyl phenyl ether | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.053 | <0.051 | <0.049 | --- | <0.051 | --- | --- | --- | <0.055 |
| 4-Chloro-3-methylphenol | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.14 | <0.13 | <0.13 | --- | <0.13 | --- | --- | --- | <0.14 |
| 4-Chloroaniline | 8200 | NRO | 0.7 | 820 | NRO | --- | --- | <0.19 | <0.18 | <0.17 | --- | <0.18 | --- | --- | --- | <0.20 |
| 4-Chlorophenyl phenyl ether | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.047 | <0.045 | <0.043 | --- | <0.045 | --- | --- | --- | <0.049 |
| 4-Nitroaniline | 6100 | 1000 | 0.1 | 610 | 110 | --- | --- | <0.17 | <0.16 | <0.15 | --- | <0.16 | --- | --- | --- | <0.17 |
| 4-Nitrophenol | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.38 | <0.37 | <0.35 | --- | <0.37 | --- | --- | --- | <0.40 |
| Acenaphthene | 120000 | NRO | 570 | 120000 | NRO | 0.046 | <0.0070 | <0.0072 | <0.0069 | 0.0077 | <0.0070 | <0.0070 | <0.0071 | <0.0070 | 0.19 | <0.0075 |
| Acenaphthylene | 61000 | NRO | 85 | 61000 | NRO | <0.0050 | <0.0051 | <0.0053 | <0.0051 | <0.0049 | <0.0051 | <0.0051 | <0.0052 | <0.0051 | 0.016 | <0.0055 |
| Anthracene | 610000 | NRO | 12000 | 610000 | NRO | 0.12 | <0.0065 | <0.0067 | <0.0064 | <0.0062 | <0.0065 | <0.0065 | <0.0066 | <0.0065 | 0.47 | <0.0069 |
| Benzo[a]anthracene | 8 | NRO | **2** | 170 | NRO | 0.37 | <0.0053 | <0.0054 | <0.0052 | <0.0050 | <0.0052 | 0.0092 | <0.0053 | <0.0052 | **2.5** | <0.0056 |
| Benzo[a]pyrene | **2.1** | NRO | 8 | 17 | NRO | 0.43 | <0.0076 | <0.0077 | <0.0074 | <0.0071 | <0.0075 | <0.0075 | 0.0090 | <0.0075 | **2.8** | <0.0081 |
| Benzo[b]fluoranthene | 8 | NRO | 5 | 170 | NRO | 0.63 | <0.0084 | <0.0086 | 0.015 | <0.0080 | <0.0084 | 0.024 | 0.012 | <0.0084 | 4.0 | <0.0090 |
| Benzo[g,h,i]perylene | 61000 | NRO | 27000 | 61000 | NRO | 0.12 | <0.013 | <0.013 | 0.013 | 0.013 | <0.012 | 0.028 | <0.013 | <0.013 | 0.93 | <0.013 |
| Benzo[k]fluoranthene | 78 | NRO | 49 | 1700 | NRO | 0.28 | <0.012 | <0.012 | <0.011 | <0.011 | <0.011 | <0.011 | <0.012 | <0.011 | 1.6 | <0.012 |
| Bis(2-chloroethoxy)methane | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.041 | <0.039 | <0.038 | --- | <0.040 | --- | --- | --- | <0.042 |
| Bis(2-chloroethyl)ether | 5 | 0.2 | 0.0004 | 75 | 0.66 | --- | --- | <0.060 | <0.058 | <0.055 | --- | <0.058 | --- | --- | --- | <0.062 |
| Bis(2-ethylhexyl) phthalate | 410 | 31000 | 3600 | 4100 | 31000 | --- | --- | <0.073 | <0.070 | <0.067 | --- | <0.071 | --- | --- | --- | <0.076 |
| Butyl benzyl phthalate | 410000 | 930 | 930 | 410000 | 930 | --- | --- | <0.076 | <0.073 | <0.070 | --- | <0.074 | --- | --- | --- | <0.079 |
| Carbazole | 290 | NRO | 0.6 | 6200 | NRO | --- | --- | <0.10 | <0.096 | <0.092 | --- | <0.097 | --- | --- | --- | <0.10 |
| Chrysene | 780 | NRO | 160 | 17000 | NRO | 0.46 | <0.011 | <0.011 | 0.017 | 0.016 | <0.011 | 0.026 | <0.011 | <0.011 | 2.9 | <0.011 |
| Dibenz(a,h)anthracene | 0.8 | NRO | 2 | 17 | NRO | 0.046 | <0.0075 | <0.0077 | <0.0074 | <0.0071 | <0.0075 | 0.016 | <0.0077 | <0.0075 | 0.29 | <0.0080 |
| Dibenzofuran | NRO | NRO | NRO | 820 | NRO | --- | --- | <0.047 | <0.045 | <0.043 | --- | <0.045 | --- | --- | --- | <0.049 |
| Diethyl phthalate | 1000000 | 2000 | 470 | 1000000 | 2000 | --- | --- | <0.068 | <0.065 | <0.062 | --- | <0.066 | --- | --- | --- | <0.070 |
| Dimethyl phthalate | NRO | NRO | NRO | NRO | NRO | --- | --- | <0.052 | <0.050 | <0.048 | --- | <0.051 | --- | --- | --- | <0.054 |
| Di-n-butyl phthalate | 200000 | 2300 | 2300 | 200000 | 2300 | --- | --- | <0.061 | <0.058 | <0.056 | --- | <0.059 | --- | --- | --- | <0.063 |
| Di-n-octyl phthalate | 41000 | 10000 | 10000 | 4100 | 10000 | --- | --- | <0.065 | <0.063 | <0.060 | --- | <0.063 | --- | --- | --- | <0.068 |
| Fluoranthene | 82000 | NRO | 4300 | 82000 | NRO | 1.2 | <0.0072 | <0.0074 | 0.0085 | <0.0068 | <0.0072 | <0.0072 | <0.0074 | <0.0072 | 6.4 | <0.0077 |
| Fluorene | 82000 | NRO | 560 | 82000 | NRO | 0.068 | <0.0055 | <0.0056 | <0.0054 | <0.0052 | <0.0054 | <0.0054 | <0.0056 | <0.0055 | 0.18 | <0.0058 |
| Hexachlorobenzene | 4 | 1 | 2 | 78 | 2.6 | --- | --- | <0.0093 | <0.0089 | <0.0085 | --- | <0.0090 | --- | --- | --- | <0.0096 |
| Hexachlorobutadiene | 2000 | NRO | 2.2 | 200 | NRO | --- | --- | <0.063 | <0.060 | <0.058 | --- | <0.061 | --- | --- | --- | <0.065 |
| Hexachlorocyclopentadiene | 14000 | 10 | 400 | 14000 | 1.1 | --- | --- | <0.23 | <0.22 | <0.21 | --- | <0.22 | --- | --- | --- | <0.24 |
| Hexachloroethane | 2000 | NRO | 0.5 | 2000 | NRO | --- | --- | <0.061 | <0.058 | <0.056 | --- | <0.059 | --- | --- | --- | <0.063 |
| Indeno[1,2,3-cd]pyrene | 8 | NRO | 14 | 170 | NRO | 0.14 | <0.010 | <0.010 | <0.010 | <0.0095 | <0.010 | 0.019 | <0.010 | <0.010 | 0.95 | <0.011 |
| Isophorone | 410000 | 4600 | 8 | 410000 | 4600 | --- | --- | <0.045 | <0.043 | <0.041 | --- | <0.044 | --- | --- | --- | <0.047 |
| Naphthalene | 41000 | 170 | 12 | 4100 | 1.8 | <0.0058 | <0.0060 | <0.0061 | <0.0059 | <0.0057 | <0.0060 | <0.0060 | <0.0061 | <0.0060 | 0.012 | <0.0064 |
| Nitrobenzene | 1000 | 92 | 0.1 | 1000 | 9.4 | --- | --- | <0.010 | <0.0096 | <0.0092 | --- | <0.0097 | --- | --- | --- | <0.010 |
| N-Nitrosodi-n-propylamine | 0.8 | NRO | 0.00005 | 18 | NRO | --- | --- | <0.049 | <0.047 | <0.045 | --- | <0.047 | --- | --- | --- | <0.051 |
| N-Nitrosodiphenylamine | 1200 | NRO | 1 | 25000 | NRO | --- | --- | <0.047 | <0.045 | <0.043 | --- | <0.046 | --- | --- | --- | <0.049 |
| Pentachlorophenol | 24 | NRO | 0.02 | 520 | NRO | --- | --- | <0.64 | <0.62 | <0.59 | --- | <0.62 | --- | --- | --- | <0.67 |
| Phenanthrene | 61000 | NRO | 210 | 61000 | NRO | 0.50 | <0.0054 | <0.0056 | 0.0092 | 0.035 | <0.0054 | 0.020 | <0.0055 | <0.0054 | 3.5 | <0.0058 |
| Phenol | 610000 | NRO | 100 | 61000 | NRO | --- | --- | <0.089 | <0.085 | <0.082 | --- | <0.086 | --- | --- | --- | <0.092 |
| Pyrene | 61000 | NRO | 4200 | 61000 | NRO | 0.95 | <0.0078 | <0.0079 | 0.016 | 0.011 | <0.0077 | 0.015 | <0.0079 | <0.0077 | 4.5 | <0.0083 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
SVOCs via USEPA Method 8270c

## Table 5. Summary of SVOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-17 | B-18 | B-18D | B-19 | B-20 | B-20D | B-21 | B-22 | B-23 | B-23D | B-24 | B-25 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 15 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 20000 | 3200 | 5 | 2000 | 920 | <0.044 | <0.045 | <0.041 | <0.044 | <0.041 | <0.039 | <0.040 | <0.042 | <0.043 | <0.039 | <0.041 | <0.042 |
| 1,2-Dichlorobenzene | 180000 | 560 | 17 | 18000 | 310 | <0.048 | <0.050 | <0.045 | <0.049 | <0.045 | <0.044 | <0.045 | <0.047 | <0.048 | <0.043 | <0.046 | <0.046 |
| 1,3-Dichlorobenzene | NRO | NRO | NRO | NRO | NRO | <0.046 | <0.047 | <0.042 | <0.046 | <0.043 | <0.041 | <0.042 | <0.044 | <0.045 | <0.041 | <0.043 | <0.044 |
| 1,4-Dichlorobenzene | NRO | 11000 | 2 | NRO | 340 | <0.052 | <0.054 | <0.048 | <0.052 | <0.049 | <0.047 | <0.048 | <0.050 | <0.051 | <0.046 | <0.049 | <0.050 |
| 2,2'-oxybis[1-chloropropane] | NRO | NRO | NRO | NRO | NRO | <0.047 | <0.049 | <0.044 | <0.047 | <0.044 | <0.042 | <0.043 | <0.046 | <0.047 | <0.042 | <0.044 | <0.045 |
| 2,4,5-Trichlorophenol | 200000 | NRO | 64-230 | 200000 | NRO | <0.092 | <0.096 | <0.086 | <0.093 | <0.087 | <0.083 | <0.086 | <0.090 | <0.092 | <0.082 | <0.087 | <0.088 |
| 2,4,6-Trichlorophenol | 520 | 200 | 0.07-0.13 | 11000 | 540 | <0.14 | <0.14 | <0.13 | <0.14 | <0.13 | <0.12 | <0.13 | <0.13 | <0.14 | <0.12 | <0.13 | <0.13 |
| 2,4-Dichlorophenol | 6100 | NRO | 0.69-1 | 610 | NRO | <0.096 | <0.10 | <0.089 | <0.097 | <0.090 | <0.086 | <0.089 | <0.093 | <0.095 | <0.086 | <0.090 | <0.092 |
| 2,4-Dimethylphenol | 41000 | NRO | 9 | 41000 | NRO | <0.15 | <0.16 | <0.14 | <0.15 | <0.14 | <0.14 | <0.14 | <0.15 | <0.15 | <0.14 | <0.14 | <0.15 |
| 2,4-Dinitrophenol | 4100 | NRO | 0.2 | 410 | NRO | <0.71 | <0.74 | <0.66 | <0.72 | <0.67 | <0.64 | <0.66 | <0.69 | <0.71 | <0.64 | <0.67 | <0.68 |
| 2,4-Dinitrotoluene | 8.4 | NRO | 0.0008 | 180 | NRO | <0.064 | <0.067 | <0.060 | <0.065 | <0.060 | <0.058 | <0.060 | <0.062 | <0.064 | <0.057 | <0.061 | <0.061 |
| 2,6-Dinitrotoluene | 8.4 | NRO | 0.0007 | 180 | NRO | <0.080 | <0.083 | <0.074 | <0.080 | <0.075 | <0.072 | <0.074 | <0.077 | <0.079 | <0.071 | <0.075 | <0.076 |
| 2-Chloronaphthalene | 160000 | NRO | 49 | 160000 | NRO | <0.045 | <0.046 | <0.042 | <0.045 | <0.042 | <0.040 | <0.041 | <0.043 | <0.044 | <0.040 | <0.042 | <0.043 |
| 2-Chlorophenol | 10000 | 53000 | 3.1-3.9 | 10000 | 53000 | <0.069 | <0.072 | <0.064 | <0.070 | <0.065 | <0.062 | <0.064 | <0.067 | <0.069 | <0.062 | <0.065 | <0.066 |
| 2-Methylnaphthalene | 8200 | NRO | 1.9 | 820 | NRO | <0.0075 | <0.0077 | 0.012 | <0.0075 | 0.0084 | 0.0095 | 0.0076 | <0.0072 | 0.046 | 0.012 | 0.23 | 0.11 |
| 2-Methylphenol | 100000 | NRO | 15 | 100000 | NRO | <0.065 | <0.067 | <0.060 | <0.066 | <0.061 | <0.058 | <0.060 | <0.063 | <0.064 | <0.058 | <0.061 | <0.062 |
| 2-Nitroaniline | 6100 | 35 | 0.14 | 610 | 3.6 | <0.055 | <0.056 | <0.051 | <0.055 | <0.051 | <0.049 | <0.050 | <0.053 | <0.054 | <0.049 | <0.051 | <0.052 |
| 2-Nitrophenol | NRO | NRO | NRO | NRO | NRO | <0.096 | <0.099 | <0.089 | <0.097 | <0.090 | <0.086 | <0.089 | <0.093 | <0.095 | <0.085 | <0.090 | <0.091 |
| 3 & 4 Methylphenol | 10000 | NRO | 0.2 | 1000 | NRO | <0.068 | <0.070 | <0.063 | <0.068 | <0.063 | <0.061 | <0.063 | <0.066 | <0.067 | <0.060 | <0.064 | <0.064 |
| 3,3'-Dichlorobenzidine | 13 | NRO | 0.007 | 280 | NRO | <0.057 | <0.059 | <0.053 | <0.057 | <0.053 | <0.051 | <0.053 | <0.055 | <0.056 | <0.050 | <0.053 | <0.054 |
| 3-Nitroaniline | 610 | 250 | 0.01 | 61 | 26 | <0.13 | <0.13 | <0.12 | <0.13 | <0.12 | <0.11 | <0.12 | <0.12 | <0.12 | <0.11 | <0.12 | <0.12 |
| 4,6-Dinitro-2-methylphenol | 200 | NRO | 0.0031 | 820 | NRO | <0.33 | <0.34 | <0.30 | <0.33 | <0.31 | <0.29 | <0.30 | <0.32 | <0.32 | <0.29 | <0.31 | <0.31 |
| 4-Bromophenyl phenyl ether | NRO | NRO | NRO | NRO | NRO | <0.053 | <0.055 | <0.050 | <0.054 | <0.050 | <0.048 | <0.049 | <0.052 | <0.053 | <0.048 | <0.050 | <0.051 |
| 4-Chloro-3-methylphenol | NRO | NRO | NRO | NRO | NRO | <0.14 | <0.14 | <0.13 | <0.14 | <0.13 | <0.12 | <0.13 | <0.13 | <0.14 | <0.12 | <0.13 | <0.13 |
| 4-Chloroaniline | 8200 | NRO | 0.7 | 820 | NRO | <0.19 | <0.20 | <0.18 | <0.19 | <0.18 | <0.17 | <0.18 | <0.18 | <0.19 | <0.17 | <0.18 | <0.18 |
| 4-Chlorophenyl phenyl ether | NRO | NRO | NRO | NRO | NRO | <0.047 | <0.049 | <0.044 | <0.048 | <0.044 | <0.043 | <0.044 | <0.046 | <0.047 | <0.042 | <0.044 | <0.045 |
| 4-Nitroaniline | 6100 | 1000 | 0.1 | 610 | 110 | <0.17 | <0.18 | <0.16 | <0.17 | <0.16 | <0.15 | <0.16 | <0.16 | <0.17 | <0.15 | <0.16 | <0.16 |
| 4-Nitrophenol | NRO | NRO | NRO | NRO | NRO | <0.39 | <0.40 | <0.36 | <0.39 | <0.36 | <0.35 | <0.36 | <0.37 | <0.38 | <0.34 | <0.36 | <0.37 |
| Acenaphthene | 120000 | NRO | 570 | 120000 | NRO | <0.0073 | <0.0075 | <0.0068 | <0.0073 | 0.022 | <0.0065 | <0.0067 | <0.0071 | <0.0072 | <0.0065 | 1.1 | <0.0069 |
| Acenaphthylene | 61000 | NRO | 85 | 61000 | NRO | <0.0053 | <0.0055 | <0.0050 | <0.0054 | <0.0050 | <0.0048 | <0.0049 | <0.0052 | <0.0053 | <0.0048 | 0.024 | <0.0051 |
| Anthracene | 610000 | NRO | 12000 | 610000 | NRO | <0.0068 | <0.0070 | <0.0063 | <0.0068 | 0.062 | <0.0061 | <0.0063 | <0.0066 | <0.0067 | <0.0060 | 1.3 | <0.0065 |
| Benzo[a]anthracene | 8 | NRO | **2** | 170 | NRO | <0.0055 | <0.0056 | <0.0051 | 0.0073 | 0.083 | <0.0049 | <0.0050 | <0.0053 | <0.0054 | <0.0049 | **2.2** | 0.0052 |
| Benzo[a]pyrene | 2.1 | NRO | 8 | 17 | NRO | <0.0078 | <0.0081 | <0.0073 | 0.0079 | 0.078 | <0.0070 | <0.0073 | <0.0076 | <0.0078 | <0.0070 | 2.1 | <0.0075 |
| Benzo[b]fluoranthene | 8 | NRO | 5 | 170 | NRO | <0.0087 | <0.0091 | <0.0081 | 0.012 | 0.10 | <0.0079 | <0.0081 | <0.0085 | <0.0087 | <0.0078 | 2.2 | <0.0083 |
| Benzo[g,h,i]perylene | 61000 | NRO | 27000 | 61000 | NRO | <0.013 | <0.014 | 0.019 | <0.013 | 0.039 | <0.012 | <0.012 | <0.013 | 0.020 | 0.017 | 0.59 | 0.019 |
| Benzo[k]fluoranthene | 78 | NRO | 49 | 1700 | NRO | <0.012 | <0.012 | <0.011 | <0.012 | 0.034 | <0.011 | <0.011 | <0.012 | <0.012 | <0.011 | 1.2 | <0.011 |
| Bis(2-chloroethoxy)methane | NRO | NRO | NRO | NRO | NRO | <0.041 | <0.043 | <0.038 | <0.042 | <0.039 | <0.037 | <0.038 | <0.040 | <0.041 | <0.037 | <0.039 | <0.039 |
| Bis(2-chloroethyl)ether | 5 | 0.2 | 0.0004 | 75 | 0.66 | <0.061 | <0.063 | <0.056 | <0.061 | <0.057 | <0.055 | <0.056 | <0.059 | <0.060 | <0.054 | <0.057 | <0.058 |
| Bis(2-ethylhexyl) phthalate | 410 | 31000 | 3600 | 4100 | 31000 | <0.074 | <0.077 | <0.069 | <0.075 | <0.070 | <0.067 | <0.069 | <0.072 | <0.073 | <0.066 | <0.070 | <0.071 |
| Butyl benzyl phthalate | 410000 | 930 | 930 | 410000 | 930 | <0.077 | <0.080 | <0.072 | <0.078 | <0.072 | <0.069 | <0.071 | <0.075 | <0.076 | <0.069 | <0.072 | <0.074 |
| Carbazole | 290 | NRO | **0.6** | 6200 | NRO | <0.10 | <0.10 | <0.094 | <0.10 | <0.095 | <0.091 | <0.094 | <0.098 | <0.10 | <0.090 | **0.75** | <0.097 |
| Chrysene | 780 | NRO | 160 | 17000 | NRO | <0.011 | <0.011 | 0.025 | <0.011 | 0.095 | 0.015 | 0.014 | <0.011 | 0.019 | 0.028 | 2.2 | 0.026 |
| Dibenz(a,h)anthracene | 0.8 | NRO | 2 | 17 | NRO | <0.0078 | <0.0081 | <0.0073 | <0.0079 | 0.011 | <0.0070 | <0.0073 | <0.0076 | <0.0078 | <0.0070 | 0.22 | <0.0075 |
| Dibenzofuran | NRO | NRO | NRO | 820 | NRO | <0.047 | <0.049 | <0.044 | <0.048 | <0.045 | <0.043 | <0.044 | <0.046 | <0.047 | <0.042 | 0.83 | <0.045 |
| Diethyl phthalate | 1000000 | 2000 | 470 | 1000000 | 2000 | <0.069 | <0.071 | <0.064 | <0.069 | <0.065 | <0.062 | <0.064 | <0.067 | <0.068 | <0.061 | <0.065 | <0.065 |
| Dimethyl phthalate | NRO | NRO | NRO | NRO | NRO | <0.053 | <0.055 | <0.049 | <0.053 | <0.050 | <0.048 | <0.049 | <0.051 | <0.052 | <0.047 | <0.050 | <0.050 |
| Di-n-butyl phthalate | 200000 | 2300 | 2300 | 200000 | 2300 | <0.062 | <0.064 | <0.057 | <0.062 | <0.058 | <0.055 | <0.057 | <0.060 | <0.061 | <0.055 | <0.058 | <0.059 |
| Di-n-octyl phthalate | 41000 | 10000 | 10000 | 4100 | 10000 | <0.066 | <0.068 | <0.061 | <0.067 | <0.062 | <0.059 | <0.061 | <0.064 | <0.065 | <0.059 | <0.062 | <0.063 |
| Fluoranthene | 82000 | NRO | 4300 | 82000 | NRO | <0.0075 | <0.0078 | <0.0070 | 0.014 | 0.25 | <0.0068 | 0.011 | <0.0073 | 0.0082 | <0.0067 | 4.8 | 0.011 |
| Fluorene | 82000 | NRO | 560 | 82000 | NRO | <0.0057 | <0.0059 | 0.0076 | <0.0057 | 0.024 | <0.0051 | <0.0053 | <0.0055 | 0.0076 | <0.0051 | 1.4 | <0.0054 |
| Hexachlorobenzene | 4 | 1 | 2 | 78 | 2.6 | <0.0094 | <0.0097 | <0.0087 | <0.0095 | <0.0088 | <0.0084 | <0.0087 | <0.0091 | <0.0093 | <0.0084 | <0.0088 | <0.0090 |
| Hexachlorobutadiene | 2000 | NRO | 2.2 | 200 | NRO | <0.064 | <0.066 | <0.059 | <0.064 | <0.060 | <0.057 | <0.059 | <0.062 | <0.063 | <0.057 | <0.060 | <0.061 |
| Hexachlorocyclopentadiene | 14000 | 10 | 400 | 14000 | 1.1 | <0.23 | <0.24 | <0.22 | <0.23 | <0.22 | <0.21 | <0.22 | <0.23 | <0.23 | <0.21 | <0.22 | <0.22 |
| Hexachloroethane | 2000 | NRO | 0.5 | 2000 | NRO | <0.062 | <0.064 | <0.057 | <0.062 | <0.058 | <0.055 | <0.057 | <0.060 | <0.061 | <0.055 | <0.058 | <0.059 |
| Indeno[1,2,3-cd]pyrene | 8 | NRO | 14 | 170 | NRO | <0.011 | <0.011 | <0.0098 | <0.011 | 0.033 | <0.0094 | <0.0097 | <0.010 | <0.010 | <0.0094 | 0.63 | <0.010 |
| Isophorone | 410000 | 4600 | 8 | 410000 | 4600 | <0.045 | <0.047 | <0.042 | <0.046 | <0.043 | <0.041 | <0.042 | <0.044 | <0.045 | <0.041 | <0.043 | <0.043 |
| Naphthalene | 41000 | 170 | 12 | 4100 | 1.8 | <0.0062 | <0.0065 | <0.0058 | <0.0063 | <0.0059 | <0.0056 | <0.0058 | <0.0060 | 0.0088 | <0.0055 | 0.35 | 0.032 |
| Nitrobenzene | 1000 | 92 | 0.1 | 1000 | 9.4 | <0.010 | <0.010 | <0.0094 | <0.010 | <0.0095 | <0.0091 | <0.0094 | <0.0098 | <0.010 | <0.0090 | <0.0095 | <0.0096 |
| N-Nitrosodi-n-propylamine | 0.8 | NRO | 0.00005 | 18 | NRO | <0.050 | <0.051 | <0.046 | <0.050 | <0.047 | <0.044 | <0.046 | <0.048 | <0.049 | <0.044 | <0.047 | <0.047 |
| N-Nitrosodiphenylamine | 1200 | NRO | 1 | 25000 | NRO | <0.048 | <0.050 | <0.044 | <0.048 | <0.045 | <0.043 | <0.044 | <0.046 | <0.047 | <0.043 | <0.045 | <0.046 |
| Pentachlorophenol | 24 | NRO | 0.02 | 520 | NRO | <0.65 | <0.67 | <0.60 | <0.66 | <0.61 | <0.58 | <0.60 | <0.63 | <0.64 | <0.58 | <0.61 | <0.62 |
| Phenanthrene | 61000 | NRO | 210 | 61000 | NRO | <0.0056 | <0.0059 | 0.048 | 0.0074 | 0.21 | 0.029 | 0.022 | <0.0055 | 0.051 | 0.049 | 4.9 | 0.092 |
| Phenol | 610000 | NRO | 100 | 61000 | NRO | <0.090 | <0.093 | <0.084 | <0.091 | <0.085 | <0.081 | <0.083 | <0.087 | <0.089 | <0.080 | <0.085 | <0.086 |
| Pyrene | 61000 | NRO | 4200 | 61000 | NRO | <0.0081 | <0.0083 | 0.018 | 0.012 | 0.17 | 0.012 | 0.012 | <0.0078 | 0.017 | 0.020 | 3.4 | 0.020 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
SVOCs via USEPA Method 8270c

ECS Project # 2861-B
UA Corporate Campus SSI

## Table 6. Summary of SVOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | | | | | | | | | |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | B-26 | B-27 | B-28 | B-29 | B-30 | B-31 | B-32 | B-33 | B-34 |
| | | | | | | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 20000 | 3200 | 5 | 2000 | 920 | <0.040 | <0.040 | <0.041 | <0.038 | <0.040 | <0.040 | <0.038 | <0.086 | <0.043 |
| 1,2-Dichlorobenzene | 180000 | 560 | 17 | 18000 | 310 | <0.045 | <0.045 | <0.045 | <0.043 | <0.044 | <0.045 | <0.042 | <0.095 | <0.048 |
| 1,3-Dichlorobenzene | NRO | NRO | NRO | NRO | NRO | <0.042 | <0.042 | <0.043 | <0.040 | <0.042 | <0.042 | <0.039 | <0.089 | <0.045 |
| 1,4-Dichlorobenzene | NRO | 11000 | 2 | NRO | 340 | <0.048 | <0.048 | <0.049 | <0.046 | <0.047 | <0.048 | <0.045 | <0.10 | <0.051 |
| 2,2'-oxybis[1-chloropropane] | NRO | NRO | NRO | NRO | NRO | <0.044 | <0.043 | <0.044 | <0.041 | <0.043 | <0.043 | <0.040 | <0.092 | <0.046 |
| 2,4,5-Trichlorophenol | 200000 | NRO | 64-230 | 200000 | NRO | <0.086 | <0.085 | <0.087 | <0.082 | <0.084 | <0.085 | <0.080 | <0.18 | <0.091 |
| 2,4,6-Trichlorophenol | 520 | 200 | 0.07-0.13 | 11000 | 540 | <0.13 | <0.13 | <0.13 | <0.12 | <0.13 | <0.13 | <0.12 | <0.27 | <0.14 |
| 2,4-Dichlorophenol | 6100 | NRO | 0.69-1 | 610 | NRO | <0.089 | <0.089 | <0.090 | <0.085 | <0.088 | <0.089 | <0.083 | <0.19 | <0.095 |
| 2,4-Dimethylphenol | 41000 | NRO | 9 | 41000 | NRO | <0.14 | <0.14 | <0.14 | <0.14 | <0.14 | <0.14 | <0.13 | <0.30 | <0.15 |
| 2,4-Dinitrophenol | 4100 | NRO | 0.2 | 410 | NRO | <0.66 | <0.66 | <0.67 | <0.63 | <0.65 | <0.66 | <0.61 | <1.4 | <0.70 |
| 2,4-Dinitrotoluene | 8.4 | NRO | 0.0008 | 180 | NRO | <0.060 | <0.060 | <0.060 | <0.057 | <0.059 | <0.059 | <0.055 | <0.13 | <0.063 |
| 2,6-Dinitrotoluene | 8.4 | NRO | 0.0007 | 180 | NRO | <0.074 | <0.074 | <0.075 | <0.070 | <0.073 | <0.073 | <0.069 | <0.16 | <0.078 |
| 2-Chloronaphthalene | 160000 | NRO | 49 | 160000 | NRO | <0.042 | <0.041 | <0.042 | <0.039 | <0.041 | <0.041 | <0.039 | <0.088 | <0.044 |
| 2-Chlorophenol | 10000 | 53000 | 3.1-3.9 | 10000 | 53000 | <0.064 | <0.064 | <0.065 | <0.061 | <0.063 | <0.064 | <0.059 | <0.14 | <0.068 |
| 2-Methylnaphthalene | 8200 | NRO | 1.9 | 820 | NRO | 0.058 | 0.044 | 0.020 | 0.022 | 0.019 | 0.038 | 0.011 | <0.015 | 0.095 |
| 2-Methylphenol | 100000 | NRO | 15 | 100000 | NRO | <0.060 | <0.060 | <0.061 | <0.057 | <0.059 | <0.060 | <0.056 | <0.13 | <0.064 |
| 2-Nitroaniline | 6100 | 35 | 0.14 | 610 | 3.6 | <0.051 | <0.050 | <0.051 | <0.048 | <0.050 | <0.050 | <0.047 | <0.11 | <0.054 |
| 2-Nitrophenol | NRO | NRO | NRO | NRO | NRO | <0.089 | <0.089 | <0.090 | <0.084 | <0.087 | <0.088 | <0.082 | <0.19 | <0.094 |
| 3 & 4 Methylphenol | 10000 | NRO | 0.2 | 1000 | NRO | <0.063 | <0.062 | <0.063 | <0.060 | <0.062 | <0.062 | <0.058 | <0.13 | <0.066 |
| 3,3'-Dichlorobenzidine | 13 | NRO | 0.007 | 280 | NRO | <0.053 | <0.052 | <0.053 | <0.050 | <0.052 | <0.052 | <0.049 | <0.11 | <0.056 |
| 3-Nitroaniline | 610 | 250 | 0.01 | 61 | 26 | <0.12 | <0.12 | <0.12 | <0.11 | <0.11 | <0.12 | <0.11 | <0.25 | <0.12 |
| 4,6-Dinitro-2-methylphenol | 200 | NRO | 0.0031 | 820 | NRO | <0.30 | <0.30 | <0.31 | <0.29 | <0.30 | <0.30 | <0.28 | <0.64 | <0.32 |
| 4-Bromophenyl phenyl ether | NRO | NRO | NRO | NRO | NRO | <0.050 | <0.049 | <0.050 | <0.047 | <0.049 | <0.049 | <0.046 | <0.10 | <0.053 |
| 4-Chloro-3-methylphenol | NRO | NRO | NRO | NRO | NRO | <0.13 | <0.13 | <0.13 | <0.12 | <0.13 | <0.13 | <0.12 | <0.27 | <0.14 |
| 4-Chloroaniline | 8200 | NRO | 0.7 | 820 | NRO | <0.18 | <0.18 | <0.18 | <0.17 | <0.17 | <0.18 | <0.16 | <0.37 | <0.19 |
| 4-Chlorophenyl phenyl ether | NRO | NRO | NRO | NRO | NRO | <0.044 | <0.044 | <0.044 | <0.042 | <0.043 | <0.044 | <0.041 | <0.093 | <0.047 |
| 4-Nitroaniline | 6100 | 1000 | 0.1 | 610 | 110 | <0.16 | <0.16 | <0.16 | <0.15 | <0.15 | <0.16 | <0.15 | <0.33 | <0.17 |
| 4-Nitrophenol | NRO | NRO | NRO | NRO | NRO | <0.36 | <0.36 | <0.36 | <0.34 | <0.35 | <0.35 | <0.33 | <0.76 | <0.38 |
| Acenaphthene | 120000 | NRO | 570 | 120000 | NRO | <0.0068 | 0.034 | <0.0068 | 0.0077 | <0.0066 | <0.0067 | <0.0063 | 0.085 | 0.85 |
| Acenaphthylene | 61000 | NRO | 85 | 61000 | NRO | <0.0050 | <0.0049 | <0.0050 | <0.0047 | <0.0049 | <0.0049 | <0.0046 | 0.017 | 0.016 |
| Anthracene | 610000 | NRO | 12000 | 610000 | NRO | <0.0063 | 0.11 | <0.0063 | 0.013 | <0.0062 | <0.0062 | <0.0058 | 0.24 | 1.3 |
| Benzo[a]anthracene | 8 | NRO | **2** | 170 | NRO | <0.0051 | 0.39 | <0.0051 | 0.077 | <0.0050 | 0.0091 | <0.0047 | 1.2 | **4.3** |
| Benzo[a]pyrene | **2.1** | NRO | 8 | 17 | NRO | <0.0073 | 0.38 | <0.0074 | 0.071 | <0.0071 | <0.0072 | <0.0067 | 1.5 | **4.4** |
| Benzo[b]fluoranthene | 8 | NRO | **5** | 170 | NRO | <0.0081 | 0.58 | <0.0082 | 0.12 | <0.0080 | <0.0080 | <0.0075 | 2.0 | **6.1** |
| Benzo[g,h,i]perylene | 61000 | NRO | 27000 | 61000 | NRO | 0.016 | 0.12 | 0.016 | 0.028 | <0.012 | <0.012 | <0.011 | 0.74 | 1.4 |
| Benzo[k]fluoranthene | 78 | NRO | 49 | 1700 | NRO | <0.011 | 0.20 | <0.011 | 0.045 | <0.011 | <0.011 | <0.010 | 0.83 | 2.1 |
| Bis(2-chloroethoxy)methane | NRO | NRO | NRO | NRO | NRO | <0.038 | <0.038 | <0.039 | <0.036 | <0.038 | <0.038 | <0.036 | <0.081 | <0.041 |
| Bis(2-chloroethyl)ether | 5 | 0.2 | 0.0004 | 75 | 0.66 | <0.056 | <0.056 | <0.057 | <0.054 | <0.055 | <0.056 | <0.052 | <0.12 | <0.060 |
| Bis(2-ethylhexyl) phthalate | 410 | 31000 | 3600 | 4100 | 31000 | <0.069 | <0.068 | <0.069 | <0.065 | <0.067 | <0.068 | <0.064 | 0.15 | 0.24 |
| Butyl benzyl phthalate | 410000 | 930 | 930 | 410000 | 930 | <0.071 | <0.071 | <0.072 | <0.068 | <0.070 | <0.071 | <0.066 | <0.15 | <0.076 |
| Carbazole | 290 | NRO | **0.6** | 6200 | NRO | <0.094 | <0.094 | <0.095 | <0.089 | <0.092 | <0.093 | <0.087 | 0.28 | **1.1** |
| Chrysene | 780 | NRO | 160 | 17000 | NRO | 0.018 | 0.43 | 0.019 | 0.10 | 0.021 | 0.014 | <0.0095 | 1.5 | 4.8 |
| Dibenz(a,h)anthracene | 0.8 | NRO | 2 | 17 | NRO | <0.0073 | 0.043 | <0.0073 | 0.0084 | <0.0071 | <0.0072 | <0.0067 | 0.19 | 0.53 |
| Dibenzofuran | NRO | NRO | NRO | 820 | NRO | <0.044 | <0.044 | <0.044 | <0.042 | <0.043 | <0.044 | <0.041 | <0.093 | 0.30 |
| Diethyl phthalate | 1000000 | 2000 | 470 | 1000000 | 2000 | <0.064 | <0.063 | <0.064 | <0.061 | <0.063 | <0.063 | <0.059 | <0.13 | <0.067 |
| Dimethyl phthalate | NRO | NRO | NRO | NRO | NRO | <0.049 | <0.049 | <0.050 | <0.047 | <0.048 | <0.049 | <0.046 | <0.10 | <0.052 |
| Di-n-butyl phthalate | 200000 | 2300 | 2300 | 200000 | 2300 | <0.057 | <0.057 | <0.058 | <0.054 | <0.056 | <0.057 | <0.053 | <0.12 | <0.061 |
| Di-n-octyl phthalate | 41000 | 10000 | 10000 | 4100 | 10000 | <0.061 | <0.061 | <0.062 | <0.058 | <0.060 | <0.061 | <0.057 | <0.13 | <0.065 |
| Fluoranthene | 82000 | NRO | 4300 | 82000 | NRO | 0.0072 | 0.86 | 0.0097 | 0.20 | 0.0070 | 0.016 | 0.012 | 2.8 | 9.9 |
| Fluorene | 82000 | NRO | 560 | 82000 | NRO | <0.0053 | 0.023 | <0.0053 | 0.0060 | 0.0058 | <0.0052 | 0.0054 | 0.083 | 0.63 |
| Hexachlorobenzene | 4 | 1 | 2 | 78 | 2.6 | <0.0087 | <0.0087 | <0.0088 | <0.0083 | <0.0086 | <0.0086 | <0.0081 | <0.018 | <0.0092 |
| Hexachlorobutadiene | 2000 | NRO | 2.2 | 200 | NRO | <0.059 | <0.059 | <0.060 | <0.056 | <0.058 | <0.059 | <0.055 | <0.12 | <0.063 |
| Hexachlorocyclopentadiene | 14000 | 10 | 400 | 14000 | 1.1 | <0.22 | <0.22 | <0.22 | <0.21 | <0.21 | <0.21 | <0.20 | <0.46 | <0.23 |
| Hexachloroethane | 2000 | NRO | 0.5 | 2000 | NRO | <0.057 | <0.057 | <0.058 | <0.054 | <0.056 | <0.057 | <0.053 | <0.12 | <0.061 |
| Indeno[1,2,3-cd]pyrene | 8 | NRO | 14 | 170 | NRO | <0.0097 | 0.11 | <0.0098 | 0.023 | <0.0096 | <0.0097 | <0.0090 | 0.71 | 1.4 |
| Isophorone | 410000 | 4600 | 8 | 410000 | 4600 | <0.042 | <0.042 | <0.043 | <0.040 | <0.041 | <0.042 | <0.039 | <0.089 | <0.045 |
| Naphthalene | 41000 | 170 | 12 | 4100 | 1.8 | 0.016 | 0.018 | 0.0072 | 0.011 | <0.0057 | 0.0097 | 0.0061 | <0.012 | 0.079 |
| Nitrobenzene | 1000 | 92 | 0.1 | 1000 | 9.4 | <0.0094 | <0.0093 | <0.0095 | <0.0089 | <0.0092 | <0.0093 | <0.0087 | <0.020 | <0.0099 |
| N-Nitrosodi-n-propylamine | 0.8 | NRO | 0.00005 | 18 | NRO | <0.046 | <0.046 | <0.046 | <0.044 | <0.045 | <0.046 | <0.043 | <0.097 | <0.049 |
| N-Nitrosodiphenylamine | 1200 | NRO | 1 | 25000 | NRO | <0.044 | <0.044 | <0.045 | <0.042 | <0.044 | <0.044 | <0.041 | <0.094 | <0.047 |
| Pentachlorophenol | 24 | NRO | 0.02 | 520 | NRO | <0.60 | <0.60 | <0.61 | <0.57 | <0.59 | <0.60 | <0.56 | <1.3 | <0.64 |
| Phenanthrene | 61000 | NRO | 210 | 61000 | NRO | 0.054 | 0.51 | 0.051 | 0.14 | 0.060 | 0.041 | 0.030 | 1.3 | 6.9 |
| Phenol | 610000 | NRO | 100 | 61000 | NRO | <0.083 | <0.083 | <0.084 | <0.079 | <0.082 | <0.083 | <0.077 | <0.18 | <0.088 |
| Pyrene | 61000 | NRO | 4200 | 61000 | NRO | 0.018 | 0.54 | 0.019 | 0.13 | 0.013 | 0.015 | 0.0099 | 2.1 | 7.3 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
SVOCs via USEPA Method 8270c

## Table 7. Summary of Metal Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-1 | B-5 | B-6 | B-7 | B-7D | B-9 | B-10 | B-11 | B-12 | B-14 | B-15 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 2-4 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | | | |
| Aluminum | 1000000 | 1000000 | NRO [9500] | 410000 | 870000 | --- | --- | (12000) | (11000) | (12000) | --- | (11000) | --- | --- | --- | (13000) |
| TCLP Aluminum* | NRO | NRO | **3.5** | NRO | NRO | --- | --- | **4.1** | <0.20 | <0.20 | --- | <0.20 | --- | --- | --- | 0.25 |
| Antimony | 820 | NRO | 5 | 82 | NRO | --- | --- | 1.3 | 1.3 | 0.86 | --- | 0.96 | --- | --- | --- | 1.2 |
| Arsenic | **13** | 1200 | 29-32 | 61 | 25000 | --- | --- | 6.6 | 9.9 | 8.7 | --- | 6.6 | --- | --- | --- | **17** |
| Barium | 140000 | 910000 | 1700-2100[110] | 14000 | 870000 | --- | --- | 110 | 45 | 44 | --- | [37] | --- | --- | --- | 190 |
| Beryllium | 4100 | 2100 | 1000-8000[0.59] | 410 | 44000 | --- | --- | 0.88 | 0.98 | 0.93 | --- | (0.84) | --- | --- | --- | 1.1 |
| TCLP Beryllium* | NRO | NRO | 0.004 | NRO | NRO | --- | --- | --- | --- | --- | --- | <0.0040 | --- | --- | --- | --- |
| Cadmium | 2000 | 2800 | 11-430[0.6] | 200 | 59000 | --- | --- | 0.14 | 0.091 | 0.049 | --- | [0.096] | --- | --- | --- | 0.26 |
| Calcium | NRO | NRO | NRO | NRO | NRO | --- | --- | 45000 | 52000 | 70000 | --- | 53000 | --- | --- | --- | 3900 |
| Chromium | 6100 | 420 | 21-36 | 4100 | 690 | --- | --- | 18 | 18 | 18 | --- | 17 | --- | --- | --- | 20 |
| Cobalt | 120000 | NRO | NRO [8.9] | 12000 | NRO | --- | --- | (12) | (12) | (17) | --- | (9.0) | --- | --- | --- | (21) |
| TCLP Cobalt* | NRO | NRO | 1 | NRO | NRO | | | 0.24 | <0.010 | 0.053 | --- | <0.010 | --- | --- | --- | <0.010 |
| Copper | 82000 | NRO | 330000[19.6] | 8200 | NRO | --- | --- | 34 | 33 | 27 | --- | (24) | --- | --- | --- | 17 |
| TCLP Copper* | NRO | NRO | 0.65 | NRO | NRO | --- | --- | --- | --- | --- | --- | <0.010 | --- | --- | --- | --- |
| Iron | 1000000 | NRO | NRO [15900] | 140000 | NRO | --- | --- | (22000) | (28000) | (22000) | --- | (20000) | --- | --- | --- | (32000) |
| TCLP Iron* | NRO | NRO | 5 | NRO | NRO | --- | --- | 3.2 | <0.20 | <0.20 | --- | <0.20 | --- | --- | --- | 0.33 |
| Lead | 800 | NRO | 107[36] | 700 | NRO | 13 | 14 | 14 | 16 | 16 | [7.6] | 12 | [12] | [13] | 35 | 21 |
| Magnesium | NRO | NRO | NRO | 730000 | NRO | --- | --- | 23000 | 27000 | 38000 | --- | 29000 | --- | --- | --- | 4200 |
| Manganese | 41000 | 91000 | 636 | 4100 | 8700 | --- | --- | [530] | [380] | [510] | --- | [360] | --- | --- | --- | (1400) |
| TCLP Manganese* | NRO | NRO | **0.15** | NRO | NRO | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | **0.83** |
| Nickel | 41000 | 21000 | 700-3800[18] | 4100 | 440000 | --- | --- | 31 | 37 | 39 | --- | (29) | --- | --- | --- | 30 |
| TCLP Nickel* | NRO | NRO | 0.1 | NRO | NRO | --- | --- | --- | --- | --- | --- | <0.01 | --- | --- | --- | --- |
| Potassium | NRO | NRO | NRO | NRO | NRO | --- | --- | 2500 | 3000 | 3400 | --- | 3000 | --- | --- | --- | 1600 |
| Selenium | 10000 | NRO | 1.8-4.5 | 1000 | NRO | --- | --- | <0.68 | <0.68 | <0.64 | --- | <0.61 | --- | --- | --- | <0.65 |
| Silver | 10000 | NRO | 13-110[0.55] | 1000 | NRO | --- | --- | 0.36 | 0.25 | <0.14 | --- | [0.22] | --- | --- | --- | 0.48 |
| Sodium | NRO | NRO | NRO | NRO | NRO | --- | --- | 1900 | 150 | 220 | --- | 340 | --- | --- | --- | 94 |
| Thallium | 160 | NRO | 3.4-4.4 | 160 | NRO | --- | --- | <0.58 | <0.57 | 0.54 | --- | <0.52 | --- | --- | --- | <0.55 |
| Vanadium | 14000 | NRO | 980 | 1400 | NRO | --- | --- | 24 | 25 | 22 | --- | 22 | --- | --- | --- | 34 |
| Zinc | 610000 | NRO | 16000-53000[53] | 61000 | NRO | --- | --- | 65 | 61 | 57 | --- | (59) | --- | --- | --- | 75 |
| TCLP Zinc* | NRO | NRO | 5 | NRO | NRO | --- | --- | --- | --- | --- | --- | 0.037 | --- | --- | --- | --- |
| Mercury | 610 | 16 | 3.3-8[0.06] | 61 | 0.1 | --- | --- | 0.032 | 0.022 | 0.020 | --- | [0.024] | --- | --- | --- | 0.050 |
| pH | NRO | | | | | 7.61 | 8.19 | 7.90 | 7.78 | 7.87 | --- | 8.69 | --- | --- | 7.37 | 7.25 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**

NRO – No Remediation Objective listed in 35 IAC 742

* - Indicates concentrations are listed in mg/L

[x] - Indicates that background concentration was utilized as pH specific RO does not exist

( ) - Indicates that the TCLP value was utilized for comparison

Metals and pH via USEPA Method 6010B/9014

# Table 8. Summary of Metal Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | | | | | | | | | | | | |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | B-17 | B-18 | B-18D | B-19 | B-20 | B-20D | B-21 | B-22 | B-23 | B-23D | B-24 | B-25 |
| | | | | | | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 15 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | | | | |
| Aluminum | 1000000 | 1000000 | NRO [9500] | 410000 | 870000 | --- | (13000) | (12000) | (18000) | (11000) | [8500] | (16000) | (12000) | --- | [8200] | (12000) | --- |
| TCLP Aluminum* | NRO | NRO | 3.5 | NRO | NRO | --- | <0.20 | <0.20 | 0.23 | <0.20 | --- | <0.20 | <0.20 | --- | --- | <0.20 | --- |
| Antimony | 820 | NRO | 5 | 82 | NRO | --- | 1.2 | 0.89 | 1.5 | 1.2 | 1.1 | 1.4 | 0.79 | --- | 0.61 | 1.4 | --- |
| Arsenic | 13 | 1200 | 29-32 [13] | 61 | 25000 | 10 | 7.7 | 8.3 | 6.1 | 7.3 | 9.4 | 3.9 | 3.4 | 5.8 | 8.2 | 7.2 | 6.3 |
| Barium | 140000 | 910000 | 1700-2100[110] | 14000 | 870000 | 110 | 65 | 44 | 120 | 50 | 30 | 96 | [53] | 62 | [35] | 46 | 42 |
| Beryllium | 4100 | 2100 | 1000-8000[0.59] | 410 | 44000 | --- | 0.97 | 0.88 | 1.1 | 0.80 | 0.79 | 0.98 | (0.76) | --- | (0.68) | 0.92 | --- |
| TCLP Beryllium* | NRO | NRO | 0.004* | NRO | NRO | --- | --- | --- | --- | --- | --- | --- | <0.0040* | --- | <0.0040* | --- | --- |
| Cadmium | 2000 | 2800 | 11-430[0.6] | 200 | 59000 | 0.16 | 0.12 | <0.041 | 0.12 | 0.15 | 6.8 | 0.23 | [0.21] | <0.042 | [0.062] | <0.037 | 0.13 |
| Calcium | NRO | NRO | NRO | NRO | NRO | --- | 31000 | 64000 | 6800 | 68000 | 48000 | 8700 | 96000 | --- | 54000 | 44000 | --- |
| Chromium | 6100 | 420 | 21-36 | 4100 | 690 | 23 | 19 | 18 | 24 | 17 | 14 | 21 | 17 | 22 | 13 | 18 | 15 |
| Cobalt | 120000 | NRO | NRO [8.9] | 12000 | NRO | --- | (9.5) | (14) | [8.7] | (12) | (16) | (9.7) | 6.3 | --- | (10) | (11) | --- |
| TCLP Cobalt* | NRO | NRO | 1 | NRO | NRO | | <0.010 | 0.040 | | <0.010 | 0.034 | <0.010 | --- | --- | 0.024 | 0.016 | --- |
| Copper | 82000 | NRO | 330000[19.6] | 8200 | NRO | --- | 28 | 24 | 23 | 24 | 30 | 26 | [14] | --- | (21) | 24 | --- |
| TCLP Copper* | NRO | NRO | 0.65 | NRO | NRO | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0.012 | --- | --- |
| Iron | 1000000 | NRO | NRO [15900] | 140000 | NRO | --- | (22000) | (20000) | (22000) | (19000) | (21000) | [14000] | [15000] | --- | (17000) | (26000) | --- |
| TCLP Iron* | NRO | NRO | 5 | NRO | NRO | --- | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | --- | --- | --- | <0.20 | <0.20 | --- |
| Lead | 800 | NRO | 107[36] | 700 | NRO | 17 | 15 | 13 | 19 | 13 | 15 | 18 | 10 | 12 | 12 | 20 | 10 |
| Magnesium | NRO | NRO | NRO | 730000 | NRO | --- | 20000 | 35000 | 6300 | 31000 | 26000 | 6100 | 25000 | --- | 28000 | 25000 | --- |
| Manganese | 41000 | 91000 | [636] | 4100 | 8700 | --- | [240] | [430] | [170] | [400] | [380] | [300] | [240] | --- | [340] | [350] | --- |
| Nickel | 41000 | 21000 | 700-3800[18] | 4100 | 440000 | --- | 30 | 35 | 30 | 29 | 38 | 26 | (22) | --- | (26) | 29 | --- |
| TCLP Nickel* | NRO | NRO | 0.1 | NRO | NRO | --- | --- | --- | --- | --- | --- | --- | <0.010 | --- | 0.053 | --- | --- |
| Potassium | NRO | NRO | NRO | NRO | NRO | --- | 2600 | 3300 | 2000 | 2700 | 2500 | 1900 | 3000 | --- | 2400 | 3200 | --- |
| Selenium | 10000 | NRO | 1.8-4.5 | 1000 | NRO | <0.61 | <0.70 | <0.67 | <0.62 | <0.68 | <0.64 | <0.68 | <0.65 | <0.68 | <0.64 | <0.61 | <0.66 |
| Silver | 10000 | NRO | 13-110[0.55] | 1000 | NRO | 0.41 | 0.35 | 0.21 | 0.36 | 0.23 | <0.14 | 0.39 | [0.23] | 0.32 | [<0.14] | 0.34 | 0.23 |
| Sodium | NRO | NRO | NRO | NRO | NRO | --- | 1200 | 230 | 95 | 160 | 170 | 290 | 130 | --- | 200 | 460 | --- |
| Thallium | 160 | NRO | 3.4-4.4 | 160 | NRO | --- | <0.59 | <0.57 | <0.53 | <0.58 | <0.55 | <0.58 | <0.55 | --- | [<0.55] | <0.52 | --- |
| Vanadium | 14000 | NRO | 980 | 1400 | NRO | --- | 27 | 23 | 34 | 24 | 16 | 33 | 21 | --- | 17 | 26 | --- |
| Zinc | 610000 | NRO | 16000-53000[53] | 61000 | NRO | --- | 69 | 53 | 73 | 56 | 1300 | 71 | [52] | --- | (57) | 56 | --- |
| TCLP Zinc* | NRO | NRO | 5 | NRO | NRO | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0.061 | --- | --- |
| Mercury | 610 | 16 | 3.3-8[0.06] | 61 | 0.1 | 0.057 | 0.031 | 0.020 | 0.042 | 0.032 | 0.019 | 0.024 | [0.022] | 0.017 | [0.017] | 0.020 | 0.019 |
| pH | NRO | | | | | 7.17 | 7.58 | 7.99 | 7.03 | 7.99 | 8.23 | 7.60 | 8.29 | 8.19 | 8.34 | 7.16 | 7.93 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**

**Exceeded SROs are shaded green**

NRO – No Remediation Objective listed in 35 IAC 742

* - Indicates concentrations are listed in mg/L

[x] - Indicates that background concentration was utilized as pH specific RO does not exist

( ) - Indicates that the TCLP value was utilized for comparison

Metals and pH via USEPA Method 6010B/9014

# Table 9. Summary of VOC Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-26 | B-27 | B-28 | B-29 | B-30 | B-31 | B-32 | B-33 | B-34 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | | |
| Aluminum | 1000000 | 1000000 | NRO [9500] | 410000 | 870000 | --- | (12000) | --- | --- | --- | --- | [6500] | --- | --- |
| TCLP Aluminum* | NRO | NRO | 3.5 | NRO | NRO | --- | <0.20 | --- | --- | --- | --- | --- | --- | --- |
| Antimony | 820 | NRO | 5 | 82 | NRO | --- | 1.1 | --- | --- | --- | --- | 0.75 | --- | --- |
| Arsenic | 13 | 1200 | 29-32 [13] | 61 | 25000 | [6.3] | 11 | 8.8 | 8.2 | 8.2 | 5.1 | 6.3 | 7.4 | 6.8 |
| Barium | 140000 | 910000 | 1700-2100[110] | 14000 | 870000 | [50] | 47 | [48] | 40 | [32] | [39] | [33] | 96 | 110 |
| Beryllium | 4100 | 2100 | 1000-8000[0.59] | 410 | 44000 | --- | 0.90 | --- | --- | --- | --- | 0.56 | --- | --- |
| Cadmium | 2000 | 2800 | 11-430[0.6] | 200 | 59000 | [<0.037] | 0.083 | [0.043] | 0.098 | [<0.038] | [<0.039] | [<0.036] | 0.37 | 0.50 |
| Calcium | NRO | NRO | NRO | NRO | NRO | --- | 59000 | --- | --- | --- | --- | 51000 | --- | --- |
| Chromium | 6100 | 420 | 21-36[16.8] | 4100 | 690 | (19) | 19 | 19 | 15 | 12 | 15 | 12 | 28 | 22 |
| TCLP Chromium* | NRO | NRO | 0.1 | NRO | NRO | <0.010 | --- | --- | --- | --- | --- | --- | --- | --- |
| Cobalt | 120000 | NRO | NRO [8.9] | 12000 | NRO | --- | (12) | --- | --- | --- | --- | (9.5) | --- | --- |
| TCLP Cobalt* | NRO | NRO | 1 | NRO | NRO | --- | 0.027 | --- | --- | --- | --- | 0.015 | --- | --- |
| Copper | 82000 | NRO | 330000[19.6] | 8200 | NRO | --- | 23 | --- | --- | --- | --- | 19 | --- | --- |
| Iron | 1000000 | NRO | NRO [15900] | 140000 | NRO | --- | (22000) | --- | --- | --- | --- | [15000] | --- | --- |
| TCLP Iron* | NRO | NRO | 5 | NRO | NRO | | <0.20 | --- | --- | --- | --- | --- | --- | --- |
| Lead | 800 | NRO | 107[36] | 700 | NRO | [11] | 12 | 12 | 15 | 11 | 10 | 11 | 39 | 53 |
| Magnesium | NRO | NRO | NRO | 730000 | NRO | --- | 30000 | --- | --- | --- | --- | 24000 | --- | --- |
| Manganese | 41000 | 91000 | [636] | 4100 | 8700 | --- | [420] | --- | --- | --- | --- | [330] | --- | --- |
| Nickel | 41000 | 21000 | 700-3800[18] | 4100 | 440000 | --- | 32 | --- | --- | --- | --- | 25 | --- | --- |
| Potassium | NRO | NRO | NRO | NRO | NRO | --- | 3800 | --- | --- | --- | --- | 1700 | --- | --- |
| Selenium | 10000 | NRO | 1.8-4.5 | 1000 | NRO | [<0.61] | <0.63 | <0.66 | <0.62 | <0.62 | <0.64 | <0.58 | 0.71 | <0.61 |
| Silver | 10000 | NRO | 13-110[0.55] | 1000 | NRO | [0.25] | 0.16 | [0.28] | 0.22 | [0.20] | [0.21] | [0.17] | 0.36 | 0.36 |
| Sodium | NRO | NRO | NRO | NRO | NRO | --- | 260 | --- | --- | --- | --- | 160 | --- | --- |
| Thallium | 160 | NRO | 3.4-4.4 | 160 | NRO | --- | <0.54 | --- | --- | --- | --- | <0.49 | --- | --- |
| Vanadium | 14000 | NRO | 980 | 1400 | NRO | --- | 24 | --- | --- | --- | --- | 15 | --- | --- |
| Zinc | 610000 | NRO | 16000-53000[53] | 61000 | NRO | --- | 56 | --- | --- | --- | --- | [42] | --- | --- |
| Mercury | 610 | 16 | 3.3-8[0.06] | 61 | **0.1** | [0.019] | 0.019 | [0.020] | 0.022 | 0.024 | 0.023 | 0.022 | 0.098 | **0.11** |
| pH | NRO | | | | | 9.38 | 8.18 | 8.48 | 7.96 | 8.45 | 8.39 | 8.31 | 7.15 | 7.26 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**

**Exceeded SROs are shaded green**

NRO – No Remediation Objective listed in 35 IAC 742

* - Indicates concentrations are listed in mg/L

[x] - Indicates that background concentration was utilized as pH specific RO does not exist

( ) - Indicates that the TCLP value was utilized for comparison

Metals and pH via USEPA Method 6010B/9014

# Table 10. Summary of Pesticide Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | | | | | | | | |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | B-6 | B-7 | B-7D | B-10 | B-15 | B-18 | B-18D | B-19 |
| | | | | | | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 15 | 2-4 |
| | mg/kg | | | | | | | | | | | | |
| 4,4'-DDD | 24 | NRO | 16 | 520 | NRO | 0.038 | 0.0051 | <0.0010 | <0.0010 | 0.0036 | <0.0011 | <0.0010 | <0.0011 |
| 4,4'-DDE | 17 | NRO | 54 | 370 | NRO | 0.14 | 0.0068 | <0.0010 | <0.00099 | 0.020 | <0.0011 | <0.00096 | 0.0046 |
| 4,4'-DDT | 17 | 1500 | 32 | 100 | 2100 | 0.0013 | 0.0015 | <0.00092 | <0.00091 | 0.0023 | <0.00099 | <0.00088 | 0.0023 |
| Aldrin | 0.3 | 6.6 | 0.5 | 6.1 | 9.3 | <0.0014 | <0.0013 | <0.0013 | <0.0013 | <0.0015 | <0.0014 | <0.0013 | <0.0014 |
| alpha-BHC | 0.9 | 1.5 | 0.0005 | 20 | 2.1 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0012 | <0.0012 | <0.0010 | <0.0012 |
| beta-BHC | NRO | NRO | NRO | NRO | NRO | 0.0033 | 0.011 | <0.0016 | <0.0016 | <0.0017 | <0.0017 | <0.0015 | <0.0016 |
| cis-Chlordane | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0010 | <0.0010 | <0.0010 | <0.0011 | <0.0011 | <0.00099 | <0.0011 |
| delta-BHC | NRO | NRO | NRO | NRO | NRO | <0.00097 | <0.00092 | <0.00093 | <0.00092 | <0.0010 | <0.00099 | <0.00089 | <0.00098 |
| Dieldrin | 0.4 | 2.2 | 0.004 | 7.8 | 3.1 | <0.0011 | <0.0010 | <0.0010 | <0.0010 | <0.0011 | <0.0011 | <0.00097 | <0.0011 |
| Endosulfan I | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0010 | <0.0010 | <0.0010 | <0.0011 | <0.0011 | <0.0010 | <0.0011 |
| Endosulfan II | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0010 | <0.0011 | <0.0011 | <0.0012 | <0.0011 | <0.0010 | <0.0011 |
| Endosulfan sulfate | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0012 | <0.0012 | <0.0010 | <0.0011 |
| Endrin | 610 | NRO | 1 | 61 | NRO | <0.0010 | <0.00098 | <0.00099 | <0.00098 | <0.0011 | <0.0011 | <0.00095 | <0.0010 |
| Endrin aldehyde | NRO | NRO | NRO | NRO | NRO | <0.0012 | <0.0011 | <0.0011 | <0.0011 | <0.0012 | <0.0012 | <0.0011 | <0.0012 |
| Endrin ketone | NRO | NRO | NRO | NRO | NRO | <0.00098 | <0.00093 | <0.00095 | <0.00094 | <0.0010 | <0.0010 | <0.00090 | <0.00099 |
| gamma-BHC (Lindane) | 4 | NRO | 0.009 | 96 | NRO | <0.0010 | <0.00095 | <0.00097 | <0.00096 | <0.0011 | <0.0010 | <0.00092 | <0.0010 |
| Heptachlor | 1 | 11 | 23 | 28 | 16 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0011 | <0.0010 | <0.0011 |
| Heptachlor epoxide | 0.6 | 9.2 | 0.7 | 2.7 | 13 | <0.0011 | <0.0010 | <0.0010 | <0.0010 | <0.0011 | <0.0011 | <0.0010 | <0.0011 |
| Methoxychlor | 10000 | NRO | 160 | 1000 | NRO | <0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0014 | <0.0014 | <0.0012 | <0.0013 |
| Toxaphene | 5.2 | 170 | 31 | 110 | 240 | <0.0081 | <0.0076 | <0.0078 | <0.0077 | <0.0085 | <0.0083 | <0.0074 | <0.0082 |
| trans-Chlordane | NRO | NRO | NRO | NRO | NRO | <0.0012 | <0.0011 | <0.0011 | <0.0011 | <0.0012 | <0.0012 | <0.0011 | <0.0012 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
Pesticides via USEPA Method 8081B

# Table 11. Summary of Pesticide Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | B-20 | B-20D | B-21 | B-22 | B-23D | B-24 | B-27 | B-32 |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | 2-4 | 15 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | |
| 4,4'-DDD | 24 | NRO | 16 | 520 | NRO | 0.0016 | <0.0010 | 0.051 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.00097 |
| 4,4'-DDE | 17 | NRO | 54 | 370 | NRO | 0.0032 | <0.00098 | 0.068 | <0.0010 | <0.00096 | <0.0010 | <0.00099 | <0.00093 |
| 4,4'-DDT | 17 | 1500 | 32 | 100 | 2100 | 0.0012 | <0.00090 | 0.0054 | <0.00094 | <0.00089 | <0.00096 | <0.00092 | <0.00086 |
| Aldrin | 0.3 | 6.6 | 0.5 | 6.1 | 9.3 | <0.0014 | <0.0013 | <0.0013 | <0.0014 | <0.0013 | <0.0014 | <0.0013 | <0.0013 |
| alpha-BHC | 0.9 | 1.5 | 0.0005 | 20 | 2.1 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0010 |
| beta-BHC | NRO | NRO | NRO | NRO | NRO | <0.0016 | <0.0015 | <0.0015 | <0.0016 | <0.0015 | <0.0016 | <0.0016 | <0.0015 |
| cis-Chlordane | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0010 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.00097 |
| delta-BHC | NRO | NRO | NRO | NRO | NRO | <0.00095 | <0.00091 | <0.00091 | <0.00095 | <0.00089 | <0.00096 | <0.00092 | <0.00087 |
| Dieldrin | 0.4 | 2.2 | 0.004 | 7.8 | 3.1 | <0.0010 | <0.0010 | <0.00099 | <0.0010 | <0.00098 | <0.0011 | <0.0010 | <0.00095 |
| Endosulfan I | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0010 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.00098 |
| Endosulfan II | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0010 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0011 | <0.00099 |
| Endosulfan sulfate | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0011 | <0.0010 |
| Endrin | 610 | NRO | 1 | 61 | NRO | <0.0010 | <0.00097 | <0.00097 | <0.0010 | <0.00095 | <0.0010 | <0.00098 | <0.00092 |
| Endrin aldehyde | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0010 |
| Endrin ketone | NRO | NRO | NRO | NRO | NRO | <0.00097 | <0.00093 | <0.00092 | <0.00096 | <0.00091 | <0.00098 | <0.00094 | <0.00088 |
| gamma-BHC (Lindane) | 4 | NRO | 0.009 | 96 | NRO | <0.00099 | <0.00095 | <0.00094 | <0.00099 | <0.00093 | <0.0010 | <0.00096 | <0.00090 |
| Heptachlor | 1 | 11 | 23 | 28 | 16 | <0.0011 | <0.0010 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.00098 |
| Heptachlor epoxide | 0.6 | 9.2 | 0.7 | 2.7 | 13 | <0.0011 | <0.0010 | <0.0010 | <0.0011 | <0.0010 | <0.0011 | <0.0010 | <0.00098 |
| Methoxychlor | 10000 | NRO | 160 | 1000 | NRO | <0.0013 | <0.0013 | <0.0012 | <0.0013 | <0.0012 | <0.0013 | <0.0013 | <0.0012 |
| Toxaphene | 5.2 | 170 | 31 | 110 | 240 | <0.0080 | <0.0076 | <0.0076 | <0.0079 | <0.0075 | <0.0080 | <0.0077 | <0.0072 |
| trans-Chlordane | NRO | NRO | NRO | NRO | NRO | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0011 | <0.0012 | <0.0011 | <0.0010 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
Pesticides via USEPA Method 8081B

# Table 12. Summary of PCB Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | | | | | | | | |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | B-6 | B-7 | B-7D | B-10 | B-15 | B-18 | B-18D | B-19 |
| | | | | | | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 | 15 | 2-4 |
| | mg/kg | | | | | | | | | | | | |
| PCB-1016 | NRO | NRO | NRO | NRO | NRO | <0.0078 | <0.0074 | <0.0075 | <0.0075 | <0.0082 | <0.0081 | <0.0072 | <0.0079 |
| PCB-1221 | NRO | NRO | NRO | NRO | NRO | <0.0078 | <0.0074 | <0.0075 | <0.0075 | <0.0082 | <0.0081 | <0.0072 | <0.0079 |
| PCB-1232 | NRO | NRO | NRO | NRO | NRO | <0.0054 | <0.0051 | <0.0052 | <0.0052 | <0.0057 | <0.0056 | <0.0050 | <0.0055 |
| PCB-1242 | NRO | NRO | NRO | NRO | NRO | <0.0078 | <0.0074 | <0.0075 | <0.0074 | <0.0082 | <0.0080 | <0.0071 | <0.0079 |
| PCB-1248 | NRO | NRO | NRO | NRO | NRO | <0.0095 | <0.0090 | <0.0091 | <0.0091 | <0.010 | <0.0098 | <0.0087 | <0.0096 |
| PCB-1254 | NRO | NRO | NRO | NRO | NRO | <0.0068 | <0.0064 | <0.0065 | <0.0065 | <0.0071 | <0.0070 | 0.013 | <0.0069 |
| PCB-1260 | NRO | NRO | NRO | NRO | NRO | <0.0075 | <0.0071 | <0.0072 | <0.0072 | <0.0079 | <0.0078 | <0.0069 | <0.0076 |
| Polychlorinated biphenyls, Total | 1 | NRO | NRO | NRO | NRO | <0.0054 | <0.0051 | <0.0052 | <0.0052 | <0.0057 | <0.0056 | 0.013 | <0.0055 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
PCBs via USEPA Method 8082A

# Table 13. Summary of PCB Concentrations in Soil
## Samples Collected August 2021

| Analyte | Tier 1 SROs | | | | | Sample Location and Depth (ft) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Industrial/Commercial | | SCGI | Construction Worker | | | | | | | | | |
| | Ingestion | Inhalation | Class I | Ingestion | Inhalation | B-20 | B-20D | B-21 | B-22 | B-23D | B-24 | B-27 | B-32 |
| | | | | | | 2-4 | 15 | 2-4 | 2-4 | 15 | 2-4 | 2-4 | 2-4 |
| | mg/kg | | | | | | | | | | | | |
| PCB-1016 | NRO | NRO | NRO | NRO | NRO | <0.0077 | <0.0074 | <0.0074 | <0.0077 | <0.0072 | <0.0078 | <0.0075 | <0.0070 |
| PCB-1221 | NRO | NRO | NRO | NRO | NRO | <0.0077 | <0.0074 | <0.0074 | <0.0077 | <0.0072 | <0.0078 | <0.0075 | <0.0070 |
| PCB-1232 | NRO | NRO | NRO | NRO | NRO | <0.0053 | <0.0051 | <0.0051 | <0.0053 | <0.0050 | <0.0054 | <0.0052 | <0.0049 |
| PCB-1242 | NRO | NRO | NRO | NRO | NRO | <0.0077 | <0.0073 | <0.0073 | <0.0076 | <0.0072 | <0.0077 | <0.0074 | <0.0070 |
| PCB-1248 | NRO | NRO | NRO | NRO | NRO | <0.0094 | <0.0090 | <0.0089 | <0.0093 | <0.0088 | <0.0095 | <0.0091 | <0.0085 |
| PCB-1254 | NRO | NRO | NRO | NRO | NRO | <0.0067 | <0.0064 | <0.0064 | <0.0066 | <0.0063 | <0.0068 | <0.0065 | <0.0061 |
| PCB-1260 | NRO | NRO | NRO | NRO | NRO | <0.0074 | <0.0071 | <0.0071 | <0.0074 | <0.0070 | <0.0075 | <0.0072 | <0.0068 |
| Polychlorinated biphenyls, Total | 1 | NRO | NRO | NRO | NRO | <0.0053 | <0.0051 | <0.0051 | <0.0053 | <0.0050 | <0.0054 | <0.0052 | <0.0049 |

**Concentrations in excess of Tier 1 SROs are shaded yellow**
**Exceeded SROs are shaded green**
NRO – No Remediation Objective Listed in 35 IAC 742
PCBs via USEPA Method 8082A

## Table 14. Summary of Sample Analyses for Soil/Gas - USEPA TO-15 Compounds

| Analyte | Indoor RO Residential | Sample ID | | | |
|---|---|---|---|---|---|
| | | SG-1 | SG-2 | SG-3 | SG-4 |
| | mg/m$^3$ | | | | |
| 1,1,1-Trichloroethane | 41,000 | <0.0044 | <0.0044 | <0.0044 | <0.0044 |
| 1,1,2-Trichloroethane | 170,000 | <0.0044 | <0.0044 | <0.0044 | <0.0044 |
| 1,1-Dichloroethane | 4,200 | <0.0032 | <0.0032 | <0.0032 | <0.0032 |
| 1,1-Dichloroethylene | 1,600 | <0.0032 | <0.0032 | <0.0032 | <0.0032 |
| 1,2,4-Trichlorobenzene | 25 | <0.030 | <0.030 | <0.030 | <0.030 |
| 1,2-Dibromoethane | 0.048 | <0.0061 | <0.0061 | <0.0061 | <0.0061 |
| 1,2-Dichlorobenzene | 1,700 | <0.0048 | <0.0048 | <0.0048 | <0.0048 |
| 1,2-Dichloroethane | 0.81 | 0.00067 | <0.0032 | 0.00054 | <0.0032 |
| 1,2-Dichloropropane | 2.3 | <0.0037 | <0.0037 | <0.0037 | <0.0037 |
| 1,4-Dichlorobenzene | 6,800 | <0.0048 | <0.0048 | <0.0048 | <0.0048 |
| 2-Butanone (MEK) | 40,000 | 0.020 | 0.048 | 0.0075 | 0.0083 |
| Acetone | 750,000 | 0.052 | 0.22 | 0.054 | 0.12 |
| Benzene | 2.8 | 0.0042 | 0.0089 | 0.0012 | 0.0013 |
| Bromodichloromethane | 450,000 | <0.0054 | <0.0054 | <0.0054 | <0.0054 |
| Bromoform | 52 | <0.0083 | <0.0083 | <0.0083 | <0.0083 |
| Butanol | 29,000 | 0.0093 | 0.016 | 0.012 | 0.014 |
| Carbon disulfide | 5,300 | 0.027 | 0.20 | 0.0012 | 0.00098 |
| Carbon tetrachloride | 1.5 | 0.00098 | <0.0050 | <0.0050 | <0.0050 |
| Chlorobenzene | 420 | 0.00064 | 0.00059 | 0.00046 | 0.00044 |
| Chlorodibromomethane | 57,000 | <0.0068 | <0.0068 | <0.0068 | <0.0068 |
| Chloroform | 0.92 | 0.0019 | 0.00035 | <0.0039 | 0.0013 |
| cis-1,2-Dichloroethylene | 1,100,000 | <0.0032 | <0.0032 | <0.0032 | <0.0032 |
| Dichlorodifluoromethane | 1,700 | 0.0037 | 0.0014 | 0.0028 | 0.0026 |
| Ethylbenzene | 9.3 | 0.0065 | 0.023 | 0.00092 | 0.0018 |
| Isopropylbenzene | 3,500 | 0.0017 | 0.0037 | <0.0079 | <0.0079 |
| m+p-Xylene | 820 | 0.024 | 0.11 | 0.0028 | 0.0055 |
| Methyl bromide | 42 | <0.0031 | <0.0031 | <0.0031 | <0.0031 |
| Methyl tertiary butyl ether | 24,000 | <0.014 | <0.014 | <0.014 | <0.014 |
| Methylene chloride | 45 | 0.14 | 0.022 | 0.025 | <0.014 |
| Naphthalene | 0.75 | <0.010 | <0.010 | <0.010 | <0.010 |
| o-Xylene | 790 | 0.017 | 0.052 | 0.0016 | 0.0022 |
| p-Dioxane | 2.3 | <0.0072 | <0.0072 | <0.0072 | <0.0072 |
| Styrene | 8,500 | <0.0034 | <0.0034 | <0.0034 | 0.0010 |
| Tetrachloroethylene | 4 | 0.0098 | 0.0013 | 0.00076 | 0.0049 |
| Toluene | 40,000 | 0.054 | 0.060 | 0.022 | 0.0075 |
| trans-1,2-Dichloroethylene | 510 | <0.0032 | <0.0032 | <0.0032 | <0.0032 |
| Trichloroethylene | 12 | <0.0021 | 0.00071 | <0.0021 | 0.086 |
| Trichlorofluoromethane | 5,600 | 0.012 | 0.0014 | 0.0021 | 0.0020 |
| Vinyl acetate | 1,600 | <0.014 | <0.014 | <0.014 | <0.014 |
| Vinyl chloride | 4.8 | <0.0010 | <0.0010 | <0.0010 | <0.0010 |
| Xylenes (total) | 840 | 0.041 | 0.16 | 0.0044 | 0.0077 |
| cis-1,3-Dichloropropene | NRO | <0.0036 | <0.0036 | <0.0036 | <0.0036 |
| trans-1,3-Dichloropropene | NRO | <0.0036 | <0.0036 | <0.0036 | <0.0036 |

**Concentrations in excess of ROs are shaded yellow**
**Exceeded ROs are shaded green**
Indoor ROs as Listed in 35 IAC 742 Appendix B - Table H
NRO – No Remedial Objective Listed
Air Analysis via USEPA Method TO-15

**BORING LOGS**

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204605-2
Client Project/Site: Cloud HQ (53: 2861-B)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/23/2021 12:12:15 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

## Job ID: 500-204605-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204605-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 9/1/2021 1:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6º C.

**Metals**
Method 6010B: The continuing calibration blanks (CCB) contained Iron above the reporting limit (RL). The sample B-7D (500-204605-4) and B-20D (500-204605-6) associated with this CCB did not contain the target compound; therefore, re-analysis of samples was not performed.

B-7D (500-204605-4) and B-20D (500-204605-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

## Client Sample ID: B-7D — Lab Sample ID: 500-204605-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.053 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-18D — Lab Sample ID: 500-204605-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.040 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-20D — Lab Sample ID: 500-204605-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.034 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-23D — Lab Sample ID: 500-204605-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Nickel | 0.052 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Copper | 0.012 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Zinc | 0.061 | J | 0.10 | 0.020 | mg/L | 1 | | 6010B | TCLP |
| Cobalt | 0.024 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 1311 | TCLP Extraction | SW846 | TAL CHI |
| 3010A | Preparation, Total Metals | SW846 | TAL CHI |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204605-4 | B-7D | Solid | 08/31/21 13:30 | 09/01/21 13:30 |
| 500-204605-5 | B-18D | Solid | 08/31/21 13:50 | 09/01/21 13:30 |
| 500-204605-6 | B-20D | Solid | 08/31/21 14:20 | 09/01/21 13:30 |
| 500-204605-7 | B-23D | Solid | 08/31/21 14:45 | 09/01/21 13:30 |

# Client Sample Results

Client: ECS Midwest LLC
Job ID: 500-204605-2
Project/Site: Cloud HQ (53: 2861-B)

## Client Sample ID: B-7D
**Lab Sample ID: 500-204605-4**

**Date Collected: 08/31/21 13:30**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/21/21 16:10 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/21/21 16:10 | 1 |
| **Cobalt** | **0.053** | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:10 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

**Client Sample ID: B-18D**
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-5**
**Matrix: Solid**

**Method: 6010B - Metals (ICP) - TCLP**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/22/21 14:44 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/21/21 16:14 | 1 |
| **Cobalt** | **0.040** | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:14 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

## Client Sample ID: B-20D

**Date Collected: 08/31/21 14:20**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-6

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/21/21 16:17 | 1 |
| **Cobalt** | **0.034** | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:17 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

**Client Sample ID: B-23D**
**Date Collected: 08/31/21 14:45**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-7**
**Matrix: Solid**

**Method: 6010B - Metals (ICP) - TCLP**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0040 | 0.0040 | mg/L | | 09/21/21 07:42 | 09/21/21 16:20 | 1 |
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/22/21 14:47 | 1 |
| **Nickel** | **0.052** | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:20 | 1 |
| **Copper** | **0.012** | **J** | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:20 | 1 |
| **Zinc** | **0.061** | **J** | 0.10 | 0.020 | mg/L | | 09/21/21 07:42 | 09/21/21 16:20 | 1 |
| **Cobalt** | **0.024** | **J** | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:20 | 1 |

# Definitions/Glossary

Client: ECS Midwest LLC
Job ID: 500-204605-2
Project/Site: Cloud HQ (53: 2861-B)

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-2

## Metals

### Leach Batch: 619220

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | TCLP | Solid | 1311 | |
| 500-204605-5 | B-18D | TCLP | Solid | 1311 | |
| 500-204605-6 | B-20D | TCLP | Solid | 1311 | |
| 500-204605-7 | B-23D | TCLP | Solid | 1311 | |
| LB 500-619220/2-B | Method Blank | TCLP | Solid | 1311 | |

### Prep Batch: 619477

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | TCLP | Solid | 3010A | 619220 |
| 500-204605-5 | B-18D | TCLP | Solid | 3010A | 619220 |
| 500-204605-6 | B-20D | TCLP | Solid | 3010A | 619220 |
| 500-204605-7 | B-23D | TCLP | Solid | 3010A | 619220 |
| LB 500-619220/2-B | Method Blank | TCLP | Solid | 3010A | 619220 |
| LCS 500-619477/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |

### Analysis Batch: 619755

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | TCLP | Solid | 6010B | 619477 |
| 500-204605-5 | B-18D | TCLP | Solid | 6010B | 619477 |
| 500-204605-6 | B-20D | TCLP | Solid | 6010B | 619477 |
| 500-204605-7 | B-23D | TCLP | Solid | 6010B | 619477 |
| LB 500-619220/2-B | Method Blank | TCLP | Solid | 6010B | 619477 |
| LCS 500-619477/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 619477 |

### Analysis Batch: 619928

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-5 | B-18D | TCLP | Solid | 6010B | 619477 |
| 500-204605-7 | B-23D | TCLP | Solid | 6010B | 619477 |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: LCS 500-619477/2-A**
**Matrix: Solid**
**Analysis Batch: 619755**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 619477**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0535 | | mg/L | | 107 | 80 - 120 |
| Iron | 1.00 | 1.11 | | mg/L | | 111 | 80 - 120 |
| Nickel | 0.500 | 0.515 | | mg/L | | 103 | 80 - 120 |
| Copper | 0.250 | 0.268 | | mg/L | | 107 | 80 - 120 |
| Aluminum | 2.00 | 2.09 | | mg/L | | 105 | 80 - 120 |
| Zinc | 0.500 | 0.587 | | mg/L | | 117 | 80 - 120 |
| Cobalt | 0.500 | 0.518 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LB 500-619220/2-B**
**Matrix: Solid**
**Analysis Batch: 619755**

**Client Sample ID: Method Blank**
**Prep Type: TCLP**
**Prep Batch: 619477**

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0040 | 0.0040 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |
| Nickel | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |
| Copper | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |
| Zinc | ND | | 0.10 | 0.020 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |

# Lab Chronicle

Client: ECS Midwest LLC
Job ID: 500-204605-2
Project/Site: Cloud HQ (53: 2861-B)

## Client Sample ID: B-7D
**Lab Sample ID: 500-204605-4**
**Date Collected: 08/31/21 13:30**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619755 | 09/21/21 16:10 | JJB | TAL CHI |

## Client Sample ID: B-18D
**Lab Sample ID: 500-204605-5**
**Date Collected: 08/31/21 13:50**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619755 | 09/21/21 16:14 | JJB | TAL CHI |
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619928 | 09/22/21 14:44 | JJB | TAL CHI |

## Client Sample ID: B-20D
**Lab Sample ID: 500-204605-6**
**Date Collected: 08/31/21 14:20**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619755 | 09/21/21 16:17 | JJB | TAL CHI |

## Client Sample ID: B-23D
**Lab Sample ID: 500-204605-7**
**Date Collected: 08/31/21 14:45**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619755 | 09/21/21 16:20 | JJB | TAL CHI |
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619928 | 09/22/21 14:47 | JJB | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-204605-2
Project/Site: Cloud HQ (53: 2861-B)

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

500-204605 COC

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | | COC No |
|---|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact. Jim Knapp | | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | | Job No 500-204605 |
| Buffalo Grove IL 60089 | Calendar ( C ) or Work Days (W) | | | SDG No |
| Phone | | | | |
| 224-478-9420 FAX 847 279-0369 | ☐ 2 weeks | | | |
| Project Name Cloud HQ | ☒ Standard | | | |
| Site 53 2861-B | ☐ 3 day | | | |
| P O # 53 2861-B | ☐ 1 day | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-33 | 8/31/21 | 1130 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 2 | ~~B-35~~ B-34 | 8/31/21 | 1200 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 3 | B-14 | 8/31/21 | 1245 | Grab | Soil | Kit | | | | | | | X | | X | X | X | |
| 4 | B-7D | 8/31/21 | 1330 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 5 | B-18D | 8/31/21 | 1350 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 6 | B-20D | 8/31/21 | 1420 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 7 | B-23D | 8/31/21 | 1445 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |

Preservation Used: 1= Ice, 2= HCl; 3= $H_2SO_4$; 4=$HNO_3$; 5=NaOH; 6= Other _____

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ In Irritant ☐ son B Unknown

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☒ Disposal By Lab ☐ chive For _____ Months

**Special Instructions/QC Requirements & Comments:**

| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
|---|---|---|---|---|---|
| | ECS Midwest | 9/1/21 | | IA | 9/1/21 1000 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | IA 9/1/21 | 1330 | Paula Buckley | EST CAN | 9/1/21 1330 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | | | | |



1.60

48 hr

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204605-2

**Login Number: 204605**
**List Number: 1**
**Creator: Buckley, Paula M**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.6 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204356-1
Client Project/Site: Cloud HQ (53:2861-B)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/2/2021 4:50:12 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-204356-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204356-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/26/2021 12:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

**GC/MS VOA**
Method 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for 616485 recovered outside control limits for Acetone. B-6 (500-204356-3), B-7 (500-204356-4), B-10 (500-204356-6), B-15 (500-204356-9), B-17 (500-204356-10) and B-18 (500-204356-11)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC/MS Semi VOA**
Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-616422 was outside the method criteria for the following analyte(s): 2,2'-oxybis[1-chloropropane] and Hexachlorocyclopentadiene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-616645 was outside the method criteria for the following analyte(s): bis(chloroisopropyl) ether, 2,4,6-Tribromophenol (Surr), Hexachlorobenzene, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-616645 was outside the method criteria for the following analyte(s): Benzo[a]pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The following sample contained one acid surrogate outside acceptance limits: B-7 (500-204356-4). The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-616303 and analytical batch 500-616422 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC Semi VOA**
Method 8081B: ) The %RPD between the primary and confirmation column exceeded 40% for beta-BHC for the following sample: B-7 (500-204356-4). The lower has been reported and qualified in accordance with the laboratory's SOP.

Method 8081B: The %RPD between the primary and confirmation column exceeded 40% for 4,4'-DDT for the following sample: B-6 (500-204356-3). The lower has been reported and qualified in accordance with the laboratory's SOP.

Method 8081B: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: B-6 (500-204356-3). The reagent lot number used was: SLCG3578.

Method 8082A: Surrogate DCB Decachlorobiphenyl recovery for the following method blank (MB) was outside control limits: (MB 500-616559/1-A). The other surrogate was within limits and the MB is non-detect for the target analytes; therefore, re-analysis was not

## Job ID: 500-204356-1 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

performed.

Method 8082A: The following sample required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: B-6 (500-204356-3). The reagent lot number used was: SLCG3578.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**

Method 6010B: The method blank for preparation batch 500-616902 and analytical batch 500-617123 contained Calcium and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-1 — Lab Sample ID: 500-204356-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 0.046 | | 0.037 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.068 | | 0.037 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.50 | | 0.037 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.12 | | 0.037 | 0.0063 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 1.2 | | 0.037 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.95 | | 0.037 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.37 | | 0.037 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.46 | | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.63 | | 0.037 | 0.0081 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.28 | | 0.037 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.43 | | 0.037 | 0.0073 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.14 | | 0.037 | 0.0098 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.046 | | 0.037 | 0.0073 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.12 | | 0.037 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Lead | 13 | | 0.54 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| pH | 7.6 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-5 — Lab Sample ID: 500-204356-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 14 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| pH | 8.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-6 — Lab Sample ID: 500-204356-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.12 | *1 | 0.021 | 0.0093 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Methyl Ethyl Ketone | 0.023 | | 0.0053 | 0.0024 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| beta-BHC | 0.0033 | | 0.0020 | 0.0016 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDD | 0.038 | | 0.0020 | 0.0011 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDT | 0.0013 | J | 0.0020 | 0.00096 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDE - DL | 0.14 | | 0.010 | 0.0052 | mg/Kg | 5 | ☼ | 8081B | Total/NA |
| Aluminum | 12000 | B | 23 | 9.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.3 | J | 2.3 | 0.45 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 6.6 | | 1.2 | 0.39 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 110 | | 1.2 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.88 | | 0.46 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.14 | J B | 0.23 | 0.042 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 45000 | B | 23 | 3.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 18 | | 1.2 | 0.57 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 12 | | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 34 | | 1.2 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 22000 | B | 23 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 14 | | 0.58 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 23000 | B | 12 | 5.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 530 | B | 1.2 | 0.17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 31 | | 1.2 | 0.34 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2500 | | 58 | 20 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.36 | J | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 1900 | | 120 | 17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 24 | | 0.58 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 65 | | 2.3 | 1.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-6 (Continued) — Lab Sample ID: 500-204356-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.032 | | 0.018 | 0.0059 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| Cyanide, Total | 0.13 | J | 0.26 | 0.13 | mg/Kg | 1 | ☼ | 9012B | Total/NA |
| pH | 7.9 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-7 — Lab Sample ID: 500-204356-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | 0.015 | J | 0.038 | 0.0083 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.013 | J | 0.038 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.017 | J | 0.038 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.0085 | J | 0.038 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.0092 | J | 0.038 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.016 | J | 0.038 | 0.0076 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| beta-BHC | 0.011 | | 0.0019 | 0.0015 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDD | 0.0051 | | 0.0019 | 0.0010 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDE | 0.0068 | | 0.0019 | 0.00099 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDT | 0.0015 | J | 0.0019 | 0.00091 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| Aluminum | 11000 | B | 23 | 9.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.3 | J | 2.3 | 0.45 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 9.9 | | 1.1 | 0.39 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 45 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.98 | | 0.46 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.091 | J B | 0.23 | 0.041 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 52000 | B | 23 | 3.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 18 | | 1.1 | 0.57 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 12 | | 0.57 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 33 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 28000 | B | 23 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 16 | | 0.57 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 27000 | B | 11 | 5.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 380 | B | 1.1 | 0.17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 37 | | 1.1 | 0.33 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3000 | | 57 | 20 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.25 | J | 0.57 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 150 | | 110 | 17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 25 | | 0.57 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 61 | | 2.3 | 1.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.022 | | 0.018 | 0.0061 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.8 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-9 — Lab Sample ID: 500-204356-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 7.6 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

## Client Sample ID: B-10 — Lab Sample ID: 500-204356-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 0.0092 | J | 0.039 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.024 | J | 0.039 | 0.0084 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.028 | J F1 | 0.039 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.026 | J | 0.039 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-10 (Continued) — Lab Sample ID: 500-204356-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Dibenz(a,h)anthracene | 0.016 | J | 0.039 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.019 | J F1 | 0.039 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.020 | J | 0.039 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.015 | J | 0.039 | 0.0077 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Aluminum | 11000 | B | 21 | 8.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 0.96 | J | 2.1 | 0.41 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 6.6 | | 1.0 | 0.36 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 37 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.84 | | 0.42 | 0.098 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.096 | J B | 0.21 | 0.038 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 53000 | B | 21 | 3.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 17 | | 1.0 | 0.52 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 9.0 | | 0.52 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 24 | | 1.0 | 0.29 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 20000 | B | 21 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 12 | | 0.52 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 29000 | B | 10 | 5.2 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 360 | B | 1.0 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 29 | | 1.0 | 0.30 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3000 | | 52 | 18 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.22 | J | 0.52 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 340 | | 100 | 15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 22 | | 0.52 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 59 | | 2.1 | 0.92 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.024 | | 0.019 | 0.0064 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.7 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-11 — Lab Sample ID: 500-204356-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | 0.012 | J | 0.039 | 0.0086 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.0090 | J | 0.039 | 0.0077 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Lead | 12 | | 0.57 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

## Client Sample ID: B-12 — Lab Sample ID: 500-204356-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 13 | | 0.56 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

## Client Sample ID: B-15 — Lab Sample ID: 500-204356-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.034 | *1 | 0.018 | 0.0080 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Methyl Ethyl Ketone | 0.0054 | | 0.0046 | 0.0020 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| 4,4'-DDD | 0.0036 | | 0.0021 | 0.0011 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDE | 0.020 | | 0.0021 | 0.0011 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDT | 0.0023 | | 0.0021 | 0.0010 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| Aluminum | 13000 | B | 22 | 9.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.2 | J | 2.2 | 0.43 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 17 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 190 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 1.1 | | 0.44 | 0.10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-15 (Continued)

## Lab Sample ID: 500-204356-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 0.26 | B | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 3900 | B | 22 | 3.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 20 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 21 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 17 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 32000 | B | 22 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 21 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 4200 | B | 11 | 5.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 1400 | B | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 30 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 1600 | | 55 | 19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.48 | J | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 94 | J | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 34 | | 0.55 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 75 | | 2.2 | 0.96 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.050 | | 0.020 | 0.0067 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.3 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-17

## Lab Sample ID: 500-204356-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.052 | *1 | 0.019 | 0.0082 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Methyl Ethyl Ketone | 0.0074 | | 0.0047 | 0.0021 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Arsenic | 10 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 110 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.16 | J B | 0.21 | 0.037 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 23 | | 1.0 | 0.51 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 17 | | 0.52 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.41 | J | 0.52 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.057 | | 0.020 | 0.0066 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-18

## Lab Sample ID: 500-204356-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.040 | *1 | 0.017 | 0.0074 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Methyl Ethyl Ketone | 0.0057 | | 0.0043 | 0.0019 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Aluminum | 13000 | B | 24 | 9.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.2 | J | 2.4 | 0.46 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 7.7 | | 1.2 | 0.40 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 65 | | 1.2 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.97 | | 0.47 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.12 | J B | 0.24 | 0.043 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 31000 | B | 24 | 4.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 19 | | 1.2 | 0.59 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 9.5 | | 0.59 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 28 | | 1.2 | 0.33 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 22000 | B | 24 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 15 | | 0.59 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 20000 | B | 12 | 5.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 240 | B | 1.2 | 0.17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 30 | | 1.2 | 0.34 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-18 (Continued)

## Lab Sample ID: 500-204356-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Potassium | 2600 | | 59 | 21 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.35 | J | 0.59 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 1200 | | 120 | 18 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 27 | | 0.59 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 69 | | 2.4 | 1.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.031 | | 0.020 | 0.0065 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.6 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8081B | Organochlorine Pesticides (GC) | SW846 | TAL CHI |
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL CHI |
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 7471B | Mercury (CVAA) | SW846 | TAL CHI |
| 9012B | Cyanide, Total andor Amenable | SW846 | TAL CHI |
| 9045D | pH | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 3050B | Preparation, Metals | SW846 | TAL CHI |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |
| 7471B | Preparation, Mercury | SW846 | TAL CHI |
| 9010C | Cyanide, Distillation | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204356-1 | B-1 | Solid | 08/25/21 08:00 | 08/26/21 12:50 |
| 500-204356-2 | B-5 | Solid | 08/25/21 08:50 | 08/26/21 12:50 |
| 500-204356-3 | B-6 | Solid | 08/25/21 10:00 | 08/26/21 12:50 |
| 500-204356-4 | B-7 | Solid | 08/25/21 10:35 | 08/26/21 12:50 |
| 500-204356-5 | B-9 | Solid | 08/25/21 11:00 | 08/26/21 12:50 |
| 500-204356-6 | B-10 | Solid | 08/25/21 11:10 | 08/26/21 12:50 |
| 500-204356-7 | B-11 | Solid | 08/25/21 12:15 | 08/26/21 12:50 |
| 500-204356-8 | B-12 | Solid | 08/25/21 12:30 | 08/26/21 12:50 |
| 500-204356-9 | B-15 | Solid | 08/25/21 12:50 | 08/26/21 12:50 |
| 500-204356-10 | B-17 | Solid | 08/25/21 13:40 | 08/26/21 12:50 |
| 500-204356-11 | B-18 | Solid | 08/25/21 14:15 | 08/26/21 12:50 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-1

**Date Collected: 08/25/21 08:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-1

**Matrix: Solid**
**Percent Solids: 87.6**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.012 | 0.0068 | mg/Kg | ☼ | 08/25/21 08:00 | 08/31/21 11:55 | 50 |
| Toluene | ND | | 0.012 | 0.0069 | mg/Kg | ☼ | 08/25/21 08:00 | 08/31/21 11:55 | 50 |
| Ethylbenzene | ND | | 0.012 | 0.0085 | mg/Kg | ☼ | 08/25/21 08:00 | 08/31/21 11:55 | 50 |
| Xylenes, Total | ND | | 0.023 | 0.010 | mg/Kg | ☼ | 08/25/21 08:00 | 08/31/21 11:55 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *90* | | *75 - 126* | *08/25/21 08:00* | *08/31/21 11:55* | *50* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* | *08/25/21 08:00* | *08/31/21 11:55* | *50* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *72 - 124* | *08/25/21 08:00* | *08/31/21 11:55* | *50* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | *08/25/21 08:00* | *08/31/21 11:55* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | | 0.037 | 0.0058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Acenaphthene** | **0.046** | | 0.037 | 0.0068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Fluorene** | **0.068** | | 0.037 | 0.0053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Phenanthrene** | **0.50** | | 0.037 | 0.0053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Anthracene** | **0.12** | | 0.037 | 0.0063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Fluoranthene** | **1.2** | | 0.037 | 0.0070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Pyrene** | **0.95** | | 0.037 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Benzo[a]anthracene** | **0.37** | | 0.037 | 0.0051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Chrysene** | **0.46** | | 0.037 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Benzo[b]fluoranthene** | **0.63** | | 0.037 | 0.0081 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Benzo[k]fluoranthene** | **0.28** | | 0.037 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Benzo[a]pyrene** | **0.43** | | 0.037 | 0.0073 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.14** | | 0.037 | 0.0098 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Dibenz(a,h)anthracene** | **0.046** | | 0.037 | 0.0073 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |
| **Benzo[g,h,i]perylene** | **0.12** | | 0.037 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 17:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *80* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 17:45* | *1* |
| *2-Fluorobiphenyl* | *86* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 17:45* | *1* |
| *Terphenyl-d14* | *101* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 17:45* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **13** | | 0.54 | 0.25 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 12:53 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.6** | | 0.2 | 0.2 | SU | | | 08/31/21 16:31 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-5

**Date Collected: 08/25/21 08:50**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-2

**Matrix: Solid**
**Percent Solids: 84.7**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.012 | 0.0072 | mg/Kg | ☼ | 08/25/21 08:50 | 09/01/21 13:12 | 50 |
| Toluene | ND | | 0.012 | 0.0073 | mg/Kg | ☼ | 08/25/21 08:50 | 09/01/21 13:12 | 50 |
| Ethylbenzene | ND | | 0.012 | 0.0091 | mg/Kg | ☼ | 08/25/21 08:50 | 09/01/21 13:12 | 50 |
| Xylenes, Total | ND | | 0.025 | 0.011 | mg/Kg | ☼ | 08/25/21 08:50 | 09/01/21 13:12 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *75 - 126* | *08/25/21 08:50* | *09/01/21 13:12* | *50* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 120* | *08/25/21 08:50* | *09/01/21 13:12* | *50* |
| *4-Bromofluorobenzene (Surr)* | *75* | | *72 - 124* | *08/25/21 08:50* | *09/01/21 13:12* | *50* |
| *Dibromofluoromethane* | *88* | | *75 - 120* | *08/25/21 08:50* | *09/01/21 13:12* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | | 0.039 | 0.0060 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Acenaphthylene | ND | | 0.039 | 0.0051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Acenaphthene | ND | | 0.039 | 0.0070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Fluorene | ND | | 0.039 | 0.0055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Phenanthrene | ND | | 0.039 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Anthracene | ND | | 0.039 | 0.0065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Fluoranthene | ND | | 0.039 | 0.0072 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Pyrene | ND | | 0.039 | 0.0078 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Benzo[a]anthracene | ND | | 0.039 | 0.0053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Chrysene | ND | | 0.039 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Benzo[b]fluoranthene | ND | | 0.039 | 0.0084 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Benzo[k]fluoranthene | ND | | 0.039 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Benzo[a]pyrene | ND | | 0.039 | 0.0076 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.039 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.039 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.039 | 0.013 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 13:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *85* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 13:42* | *1* |
| *2-Fluorobiphenyl* | *84* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 13:42* | *1* |
| *Terphenyl-d14* | *101* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 13:42* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **14** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 12:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.2** | | 0.2 | 0.2 | SU | | | 08/31/21 16:36 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-6

**Date Collected: 08/25/21 10:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-3

**Matrix: Solid**
**Percent Solids: 82.3**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.12** | ***1** | 0.021 | 0.0093 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Benzene | ND | | 0.0021 | 0.00055 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Bromodichloromethane | ND | | 0.0021 | 0.00044 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Bromoform | ND | | 0.0021 | 0.00062 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Bromomethane | ND | | 0.0053 | 0.0020 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Carbon disulfide | ND | | 0.0053 | 0.0011 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Carbon tetrachloride | ND | | 0.0021 | 0.00062 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Chlorobenzene | ND | | 0.0021 | 0.00079 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Chloroethane | ND | | 0.0053 | 0.0016 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Chloroform | ND | | 0.0021 | 0.00074 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Chloromethane | ND | | 0.0053 | 0.0021 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0021 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0021 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Dibromochloromethane | ND | | 0.0021 | 0.00070 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,1-Dichloroethane | ND | | 0.0021 | 0.00073 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,2-Dichloroethane | ND | | 0.0053 | 0.0017 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,1-Dichloroethene | ND | | 0.0021 | 0.00074 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,2-Dichloropropane | ND | | 0.0021 | 0.00055 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0021 | 0.00075 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Ethylbenzene | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 2-Hexanone | ND | | 0.0053 | 0.0017 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Methylene Chloride | ND | | 0.0053 | 0.0021 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| **Methyl Ethyl Ketone** | **0.023** | | 0.0053 | 0.0024 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| methyl isobutyl ketone | ND | | 0.0053 | 0.0016 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Methyl tert-butyl ether | ND | | 0.0021 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Styrene | ND | | 0.0021 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0021 | 0.00068 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Tetrachloroethene | ND | | 0.0021 | 0.00073 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Toluene | ND | | 0.0021 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0021 | 0.00095 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0021 | 0.00075 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0021 | 0.00072 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0021 | 0.00092 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Trichloroethene | ND | | 0.0021 | 0.00072 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Vinyl chloride | ND | | 0.0021 | 0.00095 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |
| Xylenes, Total | ND | | 0.0043 | 0.00068 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *75 - 131* | *08/26/21 19:02* | *08/30/21 21:15* | *1* |
| *Dibromofluoromethane* | *112* | | *75 - 126* | *08/26/21 19:02* | *08/30/21 21:15* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *123* | | *70 - 134* | *08/26/21 19:02* | *08/30/21 21:15* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/26/21 19:02* | *08/30/21 21:15* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.040 | 0.0072 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Acenaphthylene | ND | | 0.040 | 0.0053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Anthracene | ND | | 0.040 | 0.0067 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Benzo[a]anthracene | ND | | 0.040 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Benzo[a]pyrene | ND | | 0.040 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-6**
**Date Collected: 08/25/21 10:00**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-3**
**Matrix: Solid**
**Percent Solids: 82.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.040 | 0.0086 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.040 | 0.013 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Benzo[k]fluoranthene | ND | | 0.040 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.20 | 0.041 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.20 | 0.060 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.20 | 0.073 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.20 | 0.053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Butyl benzyl phthalate | ND | | 0.20 | 0.076 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Carbazole | ND | | 0.20 | 0.10 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4-Chloroaniline | ND | | 0.81 | 0.19 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2-Chloronaphthalene | ND | | 0.20 | 0.044 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2-Chlorophenol | ND | | 0.20 | 0.068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Chrysene | ND | | 0.040 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.040 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Dibenzofuran | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | 0.048 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | 0.051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.20 | 0.056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,4-Dichlorophenol | ND | | 0.40 | 0.095 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Diethyl phthalate | ND | | 0.20 | 0.068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,4-Dimethylphenol | ND | | 0.40 | 0.15 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Dimethyl phthalate | ND | | 0.20 | 0.052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Di-n-butyl phthalate | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.81 | 0.32 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,4-Dinitrophenol | ND | | 0.81 | 0.70 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.20 | 0.079 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Di-n-octyl phthalate | ND | | 0.20 | 0.065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Fluoranthene | ND | | 0.040 | 0.0074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Fluorene | ND | | 0.040 | 0.0056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Hexachlorobenzene | ND | | 0.081 | 0.0093 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | 0.063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.81 | 0.23 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Hexachloroethane | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.040 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Isophorone | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2-Methylnaphthalene | ND | | 0.081 | 0.0074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2-Methylphenol | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 3 & 4 Methylphenol | ND | | 0.20 | 0.067 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Naphthalene | ND | | 0.040 | 0.0061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2-Nitroaniline | ND | | 0.20 | 0.054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 3-Nitroaniline | ND | | 0.40 | 0.12 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4-Nitroaniline | ND | | 0.40 | 0.17 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Nitrobenzene | ND | | 0.040 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2-Nitrophenol | ND | | 0.40 | 0.094 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 4-Nitrophenol | ND | | 0.81 | 0.38 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |

**Client Sample ID: B-6**
**Date Collected: 08/25/21 10:00**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-3**
**Matrix: Solid**
**Percent Solids: 82.3**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.081 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Pentachlorophenol | ND | | 0.81 | 0.64 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Phenanthrene | ND | | 0.040 | 0.0056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Phenol | ND | | 0.20 | 0.089 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| Pyrene | ND | | 0.040 | 0.0079 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | 0.043 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.40 | 0.091 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *78* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 14:06* | *1* |
| *2-Fluorophenol* | *85* | | *31 - 166* | *08/27/21 17:53* | *08/30/21 14:06* | *1* |
| *Nitrobenzene-d5* | *77* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 14:06* | *1* |
| *Phenol-d5* | *88* | | *30 - 153* | *08/27/21 17:53* | *08/30/21 14:06* | *1* |
| *Terphenyl-d14* | *100* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 14:06* | *1* |
| *2,4,6-Tribromophenol* | *68* | | *31 - 143* | *08/27/21 17:53* | *08/30/21 14:06* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0020 | 0.0014 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| alpha-BHC | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| **beta-BHC** | **0.0033** | | 0.0020 | 0.0016 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| cis-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| **4,4'-DDD** | **0.038** | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| **4,4'-DDT** | **0.0013** | **J** | 0.0020 | 0.00096 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| delta-BHC | ND | | 0.0020 | 0.00097 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Dieldrin | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Endosulfan I | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Endosulfan II | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Endosulfan sulfate | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Endrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Endrin aldehyde | ND | | 0.0020 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Endrin ketone | ND | | 0.0020 | 0.00098 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Heptachlor | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Heptachlor epoxide | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Methoxychlor | ND | | 0.0099 | 0.0013 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| Toxaphene | ND | | 0.020 | 0.0081 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |
| trans-Chlordane | ND | | 0.0020 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *71* | | *33 - 148* | *08/30/21 17:28* | *08/31/21 08:18* | *1* |
| *Tetrachloro-m-xylene* | *62* | | *30 - 121* | *08/30/21 17:28* | *08/31/21 08:18* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **4,4'-DDE** | **0.14** | | 0.010 | 0.0052 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 23:28 | 5 |

## Client Sample ID: B-6

**Date Collected: 08/25/21 10:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-3

**Matrix: Solid**
**Percent Solids: 82.3**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| DCB Decachlorobiphenyl | 134 | | 33 - 148 | 08/30/21 17:28 | 08/31/21 23:28 | 5 |
| Tetrachloro-m-xylene | 93 | | 30 - 121 | 08/30/21 17:28 | 08/31/21 23:28 | 5 |

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.020 | 0.0078 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| PCB-1221 | ND | | 0.020 | 0.0078 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| PCB-1232 | ND | | 0.020 | 0.0054 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| PCB-1242 | ND | | 0.020 | 0.0078 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| PCB-1248 | ND | | 0.020 | 0.0095 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| PCB-1254 | ND | | 0.020 | 0.0068 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| PCB-1260 | ND | | 0.020 | 0.0075 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.020 | 0.0054 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 08:19 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 50 | | 49 - 129 | 08/30/21 17:28 | 08/31/21 08:19 | 1 |
| DCB Decachlorobiphenyl | 62 | | 37 - 121 | 08/30/21 17:28 | 08/31/21 08:19 | 1 |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **12000** | **B** | 23 | 9.4 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Antimony** | **1.3** | **J** | 2.3 | 0.45 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Arsenic** | **6.6** | | 1.2 | 0.39 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Barium** | **110** | | 1.2 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Beryllium** | **0.88** | | 0.46 | 0.11 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Cadmium** | **0.14** | **J B** | 0.23 | 0.042 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Calcium** | **45000** | **B** | 23 | 3.9 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Chromium** | **18** | | 1.2 | 0.57 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Cobalt** | **12** | | 0.58 | 0.15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Copper** | **34** | | 1.2 | 0.32 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Iron** | **22000** | **B** | 23 | 12 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Lead** | **14** | | 0.58 | 0.27 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Magnesium** | **23000** | **B** | 12 | 5.7 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Manganese** | **530** | **B** | 1.2 | 0.17 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Nickel** | **31** | | 1.2 | 0.34 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Potassium** | **2500** | | 58 | 20 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| Selenium | ND | | 1.2 | 0.68 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Silver** | **0.36** | **J** | 0.58 | 0.15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Sodium** | **1900** | | 120 | 17 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| Thallium | ND | | 1.2 | 0.58 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Vanadium** | **24** | | 0.58 | 0.14 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |
| **Zinc** | **65** | | 2.3 | 1.0 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:00 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.032** | | 0.018 | 0.0059 | mg/Kg | ☼ | 08/31/21 14:25 | 09/01/21 09:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Cyanide, Total** | **0.13** | **J** | 0.26 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 12:39 | 1 |
| **pH** | **7.9** | | 0.2 | 0.2 | SU | | | 08/31/21 16:39 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-7

**Date Collected: 08/25/21 10:35**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-4

**Matrix: Solid**
**Percent Solids: 86.1**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | *1 | 0.019 | 0.0081 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Benzene | ND | | 0.0019 | 0.00048 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Bromodichloromethane | ND | | 0.0019 | 0.00038 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Bromoform | ND | | 0.0019 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Bromomethane | ND | | 0.0047 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Carbon disulfide | ND | | 0.0047 | 0.00097 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Carbon tetrachloride | ND | | 0.0019 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Chlorobenzene | ND | | 0.0019 | 0.00069 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Chloroethane | ND | | 0.0047 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Chloroform | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Chloromethane | ND | | 0.0047 | 0.0019 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0019 | 0.00052 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0019 | 0.00056 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Dibromochloromethane | ND | | 0.0019 | 0.00061 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,1-Dichloroethane | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,2-Dichloroethane | ND | | 0.0047 | 0.0015 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,1-Dichloroethene | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,2-Dichloropropane | ND | | 0.0019 | 0.00048 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Ethylbenzene | ND | | 0.0019 | 0.00089 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 2-Hexanone | ND | | 0.0047 | 0.0015 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Methylene Chloride | ND | | 0.0047 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0047 | 0.0021 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| methyl isobutyl ketone | ND | | 0.0047 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Methyl tert-butyl ether | ND | | 0.0019 | 0.00055 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Styrene | ND | | 0.0019 | 0.00056 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0019 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Tetrachloroethene | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Toluene | ND | | 0.0019 | 0.00047 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0019 | 0.00083 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0019 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0019 | 0.00080 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Trichloroethene | ND | | 0.0019 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Vinyl chloride | ND | | 0.0019 | 0.00083 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |
| Xylenes, Total | ND | | 0.0037 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 21:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *75 - 131* | *08/26/21 19:02* | *08/30/21 21:40* | *1* |
| *Dibromofluoromethane* | *111* | | *75 - 126* | *08/26/21 19:02* | *08/30/21 21:40* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *118* | | *70 - 134* | *08/26/21 19:02* | *08/30/21 21:40* | *1* |
| *Toluene-d8 (Surr)* | *112* | | *75 - 124* | *08/26/21 19:02* | *08/30/21 21:40* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.038 | 0.0069 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Acenaphthylene | ND | | 0.038 | 0.0051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Anthracene | ND | | 0.038 | 0.0064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Benzo[a]anthracene | ND | | 0.038 | 0.0052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Benzo[a]pyrene | ND | | 0.038 | 0.0074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-7**
**Date Collected: 08/25/21 10:35**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-4**
**Matrix: Solid**
**Percent Solids: 86.1**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **0.015** | **J** | 0.038 | 0.0083 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| **Benzo[g,h,i]perylene** | **0.013** | **J** | 0.038 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Benzo[k]fluoranthene | ND | | 0.038 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.039 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.073 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Carbazole | ND | | 0.19 | 0.096 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4-Chloroaniline | ND | | 0.77 | 0.18 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| **Chrysene** | **0.017** | **J** | 0.038 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.038 | 0.0074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.19 | 0.054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,4-Dichlorophenol | ND | | 0.38 | 0.091 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,4-Dimethylphenol | ND | | 0.38 | 0.15 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.77 | 0.31 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,4-Dinitrophenol | ND | | 0.77 | 0.68 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| **Fluoranthene** | **0.0085** | **J** | 0.038 | 0.0071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Fluorene | ND | | 0.038 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Hexachlorobenzene | ND | | 0.077 | 0.0089 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.77 | 0.22 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.038 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Isophorone | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2-Methylnaphthalene | ND | | 0.077 | 0.0071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Naphthalene | ND | | 0.038 | 0.0059 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 3-Nitroaniline | ND | | 0.38 | 0.12 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4-Nitroaniline | ND | | 0.38 | 0.16 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Nitrobenzene | ND | | 0.038 | 0.0096 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2-Nitrophenol | ND | | 0.38 | 0.091 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 4-Nitrophenol | ND | | 0.77 | 0.37 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |

**Client Sample ID: B-7**
**Date Collected: 08/25/21 10:35**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-4**
**Matrix: Solid**
**Percent Solids: 86.1**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.077 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Pentachlorophenol | ND | | 0.77 | 0.62 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| **Phenanthrene** | **0.0092** | **J** | 0.038 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| Phenol | ND | | 0.19 | 0.085 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| **Pyrene** | **0.016** | **J** | 0.038 | 0.0076 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.38 | 0.088 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 10:53 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *69* | | *43 - 145* | *08/27/21 17:53* | *08/31/21 10:53* | *1* |
| *2-Fluorophenol* | *95* | | *31 - 166* | *08/27/21 17:53* | *08/31/21 10:53* | *1* |
| *Nitrobenzene-d5* | *63* | | *37 - 147* | *08/27/21 17:53* | *08/31/21 10:53* | *1* |
| *Phenol-d5* | *91* | | *30 - 153* | *08/27/21 17:53* | *08/31/21 10:53* | *1* |
| *Terphenyl-d14* | *88* | | *42 - 157* | *08/27/21 17:53* | *08/31/21 10:53* | *1* |
| *2,4,6-Tribromophenol* | *30* | *S1-* | *31 - 143* | *08/27/21 17:53* | *08/31/21 10:53* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| **beta-BHC** | **0.011** | | 0.0019 | 0.0015 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| **4,4'-DDD** | **0.0051** | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| **4,4'-DDE** | **0.0068** | | 0.0019 | 0.00099 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| **4,4'-DDT** | **0.0015** | **J** | 0.0019 | 0.00091 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00092 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Dieldrin | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Endrin | ND | | 0.0019 | 0.00098 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00093 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00095 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Methoxychlor | ND | | 0.0094 | 0.0013 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| Toxaphene | ND | | 0.019 | 0.0076 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:48 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *94* | | *33 - 148* | *08/30/21 17:28* | *08/31/21 03:48* | *1* |
| *Tetrachloro-m-xylene* | *71* | | *30 - 121* | *08/30/21 17:28* | *08/31/21 03:48* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |

## Client Sample ID: B-7

**Date Collected: 08/25/21 10:35**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-4

**Matrix: Solid**
**Percent Solids: 86.1**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |
| PCB-1232 | ND | | 0.019 | 0.0051 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |
| PCB-1242 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |
| PCB-1248 | ND | | 0.019 | 0.0090 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |
| PCB-1254 | ND | | 0.019 | 0.0064 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |
| PCB-1260 | ND | | 0.019 | 0.0071 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.019 | 0.0051 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *60* | | *49 - 129* | *08/30/21 17:28* | *08/31/21 03:41* | *1* |
| *DCB Decachlorobiphenyl* | *84* | | *37 - 121* | *08/30/21 17:28* | *08/31/21 03:41* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **11000** | **B** | 23 | 9.4 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Antimony** | **1.3** | **J** | 2.3 | 0.45 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Arsenic** | **9.9** | | 1.1 | 0.39 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Barium** | **45** | | 1.1 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Beryllium** | **0.98** | | 0.46 | 0.11 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Cadmium** | **0.091** | **J B** | 0.23 | 0.041 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Calcium** | **52000** | **B** | 23 | 3.9 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Chromium** | **18** | | 1.1 | 0.57 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Cobalt** | **12** | | 0.57 | 0.15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Copper** | **33** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Iron** | **28000** | **B** | 23 | 12 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Lead** | **16** | | 0.57 | 0.27 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Magnesium** | **27000** | **B** | 11 | 5.7 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Manganese** | **380** | **B** | 1.1 | 0.17 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Nickel** | **37** | | 1.1 | 0.33 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Potassium** | **3000** | | 57 | 20 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| Selenium | ND | | 1.1 | 0.68 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Silver** | **0.25** | **J** | 0.57 | 0.15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Sodium** | **150** | | 110 | 17 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| Thallium | ND | | 1.1 | 0.57 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Vanadium** | **25** | | 0.57 | 0.14 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |
| **Zinc** | **61** | | 2.3 | 1.0 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:03 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.022** | | 0.018 | 0.0061 | mg/Kg | ☼ | 08/31/21 14:25 | 09/01/21 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.27 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 12:44 | 1 |
| **pH** | **7.8** | | 0.2 | 0.2 | SU | | | 08/31/21 16:41 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-9

**Date Collected: 08/25/21 11:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-5

**Matrix: Solid**
**Percent Solids: 85.2**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.013 | 0.0076 | mg/Kg | ☼ | 08/25/21 11:00 | 08/31/21 12:39 | 50 |
| Toluene | ND | | 0.013 | 0.0077 | mg/Kg | ☼ | 08/25/21 11:00 | 08/31/21 12:39 | 50 |
| Ethylbenzene | ND | | 0.013 | 0.0095 | mg/Kg | ☼ | 08/25/21 11:00 | 08/31/21 12:39 | 50 |
| Xylenes, Total | ND | | 0.026 | 0.011 | mg/Kg | ☼ | 08/25/21 11:00 | 08/31/21 12:39 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *75 - 126* | *08/25/21 11:00* | *08/31/21 12:39* | *50* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 120* | *08/25/21 11:00* | *08/31/21 12:39* | *50* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *72 - 124* | *08/25/21 11:00* | *08/31/21 12:39* | *50* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | *08/25/21 11:00* | *08/31/21 12:39* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | | 0.038 | 0.0060 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Acenaphthylene | ND | | 0.038 | 0.0051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Acenaphthene | ND | | 0.038 | 0.0070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Fluorene | ND | | 0.038 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Phenanthrene | ND | | 0.038 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Anthracene | ND | | 0.038 | 0.0065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Fluoranthene | ND | | 0.038 | 0.0072 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Pyrene | ND | | 0.038 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Benzo[a]anthracene | ND | | 0.038 | 0.0052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Chrysene | ND | | 0.038 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Benzo[b]fluoranthene | ND | | 0.038 | 0.0084 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Benzo[k]fluoranthene | ND | | 0.038 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Benzo[a]pyrene | ND | | 0.038 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.038 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.038 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.038 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 14:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *68* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 14:31* | *1* |
| *2-Fluorobiphenyl* | *76* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 14:31* | *1* |
| *Terphenyl-d14* | *99* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 14:31* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **7.6** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:06 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-10
**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-6
**Matrix: Solid**
**Percent Solids: 85.6**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | *1 | 0.025 | 0.011 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Benzene | ND | | 0.0025 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Bromodichloromethane | ND | | 0.0025 | 0.00051 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Bromoform | ND | | 0.0025 | 0.00073 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Bromomethane | ND | | 0.0062 | 0.0024 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Carbon disulfide | ND | | 0.0062 | 0.0013 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Carbon tetrachloride | ND | | 0.0025 | 0.00072 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Chlorobenzene | ND | | 0.0025 | 0.00092 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Chloroethane | ND | | 0.0062 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Chloroform | ND | | 0.0025 | 0.00087 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Chloromethane | ND | | 0.0062 | 0.0025 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0025 | 0.00070 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0025 | 0.00075 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Dibromochloromethane | ND | | 0.0025 | 0.00082 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,1-Dichloroethane | ND | | 0.0025 | 0.00086 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,2-Dichloroethane | ND | | 0.0062 | 0.0019 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,1-Dichloroethene | ND | | 0.0025 | 0.00086 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,2-Dichloropropane | ND | | 0.0025 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0025 | 0.00088 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Ethylbenzene | ND | | 0.0025 | 0.0012 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 2-Hexanone | ND | | 0.0062 | 0.0019 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Methylene Chloride | ND | | 0.0062 | 0.0025 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0062 | 0.0028 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| methyl isobutyl ketone | ND | | 0.0062 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Methyl tert-butyl ether | ND | | 0.0025 | 0.00073 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Styrene | ND | | 0.0025 | 0.00075 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0025 | 0.00080 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Tetrachloroethene | ND | | 0.0025 | 0.00085 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Toluene | ND | | 0.0025 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0025 | 0.00088 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0025 | 0.00084 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Trichloroethene | ND | | 0.0025 | 0.00084 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Vinyl chloride | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |
| Xylenes, Total | ND | | 0.0050 | 0.00080 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *75 - 131* | *08/26/21 19:02* | *08/30/21 22:05* | *1* |
| *Dibromofluoromethane* | *112* | | *75 - 126* | *08/26/21 19:02* | *08/30/21 22:05* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *119* | | *70 - 134* | *08/26/21 19:02* | *08/30/21 22:05* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/26/21 19:02* | *08/30/21 22:05* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.039 | 0.0070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Acenaphthylene | ND | | 0.039 | 0.0051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Anthracene | ND | | 0.039 | 0.0065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Benzo[a]anthracene** | **0.0092** | **J** | 0.039 | 0.0052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Benzo[a]pyrene | ND | | 0.039 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-10**
**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-6**
**Matrix: Solid**
**Percent Solids: 85.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **0.024** | **J** | 0.039 | 0.0084 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Benzo[g,h,i]perylene** | **0.028** | **J F1** | 0.039 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Benzo[k]fluoranthene | ND | | 0.039 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Carbazole | ND | | 0.19 | 0.097 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4-Chloroaniline | ND | | 0.78 | 0.18 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.39 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2-Chlorophenol | ND | F1 | 0.19 | 0.066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Chrysene** | **0.026** | **J** | 0.039 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Dibenz(a,h)anthracene** | **0.016** | **J** | 0.039 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 1,3-Dichlorobenzene | ND | F1 | 0.19 | 0.044 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 1,4-Dichlorobenzene | ND | F1 | 0.19 | 0.050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.19 | 0.054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,4-Dichlorophenol | ND | | 0.39 | 0.092 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,4-Dimethylphenol | ND | | 0.39 | 0.15 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.78 | 0.31 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,4-Dinitrophenol | ND | F1 | 0.78 | 0.68 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.076 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Fluoranthene | ND | | 0.039 | 0.0072 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Fluorene | ND | | 0.039 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Hexachlorobenzene | ND | | 0.078 | 0.0090 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Hexachlorocyclopentadiene | ND | F1 | 0.78 | 0.22 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Hexachloroethane | ND | F1 | 0.19 | 0.059 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.019** | **J F1** | 0.039 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Isophorone | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2-Methylnaphthalene | ND | | 0.078 | 0.0071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Naphthalene | ND | | 0.039 | 0.0060 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 3-Nitroaniline | ND | | 0.39 | 0.12 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4-Nitroaniline | ND | | 0.39 | 0.16 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Nitrobenzene | ND | | 0.039 | 0.0097 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2-Nitrophenol | ND | | 0.39 | 0.092 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 4-Nitrophenol | ND | | 0.78 | 0.37 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |

**Client Sample ID: B-10**
**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-6**
**Matrix: Solid**
**Percent Solids: 85.6**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.078 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Pentachlorophenol | ND | | 0.78 | 0.62 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Phenanthrene** | **0.020** | **J** | 0.039 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| Phenol | ND | | 0.19 | 0.086 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| **Pyrene** | **0.015** | **J** | 0.039 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.39 | 0.088 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.39 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *72* | | *43 - 145* | *08/27/21 17:53* | *08/31/21 12:26* | *1* |
| *2-Fluorophenol* | *94* | | *31 - 166* | *08/27/21 17:53* | *08/31/21 12:26* | *1* |
| *Nitrobenzene-d5* | *66* | | *37 - 147* | *08/27/21 17:53* | *08/31/21 12:26* | *1* |
| *Phenol-d5* | *88* | | *30 - 153* | *08/27/21 17:53* | *08/31/21 12:26* | *1* |
| *Terphenyl-d14* | *122* | | *42 - 157* | *08/27/21 17:53* | *08/31/21 12:26* | *1* |
| *2,4,6-Tribromophenol* | *32* | | *31 - 143* | *08/27/21 17:53* | *08/31/21 12:26* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| beta-BHC | ND | | 0.0019 | 0.0016 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| 4,4'-DDD | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| 4,4'-DDE | ND | | 0.0019 | 0.00099 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| 4,4'-DDT | ND | | 0.0019 | 0.00091 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00092 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Dieldrin | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Endrin | ND | | 0.0019 | 0.00098 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00094 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00096 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Methoxychlor | ND | | 0.0095 | 0.0013 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| Toxaphene | ND | | 0.019 | 0.0077 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *94* | | *33 - 148* | *08/30/21 17:28* | *08/31/21 04:08* | *1* |
| *Tetrachloro-m-xylene* | *78* | | *30 - 121* | *08/30/21 17:28* | *08/31/21 04:08* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |

**Client Sample ID: B-10**
**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-6**
**Matrix: Solid**
**Percent Solids: 85.6**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |
| PCB-1232 | ND | | 0.019 | 0.0052 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |
| PCB-1242 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |
| PCB-1248 | ND | | 0.019 | 0.0091 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |
| PCB-1254 | ND | | 0.019 | 0.0065 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |
| PCB-1260 | ND | | 0.019 | 0.0072 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.019 | 0.0052 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 03:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *65* | | *49 - 129* | *08/30/21 17:28* | *08/31/21 03:57* | *1* |
| *DCB Decachlorobiphenyl* | *74* | | *37 - 121* | *08/30/21 17:28* | *08/31/21 03:57* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **11000** | **B** | 21 | 8.5 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Antimony** | **0.96** | **J** | 2.1 | 0.41 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Arsenic** | **6.6** | | 1.0 | 0.36 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Barium** | **37** | | 1.0 | 0.12 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Beryllium** | **0.84** | | 0.42 | 0.098 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Cadmium** | **0.096** | **J B** | 0.21 | 0.038 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Calcium** | **53000** | **B** | 21 | 3.5 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Chromium** | **17** | | 1.0 | 0.52 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Cobalt** | **9.0** | | 0.52 | 0.14 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Copper** | **24** | | 1.0 | 0.29 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Iron** | **20000** | **B** | 21 | 11 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Lead** | **12** | | 0.52 | 0.24 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Magnesium** | **29000** | **B** | 10 | 5.2 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Manganese** | **360** | **B** | 1.0 | 0.15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Nickel** | **29** | | 1.0 | 0.30 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Potassium** | **3000** | | 52 | 18 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| Selenium | ND | | 1.0 | 0.61 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Silver** | **0.22** | **J** | 0.52 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Sodium** | **340** | | 100 | 15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| Thallium | ND | | 1.0 | 0.52 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Vanadium** | **22** | | 0.52 | 0.12 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |
| **Zinc** | **59** | | 2.1 | 0.92 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:09 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.024** | | 0.019 | 0.0064 | mg/Kg | ☼ | 08/31/21 14:25 | 09/01/21 09:25 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.26 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 12:46 | 1 |
| **pH** | **8.7** | | 0.2 | 0.2 | SU | | | 08/31/21 16:46 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-11

**Date Collected: 08/25/21 12:15**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-7

**Matrix: Solid**
**Percent Solids: 83.3**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.013 | 0.0077 | mg/Kg | ☼ | 08/25/21 12:15 | 08/31/21 13:01 | 50 |
| Toluene | ND | | 0.013 | 0.0077 | mg/Kg | ☼ | 08/25/21 12:15 | 08/31/21 13:01 | 50 |
| Ethylbenzene | ND | | 0.013 | 0.0096 | mg/Kg | ☼ | 08/25/21 12:15 | 08/31/21 13:01 | 50 |
| Xylenes, Total | ND | | 0.026 | 0.012 | mg/Kg | ☼ | 08/25/21 12:15 | 08/31/21 13:01 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *75 - 126* | *08/25/21 12:15* | *08/31/21 13:01* | *50* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* | *08/25/21 12:15* | *08/31/21 13:01* | *50* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *72 - 124* | *08/25/21 12:15* | *08/31/21 13:01* | *50* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | *08/25/21 12:15* | *08/31/21 13:01* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | | 0.039 | 0.0061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Acenaphthylene | ND | | 0.039 | 0.0052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Acenaphthene | ND | | 0.039 | 0.0071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Fluorene | ND | | 0.039 | 0.0056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Phenanthrene | ND | | 0.039 | 0.0055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Anthracene | ND | | 0.039 | 0.0066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Fluoranthene | ND | | 0.039 | 0.0074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Pyrene | ND | | 0.039 | 0.0079 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Benzo[a]anthracene | ND | | 0.039 | 0.0053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Chrysene | ND | | 0.039 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| **Benzo[b]fluoranthene** | **0.012** | **J** | 0.039 | 0.0086 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Benzo[k]fluoranthene | ND | | 0.039 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| **Benzo[a]pyrene** | **0.0090** | **J** | 0.039 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.039 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.039 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.039 | 0.013 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 15:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *78* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 15:43* | *1* |
| *2-Fluorobiphenyl* | *81* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 15:43* | *1* |
| *Terphenyl-d14* | *102* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 15:43* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **12** | | 0.57 | 0.26 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:13 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-12

**Date Collected: 08/25/21 12:30**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-8

**Matrix: Solid**
**Percent Solids: 84.3**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.012 | 0.0072 | mg/Kg | ☼ | 08/25/21 12:30 | 08/31/21 13:23 | 50 |
| Toluene | ND | | 0.012 | 0.0073 | mg/Kg | ☼ | 08/25/21 12:30 | 08/31/21 13:23 | 50 |
| Ethylbenzene | ND | | 0.012 | 0.0091 | mg/Kg | ☼ | 08/25/21 12:30 | 08/31/21 13:23 | 50 |
| Xylenes, Total | ND | | 0.025 | 0.011 | mg/Kg | ☼ | 08/25/21 12:30 | 08/31/21 13:23 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *75 - 126* | *08/25/21 12:30* | *08/31/21 13:23* | *50* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* | *08/25/21 12:30* | *08/31/21 13:23* | *50* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *72 - 124* | *08/25/21 12:30* | *08/31/21 13:23* | *50* |
| *Dibromofluoromethane* | *97* | | *75 - 120* | *08/25/21 12:30* | *08/31/21 13:23* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | | 0.039 | 0.0060 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Acenaphthylene | ND | | 0.039 | 0.0051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Acenaphthene | ND | | 0.039 | 0.0070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Fluorene | ND | | 0.039 | 0.0055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Phenanthrene | ND | | 0.039 | 0.0054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Anthracene | ND | | 0.039 | 0.0065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Fluoranthene | ND | | 0.039 | 0.0072 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Pyrene | ND | | 0.039 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Benzo[a]anthracene | ND | | 0.039 | 0.0052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Chrysene | ND | | 0.039 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Benzo[b]fluoranthene | ND | | 0.039 | 0.0084 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Benzo[k]fluoranthene | ND | | 0.039 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Benzo[a]pyrene | ND | | 0.039 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.039 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.039 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.039 | 0.013 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *74* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 16:08* | *1* |
| *2-Fluorobiphenyl* | *92* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 16:08* | *1* |
| *Terphenyl-d14* | *104* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 16:08* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **13** | | 0.56 | 0.26 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:16 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-15

**Date Collected: 08/25/21 12:50**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-9

**Matrix: Solid**
**Percent Solids: 78.4**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.034** | ***1** | 0.018 | 0.0080 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Benzene | ND | | 0.0018 | 0.00047 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Bromodichloromethane | ND | | 0.0018 | 0.00037 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Bromoform | ND | | 0.0018 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Bromomethane | ND | | 0.0046 | 0.0017 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Carbon disulfide | ND | | 0.0046 | 0.00096 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Carbon tetrachloride | ND | | 0.0018 | 0.00053 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Chlorobenzene | ND | | 0.0018 | 0.00068 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Chloroethane | ND | | 0.0046 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Chloroform | ND | | 0.0018 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Chloromethane | ND | | 0.0046 | 0.0019 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0018 | 0.00051 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0018 | 0.00056 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Dibromochloromethane | ND | | 0.0018 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,1-Dichloroethane | ND | | 0.0018 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,2-Dichloroethane | ND | | 0.0046 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,1-Dichloroethene | ND | | 0.0018 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,2-Dichloropropane | ND | | 0.0018 | 0.00048 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0018 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Ethylbenzene | ND | | 0.0018 | 0.00088 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 2-Hexanone | ND | | 0.0046 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Methylene Chloride | ND | | 0.0046 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| **Methyl Ethyl Ketone** | **0.0054** | | 0.0046 | 0.0020 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| methyl isobutyl ketone | ND | | 0.0046 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Methyl tert-butyl ether | ND | | 0.0018 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Styrene | ND | | 0.0018 | 0.00056 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0018 | 0.00059 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Tetrachloroethene | ND | | 0.0018 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Toluene | ND | | 0.0018 | 0.00047 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0018 | 0.00082 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0018 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0018 | 0.00062 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0018 | 0.00079 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Trichloroethene | ND | | 0.0018 | 0.00062 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Vinyl chloride | ND | | 0.0018 | 0.00082 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |
| Xylenes, Total | ND | | 0.0037 | 0.00059 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *75 - 131* | *08/26/21 19:02* | *08/30/21 22:31* | *1* |
| *Dibromofluoromethane* | *111* | | *75 - 126* | *08/26/21 19:02* | *08/30/21 22:31* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *119* | | *70 - 134* | *08/26/21 19:02* | *08/30/21 22:31* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/26/21 19:02* | *08/30/21 22:31* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.041 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Acenaphthylene | ND | | 0.041 | 0.0055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Anthracene | ND | | 0.041 | 0.0069 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Benzo[a]anthracene | ND | | 0.041 | 0.0056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Benzo[a]pyrene | ND | | 0.041 | 0.0081 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-15**
**Date Collected: 08/25/21 12:50**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-9**
**Matrix: Solid**
**Percent Solids: 78.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.041 | 0.0090 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.041 | 0.013 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Benzo[k]fluoranthene | ND | | 0.041 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.21 | 0.042 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.21 | 0.062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.21 | 0.076 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.21 | 0.055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Butyl benzyl phthalate | ND | | 0.21 | 0.079 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Carbazole | ND | | 0.21 | 0.10 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4-Chloroaniline | ND | | 0.84 | 0.20 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.41 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2-Chloronaphthalene | ND | | 0.21 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2-Chlorophenol | ND | | 0.21 | 0.071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Chrysene | ND | | 0.041 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.041 | 0.0080 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Dibenzofuran | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.21 | 0.050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.21 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.21 | 0.053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.21 | 0.058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,4-Dichlorophenol | ND | | 0.41 | 0.099 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Diethyl phthalate | ND | | 0.21 | 0.070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,4-Dimethylphenol | ND | | 0.41 | 0.16 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Dimethyl phthalate | ND | | 0.21 | 0.054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Di-n-butyl phthalate | ND | | 0.21 | 0.063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.84 | 0.33 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,4-Dinitrophenol | ND | | 0.84 | 0.73 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.21 | 0.066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.21 | 0.082 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Di-n-octyl phthalate | ND | | 0.21 | 0.068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Fluoranthene | ND | | 0.041 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Fluorene | ND | | 0.041 | 0.0058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Hexachlorobenzene | ND | | 0.084 | 0.0096 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Hexachlorobutadiene | ND | | 0.21 | 0.065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.84 | 0.24 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Hexachloroethane | ND | | 0.21 | 0.063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.041 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Isophorone | ND | | 0.21 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2-Methylnaphthalene | ND | | 0.084 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2-Methylphenol | ND | | 0.21 | 0.067 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 3 & 4 Methylphenol | ND | | 0.21 | 0.069 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Naphthalene | ND | | 0.041 | 0.0064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2-Nitroaniline | ND | | 0.21 | 0.056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 3-Nitroaniline | ND | | 0.41 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4-Nitroaniline | ND | | 0.41 | 0.17 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Nitrobenzene | ND | | 0.041 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2-Nitrophenol | ND | | 0.41 | 0.098 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 4-Nitrophenol | ND | | 0.84 | 0.40 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |

**Client Sample ID: B-15**
**Date Collected: 08/25/21 12:50**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-9**
**Matrix: Solid**
**Percent Solids: 78.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.084 | 0.051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.21 | 0.048 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Pentachlorophenol | ND | | 0.84 | 0.67 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Phenanthrene | ND | | 0.041 | 0.0058 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Phenol | ND | | 0.21 | 0.092 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| Pyrene | ND | | 0.041 | 0.0083 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.21 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.41 | 0.095 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.41 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *69* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 16:32* | *1* |
| *2-Fluorophenol* | *96* | | *31 - 166* | *08/27/21 17:53* | *08/30/21 16:32* | *1* |
| *Nitrobenzene-d5* | *74* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 16:32* | *1* |
| *Phenol-d5* | *95* | | *30 - 153* | *08/27/21 17:53* | *08/30/21 16:32* | *1* |
| *Terphenyl-d14* | *97* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 16:32* | *1* |
| *2,4,6-Tribromophenol* | *60* | | *31 - 143* | *08/27/21 17:53* | *08/30/21 16:32* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0021 | 0.0015 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| alpha-BHC | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| beta-BHC | ND | | 0.0021 | 0.0017 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| cis-Chlordane | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| **4,4'-DDD** | **0.0036** | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| **4,4'-DDE** | **0.020** | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| **4,4'-DDT** | **0.0023** | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| delta-BHC | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Dieldrin | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Endosulfan I | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Endosulfan II | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Endosulfan sulfate | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Endrin | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Endrin aldehyde | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Endrin ketone | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Heptachlor | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Heptachlor epoxide | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Methoxychlor | ND | | 0.010 | 0.0014 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| Toxaphene | ND | | 0.021 | 0.0085 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |
| trans-Chlordane | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *93* | | *33 - 148* | *08/30/21 17:28* | *08/31/21 04:29* | *1* |
| *Tetrachloro-m-xylene* | *59* | | *30 - 121* | *08/30/21 17:28* | *08/31/21 04:29* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.021 | 0.0082 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |

## Client Sample ID: B-15

**Date Collected: 08/25/21 12:50**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-9

**Matrix: Solid**
**Percent Solids: 78.4**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.021 | 0.0082 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |
| PCB-1232 | ND | | 0.021 | 0.0057 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |
| PCB-1242 | ND | | 0.021 | 0.0082 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |
| PCB-1248 | ND | | 0.021 | 0.010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |
| PCB-1254 | ND | | 0.021 | 0.0071 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |
| PCB-1260 | ND | | 0.021 | 0.0079 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.021 | 0.0057 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *68* | | *49 - 129* | *08/30/21 17:28* | *08/31/21 04:12* | *1* |
| *DCB Decachlorobiphenyl* | *72* | | *37 - 121* | *08/30/21 17:28* | *08/31/21 04:12* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **13000** | **B** | 22 | 9.0 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Antimony** | **1.2** | **J** | 2.2 | 0.43 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Arsenic** | **17** | | 1.1 | 0.38 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Barium** | **190** | | 1.1 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Beryllium** | **1.1** | | 0.44 | 0.10 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Cadmium** | **0.26** | **B** | 0.22 | 0.040 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Calcium** | **3900** | **B** | 22 | 3.7 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Chromium** | **20** | | 1.1 | 0.54 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Cobalt** | **21** | | 0.55 | 0.14 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Copper** | **17** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Iron** | **32000** | **B** | 22 | 11 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Lead** | **21** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Magnesium** | **4200** | **B** | 11 | 5.4 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Manganese** | **1400** | **B** | 1.1 | 0.16 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Nickel** | **30** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Potassium** | **1600** | | 55 | 19 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| Selenium | ND | | 1.1 | 0.65 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Silver** | **0.48** | **J** | 0.55 | 0.14 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Sodium** | **94** | **J** | 110 | 16 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| Thallium | ND | | 1.1 | 0.55 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Vanadium** | **34** | | 0.55 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |
| **Zinc** | **75** | | 2.2 | 0.96 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:26 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.050** | | 0.020 | 0.0067 | mg/Kg | ☼ | 08/31/21 14:25 | 09/01/21 09:27 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.27 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 12:48 | 1 |
| **pH** | **7.3** | | 0.2 | 0.2 | SU | | | 08/31/21 16:54 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-17

**Date Collected: 08/25/21 13:40**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-10

**Matrix: Solid**
**Percent Solids: 80.8**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.052** | ***1** | 0.019 | 0.0082 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Benzene | ND | | 0.0019 | 0.00048 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Bromodichloromethane | ND | | 0.0019 | 0.00038 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Bromoform | ND | | 0.0019 | 0.00055 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Bromomethane | ND | | 0.0047 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Carbon disulfide | ND | | 0.0047 | 0.00098 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Carbon tetrachloride | ND | | 0.0019 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Chlorobenzene | ND | | 0.0019 | 0.00069 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Chloroethane | ND | | 0.0047 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Chloroform | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Chloromethane | ND | | 0.0047 | 0.0019 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0019 | 0.00052 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0019 | 0.00057 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Dibromochloromethane | ND | | 0.0019 | 0.00061 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,1-Dichloroethane | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,2-Dichloroethane | ND | | 0.0047 | 0.0015 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,1-Dichloroethene | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,2-Dichloropropane | ND | | 0.0019 | 0.00049 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Ethylbenzene | ND | | 0.0019 | 0.00090 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 2-Hexanone | ND | | 0.0047 | 0.0015 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Methylene Chloride | ND | | 0.0047 | 0.0018 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| **Methyl Ethyl Ketone** | **0.0074** | | 0.0047 | 0.0021 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| methyl isobutyl ketone | ND | | 0.0047 | 0.0014 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Methyl tert-butyl ether | ND | | 0.0019 | 0.00055 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Styrene | ND | | 0.0019 | 0.00057 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0019 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Tetrachloroethene | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Toluene | ND | | 0.0019 | 0.00047 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0019 | 0.00083 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0019 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0019 | 0.00081 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Trichloroethene | ND | | 0.0019 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Vinyl chloride | ND | | 0.0019 | 0.00083 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |
| Xylenes, Total | ND | | 0.0038 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 22:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *113* | | *75 - 131* | *08/26/21 19:02* | *08/30/21 22:56* | *1* |
| *Dibromofluoromethane* | *115* | | *75 - 126* | *08/26/21 19:02* | *08/30/21 22:56* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *121* | | *70 - 134* | *08/26/21 19:02* | *08/30/21 22:56* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/26/21 19:02* | *08/30/21 22:56* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.040 | 0.0073 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Acenaphthylene | ND | | 0.040 | 0.0053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Anthracene | ND | | 0.040 | 0.0068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Benzo[a]anthracene | ND | | 0.040 | 0.0055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Benzo[a]pyrene | ND | | 0.040 | 0.0078 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-17**
**Date Collected: 08/25/21 13:40**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-10**
**Matrix: Solid**
**Percent Solids: 80.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.040 | 0.0087 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.040 | 0.013 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Benzo[k]fluoranthene | ND | | 0.040 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.20 | 0.041 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.20 | 0.074 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.20 | 0.053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Butyl benzyl phthalate | ND | | 0.20 | 0.077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Carbazole | ND | | 0.20 | 0.10 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4-Chloroaniline | ND | | 0.82 | 0.19 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2-Chloronaphthalene | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2-Chlorophenol | ND | | 0.20 | 0.069 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Chrysene | ND | | 0.040 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.040 | 0.0078 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Dibenzofuran | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | 0.048 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | 0.052 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.20 | 0.057 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,4-Dichlorophenol | ND | | 0.40 | 0.096 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Diethyl phthalate | ND | | 0.20 | 0.069 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,4-Dimethylphenol | ND | | 0.40 | 0.15 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Dimethyl phthalate | ND | | 0.20 | 0.053 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Di-n-butyl phthalate | ND | | 0.20 | 0.062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.82 | 0.33 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,4-Dinitrophenol | ND | | 0.82 | 0.71 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.20 | 0.080 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Di-n-octyl phthalate | ND | | 0.20 | 0.066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Fluoranthene | ND | | 0.040 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Fluorene | ND | | 0.040 | 0.0057 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Hexachlorobenzene | ND | | 0.082 | 0.0094 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.82 | 0.23 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Hexachloroethane | ND | | 0.20 | 0.062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.040 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Isophorone | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2-Methylnaphthalene | ND | | 0.082 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2-Methylphenol | ND | | 0.20 | 0.065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 3 & 4 Methylphenol | ND | | 0.20 | 0.068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Naphthalene | ND | | 0.040 | 0.0062 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2-Nitroaniline | ND | | 0.20 | 0.055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 3-Nitroaniline | ND | | 0.40 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4-Nitroaniline | ND | | 0.40 | 0.17 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Nitrobenzene | ND | | 0.040 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2-Nitrophenol | ND | | 0.40 | 0.096 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 4-Nitrophenol | ND | | 0.82 | 0.39 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-17**
**Date Collected: 08/25/21 13:40**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-10**
**Matrix: Solid**
**Percent Solids: 80.8**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.082 | 0.050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.20 | 0.048 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Pentachlorophenol | ND | | 0.82 | 0.65 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Phenanthrene | ND | | 0.040 | 0.0056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Phenol | ND | | 0.20 | 0.090 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| Pyrene | ND | | 0.040 | 0.0081 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | 0.044 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.40 | 0.092 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/30/21 16:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *80* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 16:56* | *1* |
| *2-Fluorophenol* | *100* | | *31 - 166* | *08/27/21 17:53* | *08/30/21 16:56* | *1* |
| *Nitrobenzene-d5* | *71* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 16:56* | *1* |
| *Phenol-d5* | *99* | | *30 - 153* | *08/27/21 17:53* | *08/30/21 16:56* | *1* |
| *Terphenyl-d14* | *103* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 16:56* | *1* |
| *2,4,6-Tribromophenol* | *72* | | *31 - 143* | *08/27/21 17:53* | *08/30/21 16:56* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **10** | | 1.0 | 0.35 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |
| **Barium** | **110** | | 1.0 | 0.12 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |
| **Cadmium** | **0.16** | **J B** | 0.21 | 0.037 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |
| **Chromium** | **23** | | 1.0 | 0.51 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |
| **Lead** | **17** | | 0.52 | 0.24 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |
| Selenium | ND | | 1.0 | 0.61 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |
| **Silver** | **0.41** | **J** | 0.52 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:29 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.057** | | 0.020 | 0.0066 | mg/Kg | ☼ | 08/31/21 14:25 | 09/01/21 09:29 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.2** | | 0.2 | 0.2 | SU | | | 08/31/21 16:59 | 1 |

**Client Sample ID: B-18**
**Date Collected: 08/25/21 14:15**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-11**
**Matrix: Solid**
**Percent Solids: 78.0**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.040** | ***1** | 0.017 | 0.0074 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Benzene | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Bromodichloromethane | ND | | 0.0017 | 0.00035 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Bromoform | ND | | 0.0017 | 0.00050 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Bromomethane | ND | | 0.0043 | 0.0016 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Carbon disulfide | ND | | 0.0043 | 0.00089 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Carbon tetrachloride | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Chlorobenzene | ND | | 0.0017 | 0.00063 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Chloroethane | ND | | 0.0043 | 0.0013 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Chloroform | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Chloromethane | ND | | 0.0043 | 0.0017 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0017 | 0.00048 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Dibromochloromethane | ND | | 0.0017 | 0.00056 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,1-Dichloroethane | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,2-Dichloroethane | ND | | 0.0043 | 0.0013 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,1-Dichloroethene | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,2-Dichloropropane | ND | | 0.0017 | 0.00044 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0017 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Ethylbenzene | ND | | 0.0017 | 0.00082 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 2-Hexanone | ND | | 0.0043 | 0.0013 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Methylene Chloride | ND | | 0.0043 | 0.0017 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| **Methyl Ethyl Ketone** | **0.0057** | | 0.0043 | 0.0019 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| methyl isobutyl ketone | ND | | 0.0043 | 0.0013 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Methyl tert-butyl ether | ND | | 0.0017 | 0.00050 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Styrene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0017 | 0.00054 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Tetrachloroethene | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Toluene | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0017 | 0.00076 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0017 | 0.00060 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0017 | 0.00073 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Trichloroethene | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Vinyl chloride | ND | | 0.0017 | 0.00075 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |
| Xylenes, Total | ND | | 0.0034 | 0.00055 | mg/Kg | ☼ | 08/26/21 19:02 | 08/30/21 23:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *113* | | *75 - 131* | *08/26/21 19:02* | *08/30/21 23:22* | *1* |
| *Dibromofluoromethane* | *111* | | *75 - 126* | *08/26/21 19:02* | *08/30/21 23:22* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *117* | | *70 - 134* | *08/26/21 19:02* | *08/30/21 23:22* | *1* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* | *08/26/21 19:02* | *08/30/21 23:22* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.042 | 0.0075 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Acenaphthylene | ND | | 0.042 | 0.0055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Anthracene | ND | | 0.042 | 0.0070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Benzo[a]anthracene | ND | | 0.042 | 0.0056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Benzo[a]pyrene | ND | | 0.042 | 0.0081 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

**Client Sample ID: B-18**
**Date Collected: 08/25/21 14:15**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-11**
**Matrix: Solid**
**Percent Solids: 78.0**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.042 | 0.0091 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.042 | 0.014 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Benzo[k]fluoranthene | ND | | 0.042 | 0.012 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.21 | 0.043 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.21 | 0.063 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.21 | 0.077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.21 | 0.055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Butyl benzyl phthalate | ND | | 0.21 | 0.080 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Carbazole | ND | | 0.21 | 0.10 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4-Chloroaniline | ND | | 0.85 | 0.20 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.42 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2-Chloronaphthalene | ND | | 0.21 | 0.046 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2-Chlorophenol | ND | | 0.21 | 0.072 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Chrysene | ND | | 0.042 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.042 | 0.0081 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Dibenzofuran | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.21 | 0.050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.21 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.21 | 0.054 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.21 | 0.059 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,4-Dichlorophenol | ND | | 0.42 | 0.10 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Diethyl phthalate | ND | | 0.21 | 0.071 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,4-Dimethylphenol | ND | | 0.42 | 0.16 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Dimethyl phthalate | ND | | 0.21 | 0.055 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Di-n-butyl phthalate | ND | | 0.21 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.85 | 0.34 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,4-Dinitrophenol | ND | | 0.85 | 0.74 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.21 | 0.067 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.21 | 0.083 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Di-n-octyl phthalate | ND | | 0.21 | 0.068 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Fluoranthene | ND | | 0.042 | 0.0078 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Fluorene | ND | | 0.042 | 0.0059 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Hexachlorobenzene | ND | | 0.085 | 0.0097 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Hexachlorobutadiene | ND | | 0.21 | 0.066 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.85 | 0.24 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Hexachloroethane | ND | | 0.21 | 0.064 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.042 | 0.011 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Isophorone | ND | | 0.21 | 0.047 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2-Methylnaphthalene | ND | | 0.085 | 0.0077 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2-Methylphenol | ND | | 0.21 | 0.067 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 3 & 4 Methylphenol | ND | | 0.21 | 0.070 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Naphthalene | ND | | 0.042 | 0.0065 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2-Nitroaniline | ND | | 0.21 | 0.056 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 3-Nitroaniline | ND | | 0.42 | 0.13 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4-Nitroaniline | ND | | 0.42 | 0.18 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Nitrobenzene | ND | | 0.042 | 0.010 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2-Nitrophenol | ND | | 0.42 | 0.099 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 4-Nitrophenol | ND | | 0.85 | 0.40 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |

**Client Sample ID: B-18**
**Date Collected: 08/25/21 14:15**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-11**
**Matrix: Solid**
**Percent Solids: 78.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.085 | 0.051 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.21 | 0.050 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Pentachlorophenol | ND | | 0.85 | 0.67 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Phenanthrene | ND | | 0.042 | 0.0059 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Phenol | ND | | 0.21 | 0.093 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| Pyrene | ND | | 0.042 | 0.0083 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.21 | 0.045 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.42 | 0.096 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.42 | 0.14 | mg/Kg | ☼ | 08/27/21 17:53 | 08/31/21 12:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *63* | | *43 - 145* | *08/27/21 17:53* | *08/31/21 12:49* | *1* |
| *2-Fluorophenol* | *96* | | *31 - 166* | *08/27/21 17:53* | *08/31/21 12:49* | *1* |
| *Nitrobenzene-d5* | *58* | | *37 - 147* | *08/27/21 17:53* | *08/31/21 12:49* | *1* |
| *Phenol-d5* | *97* | | *30 - 153* | *08/27/21 17:53* | *08/31/21 12:49* | *1* |
| *Terphenyl-d14* | *86* | | *42 - 157* | *08/27/21 17:53* | *08/31/21 12:49* | *1* |
| *2,4,6-Tribromophenol* | *46* | | *31 - 143* | *08/27/21 17:53* | *08/31/21 12:49* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0021 | 0.0014 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| alpha-BHC | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| beta-BHC | ND | | 0.0021 | 0.0017 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| cis-Chlordane | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| 4,4'-DDD | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| 4,4'-DDE | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| 4,4'-DDT | ND | | 0.0021 | 0.00099 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| delta-BHC | ND | | 0.0021 | 0.00099 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Dieldrin | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Endosulfan I | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Endosulfan II | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Endosulfan sulfate | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Endrin | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Endrin aldehyde | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Endrin ketone | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Heptachlor | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Heptachlor epoxide | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Methoxychlor | ND | | 0.010 | 0.0014 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| Toxaphene | ND | | 0.021 | 0.0083 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |
| trans-Chlordane | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *92* | | *33 - 148* | *08/30/21 17:28* | *08/31/21 04:50* | *1* |
| *Tetrachloro-m-xylene* | *96* | | *30 - 121* | *08/30/21 17:28* | *08/31/21 04:50* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.021 | 0.0081 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |

**Client Sample ID: B-18**
**Date Collected: 08/25/21 14:15**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-11**
**Matrix: Solid**
**Percent Solids: 78.0**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.021 | 0.0081 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |
| PCB-1232 | ND | | 0.021 | 0.0056 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |
| PCB-1242 | ND | | 0.021 | 0.0080 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |
| PCB-1248 | ND | | 0.021 | 0.0098 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |
| PCB-1254 | ND | | 0.021 | 0.0070 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |
| PCB-1260 | ND | | 0.021 | 0.0078 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.021 | 0.0056 | mg/Kg | ☼ | 08/30/21 17:28 | 08/31/21 04:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *65* | | *49 - 129* | *08/30/21 17:28* | *08/31/21 04:28* | *1* |
| *DCB Decachlorobiphenyl* | *69* | | *37 - 121* | *08/30/21 17:28* | *08/31/21 04:28* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **13000** | **B** | 24 | 9.7 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Antimony** | **1.2** | **J** | 2.4 | 0.46 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Arsenic** | **7.7** | | 1.2 | 0.40 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Barium** | **65** | | 1.2 | 0.13 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Beryllium** | **0.97** | | 0.47 | 0.11 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Cadmium** | **0.12** | **J B** | 0.24 | 0.043 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Calcium** | **31000** | **B** | 24 | 4.0 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Chromium** | **19** | | 1.2 | 0.59 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Cobalt** | **9.5** | | 0.59 | 0.16 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Copper** | **28** | | 1.2 | 0.33 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Iron** | **22000** | **B** | 24 | 12 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Lead** | **15** | | 0.59 | 0.27 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Magnesium** | **20000** | **B** | 12 | 5.9 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Manganese** | **240** | **B** | 1.2 | 0.17 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Nickel** | **30** | | 1.2 | 0.34 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Potassium** | **2600** | | 59 | 21 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| Selenium | ND | | 1.2 | 0.70 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Silver** | **0.35** | **J** | 0.59 | 0.15 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Sodium** | **1200** | | 120 | 18 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| Thallium | ND | | 1.2 | 0.59 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Vanadium** | **27** | | 0.59 | 0.14 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |
| **Zinc** | **69** | | 2.4 | 1.0 | mg/Kg | ☼ | 09/01/21 09:52 | 09/02/21 13:32 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.031** | | 0.020 | 0.0065 | mg/Kg | ☼ | 08/31/21 14:25 | 09/01/21 09:35 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.28 | 0.14 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 12:49 | 1 |
| **pH** | **7.6** | | 0.2 | 0.2 | SU | | | 08/31/21 17:02 | 1 |

# Definitions/Glossary

Client: ECS Midwest LLC
Job ID: 500-204356-1
Project/Site: Cloud HQ (53:2861-B)

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| *1 | LCS/LCSD RPD exceeds control limits. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD recovery exceeds control limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| S1- | Surrogate recovery exceeds control limits, low biased. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## GC/MS VOA

### Prep Batch: 616093

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 5035 | |
| 500-204356-2 | B-5 | Total/NA | Solid | 5035 | |
| 500-204356-5 | B-9 | Total/NA | Solid | 5035 | |
| 500-204356-7 | B-11 | Total/NA | Solid | 5035 | |
| 500-204356-8 | B-12 | Total/NA | Solid | 5035 | |

### Prep Batch: 616101

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 5035 | |
| 500-204356-4 | B-7 | Total/NA | Solid | 5035 | |
| 500-204356-6 | B-10 | Total/NA | Solid | 5035 | |
| 500-204356-9 | B-15 | Total/NA | Solid | 5035 | |
| 500-204356-10 | B-17 | Total/NA | Solid | 5035 | |
| 500-204356-11 | B-18 | Total/NA | Solid | 5035 | |

### Analysis Batch: 616485

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 8260B | 616101 |
| 500-204356-4 | B-7 | Total/NA | Solid | 8260B | 616101 |
| 500-204356-6 | B-10 | Total/NA | Solid | 8260B | 616101 |
| 500-204356-9 | B-15 | Total/NA | Solid | 8260B | 616101 |
| 500-204356-10 | B-17 | Total/NA | Solid | 8260B | 616101 |
| 500-204356-11 | B-18 | Total/NA | Solid | 8260B | 616101 |
| MB 500-616485/6 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-616485/3 | Lab Control Sample | Total/NA | Solid | 8260B | |
| LCSD 500-616485/4 | Lab Control Sample Dup | Total/NA | Solid | 8260B | |

### Analysis Batch: 616628

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 8260B | 616093 |
| 500-204356-5 | B-9 | Total/NA | Solid | 8260B | 616093 |
| 500-204356-7 | B-11 | Total/NA | Solid | 8260B | 616093 |
| 500-204356-8 | B-12 | Total/NA | Solid | 8260B | 616093 |
| MB 500-616628/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-616628/5 | Lab Control Sample | Total/NA | Solid | 8260B | |

### Analysis Batch: 616830

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-2 | B-5 | Total/NA | Solid | 8260B | 616093 |
| MB 500-616830/6 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-616830/4 | Lab Control Sample | Total/NA | Solid | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 616303

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 3541 | |
| 500-204356-2 | B-5 | Total/NA | Solid | 3541 | |
| 500-204356-3 | B-6 | Total/NA | Solid | 3541 | |
| 500-204356-4 | B-7 | Total/NA | Solid | 3541 | |
| 500-204356-5 | B-9 | Total/NA | Solid | 3541 | |

## GC/MS Semi VOA (Continued)

### Prep Batch: 616303 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-6 | B-10 | Total/NA | Solid | 3541 | |
| 500-204356-7 | B-11 | Total/NA | Solid | 3541 | |
| 500-204356-8 | B-12 | Total/NA | Solid | 3541 | |
| 500-204356-9 | B-15 | Total/NA | Solid | 3541 | |
| 500-204356-10 | B-17 | Total/NA | Solid | 3541 | |
| 500-204356-11 | B-18 | Total/NA | Solid | 3541 | |
| MB 500-616303/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-616303/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| 500-204356-6 MS | B-10 | Total/NA | Solid | 3541 | |
| 500-204356-6 MSD | B-10 | Total/NA | Solid | 3541 | |

### Analysis Batch: 616422

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-2 | B-5 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-3 | B-6 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-5 | B-9 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-7 | B-11 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-8 | B-12 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-9 | B-15 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-10 | B-17 | Total/NA | Solid | 8270D | 616303 |
| MB 500-616303/1-A | Method Blank | Total/NA | Solid | 8270D | 616303 |
| LCS 500-616303/2-A | Lab Control Sample | Total/NA | Solid | 8270D | 616303 |
| 500-204356-6 MS | B-10 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-6 MSD | B-10 | Total/NA | Solid | 8270D | 616303 |

### Analysis Batch: 616645

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-4 | B-7 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-6 | B-10 | Total/NA | Solid | 8270D | 616303 |
| 500-204356-11 | B-18 | Total/NA | Solid | 8270D | 616303 |

## GC Semi VOA

### Analysis Batch: 616547

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 8081B | 616559 |
| 500-204356-4 | B-7 | Total/NA | Solid | 8081B | 616559 |
| 500-204356-6 | B-10 | Total/NA | Solid | 8081B | 616559 |
| 500-204356-9 | B-15 | Total/NA | Solid | 8081B | 616559 |
| 500-204356-11 | B-18 | Total/NA | Solid | 8081B | 616559 |
| MB 500-616559/1-A | Method Blank | Total/NA | Solid | 8081B | 616559 |
| LCS 500-616559/2-A | Lab Control Sample | Total/NA | Solid | 8081B | 616559 |

### Prep Batch: 616559

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 3541 | |
| 500-204356-3 - DL | B-6 | Total/NA | Solid | 3541 | |
| 500-204356-4 | B-7 | Total/NA | Solid | 3541 | |
| 500-204356-6 | B-10 | Total/NA | Solid | 3541 | |
| 500-204356-9 | B-15 | Total/NA | Solid | 3541 | |

## GC Semi VOA (Continued)

### Prep Batch: 616559 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-11 | B-18 | Total/NA | Solid | 3541 | |
| MB 500-616559/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-616559/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| LCS 500-616559/3-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 616579

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 8082A | 616559 |
| 500-204356-4 | B-7 | Total/NA | Solid | 8082A | 616559 |
| 500-204356-6 | B-10 | Total/NA | Solid | 8082A | 616559 |
| 500-204356-9 | B-15 | Total/NA | Solid | 8082A | 616559 |
| 500-204356-11 | B-18 | Total/NA | Solid | 8082A | 616559 |
| MB 500-616559/1-A | Method Blank | Total/NA | Solid | 8082A | 616559 |
| LCS 500-616559/3-A | Lab Control Sample | Total/NA | Solid | 8082A | 616559 |

### Analysis Batch: 616781

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 - DL | B-6 | Total/NA | Solid | 8081B | 616559 |

## Metals

### Prep Batch: 616703

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 7471B | |
| 500-204356-4 | B-7 | Total/NA | Solid | 7471B | |
| 500-204356-6 | B-10 | Total/NA | Solid | 7471B | |
| 500-204356-9 | B-15 | Total/NA | Solid | 7471B | |
| 500-204356-10 | B-17 | Total/NA | Solid | 7471B | |
| 500-204356-11 | B-18 | Total/NA | Solid | 7471B | |
| MB 500-616703/12-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 500-616703/13-A | Lab Control Sample | Total/NA | Solid | 7471B | |

### Prep Batch: 616902

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 3050B | |
| 500-204356-2 | B-5 | Total/NA | Solid | 3050B | |
| 500-204356-3 | B-6 | Total/NA | Solid | 3050B | |
| 500-204356-4 | B-7 | Total/NA | Solid | 3050B | |
| 500-204356-5 | B-9 | Total/NA | Solid | 3050B | |
| 500-204356-6 | B-10 | Total/NA | Solid | 3050B | |
| 500-204356-7 | B-11 | Total/NA | Solid | 3050B | |
| 500-204356-8 | B-12 | Total/NA | Solid | 3050B | |
| 500-204356-9 | B-15 | Total/NA | Solid | 3050B | |
| 500-204356-10 | B-17 | Total/NA | Solid | 3050B | |
| 500-204356-11 | B-18 | Total/NA | Solid | 3050B | |
| MB 500-616902/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 500-616902/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |

### Analysis Batch: 616909

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 7471B | 616703 |

## Metals (Continued)

### Analysis Batch: 616909 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-4 | B-7 | Total/NA | Solid | 7471B | 616703 |
| 500-204356-6 | B-10 | Total/NA | Solid | 7471B | 616703 |
| 500-204356-9 | B-15 | Total/NA | Solid | 7471B | 616703 |
| 500-204356-10 | B-17 | Total/NA | Solid | 7471B | 616703 |
| 500-204356-11 | B-18 | Total/NA | Solid | 7471B | 616703 |
| MB 500-616703/12-A | Method Blank | Total/NA | Solid | 7471B | 616703 |
| LCS 500-616703/13-A | Lab Control Sample | Total/NA | Solid | 7471B | 616703 |

### Analysis Batch: 617123

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-2 | B-5 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-3 | B-6 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-4 | B-7 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-5 | B-9 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-6 | B-10 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-7 | B-11 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-8 | B-12 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-9 | B-15 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-10 | B-17 | Total/NA | Solid | 6010B | 616902 |
| 500-204356-11 | B-18 | Total/NA | Solid | 6010B | 616902 |
| MB 500-616902/1-A | Method Blank | Total/NA | Solid | 6010B | 616902 |
| LCS 500-616902/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 616902 |

## General Chemistry

### Analysis Batch: 616519

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | Moisture | |
| 500-204356-2 | B-5 | Total/NA | Solid | Moisture | |
| 500-204356-3 | B-6 | Total/NA | Solid | Moisture | |
| 500-204356-4 | B-7 | Total/NA | Solid | Moisture | |
| 500-204356-5 | B-9 | Total/NA | Solid | Moisture | |
| 500-204356-6 | B-10 | Total/NA | Solid | Moisture | |
| 500-204356-7 | B-11 | Total/NA | Solid | Moisture | |

### Analysis Batch: 616539

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-8 | B-12 | Total/NA | Solid | Moisture | |
| 500-204356-9 | B-15 | Total/NA | Solid | Moisture | |
| 500-204356-10 | B-17 | Total/NA | Solid | Moisture | |
| 500-204356-11 | B-18 | Total/NA | Solid | Moisture | |
| 500-204356-8 DU | B-12 | Total/NA | Solid | Moisture | |

### Analysis Batch: 616867

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-1 | B-1 | Total/NA | Solid | 9045D | |
| 500-204356-2 | B-5 | Total/NA | Solid | 9045D | |
| 500-204356-3 | B-6 | Total/NA | Solid | 9045D | |
| 500-204356-4 | B-7 | Total/NA | Solid | 9045D | |
| 500-204356-6 | B-10 | Total/NA | Solid | 9045D | |

## General Chemistry (Continued)

### Analysis Batch: 616867 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-9 | B-15 | Total/NA | Solid | 9045D | |
| 500-204356-10 | B-17 | Total/NA | Solid | 9045D | |
| 500-204356-11 | B-18 | Total/NA | Solid | 9045D | |
| LCS 500-616867/2 | Lab Control Sample | Total/NA | Solid | 9045D | |
| LCSD 500-616867/3 | Lab Control Sample Dup | Total/NA | Solid | 9045D | |
| 500-204356-1 DU | B-1 | Total/NA | Solid | 9045D | |

### Prep Batch: 617081

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 9010C | |
| 500-204356-4 | B-7 | Total/NA | Solid | 9010C | |
| 500-204356-6 | B-10 | Total/NA | Solid | 9010C | |
| 500-204356-9 | B-15 | Total/NA | Solid | 9010C | |
| 500-204356-11 | B-18 | Total/NA | Solid | 9010C | |
| MB 500-617081/1-A | Method Blank | Total/NA | Solid | 9010C | |
| HLCS 500-617081/2-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LCS 500-617081/3-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LLCS 500-617081/4-A | Lab Control Sample | Total/NA | Solid | 9010C | |

### Analysis Batch: 617124

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | Total/NA | Solid | 9012B | 617081 |
| 500-204356-4 | B-7 | Total/NA | Solid | 9012B | 617081 |
| 500-204356-6 | B-10 | Total/NA | Solid | 9012B | 617081 |
| 500-204356-9 | B-15 | Total/NA | Solid | 9012B | 617081 |
| 500-204356-11 | B-18 | Total/NA | Solid | 9012B | 617081 |
| MB 500-617081/1-A | Method Blank | Total/NA | Solid | 9012B | 617081 |
| HLCS 500-617081/2-A | Lab Control Sample | Total/NA | Solid | 9012B | 617081 |
| LCS 500-617081/3-A | Lab Control Sample | Total/NA | Solid | 9012B | 617081 |
| LLCS 500-617081/4-A | Lab Control Sample | Total/NA | Solid | 9012B | 617081 |

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | TOL | BFB | DBFM |
| Lab Sample ID | Client Sample ID | (75-126) | (75-120) | (72-124) | (75-120) |
| 500-204356-1 | B-1 | 90 | 100 | 91 | 96 |
| 500-204356-2 | B-5 | 82 | 93 | 75 | 88 |
| 500-204356-5 | B-9 | 92 | 101 | 90 | 96 |
| 500-204356-7 | B-11 | 93 | 100 | 91 | 96 |
| 500-204356-8 | B-12 | 92 | 100 | 91 | 97 |
| LCS 500-616628/5 | Lab Control Sample | 91 | 100 | 93 | 100 |
| LCS 500-616830/4 | Lab Control Sample | 79 | 93 | 75 | 95 |
| MB 500-616628/7 | Method Blank | 94 | 97 | 91 | 101 |
| MB 500-616830/6 | Method Blank | 83 | 91 | 76 | 89 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | BFB | DBFM | DCA | TOL |
| Lab Sample ID | Client Sample ID | (75-131) | (75-126) | (70-134) | (75-124) |
| 500-204356-3 | B-6 | 114 | 112 | 123 | 109 |
| 500-204356-4 | B-7 | 117 | 111 | 118 | 112 |
| 500-204356-6 | B-10 | 114 | 112 | 119 | 109 |
| 500-204356-9 | B-15 | 111 | 111 | 119 | 109 |
| 500-204356-10 | B-17 | 113 | 115 | 121 | 109 |
| 500-204356-11 | B-18 | 113 | 111 | 117 | 110 |
| LCS 500-616485/3 | Lab Control Sample | 105 | 103 | 100 | 110 |
| LCSD 500-616485/4 | Lab Control Sample Dup | 104 | 103 | 102 | 110 |
| MB 500-616485/6 | Method Blank | 112 | 104 | 103 | 107 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Solid** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | NBZ | FBP | TPHL | 2FP | PHL | TBP |
| Lab Sample ID | Client Sample ID | (37-147) | (43-145) | (42-157) | (31-166) | (30-153) | (31-143) |
| 500-204356-1 | B-1 | 80 | 86 | 101 | | | |
| 500-204356-2 | B-5 | 85 | 84 | 101 | | | |
| 500-204356-3 | B-6 | 77 | 78 | 100 | 85 | 88 | 68 |
| 500-204356-4 | B-7 | 63 | 69 | 88 | 95 | 91 | 30 S1- |
| 500-204356-5 | B-9 | 68 | 76 | 99 | | | |
| 500-204356-6 | B-10 | 66 | 72 | 122 | 94 | 88 | 32 |
| 500-204356-6 MS | B-10 | 88 | 89 | 105 | 115 | 104 | 79 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | NBZ | FBP | TPHL | 2FP | PHL | TBP |
| Lab Sample ID | Client Sample ID | (37-147) | (43-145) | (42-157) | (31-166) | (30-153) | (31-143) |
| 500-204356-6 MSD | B-10 | 76 | 80 | 115 | 94 | 96 | 70 |
| 500-204356-7 | B-11 | 78 | 81 | 102 | | | |
| 500-204356-8 | B-12 | 74 | 92 | 104 | | | |
| 500-204356-9 | B-15 | 74 | 69 | 97 | 96 | 95 | 60 |
| 500-204356-10 | B-17 | 71 | 80 | 103 | 100 | 99 | 72 |
| 500-204356-11 | B-18 | 58 | 63 | 86 | 96 | 97 | 46 |
| LCS 500-616303/2-A | Lab Control Sample | 81 | 83 | 90 | 92 | 85 | 83 |
| MB 500-616303/1-A | Method Blank | 86 | 91 | 104 | 121 | 115 | 65 |

**Surrogate Legend**

NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPHL = Terphenyl-d14
2FP = 2-Fluorophenol
PHL = Phenol-d5
TBP = 2,4,6-Tribromophenol

## Method: 8081B - Organochlorine Pesticides (GC)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | DCBP2 | TCX2 |
| Lab Sample ID | Client Sample ID | (33-148) | (30-121) |
| 500-204356-3 | B-6 | 71 | 62 |
| 500-204356-3 - DL | B-6 | 134 | 93 |
| 500-204356-4 | B-7 | 94 | 71 |
| 500-204356-6 | B-10 | 94 | 78 |
| 500-204356-9 | B-15 | 93 | 59 |
| 500-204356-11 | B-18 | 92 | 96 |
| LCS 500-616559/2-A | Lab Control Sample | 104 | 82 |
| MB 500-616559/1-A | Method Blank | 108 | 89 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | TCX2 | DCBP2 |
| Lab Sample ID | Client Sample ID | (49-129) | (37-121) |
| 500-204356-3 | B-6 | 50 | 62 |
| 500-204356-4 | B-7 | 60 | 84 |
| 500-204356-6 | B-10 | 65 | 74 |
| 500-204356-9 | B-15 | 68 | 72 |
| 500-204356-11 | B-18 | 65 | 69 |
| LCS 500-616559/3-A | Lab Control Sample | 103 | 121 |
| MB 500-616559/1-A | Method Blank | 99 | 123 S1+ |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

DCBP = DCB Decachlorobiphenyl

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-616485/6**
**Matrix: Solid**
**Analysis Batch: 616485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 08/30/21 14:47 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 08/30/21 14:47 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 08/30/21 14:47 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 08/30/21 14:47 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 08/30/21 14:47 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 08/30/21 14:47 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 08/30/21 14:47 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 08/30/21 14:47 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *75 - 131* | | *08/30/21 14:47* | *1* |
| *Dibromofluoromethane* | *104* | | *75 - 126* | | *08/30/21 14:47* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 134* | | *08/30/21 14:47* | *1* |
| *Toluene-d8 (Surr)* | *107* | | *75 - 124* | | *08/30/21 14:47* | *1* |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616485/3**
**Matrix: Solid**
**Analysis Batch: 616485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0609 | | mg/Kg | | 122 | 40 - 150 |
| Benzene | 0.0500 | 0.0498 | | mg/Kg | | 100 | 70 - 125 |
| Bromodichloromethane | 0.0500 | 0.0488 | | mg/Kg | | 98 | 67 - 129 |
| Bromoform | 0.0500 | 0.0502 | | mg/Kg | | 100 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0460 | | mg/Kg | | 92 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0508 | | mg/Kg | | 102 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0470 | | mg/Kg | | 94 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0498 | | mg/Kg | | 100 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0485 | | mg/Kg | | 97 | 75 - 125 |
| Chloroform | 0.0500 | 0.0479 | | mg/Kg | | 96 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0521 | | mg/Kg | | 104 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0471 | | mg/Kg | | 94 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0516 | | mg/Kg | | 103 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0492 | | mg/Kg | | 98 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0492 | | mg/Kg | | 98 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0501 | | mg/Kg | | 100 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0497 | | mg/Kg | | 99 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0499 | | mg/Kg | | 100 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0499 | | mg/Kg | | 100 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0543 | | mg/Kg | | 109 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0491 | | mg/Kg | | 98 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0523 | | mg/Kg | | 105 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0544 | | mg/Kg | | 109 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0478 | | mg/Kg | | 96 | 50 - 140 |
| Styrene | 0.0500 | 0.0510 | | mg/Kg | | 102 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0508 | | mg/Kg | | 102 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0514 | | mg/Kg | | 103 | 70 - 124 |
| Toluene | 0.0500 | 0.0504 | | mg/Kg | | 101 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0483 | | mg/Kg | | 97 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0521 | | mg/Kg | | 104 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0479 | | mg/Kg | | 96 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0514 | | mg/Kg | | 103 | 70 - 125 |
| Trichloroethene | 0.0500 | 0.0496 | | mg/Kg | | 99 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0502 | | mg/Kg | | 100 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.101 | | mg/Kg | | 101 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *75 - 131* |
| *Dibromofluoromethane* | *103* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: LCSD 500-616485/4**
**Matrix: Solid**
**Analysis Batch: 616485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0440 | *1 | mg/Kg | | 88 | 40 - 150 | 32 | 30 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 500-616485/4**
**Matrix: Solid**
**Analysis Batch: 616485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | | 0.0500 | 0.0502 | | mg/Kg | | 100 | 70 - 125 | 1 | 30 |
| Bromodichloromethane | | | 0.0500 | 0.0500 | | mg/Kg | | 100 | 67 - 129 | 2 | 30 |
| Bromoform | | | 0.0500 | 0.0524 | | mg/Kg | | 105 | 68 - 136 | 4 | 30 |
| Bromomethane | | | 0.0500 | 0.0471 | | mg/Kg | | 94 | 70 - 130 | 2 | 30 |
| Carbon disulfide | | | 0.0500 | 0.0523 | | mg/Kg | | 105 | 70 - 129 | 3 | 30 |
| Carbon tetrachloride | | | 0.0500 | 0.0487 | | mg/Kg | | 97 | 75 - 125 | 3 | 30 |
| Chlorobenzene | | | 0.0500 | 0.0511 | | mg/Kg | | 102 | 50 - 150 | 3 | 30 |
| Chloroethane | | | 0.0500 | 0.0484 | | mg/Kg | | 97 | 75 - 125 | 0 | 30 |
| Chloroform | | | 0.0500 | 0.0494 | | mg/Kg | | 99 | 57 - 135 | 3 | 30 |
| Chloromethane | | | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 | 2 | 30 |
| cis-1,2-Dichloroethene | | | 0.0500 | 0.0480 | | mg/Kg | | 96 | 70 - 125 | 2 | 30 |
| cis-1,3-Dichloropropene | | | 0.0500 | 0.0523 | | mg/Kg | | 105 | 70 - 125 | 1 | 30 |
| Dibromochloromethane | | | 0.0500 | 0.0500 | | mg/Kg | | 100 | 69 - 125 | 2 | 30 |
| 1,1-Dichloroethane | | | 0.0500 | 0.0501 | | mg/Kg | | 100 | 70 - 125 | 2 | 30 |
| 1,2-Dichloroethane | | | 0.0500 | 0.0502 | | mg/Kg | | 100 | 70 - 130 | 0 | 30 |
| 1,1-Dichloroethene | | | 0.0500 | 0.0508 | | mg/Kg | | 102 | 70 - 120 | 2 | 30 |
| 1,2-Dichloropropane | | | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 | 3 | 30 |
| Ethylbenzene | | | 0.0500 | 0.0518 | | mg/Kg | | 104 | 61 - 136 | 4 | 30 |
| 2-Hexanone | | | 0.0500 | 0.0572 | | mg/Kg | | 114 | 48 - 146 | 5 | 30 |
| Methylene Chloride | | | 0.0500 | 0.0496 | | mg/Kg | | 99 | 70 - 126 | 1 | 30 |
| Methyl Ethyl Ketone | | | 0.0500 | 0.0503 | | mg/Kg | | 101 | 47 - 138 | 4 | 30 |
| methyl isobutyl ketone | | | 0.0500 | 0.0557 | | mg/Kg | | 111 | 50 - 148 | 2 | 30 |
| Methyl tert-butyl ether | | | 0.0500 | 0.0479 | | mg/Kg | | 96 | 50 - 140 | 0 | 30 |
| Styrene | | | 0.0500 | 0.0520 | | mg/Kg | | 104 | 70 - 125 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | | | 0.0500 | 0.0526 | | mg/Kg | | 105 | 70 - 122 | 3 | 30 |
| Tetrachloroethene | | | 0.0500 | 0.0534 | | mg/Kg | | 107 | 70 - 124 | 4 | 30 |
| Toluene | | | 0.0500 | 0.0515 | | mg/Kg | | 103 | 70 - 125 | 2 | 30 |
| trans-1,2-Dichloroethene | | | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 | 1 | 30 |
| trans-1,3-Dichloropropene | | | 0.0500 | 0.0529 | | mg/Kg | | 106 | 70 - 125 | 1 | 30 |
| 1,1,1-Trichloroethane | | | 0.0500 | 0.0493 | | mg/Kg | | 99 | 70 - 128 | 3 | 30 |
| 1,1,2-Trichloroethane | | | 0.0500 | 0.0518 | | mg/Kg | | 104 | 70 - 125 | 1 | 30 |
| Trichloroethene | | | 0.0500 | 0.0506 | | mg/Kg | | 101 | 70 - 125 | 2 | 30 |
| Vinyl chloride | | | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 125 | 3 | 30 |
| Xylenes, Total | | | 0.100 | 0.104 | | mg/Kg | | 104 | 53 - 147 | 3 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *75 - 131* |
| *Dibromofluoromethane* | *103* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: MB 500-616628/7**
**Matrix: Solid**
**Analysis Batch: 616628**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 08/31/21 10:26 | 1 |
| Ethylbenzene | ND | | 0.00025 | 0.00018 | mg/Kg | | | 08/31/21 10:26 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616628/7**
**Matrix: Solid**
**Analysis Batch: 616628**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 08/31/21 10:26 | 1 |
| Xylenes, Total | ND | | 0.00050 | 0.00022 | mg/Kg | | | 08/31/21 10:26 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *72 - 124* | | *08/31/21 10:26* | *1* |
| *Dibromofluoromethane* | *101* | | *75 - 120* | | *08/31/21 10:26* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 126* | | *08/31/21 10:26* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 120* | | *08/31/21 10:26* | *1* |

**Lab Sample ID: LCS 500-616628/5**
**Matrix: Solid**
**Analysis Batch: 616628**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 120 |
| Ethylbenzene | 0.0500 | 0.0520 | | mg/Kg | | 104 | 70 - 123 |
| Toluene | 0.0500 | 0.0502 | | mg/Kg | | 100 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.101 | | mg/Kg | | 101 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *72 - 124* |
| *Dibromofluoromethane* | *100* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* |

**Lab Sample ID: MB 500-616830/6**
**Matrix: Solid**
**Analysis Batch: 616830**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Ethylbenzene | ND | | 0.00025 | 0.00018 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Toluene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Xylenes, Total | ND | | 0.00050 | 0.00022 | mg/Kg | | | 09/01/21 11:24 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *76* | | *72 - 124* | | *09/01/21 11:24* | *1* |
| *Dibromofluoromethane* | *89* | | *75 - 120* | | *09/01/21 11:24* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *83* | | *75 - 126* | | *09/01/21 11:24* | *1* |
| *Toluene-d8 (Surr)* | *91* | | *75 - 120* | | *09/01/21 11:24* | *1* |

**Lab Sample ID: LCS 500-616830/4**
**Matrix: Solid**
**Analysis Batch: 616830**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.0500 | 0.0500 | | mg/Kg | | 100 | 70 - 120 |
| Ethylbenzene | 0.0500 | 0.0524 | | mg/Kg | | 105 | 70 - 123 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616830/4**
**Matrix: Solid**
**Analysis Batch: 616830**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Toluene | 0.0500 | 0.0484 | | mg/Kg | | 97 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.105 | | mg/Kg | | 105 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *75* | | *72 - 124* |
| *Dibromofluoromethane* | *95* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *79* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 120* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-616303/1-A**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | ND | | 0.033 | 0.0044 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Acenaphthene | ND | | 0.033 | 0.0060 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Anthracene | ND | | 0.033 | 0.0056 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Benzo[a]anthracene | ND | | 0.033 | 0.0045 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.17 | 0.034 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.17 | 0.050 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.0072 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.17 | 0.061 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.17 | 0.044 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.0098 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Benzo[a]pyrene | ND | | 0.033 | 0.0064 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Butyl benzyl phthalate | ND | | 0.17 | 0.063 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Carbazole | ND | | 0.17 | 0.083 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4-Chloroaniline | ND | | 0.67 | 0.16 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.33 | 0.11 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.011 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2-Chloronaphthalene | ND | | 0.17 | 0.037 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2-Chlorophenol | ND | | 0.17 | 0.057 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.17 | 0.039 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Chrysene | ND | | 0.033 | 0.0091 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.033 | 0.0064 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Dibenzofuran | ND | | 0.17 | 0.039 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.17 | 0.040 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.17 | 0.037 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.17 | 0.043 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.17 | 0.047 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,4-Dichlorophenol | ND | | 0.33 | 0.079 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Diethyl phthalate | ND | | 0.17 | 0.056 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,4-Dimethylphenol | ND | | 0.33 | 0.13 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Dimethyl phthalate | ND | | 0.17 | 0.043 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Di-n-butyl phthalate | ND | | 0.17 | 0.051 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.67 | 0.27 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,4-Dinitrophenol | ND | | 0.67 | 0.59 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616303/1-A**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | ND | | 0.17 | 0.053 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.17 | 0.065 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Di-n-octyl phthalate | ND | | 0.17 | 0.054 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Fluoranthene | ND | | 0.033 | 0.0062 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Fluorene | ND | | 0.033 | 0.0047 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Hexachlorobenzene | ND | | 0.067 | 0.0077 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Hexachlorobutadiene | ND | | 0.17 | 0.052 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.67 | 0.19 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Hexachloroethane | ND | | 0.17 | 0.051 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.0086 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Isophorone | ND | | 0.17 | 0.037 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2-Methylnaphthalene | ND | | 0.067 | 0.0061 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2-Methylphenol | ND | | 0.17 | 0.053 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 3 & 4 Methylphenol | ND | | 0.17 | 0.055 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Naphthalene | ND | | 0.033 | 0.0051 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2-Nitroaniline | ND | | 0.17 | 0.045 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 3-Nitroaniline | ND | | 0.33 | 0.10 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4-Nitroaniline | ND | | 0.33 | 0.14 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Nitrobenzene | ND | | 0.033 | 0.0083 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2-Nitrophenol | ND | | 0.33 | 0.079 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 4-Nitrophenol | ND | | 0.67 | 0.32 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.067 | 0.041 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.17 | 0.039 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.17 | 0.039 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Pentachlorophenol | ND | | 0.67 | 0.53 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Phenanthrene | ND | | 0.033 | 0.0046 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Phenol | ND | | 0.17 | 0.074 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| Pyrene | ND | | 0.033 | 0.0066 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.17 | 0.036 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.33 | 0.076 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.33 | 0.11 | mg/Kg | | 08/27/21 17:53 | 08/30/21 11:16 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *91* | | *43 - 145* | *08/27/21 17:53* | *08/30/21 11:16* | *1* |
| *2-Fluorophenol* | *121* | | *31 - 166* | *08/27/21 17:53* | *08/30/21 11:16* | *1* |
| *Nitrobenzene-d5* | *86* | | *37 - 147* | *08/27/21 17:53* | *08/30/21 11:16* | *1* |
| *Phenol-d5* | *115* | | *30 - 153* | *08/27/21 17:53* | *08/30/21 11:16* | *1* |
| *Terphenyl-d14* | *104* | | *42 - 157* | *08/27/21 17:53* | *08/30/21 11:16* | *1* |
| *2,4,6-Tribromophenol* | *65* | | *31 - 143* | *08/27/21 17:53* | *08/30/21 11:16* | *1* |

**Lab Sample ID: LCS 500-616303/2-A**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acenaphthylene | 1.33 | 1.08 | | mg/Kg | | 81 | 68 - 120 |
| Acenaphthene | 1.33 | 1.27 | | mg/Kg | | 95 | 65 - 124 |
| Anthracene | 1.33 | 1.09 | | mg/Kg | | 82 | 70 - 114 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616303/2-A**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 1.33 | 1.10 | | mg/Kg | | 83 | 67 - 122 |
| Bis(2-chloroethoxy)methane | 1.33 | 1.05 | | mg/Kg | | 79 | 60 - 112 |
| Bis(2-chloroethyl)ether | 1.33 | 0.906 | | mg/Kg | | 68 | 55 - 111 |
| Benzo[b]fluoranthene | 1.33 | 1.01 | | mg/Kg | | 76 | 69 - 129 |
| Bis(2-ethylhexyl) phthalate | 1.33 | 1.14 | | mg/Kg | | 86 | 72 - 131 |
| 4-Bromophenyl phenyl ether | 1.33 | 1.17 | | mg/Kg | | 88 | 68 - 118 |
| Benzo[k]fluoranthene | 1.33 | 1.17 | | mg/Kg | | 88 | 68 - 127 |
| Benzo[a]pyrene | 1.33 | 1.20 | | mg/Kg | | 90 | 65 - 133 |
| Butyl benzyl phthalate | 1.33 | 1.04 | | mg/Kg | | 78 | 71 - 129 |
| Carbazole | 1.33 | 1.09 | | mg/Kg | | 82 | 65 - 142 |
| 4-Chloroaniline | 1.33 | 0.769 | | mg/Kg | | 58 | 30 - 150 |
| 4-Chloro-3-methylphenol | 1.33 | 1.19 | | mg/Kg | | 89 | 65 - 122 |
| Benzo[g,h,i]perylene | 1.33 | 1.18 | | mg/Kg | | 89 | 72 - 131 |
| 2-Chloronaphthalene | 1.33 | 1.09 | | mg/Kg | | 82 | 69 - 114 |
| 2-Chlorophenol | 1.33 | 1.15 | | mg/Kg | | 87 | 64 - 110 |
| 4-Chlorophenyl phenyl ether | 1.33 | 1.18 | | mg/Kg | | 89 | 62 - 119 |
| Chrysene | 1.33 | 1.10 | | mg/Kg | | 82 | 63 - 120 |
| Dibenz(a,h)anthracene | 1.33 | 1.08 | | mg/Kg | | 81 | 64 - 131 |
| Dibenzofuran | 1.33 | 1.12 | | mg/Kg | | 84 | 66 - 115 |
| 1,2-Dichlorobenzene | 1.33 | 1.06 | | mg/Kg | | 79 | 62 - 110 |
| 1,3-Dichlorobenzene | 1.33 | 0.972 | | mg/Kg | | 73 | 65 - 124 |
| 1,4-Dichlorobenzene | 1.33 | 1.03 | | mg/Kg | | 77 | 61 - 110 |
| 3,3'-Dichlorobenzidine | 1.33 | 1.00 | | mg/Kg | | 75 | 35 - 128 |
| 2,4-Dichlorophenol | 1.33 | 1.11 | | mg/Kg | | 83 | 58 - 120 |
| Diethyl phthalate | 1.33 | 1.09 | | mg/Kg | | 82 | 58 - 120 |
| 2,4-Dimethylphenol | 1.33 | 1.10 | | mg/Kg | | 82 | 60 - 110 |
| Dimethyl phthalate | 1.33 | 1.07 | | mg/Kg | | 80 | 69 - 116 |
| Di-n-butyl phthalate | 1.33 | 1.06 | | mg/Kg | | 80 | 65 - 120 |
| 4,6-Dinitro-2-methylphenol | 2.67 | 0.576 | J | mg/Kg | | 22 | 10 - 110 |
| 2,4-Dinitrophenol | 2.67 | ND | | mg/Kg | | 10 | 10 - 100 |
| 2,4-Dinitrotoluene | 1.33 | 1.17 | | mg/Kg | | 88 | 69 - 124 |
| 2,6-Dinitrotoluene | 1.33 | 1.15 | | mg/Kg | | 86 | 70 - 123 |
| Di-n-octyl phthalate | 1.33 | 1.13 | | mg/Kg | | 85 | 68 - 134 |
| Fluoranthene | 1.33 | 1.15 | | mg/Kg | | 87 | 62 - 120 |
| Fluorene | 1.33 | 1.14 | | mg/Kg | | 85 | 62 - 120 |
| Hexachlorobenzene | 1.33 | 1.28 | | mg/Kg | | 96 | 63 - 124 |
| Hexachlorobutadiene | 1.33 | 1.11 | | mg/Kg | | 83 | 56 - 120 |
| Hexachlorocyclopentadiene | 1.33 | 0.559 | J | mg/Kg | | 42 | 10 - 133 |
| Hexachloroethane | 1.33 | 0.963 | | mg/Kg | | 72 | 60 - 114 |
| Indeno[1,2,3-cd]pyrene | 1.33 | 1.09 | | mg/Kg | | 82 | 68 - 130 |
| Isophorone | 1.33 | 0.993 | | mg/Kg | | 74 | 55 - 110 |
| 2-Methylnaphthalene | 1.33 | 1.10 | | mg/Kg | | 82 | 69 - 112 |
| 2-Methylphenol | 1.33 | 1.09 | | mg/Kg | | 82 | 60 - 120 |
| 3 & 4 Methylphenol | 1.33 | 1.04 | | mg/Kg | | 78 | 57 - 120 |
| Naphthalene | 1.33 | 1.05 | | mg/Kg | | 79 | 63 - 110 |
| 2-Nitroaniline | 1.33 | 1.04 | | mg/Kg | | 78 | 57 - 124 |
| 3-Nitroaniline | 1.33 | 0.796 | | mg/Kg | | 60 | 40 - 122 |
| 4-Nitroaniline | 1.33 | 0.981 | | mg/Kg | | 74 | 60 - 160 |
| Nitrobenzene | 1.33 | 1.03 | | mg/Kg | | 77 | 60 - 116 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616303/2-A**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | 1.33 | 1.17 | | mg/Kg | | 88 | 60 - 120 |
| 4-Nitrophenol | 2.67 | 2.03 | | mg/Kg | | 76 | 30 - 122 |
| N-Nitrosodi-n-propylamine | 1.33 | 1.09 | | mg/Kg | | 81 | 56 - 118 |
| N-Nitrosodiphenylamine | 1.33 | 1.05 | | mg/Kg | | 79 | 65 - 112 |
| 2,2'-oxybis[1-chloropropane] | 1.33 | 0.730 | | mg/Kg | | 55 | 40 - 124 |
| Pentachlorophenol | 2.67 | 0.818 | | mg/Kg | | 31 | 13 - 112 |
| Phenanthrene | 1.33 | 1.07 | | mg/Kg | | 81 | 62 - 120 |
| Phenol | 1.33 | 1.13 | | mg/Kg | | 85 | 56 - 122 |
| Pyrene | 1.33 | 1.09 | | mg/Kg | | 82 | 61 - 128 |
| 1,2,4-Trichlorobenzene | 1.33 | 1.09 | | mg/Kg | | 81 | 66 - 117 |
| 2,4,5-Trichlorophenol | 1.33 | 1.12 | | mg/Kg | | 84 | 50 - 120 |
| 2,4,6-Trichlorophenol | 1.33 | 1.07 | | mg/Kg | | 80 | 57 - 120 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *83* | | *43 - 145* |
| *2-Fluorophenol* | *92* | | *31 - 166* |
| *Nitrobenzene-d5* | *81* | | *37 - 147* |
| *Phenol-d5* | *85* | | *30 - 153* |
| *Terphenyl-d14* | *90* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *83* | | *31 - 143* |

**Lab Sample ID: 500-204356-6 MS**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: B-10**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | ND | | 1.54 | 1.30 | | mg/Kg | ☼ | 84 | 68 - 120 |
| Acenaphthene | ND | | 1.54 | 1.54 | | mg/Kg | ☼ | 100 | 65 - 124 |
| Anthracene | ND | | 1.54 | 1.37 | | mg/Kg | ☼ | 89 | 70 - 114 |
| Benzo[a]anthracene | 0.0092 | J | 1.54 | 1.42 | | mg/Kg | ☼ | 92 | 67 - 122 |
| Bis(2-chloroethoxy)methane | ND | | 1.54 | 1.34 | | mg/Kg | ☼ | 87 | 60 - 112 |
| Bis(2-chloroethyl)ether | ND | | 1.54 | 1.29 | | mg/Kg | ☼ | 84 | 55 - 111 |
| Benzo[b]fluoranthene | 0.024 | J | 1.54 | 1.49 | | mg/Kg | ☼ | 96 | 69 - 129 |
| Bis(2-ethylhexyl) phthalate | ND | | 1.54 | 1.44 | | mg/Kg | ☼ | 94 | 72 - 131 |
| 4-Bromophenyl phenyl ether | ND | | 1.54 | 1.45 | | mg/Kg | ☼ | 94 | 68 - 118 |
| Benzo[k]fluoranthene | ND | | 1.54 | 1.79 | | mg/Kg | ☼ | 117 | 68 - 127 |
| Benzo[a]pyrene | ND | | 1.54 | 1.54 | | mg/Kg | ☼ | 100 | 65 - 133 |
| Butyl benzyl phthalate | ND | | 1.54 | 1.31 | | mg/Kg | ☼ | 85 | 71 - 129 |
| Carbazole | ND | | 1.54 | 1.36 | | mg/Kg | ☼ | 89 | 65 - 142 |
| 4-Chloroaniline | ND | | 1.54 | 0.782 | | mg/Kg | ☼ | 51 | 30 - 150 |
| 4-Chloro-3-methylphenol | ND | | 1.54 | 1.30 | | mg/Kg | ☼ | 84 | 65 - 122 |
| Benzo[g,h,i]perylene | 0.028 | J F1 | 1.54 | 0.887 | F1 | mg/Kg | ☼ | 56 | 72 - 131 |
| 2-Chloronaphthalene | ND | | 1.54 | 1.25 | | mg/Kg | ☼ | 81 | 69 - 114 |
| 2-Chlorophenol | ND | F1 | 1.54 | 1.79 | F1 | mg/Kg | ☼ | 117 | 64 - 110 |
| 4-Chlorophenyl phenyl ether | ND | | 1.54 | 1.44 | | mg/Kg | ☼ | 94 | 62 - 119 |
| Chrysene | 0.026 | J | 1.54 | 1.38 | | mg/Kg | ☼ | 88 | 63 - 120 |
| Dibenz(a,h)anthracene | 0.016 | J | 1.54 | 1.01 | | mg/Kg | ☼ | 65 | 64 - 131 |
| Dibenzofuran | ND | | 1.54 | 1.37 | | mg/Kg | ☼ | 89 | 66 - 115 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-204356-6 MS**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: B-10**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | | 1.54 | 0.956 | | mg/Kg | ☼ | 62 | 62 - 110 |
| 1,3-Dichlorobenzene | ND | F1 | 1.54 | 0.831 | F1 | mg/Kg | ☼ | 54 | 60 - 110 |
| 1,4-Dichlorobenzene | ND | F1 | 1.54 | 0.876 | F1 | mg/Kg | ☼ | 57 | 61 - 110 |
| 3,3'-Dichlorobenzidine | ND | | 1.54 | 1.15 | | mg/Kg | ☼ | 75 | 35 - 128 |
| 2,4-Dichlorophenol | ND | | 1.54 | 1.53 | | mg/Kg | ☼ | 99 | 58 - 120 |
| Diethyl phthalate | ND | | 1.54 | 1.34 | | mg/Kg | ☼ | 87 | 58 - 120 |
| 2,4-Dimethylphenol | ND | | 1.54 | 1.04 | | mg/Kg | ☼ | 68 | 60 - 110 |
| Dimethyl phthalate | ND | | 1.54 | 1.29 | | mg/Kg | ☼ | 84 | 69 - 116 |
| Di-n-butyl phthalate | ND | | 1.54 | 1.29 | | mg/Kg | ☼ | 84 | 65 - 120 |
| 4,6-Dinitro-2-methylphenol | ND | | 3.07 | 1.16 | | mg/Kg | ☼ | 38 | 10 - 110 |
| 2,4-Dinitrophenol | ND | F1 | 3.07 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 100 |
| 2,4-Dinitrotoluene | ND | | 1.54 | 1.43 | | mg/Kg | ☼ | 93 | 69 - 124 |
| 2,6-Dinitrotoluene | ND | | 1.54 | 1.40 | | mg/Kg | ☼ | 91 | 70 - 123 |
| Di-n-octyl phthalate | ND | | 1.54 | 1.28 | | mg/Kg | ☼ | 83 | 68 - 134 |
| Fluoranthene | ND | | 1.54 | 1.31 | | mg/Kg | ☼ | 85 | 62 - 120 |
| Fluorene | ND | | 1.54 | 1.53 | | mg/Kg | ☼ | 100 | 62 - 120 |
| Hexachlorobenzene | ND | | 1.54 | 1.58 | | mg/Kg | ☼ | 103 | 63 - 124 |
| Hexachlorobutadiene | ND | | 1.54 | 0.964 | | mg/Kg | ☼ | 63 | 56 - 120 |
| Hexachlorocyclopentadiene | ND | F1 | 1.54 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 133 |
| Hexachloroethane | ND | F1 | 1.54 | 0.783 | F1 | mg/Kg | ☼ | 51 | 60 - 114 |
| Indeno[1,2,3-cd]pyrene | 0.019 | J F1 | 1.54 | 0.967 | F1 | mg/Kg | ☼ | 62 | 68 - 130 |
| Isophorone | ND | | 1.54 | 1.30 | | mg/Kg | ☼ | 84 | 55 - 110 |
| 2-Methylnaphthalene | ND | | 1.54 | 1.29 | | mg/Kg | ☼ | 84 | 69 - 112 |
| 2-Methylphenol | ND | | 1.54 | 1.65 | | mg/Kg | ☼ | 107 | 60 - 120 |
| 3 & 4 Methylphenol | ND | | 1.54 | 1.43 | | mg/Kg | ☼ | 93 | 57 - 120 |
| Naphthalene | ND | | 1.54 | 1.10 | | mg/Kg | ☼ | 71 | 63 - 110 |
| 2-Nitroaniline | ND | | 1.54 | 1.34 | | mg/Kg | ☼ | 87 | 57 - 124 |
| 3-Nitroaniline | ND | | 1.54 | 0.973 | | mg/Kg | ☼ | 63 | 40 - 122 |
| 4-Nitroaniline | ND | | 1.54 | 1.23 | | mg/Kg | ☼ | 80 | 60 - 160 |
| Nitrobenzene | ND | | 1.54 | 1.22 | | mg/Kg | ☼ | 79 | 60 - 116 |
| 2-Nitrophenol | ND | | 1.54 | 1.50 | | mg/Kg | ☼ | 98 | 60 - 120 |
| 4-Nitrophenol | ND | | 3.07 | 2.59 | | mg/Kg | ☼ | 84 | 30 - 122 |
| N-Nitrosodi-n-propylamine | ND | | 1.54 | 1.46 | | mg/Kg | ☼ | 95 | 56 - 118 |
| N-Nitrosodiphenylamine | ND | | 1.54 | 1.19 | | mg/Kg | ☼ | 78 | 65 - 112 |
| 2,2'-oxybis[1-chloropropane] | ND | | 1.54 | 0.792 | | mg/Kg | ☼ | 52 | 40 - 124 |
| Pentachlorophenol | ND | | 3.07 | 1.16 | | mg/Kg | ☼ | 38 | 13 - 112 |
| Phenanthrene | 0.020 | J | 1.54 | 1.32 | | mg/Kg | ☼ | 85 | 62 - 120 |
| Phenol | ND | | 1.54 | 1.42 | | mg/Kg | ☼ | 92 | 56 - 122 |
| Pyrene | 0.015 | J | 1.54 | 1.41 | | mg/Kg | ☼ | 91 | 61 - 128 |
| 1,2,4-Trichlorobenzene | ND | | 1.54 | 1.08 | | mg/Kg | ☼ | 70 | 66 - 117 |
| 2,4,5-Trichlorophenol | ND | | 1.54 | 1.60 | | mg/Kg | ☼ | 104 | 50 - 120 |
| 2,4,6-Trichlorophenol | ND | | 1.54 | 1.06 | | mg/Kg | ☼ | 69 | 57 - 120 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *89* | | *43 - 145* |
| *2-Fluorophenol* | *115* | | *31 - 166* |
| *Nitrobenzene-d5* | *88* | | *37 - 147* |
| *Phenol-d5* | *104* | | *30 - 153* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-204356-6 MS**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: B-10**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| *Terphenyl-d14* | *105* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *79* | | *31 - 143* |

**Lab Sample ID: 500-204356-6 MSD**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: B-10**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | ND | | 1.53 | 1.31 | | mg/Kg | ☼ | 85 | 68 - 120 | 1 | 30 |
| Acenaphthene | ND | | 1.53 | 1.61 | | mg/Kg | ☼ | 105 | 65 - 124 | 4 | 30 |
| Anthracene | ND | | 1.53 | 1.33 | | mg/Kg | ☼ | 87 | 70 - 114 | 2 | 30 |
| Benzo[a]anthracene | 0.0092 | J | 1.53 | 1.42 | | mg/Kg | ☼ | 92 | 67 - 122 | 0 | 30 |
| Bis(2-chloroethoxy)methane | ND | | 1.53 | 1.33 | | mg/Kg | ☼ | 87 | 60 - 112 | 0 | 30 |
| Bis(2-chloroethyl)ether | ND | | 1.53 | 1.41 | | mg/Kg | ☼ | 92 | 55 - 111 | 9 | 30 |
| Benzo[b]fluoranthene | 0.024 | J | 1.53 | 1.46 | | mg/Kg | ☼ | 94 | 69 - 129 | 2 | 30 |
| Bis(2-ethylhexyl) phthalate | ND | | 1.53 | 1.52 | | mg/Kg | ☼ | 99 | 72 - 131 | 5 | 30 |
| 4-Bromophenyl phenyl ether | ND | | 1.53 | 1.48 | | mg/Kg | ☼ | 97 | 68 - 118 | 2 | 30 |
| Benzo[k]fluoranthene | ND | | 1.53 | 1.78 | | mg/Kg | ☼ | 116 | 68 - 127 | 1 | 30 |
| Benzo[a]pyrene | ND | | 1.53 | 1.55 | | mg/Kg | ☼ | 101 | 65 - 133 | 0 | 30 |
| Butyl benzyl phthalate | ND | | 1.53 | 1.55 | | mg/Kg | ☼ | 101 | 71 - 129 | 17 | 30 |
| Carbazole | ND | | 1.53 | 1.32 | | mg/Kg | ☼ | 86 | 65 - 142 | 3 | 30 |
| 4-Chloroaniline | ND | | 1.53 | 0.762 | J | mg/Kg | ☼ | 50 | 30 - 150 | 3 | 30 |
| 4-Chloro-3-methylphenol | ND | | 1.53 | 1.68 | | mg/Kg | ☼ | 110 | 65 - 122 | 26 | 30 |
| Benzo[g,h,i]perylene | 0.028 | J F1 | 1.53 | 0.887 | F1 | mg/Kg | ☼ | 56 | 72 - 131 | 0 | 30 |
| 2-Chloronaphthalene | ND | | 1.53 | 1.29 | | mg/Kg | ☼ | 84 | 69 - 114 | 3 | 30 |
| 2-Chlorophenol | ND | F1 | 1.53 | 1.84 | F1 | mg/Kg | ☼ | 120 | 64 - 110 | 3 | 30 |
| 4-Chlorophenyl phenyl ether | ND | | 1.53 | 1.40 | | mg/Kg | ☼ | 92 | 62 - 119 | 2 | 30 |
| Chrysene | 0.026 | J | 1.53 | 1.39 | | mg/Kg | ☼ | 89 | 63 - 120 | 1 | 30 |
| Dibenz(a,h)anthracene | 0.016 | J | 1.53 | 1.01 | | mg/Kg | ☼ | 65 | 64 - 131 | 0 | 30 |
| Dibenzofuran | ND | | 1.53 | 1.34 | | mg/Kg | ☼ | 87 | 66 - 115 | 2 | 30 |
| 1,2-Dichlorobenzene | ND | | 1.53 | 1.09 | | mg/Kg | ☼ | 71 | 62 - 110 | 13 | 30 |
| 1,3-Dichlorobenzene | ND | F1 | 1.53 | 0.999 | | mg/Kg | ☼ | 65 | 60 - 110 | 18 | 30 |
| 1,4-Dichlorobenzene | ND | F1 | 1.53 | 1.07 | | mg/Kg | ☼ | 70 | 61 - 110 | 20 | 30 |
| 3,3'-Dichlorobenzidine | ND | | 1.53 | 1.11 | | mg/Kg | ☼ | 72 | 35 - 128 | 4 | 30 |
| 2,4-Dichlorophenol | ND | | 1.53 | 1.48 | | mg/Kg | ☼ | 97 | 58 - 120 | 3 | 30 |
| Diethyl phthalate | ND | | 1.53 | 1.28 | | mg/Kg | ☼ | 83 | 58 - 120 | 5 | 30 |
| 2,4-Dimethylphenol | ND | | 1.53 | 1.16 | | mg/Kg | ☼ | 76 | 60 - 110 | 10 | 30 |
| Dimethyl phthalate | ND | | 1.53 | 1.31 | | mg/Kg | ☼ | 85 | 69 - 116 | 1 | 30 |
| Di-n-butyl phthalate | ND | | 1.53 | 1.29 | | mg/Kg | ☼ | 84 | 65 - 120 | 0 | 30 |
| 4,6-Dinitro-2-methylphenol | ND | | 3.07 | 1.04 | | mg/Kg | ☼ | 34 | 10 - 110 | 10 | 30 |
| 2,4-Dinitrophenol | ND | F1 | 3.07 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 100 | NC | 30 |
| 2,4-Dinitrotoluene | ND | | 1.53 | 1.41 | | mg/Kg | ☼ | 92 | 69 - 124 | 1 | 30 |
| 2,6-Dinitrotoluene | ND | | 1.53 | 1.46 | | mg/Kg | ☼ | 95 | 70 - 123 | 5 | 30 |
| Di-n-octyl phthalate | ND | | 1.53 | 1.17 | | mg/Kg | ☼ | 77 | 68 - 134 | 8 | 30 |
| Fluoranthene | ND | | 1.53 | 1.38 | | mg/Kg | ☼ | 90 | 62 - 120 | 5 | 30 |
| Fluorene | ND | | 1.53 | 1.42 | | mg/Kg | ☼ | 92 | 62 - 120 | 8 | 30 |
| Hexachlorobenzene | ND | | 1.53 | 1.49 | | mg/Kg | ☼ | 97 | 63 - 124 | 6 | 30 |
| Hexachlorobutadiene | ND | | 1.53 | 1.15 | | mg/Kg | ☼ | 75 | 56 - 120 | 18 | 30 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-204356-6 MSD**
**Matrix: Solid**
**Analysis Batch: 616422**

**Client Sample ID: B-10**
**Prep Type: Total/NA**
**Prep Batch: 616303**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | ND | F1 | 1.53 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 133 | NC | 30 |
| Hexachloroethane | ND | F1 | 1.53 | 0.914 | | mg/Kg | ☼ | 60 | 60 - 114 | 15 | 30 |
| Indeno[1,2,3-cd]pyrene | 0.019 | J F1 | 1.53 | 0.962 | F1 | mg/Kg | ☼ | 61 | 68 - 130 | 1 | 30 |
| Isophorone | ND | | 1.53 | 1.23 | | mg/Kg | ☼ | 80 | 55 - 110 | 5 | 30 |
| 2-Methylnaphthalene | ND | | 1.53 | 1.45 | | mg/Kg | ☼ | 95 | 69 - 112 | 12 | 30 |
| 2-Methylphenol | ND | | 1.53 | 1.79 | | mg/Kg | ☼ | 116 | 60 - 120 | 8 | 30 |
| 3 & 4 Methylphenol | ND | | 1.53 | 1.45 | | mg/Kg | ☼ | 95 | 57 - 120 | 2 | 30 |
| Naphthalene | ND | | 1.53 | 1.22 | | mg/Kg | ☼ | 80 | 63 - 110 | 11 | 30 |
| 2-Nitroaniline | ND | | 1.53 | 1.46 | | mg/Kg | ☼ | 95 | 57 - 124 | 9 | 30 |
| 3-Nitroaniline | ND | | 1.53 | 1.09 | | mg/Kg | ☼ | 71 | 40 - 122 | 12 | 30 |
| 4-Nitroaniline | ND | | 1.53 | 1.15 | | mg/Kg | ☼ | 75 | 60 - 160 | 7 | 30 |
| Nitrobenzene | ND | | 1.53 | 1.17 | | mg/Kg | ☼ | 76 | 60 - 116 | 4 | 30 |
| 2-Nitrophenol | ND | | 1.53 | 1.42 | | mg/Kg | ☼ | 93 | 60 - 120 | 5 | 30 |
| 4-Nitrophenol | ND | | 3.07 | 2.76 | | mg/Kg | ☼ | 90 | 30 - 122 | 6 | 30 |
| N-Nitrosodi-n-propylamine | ND | | 1.53 | 1.54 | | mg/Kg | ☼ | 100 | 56 - 118 | 5 | 30 |
| N-Nitrosodiphenylamine | ND | | 1.53 | 1.34 | | mg/Kg | ☼ | 87 | 65 - 112 | 12 | 30 |
| 2,2'-oxybis[1-chloropropane] | ND | | 1.53 | 0.891 | | mg/Kg | ☼ | 58 | 40 - 124 | 12 | 30 |
| Pentachlorophenol | ND | | 3.07 | 0.945 | | mg/Kg | ☼ | 31 | 13 - 112 | 20 | 30 |
| Phenanthrene | 0.020 | J | 1.53 | 1.32 | | mg/Kg | ☼ | 85 | 62 - 120 | 0 | 30 |
| Phenol | ND | | 1.53 | 1.49 | | mg/Kg | ☼ | 97 | 56 - 122 | 5 | 30 |
| Pyrene | 0.015 | J | 1.53 | 1.68 | | mg/Kg | ☼ | 108 | 61 - 128 | 18 | 30 |
| 1,2,4-Trichlorobenzene | ND | | 1.53 | 1.16 | | mg/Kg | ☼ | 76 | 66 - 117 | 8 | 30 |
| 2,4,5-Trichlorophenol | ND | | 1.53 | 1.51 | | mg/Kg | ☼ | 98 | 50 - 120 | 6 | 30 |
| 2,4,6-Trichlorophenol | ND | | 1.53 | 1.17 | | mg/Kg | ☼ | 76 | 57 - 120 | 10 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *80* | | *43 - 145* |
| *2-Fluorophenol* | *94* | | *31 - 166* |
| *Nitrobenzene-d5* | *76* | | *37 - 147* |
| *Phenol-d5* | *96* | | *30 - 153* |
| *Terphenyl-d14* | *115* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *70* | | *31 - 143* |

## Method: 8081B - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 500-616559/1-A**
**Matrix: Solid**
**Analysis Batch: 616547**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616559**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0017 | 0.0012 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| alpha-BHC | ND | | 0.0017 | 0.00095 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| beta-BHC | ND | | 0.0017 | 0.0014 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| cis-Chlordane | ND | | 0.0017 | 0.00090 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| 4,4'-DDD | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| 4,4'-DDE | ND | | 0.0017 | 0.00087 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| 4,4'-DDT | ND | | 0.0017 | 0.00080 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| delta-BHC | ND | | 0.0017 | 0.00081 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Dieldrin | ND | | 0.0017 | 0.00088 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: MB 500-616559/1-A**
**Matrix: Solid**
**Analysis Batch: 616547**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616559**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Endosulfan I | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Endosulfan II | ND | | 0.0017 | 0.00093 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Endosulfan sulfate | ND | | 0.0017 | 0.00093 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Endrin | ND | | 0.0017 | 0.00086 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Endrin aldehyde | ND | | 0.0017 | 0.00096 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Endrin ketone | ND | | 0.0017 | 0.00082 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0017 | 0.00084 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Heptachlor | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Heptachlor epoxide | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Methoxychlor | ND | | 0.0083 | 0.0011 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| Toxaphene | ND | | 0.017 | 0.0067 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |
| trans-Chlordane | ND | | 0.0017 | 0.00097 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:01 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *108* | | *33 - 148* | *08/30/21 17:28* | *08/31/21 01:01* | *1* |
| *Tetrachloro-m-xylene* | *89* | | *30 - 121* | *08/30/21 17:28* | *08/31/21 01:01* | *1* |

**Lab Sample ID: LCS 500-616559/2-A**
**Matrix: Solid**
**Analysis Batch: 616547**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616559**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aldrin | 0.0133 | 0.0109 | | mg/Kg | | 82 | 52 - 122 |
| alpha-BHC | 0.0133 | 0.0111 | | mg/Kg | | 84 | 50 - 123 |
| beta-BHC | 0.0133 | 0.0123 | | mg/Kg | | 92 | 44 - 140 |
| cis-Chlordane | 0.0133 | 0.0115 | | mg/Kg | | 86 | 52 - 129 |
| 4,4'-DDD | 0.0133 | 0.0121 | | mg/Kg | | 91 | 47 - 137 |
| 4,4'-DDE | 0.0133 | 0.0116 | | mg/Kg | | 87 | 50 - 130 |
| 4,4'-DDT | 0.0133 | 0.00918 | | mg/Kg | | 69 | 46 - 143 |
| delta-BHC | 0.0133 | 0.00934 | | mg/Kg | | 70 | 57 - 125 |
| Dieldrin | 0.0133 | 0.0117 | | mg/Kg | | 88 | 51 - 133 |
| Endosulfan I | 0.0133 | 0.0114 | | mg/Kg | | 85 | 30 - 120 |
| Endosulfan II | 0.0133 | 0.0123 | | mg/Kg | | 93 | 30 - 120 |
| Endosulfan sulfate | 0.0133 | 0.0127 | | mg/Kg | | 95 | 42 - 150 |
| Endrin | 0.0133 | 0.0119 | | mg/Kg | | 89 | 43 - 144 |
| Endrin aldehyde | 0.0133 | 0.0122 | | mg/Kg | | 91 | 39 - 131 |
| Endrin ketone | 0.0133 | 0.0122 | | mg/Kg | | 91 | 51 - 135 |
| gamma-BHC (Lindane) | 0.0133 | 0.0114 | | mg/Kg | | 86 | 50 - 122 |
| Heptachlor | 0.0133 | 0.0126 | | mg/Kg | | 95 | 53 - 129 |
| Heptachlor epoxide | 0.0133 | 0.0117 | | mg/Kg | | 88 | 50 - 139 |
| Methoxychlor | 0.0133 | 0.0125 | | mg/Kg | | 94 | 45 - 144 |
| trans-Chlordane | 0.0133 | 0.0118 | | mg/Kg | | 89 | 52 - 132 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *104* | | *33 - 148* |
| *Tetrachloro-m-xylene* | *82* | | *30 - 121* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 500-616559/1-A**
**Matrix: Solid**
**Analysis Batch: 616579**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616559**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.017 | 0.0066 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| PCB-1221 | ND | | 0.017 | 0.0066 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| PCB-1232 | ND | | 0.017 | 0.0045 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| PCB-1242 | ND | | 0.017 | 0.0065 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| PCB-1248 | ND | | 0.017 | 0.0079 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| PCB-1254 | ND | | 0.017 | 0.0057 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| PCB-1260 | ND | | 0.017 | 0.0063 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.017 | 0.0045 | mg/Kg | | 08/30/21 17:28 | 08/31/21 01:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *99* | | *49 - 129* | *08/30/21 17:28* | *08/31/21 01:07* | *1* |
| *DCB Decachlorobiphenyl* | *123* | *S1+* | *37 - 121* | *08/30/21 17:28* | *08/31/21 01:07* | *1* |

**Lab Sample ID: LCS 500-616559/3-A**
**Matrix: Solid**
**Analysis Batch: 616579**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616559**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| PCB-1016 | 0.167 | 0.164 | | mg/Kg | | 99 | 57 - 120 |
| PCB-1260 | 0.167 | 0.191 | | mg/Kg | | 114 | 61 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *103* | | *49 - 129* |
| *DCB Decachlorobiphenyl* | *121* | | *37 - 121* |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-616902/1-A**
**Matrix: Solid**
**Analysis Batch: 617123**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616902**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 13.4 | J | 20 | 8.2 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Antimony | ND | | 2.0 | 0.39 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Arsenic | ND | | 1.0 | 0.34 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Barium | ND | | 1.0 | 0.11 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Beryllium | ND | | 0.40 | 0.093 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Cadmium | 0.0667 | J | 0.20 | 0.036 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Calcium | 23.8 | | 20 | 3.4 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Chromium | ND | | 1.0 | 0.50 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Cobalt | ND | | 0.50 | 0.13 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Copper | ND | | 1.0 | 0.28 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Iron | 16.1 | J | 20 | 10 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Lead | ND | | 0.50 | 0.23 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Magnesium | 12.5 | | 10 | 5.0 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Manganese | 0.184 | J | 1.0 | 0.15 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Nickel | ND | | 1.0 | 0.29 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Potassium | ND | | 50 | 18 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: MB 500-616902/1-A**
**Matrix: Solid**
**Analysis Batch: 617123**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616902**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | ND | | 1.0 | 0.59 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Silver | ND | | 0.50 | 0.13 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Sodium | ND | | 100 | 15 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Thallium | ND | | 1.0 | 0.50 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Vanadium | ND | | 0.50 | 0.12 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |
| Zinc | ND | | 2.0 | 0.88 | mg/Kg | | 09/01/21 09:52 | 09/02/21 11:47 | 1 |

**Lab Sample ID: LCS 500-616902/2-A**
**Matrix: Solid**
**Analysis Batch: 617123**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616902**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aluminum | 200 | 214 | | mg/Kg | | 107 | 80 - 120 |
| Antimony | 50.0 | 49.7 | | mg/Kg | | 99 | 80 - 120 |
| Arsenic | 10.0 | 9.31 | | mg/Kg | | 93 | 80 - 120 |
| Barium | 200 | 197 | | mg/Kg | | 99 | 80 - 120 |
| Beryllium | 5.00 | 4.64 | | mg/Kg | | 93 | 80 - 120 |
| Cadmium | 5.00 | 4.63 | | mg/Kg | | 93 | 80 - 120 |
| Calcium | 1000 | 962 | | mg/Kg | | 96 | 80 - 120 |
| Chromium | 20.0 | 19.2 | | mg/Kg | | 96 | 80 - 120 |
| Cobalt | 50.0 | 48.5 | | mg/Kg | | 97 | 80 - 120 |
| Copper | 25.0 | 25.0 | | mg/Kg | | 100 | 80 - 120 |
| Iron | 100 | 113 | | mg/Kg | | 113 | 80 - 120 |
| Lead | 10.0 | 9.23 | | mg/Kg | | 92 | 80 - 120 |
| Magnesium | 1000 | 938 | | mg/Kg | | 94 | 80 - 120 |
| Manganese | 50.0 | 46.1 | | mg/Kg | | 92 | 80 - 120 |
| Nickel | 50.0 | 48.7 | | mg/Kg | | 97 | 80 - 120 |
| Potassium | 1000 | 994 | | mg/Kg | | 99 | 80 - 120 |
| Selenium | 10.0 | 8.85 | | mg/Kg | | 88 | 80 - 120 |
| Silver | 5.00 | 4.57 | | mg/Kg | | 91 | 80 - 120 |
| Sodium | 1000 | 999 | | mg/Kg | | 100 | 80 - 120 |
| Thallium | 10.0 | 9.16 | | mg/Kg | | 92 | 80 - 120 |
| Vanadium | 50.0 | 49.4 | | mg/Kg | | 99 | 80 - 120 |
| Zinc | 50.0 | 47.8 | | mg/Kg | | 96 | 80 - 120 |

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-616703/12-A**
**Matrix: Solid**
**Analysis Batch: 616909**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616703**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.017 | 0.0056 | mg/Kg | | 08/31/21 14:25 | 09/01/21 08:32 | 1 |

**Lab Sample ID: LCS 500-616703/13-A**
**Matrix: Solid**
**Analysis Batch: 616909**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616703**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.167 | 0.171 | | mg/Kg | | 103 | 80 - 120 |

## Method: 9012B - Cyanide, Total andor Amenable

**Lab Sample ID: MB 500-617081/1-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.23 | 0.11 | mg/Kg | | 09/02/21 10:35 | 09/02/21 12:24 | 1 |

**Lab Sample ID: HLCS 500-617081/2-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | | | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 11.2 | 11.1 | | mg/Kg | | 99 | 90 - 110 | | |

**Lab Sample ID: LCS 500-617081/3-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 2.28 | 2.24 | | mg/Kg | | 98 | 85 - 115 | | |

**Lab Sample ID: LLCS 500-617081/4-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | | | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | | | 1.07 | 1.11 | | mg/Kg | | 104 | 75 - 125 | | |

## Method: 9045D - pH

**Lab Sample ID: 500-204356-1 DU**
**Matrix: Solid**
**Analysis Batch: 616867**

**Client Sample ID: B-1**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.6 | | | 7.7 | | SU | | | | 0.7 | |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-1
**Date Collected: 08/25/21 08:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:31 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-1
**Date Collected: 08/25/21 08:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-1
**Matrix: Solid**
**Percent Solids: 87.6**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616093 | 08/25/21 08:00 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 616628 | 08/31/21 11:55 | JLC | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 17:45 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 12:53 | JJB | TAL CHI |

## Client Sample ID: B-5
**Date Collected: 08/25/21 08:50**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:36 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-5
**Date Collected: 08/25/21 08:50**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-2
**Matrix: Solid**
**Percent Solids: 84.7**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616093 | 08/25/21 08:50 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 616830 | 09/01/21 13:12 | JLC | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 13:42 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 12:57 | JJB | TAL CHI |

## Client Sample ID: B-6
**Date Collected: 08/25/21 10:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-3
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:39 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-6

**Lab Sample ID: 500-204356-3**

**Date Collected: 08/25/21 10:00**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**
**Percent Solids: 82.3**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616101 | 08/26/21 19:02 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616485 | 08/30/21 21:15 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 14:06 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616547 | 08/31/21 08:18 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | DL | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8081B | DL | 5 | 616781 | 08/31/21 23:28 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616579 | 08/31/21 08:19 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:00 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616703 | 08/31/21 14:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 616909 | 09/01/21 09:22 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 12:39 | SB | TAL CHI |

## Client Sample ID: B-7

**Lab Sample ID: 500-204356-4**

**Date Collected: 08/25/21 10:35**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:41 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-7

**Lab Sample ID: 500-204356-4**

**Date Collected: 08/25/21 10:35**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**
**Percent Solids: 86.1**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616101 | 08/26/21 19:02 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616485 | 08/30/21 21:40 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616645 | 08/31/21 10:53 | EF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616547 | 08/31/21 03:48 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616579 | 08/31/21 03:41 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:03 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616703 | 08/31/21 14:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 616909 | 09/01/21 09:24 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 12:44 | SB | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-9
**Date Collected: 08/25/21 11:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-5
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-9
**Date Collected: 08/25/21 11:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-5
**Matrix: Solid**
**Percent Solids: 85.2**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616093 | 08/25/21 11:00 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 616628 | 08/31/21 12:39 | JLC | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 14:31 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:06 | JJB | TAL CHI |

## Client Sample ID: B-10
**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-6
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:46 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-10
**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-6
**Matrix: Solid**
**Percent Solids: 85.6**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616101 | 08/26/21 19:02 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616485 | 08/30/21 22:05 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616645 | 08/31/21 12:26 | EF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616547 | 08/31/21 04:08 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616579 | 08/31/21 03:57 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:09 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616703 | 08/31/21 14:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 616909 | 09/01/21 09:25 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 12:46 | SB | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-11
**Date Collected: 08/25/21 12:15**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 616519 | 08/30/21 15:19 | LWN | TAL CHI |

## Client Sample ID: B-11
**Date Collected: 08/25/21 12:15**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-7**
**Matrix: Solid**
**Percent Solids: 83.3**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616093 | 08/25/21 12:15 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 616628 | 08/31/21 13:01 | JLC | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 15:43 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:13 | JJB | TAL CHI |

## Client Sample ID: B-12
**Date Collected: 08/25/21 12:30**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-8**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 616539 | 08/30/21 16:19 | LWN | TAL CHI |

## Client Sample ID: B-12
**Date Collected: 08/25/21 12:30**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-8**
**Matrix: Solid**
**Percent Solids: 84.3**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616093 | 08/25/21 12:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 616628 | 08/31/21 13:23 | JLC | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 16:08 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:16 | JJB | TAL CHI |

## Client Sample ID: B-15
**Date Collected: 08/25/21 12:50**
**Date Received: 08/26/21 12:50**

**Lab Sample ID: 500-204356-9**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:54 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616539 | 08/30/21 16:19 | LWN | TAL CHI |

## Client Sample ID: B-15

**Lab Sample ID: 500-204356-9**

**Date Collected: 08/25/21 12:50**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**
**Percent Solids: 78.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616101 | 08/26/21 19:02 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616485 | 08/30/21 22:31 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 16:32 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616547 | 08/31/21 04:29 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616579 | 08/31/21 04:12 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:26 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616703 | 08/31/21 14:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 616909 | 09/01/21 09:27 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 12:48 | SB | TAL CHI |

## Client Sample ID: B-17

**Lab Sample ID: 500-204356-10**

**Date Collected: 08/25/21 13:40**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 16:59 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616539 | 08/30/21 16:19 | LWN | TAL CHI |

## Client Sample ID: B-17

**Lab Sample ID: 500-204356-10**

**Date Collected: 08/25/21 13:40**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**
**Percent Solids: 80.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616101 | 08/26/21 19:02 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616485 | 08/30/21 22:56 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616422 | 08/30/21 16:56 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:29 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616703 | 08/31/21 14:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 616909 | 09/01/21 09:29 | MJG | TAL CHI |

## Client Sample ID: B-18

**Lab Sample ID: 500-204356-11**

**Date Collected: 08/25/21 14:15**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:02 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616539 | 08/30/21 16:19 | LWN | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-1

## Client Sample ID: B-18

**Date Collected: 08/25/21 14:15**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-11

**Matrix: Solid**
**Percent Solids: 78.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616101 | 08/26/21 19:02 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616485 | 08/30/21 23:22 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616303 | 08/27/21 17:53 | ACK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616645 | 08/31/21 12:49 | EF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616547 | 08/31/21 04:50 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | | | 616559 | 08/30/21 17:28 | JP1 | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616579 | 08/31/21 04:28 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 616902 | 09/01/21 09:52 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617123 | 09/02/21 13:32 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616703 | 08/31/21 14:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 616909 | 09/01/21 09:35 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 12:49 | SB | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-204356-1
Project/Site: Cloud HQ (53:2861-B)

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

500-204356 COC

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | COC No |
|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact: Jim Knapp | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | Job No |
| Buffalo Grove, IL 60089 | Calendar ( C ) or Work Days (W) | | |
| Phone | ☐ 2 weeks | | SDG No 500-204356 |
| 224-478-9420 FAX 847 279-0369 | ☒ Standard | | |
| Project Name Cloud HQ | ☐ 3 day | | |
| Site 53 2861-B | ☐ 1 day | | |
| P O # 53.2861-B | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-1 | 8/25 | 800 | Grab | Soil | Kit | | | | | | | X | | X | X | X | |
| 2 | B-5 | | 850 | Grab | Soil | Kit | | | | | | | X | | X | X | X | |
| 3 | B-6 | | 1000 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 4 | B-7 | | 1035 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 5 | B 9 | | 1100 | Grab | Soil | Kit | | | | | | | | | X | X | X | |
| 6 | B-10 | | 1110 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 7 | B-11 | | 1215 | Grab | Soil | Kit | | | | | | | | | X | X | X | |
| 8 | B 12 | | 1230 | Grab | Soil | Kit | | | | | | | | | X | X | X | |
| 9 | B-15 | | 1250 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 10 | B-17 | | 1340 | Grab | Soil | Kit | | X | X | | | X | X | X | | | | |
| 11 | B-18 | | 1415 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ In Irritant ☐ son B Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☒ Disposal By Lab ☐ chive For _____ Months

**Special Instructions/QC Requirements & Comments: NEED RESULTS ASAP**

0.8 = temp

| | Company | Date/Time | | Company | Date/Time |
|---|---|---|---|---|---|
| Relinquished by | ECS Midwest | 8/26 | Received by | | 8/26/21 1030 |
| Relinquished by | | 8/26/21 1250 | Received by | CTH | 8/26/21 1250 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204356-1

**Login Number: 204356**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204356-2
Client Project/Site: Cloud HQ (53:2861-B)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/22/2021 3:02:01 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Job ID: 500-204356-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204356-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/26/2021 12:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

**Metals**
Method 6010B: The laboratory control sample (LCS) for preparation batch 500-619217 and 500-619476 and analytical batch 500-619756 recovered outside control limits for the following analytes: <AffectedAnalytes>. These analytes were biased high in the LCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Client Sample ID: B-6 — Lab Sample ID: 500-204356-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 3.2 | | 0.20 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Aluminum | 4.1 | | 0.20 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Cobalt | 0.024 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-7 — Lab Sample ID: 500-204356-4

No Detections.

## Client Sample ID: B-10 — Lab Sample ID: 500-204356-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Zinc | 0.037 | J B *+ | 0.10 | 0.020 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-15 — Lab Sample ID: 500-204356-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.33 | | 0.20 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Aluminum | 0.25 | | 0.20 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Manganese | 0.83 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-18 — Lab Sample ID: 500-204356-11

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 1311 | TCLP Extraction | SW846 | TAL CHI |
| 3010A | Preparation, Total Metals | SW846 | TAL CHI |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204356-3 | B-6 | Solid | 08/25/21 10:00 | 08/26/21 12:50 |
| 500-204356-4 | B-7 | Solid | 08/25/21 10:35 | 08/26/21 12:50 |
| 500-204356-6 | B-10 | Solid | 08/25/21 11:10 | 08/26/21 12:50 |
| 500-204356-9 | B-15 | Solid | 08/25/21 12:50 | 08/26/21 12:50 |
| 500-204356-11 | B-18 | Solid | 08/25/21 14:15 | 08/26/21 12:50 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Client Sample ID: B-6

**Date Collected: 08/25/21 10:00**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-3

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 3.2 | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:41 | 1 |
| Aluminum | 4.1 | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:41 | 1 |
| Cobalt | 0.024 | J | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:41 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Client Sample ID: B-7

**Date Collected: 08/25/21 10:35**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-4

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:45 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:45 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:45 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Client Sample ID: B-10

**Date Collected: 08/25/21 11:10**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-6

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0040 | 0.0040 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |
| Nickel | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |
| Copper | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |
| **Zinc** | **0.037** | **J B *+** | 0.10 | 0.020 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:48 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Client Sample ID: B-15

**Date Collected: 08/25/21 12:50**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-9

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Iron** | **0.33** | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:51 | 1 |
| **Aluminum** | **0.25** | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:51 | 1 |
| **Manganese** | **0.83** | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:51 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:51 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Client Sample ID: B-18

**Date Collected: 08/25/21 14:15**
**Date Received: 08/26/21 12:50**

## Lab Sample ID: 500-204356-11

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:55 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:55 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 20:55 | 1 |

# Definitions/Glossary

Client: ECS Midwest LLC
Job ID: 500-204356-2
Project/Site: Cloud HQ (53:2861-B)

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204356-2

## Metals

### Leach Batch: 619217

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | TCLP | Solid | 1311 | |
| 500-204356-4 | B-7 | TCLP | Solid | 1311 | |
| 500-204356-6 | B-10 | TCLP | Solid | 1311 | |
| 500-204356-9 | B-15 | TCLP | Solid | 1311 | |
| 500-204356-11 | B-18 | TCLP | Solid | 1311 | |
| LB 500-619217/1-B | Method Blank | TCLP | Solid | 1311 | |

### Prep Batch: 619476

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | TCLP | Solid | 3010A | 619217 |
| 500-204356-4 | B-7 | TCLP | Solid | 3010A | 619217 |
| 500-204356-6 | B-10 | TCLP | Solid | 3010A | 619217 |
| 500-204356-9 | B-15 | TCLP | Solid | 3010A | 619217 |
| 500-204356-11 | B-18 | TCLP | Solid | 3010A | 619217 |
| LB 500-619217/1-B | Method Blank | TCLP | Solid | 3010A | 619217 |
| LCS 500-619476/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |

### Analysis Batch: 619756

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204356-3 | B-6 | TCLP | Solid | 6010B | 619476 |
| 500-204356-4 | B-7 | TCLP | Solid | 6010B | 619476 |
| 500-204356-6 | B-10 | TCLP | Solid | 6010B | 619476 |
| 500-204356-9 | B-15 | TCLP | Solid | 6010B | 619476 |
| 500-204356-11 | B-18 | TCLP | Solid | 6010B | 619476 |
| LB 500-619217/1-B | Method Blank | TCLP | Solid | 6010B | 619476 |
| LCS 500-619476/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 619476 |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: LCS 500-619476/2-A**
**Matrix: Solid**
**Analysis Batch: 619756**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 619476**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0517 | | mg/L | | 103 | 80 - 120 |
| Iron | 1.00 | 1.18 | | mg/L | | 118 | 80 - 120 |
| Nickel | 0.500 | 0.527 | | mg/L | | 105 | 80 - 120 |
| Copper | 0.250 | 0.274 | | mg/L | | 110 | 80 - 120 |
| Aluminum | 2.00 | 2.06 | | mg/L | | 103 | 80 - 120 |
| Zinc | 0.500 | 0.608 | *+ | mg/L | | 122 | 80 - 120 |
| Manganese | 0.500 | 0.508 | | mg/L | | 102 | 80 - 120 |
| Cobalt | 0.500 | 0.531 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: LB 500-619217/1-B**
**Matrix: Solid**
**Analysis Batch: 619756**

**Client Sample ID: Method Blank**
**Prep Type: TCLP**
**Prep Batch: 619476**

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0040 | 0.0040 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Nickel | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Copper | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Zinc | 0.0215 | J | 0.10 | 0.020 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Manganese | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |

# Lab Chronicle

Client: ECS Midwest LLC
Job ID: 500-204356-2
Project/Site: Cloud HQ (53:2861-B)

## Client Sample ID: B-6
**Lab Sample ID: 500-204356-3**
**Date Collected: 08/25/21 10:00**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 20:41 | JJB | TAL CHI |

## Client Sample ID: B-7
**Lab Sample ID: 500-204356-4**
**Date Collected: 08/25/21 10:35**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 20:45 | JJB | TAL CHI |

## Client Sample ID: B-10
**Lab Sample ID: 500-204356-6**
**Date Collected: 08/25/21 11:10**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 20:48 | JJB | TAL CHI |

## Client Sample ID: B-15
**Lab Sample ID: 500-204356-9**
**Date Collected: 08/25/21 12:50**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 20:51 | JJB | TAL CHI |

## Client Sample ID: B-18
**Lab Sample ID: 500-204356-11**
**Date Collected: 08/25/21 14:15**
**Matrix: Solid**
**Date Received: 08/26/21 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 20:55 | JJB | TAL CHI |

**Laboratory References:**
TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-204356-2
Project/Site: Cloud HQ (53:2861-B)

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

500-204356 COC

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | | COC No |
|---|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact: Jim Knapp | | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | | Job No |
| Buffalo Grove, IL 60089 | Calendar ( C ) or Work Days (W) | | | |
| Phone | ☐ 2 weeks | | | SDG No 500-204356 |
| 224-478-9420 FAX 847 279-0369 | ☒ Standard | | | |
| Project Name Cloud HQ | ☐ 3 day | | | |
| Site 53 2861-B | ☐ 1 day | | | |
| P O # 53.2861-B | | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-1 | 8/25 | 800 | Grab | Soil | Kit | | | | | | | X | | X | X | X | |
| 2 | B-5 | | 850 | Grab | Soil | Kit | | | | | | | X | | X | X | X | |
| 3 | B-6 | | 1000 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 4 | B-7 | | 1035 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 5 | B 9 | | 1100 | Grab | Soil | Kit | | | | | | | | | X | X | X | |
| 6 | B-10 | | 1110 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 7 | B-11 | | 1215 | Grab | Soil | Kit | | | | | | | | | X | X | X | |
| 8 | B 12 | | 1230 | Grab | Soil | Kit | | | | | | | | | X | X | X | |
| 9 | B-15 | | 1250 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 10 | B-17 | | 1340 | Grab | Soil | Kit | | X | X | | | X | X | X | | | | |
| 11 | B-18 | | 1415 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |

Preservation Used: 1= Ice, 2= HCl; 3= $H_2SO_4$; 4=$HNO_3$; 5=NaOH; 6= Other _____

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ In Irritant ☐ Poison B Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

**Special Instructions/QC Requirements & Comments: NEED RESULTS ASAP**

0.8 = temp

| | Company | Date/Time | | Company | Date/Time |
|---|---|---|---|---|---|
| Relinquished by | ECS Midwest | 8/26 | Received by | | 8/26/21 1030 |
| Relinquished by | | 8/26/21 1250 | Received by | | 8/26/21 1250 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204356-2

**Login Number: 204356**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204465-1
Client Project/Site: Cloud HQ (53:2861-B)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/7/2021 4:53:46 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-204465-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204465-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/27/2021 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1º C.

**GC/MS VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**
Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-616935 was outside the method criteria for the following analyte(s): 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline, Di-n-octyl phthalate, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCS associated with preparation batch 500-616812 and analytical batch 500-616935 had 1 analyte outside control limits; 3,3'-Dichlorobenzidine. These results have been reported and qualified.

Method 8270D: The following samples contained one acid surrogate outside acceptance limits:B-24 (500-204465-6). The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC Semi VOA**
Method 8081B: The %RPD between the primary and confirmation column exceeded 40% for 4,4'-DDE and 4,4'-DDD for the following sample: B-20 (500-204465-2). The lower has been reported and qualified in accordance with the laboratory's SOP.

Method 8081B: Surrogate recovery for the following sample was outside control limits: B-24 (500-204465-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: B-21 (500-204465-3) and B-24 (500-204465-6). The reagent lot number used was: SLCG3578.

Method 8082A: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: B-21 (500-204465-3) and B-24 (500-204465-6). The reagent lot number used was: SLCG3578.

Method 8082A: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: B-21 (500-204465-3) and B-24 (500-204465-6). The reagent lot number used was: SLCG3578.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Job ID: 500-204465-1 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-19 — Lab Sample ID: 500-204465-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 0.0073 | J | 0.041 | 0.0055 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.0079 | J | 0.041 | 0.0079 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.012 | J | 0.041 | 0.0088 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.014 | J | 0.041 | 0.0076 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.0074 | J | 0.041 | 0.0057 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.012 | J | 0.041 | 0.0081 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 4,4'-DDE | 0.0046 | | 0.0021 | 0.0011 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDT | 0.0023 | | 0.0021 | 0.00097 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| Aluminum | 18000 | | 21 | 8.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.5 | J F1 | 2.1 | 0.41 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 6.1 | | 1.1 | 0.36 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 120 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 1.1 | | 0.42 | 0.099 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.12 | J | 0.21 | 0.038 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 6800 | | 21 | 3.6 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 24 | | 1.1 | 0.52 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 8.7 | | 0.53 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 23 | | 1.1 | 0.30 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 22000 | | 21 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 19 | | 0.53 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 6300 | | 11 | 5.3 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 170 | F1 F2 | 1.1 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 30 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2000 | F1 | 53 | 19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.36 | J | 0.53 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 95 | J | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 34 | | 0.53 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 73 | | 2.1 | 0.93 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.042 | | 0.020 | 0.0068 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.0 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-20 — Lab Sample ID: 500-204465-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 0.022 | J | 0.038 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.062 | | 0.038 | 0.0064 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.083 | | 0.038 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.078 | | 0.038 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.10 | | 0.038 | 0.0082 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.039 | | 0.038 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.034 | J | 0.038 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.095 | | 0.038 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.011 | J | 0.038 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.25 | | 0.038 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.024 | J | 0.038 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.033 | J | 0.038 | 0.0099 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.0084 | J | 0.077 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.21 | | 0.038 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.17 | | 0.038 | 0.0076 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 4,4'-DDD | 0.0016 | J | 0.0020 | 0.0011 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDE | 0.0032 | | 0.0020 | 0.0010 | mg/Kg | 1 | ☼ | 8081B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-20 (Continued)

## Lab Sample ID: 500-204465-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.0012 | J | 0.0020 | 0.00095 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| Aluminum | 11000 | | 23 | 9.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.2 | J | 2.3 | 0.45 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 7.3 | | 1.2 | 0.40 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 50 | | 1.2 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.80 | | 0.47 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.15 | J | 0.23 | 0.042 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 68000 | | 23 | 3.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 17 | | 1.2 | 0.58 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 12 | | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 24 | | 1.2 | 0.33 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 19000 | | 23 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 13 | | 0.58 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 31000 | | 12 | 5.8 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 400 | | 1.2 | 0.17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 29 | | 1.2 | 0.34 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2700 | | 58 | 21 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.23 | J | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 160 | | 120 | 17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 24 | | 0.58 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 56 | | 2.3 | 1.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.032 | | 0.018 | 0.0061 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.0 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-21

## Lab Sample ID: 500-204465-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.014 | J | 0.015 | 0.0065 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Chrysene | 0.014 | J | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.011 | J | 0.037 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.0076 | J | 0.076 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.022 | J | 0.037 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.012 | J | 0.037 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 4,4'-DDD | 0.051 | | 0.0019 | 0.0010 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDT | 0.0054 | | 0.0019 | 0.00090 | mg/Kg | 1 | ☼ | 8081B | Total/NA |
| 4,4'-DDE - DL | 0.068 | | 0.0038 | 0.0020 | mg/Kg | 2 | ☼ | 8081B | Total/NA |
| Aluminum | 16000 | | 23 | 9.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.4 | J | 2.3 | 0.45 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 3.9 | | 1.2 | 0.40 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 96 | | 1.2 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.98 | | 0.46 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.23 | | 0.23 | 0.042 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 8700 | | 23 | 3.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 21 | | 1.2 | 0.57 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 9.7 | | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 26 | | 1.2 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 14000 | | 23 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 18 | | 0.58 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 6100 | | 12 | 5.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 300 | | 1.2 | 0.17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 26 | | 1.2 | 0.34 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-21 (Continued)

## Lab Sample ID: 500-204465-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Potassium | 1900 | | 58 | 21 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.39 | J | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 290 | | 120 | 17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 33 | | 0.58 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 71 | | 2.3 | 1.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.024 | | 0.019 | 0.0062 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.6 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-22

## Lab Sample ID: 500-204465-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.013 | J | 0.017 | 0.0073 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Aluminum | 12000 | | 22 | 9.1 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 0.79 | J | 2.2 | 0.43 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 3.4 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 53 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.76 | | 0.44 | 0.10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.21 | J | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 96000 | | 110 | 19 | mg/Kg | 5 | ☼ | 6010B | Total/NA |
| Chromium | 17 | | 1.1 | 0.55 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 6.3 | | 0.55 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 14 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 15000 | | 22 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 10 | | 0.55 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 25000 | | 11 | 5.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 240 | | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 22 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3000 | | 55 | 20 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.23 | J | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 130 | | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 21 | | 0.55 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 52 | | 2.2 | 0.97 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.022 | | 0.018 | 0.0060 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.3 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-23

## Lab Sample ID: 500-204465-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0096 | J | 0.017 | 0.0072 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Benzo[g,h,i]perylene | 0.020 | J | 0.040 | 0.013 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.019 | J | 0.040 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.0082 | J | 0.040 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0076 | J | 0.040 | 0.0056 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.046 | J | 0.081 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.0088 | J | 0.040 | 0.0062 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.051 | | 0.040 | 0.0056 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.017 | J | 0.040 | 0.0080 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 5.8 | | 1.2 | 0.39 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 62 | | 1.2 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 22 | | 1.2 | 0.57 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 12 | | 0.58 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.32 | J | 0.58 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-23 (Continued) — Lab Sample ID: 500-204465-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.017 | J | 0.019 | 0.0065 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-24 — Lab Sample ID: 500-204465-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.017 | J | 0.018 | 0.0078 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Acenaphthene | 1.1 | | 0.038 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 0.024 | J | 0.038 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 1.3 | | 0.038 | 0.0064 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 2.2 | | 0.038 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 2.1 | | 0.038 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.59 | | 0.038 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 1.2 | | 0.038 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Carbazole | 0.75 | | 0.19 | 0.095 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 2.2 | | 0.038 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.22 | | 0.038 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenzofuran | 0.83 | | 0.19 | 0.045 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 1.4 | | 0.038 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.63 | | 0.038 | 0.0099 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.23 | | 0.077 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.35 | | 0.038 | 0.0059 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene - DL | 2.2 | | 0.19 | 0.041 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Fluoranthene - DL | 4.8 | | 0.19 | 0.035 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Phenanthrene - DL | 4.9 | | 0.19 | 0.027 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Pyrene - DL | 3.4 | | 0.19 | 0.038 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Aluminum | 12000 | | 21 | 8.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.4 | J | 2.1 | 0.40 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 7.2 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 46 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.92 | | 0.41 | 0.097 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 44000 | | 21 | 3.5 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 18 | | 1.0 | 0.51 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 11 | | 0.52 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 24 | | 1.0 | 0.29 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 26000 | | 21 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 20 | | 0.52 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 25000 | | 10 | 5.1 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 350 | | 1.0 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 29 | | 1.0 | 0.30 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3200 | | 52 | 18 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.34 | J | 0.52 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 460 | | 100 | 15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 26 | | 0.52 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 56 | | 2.1 | 0.91 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.020 | | 0.019 | 0.0063 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-25 — Lab Sample ID: 500-204465-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.010 | J | 0.017 | 0.0074 | mg/Kg | 1 | ☼ | 8260B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-25 (Continued) — Lab Sample ID: 500-204465-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 0.0052 | J | 0.038 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.019 | J | 0.038 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.026 | J | 0.038 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.011 | J | 0.038 | 0.0072 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.11 | | 0.078 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.032 | J | 0.038 | 0.0059 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.092 | | 0.038 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.020 | J | 0.038 | 0.0077 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 6.3 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 42 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.13 | J | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 15 | | 1.1 | 0.55 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 10 | | 0.56 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.23 | J | 0.56 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.019 | | 0.019 | 0.0062 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.9 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-26 — Lab Sample ID: 500-204465-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[g,h,i]perylene | 0.016 | J | 0.037 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.018 | J | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.0072 | J | 0.037 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.058 | J | 0.076 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.016 | J | 0.037 | 0.0058 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.054 | | 0.037 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.018 | J | 0.037 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 6.3 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 50 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 19 | | 1.0 | 0.51 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 11 | | 0.52 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.25 | J | 0.52 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.019 | | 0.019 | 0.0063 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 9.4 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-27 — Lab Sample ID: 500-204465-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0075 | J | 0.016 | 0.0070 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Acenaphthene | 0.034 | J | 0.037 | 0.0067 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.11 | | 0.037 | 0.0063 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.39 | | 0.037 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.38 | | 0.037 | 0.0072 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.58 | | 0.037 | 0.0081 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.12 | | 0.037 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.20 | | 0.037 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.43 | | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.043 | | 0.037 | 0.0072 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.86 | | 0.037 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.023 | J | 0.037 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.11 | | 0.037 | 0.0097 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.044 | J | 0.076 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-27 (Continued)

## Lab Sample ID: 500-204465-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 0.018 | J | 0.037 | 0.0058 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.51 | | 0.037 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.54 | | 0.037 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Aluminum | 12000 | | 22 | 8.8 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.1 | J | 2.2 | 0.42 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 11 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 47 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.90 | | 0.43 | 0.10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.083 | J | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 59000 | | 22 | 3.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 19 | | 1.1 | 0.53 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 12 | | 0.54 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 23 | | 1.1 | 0.30 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 22000 | | 22 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 12 | | 0.54 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 30000 | | 11 | 5.3 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 420 | | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 32 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3800 | | 54 | 19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.16 | J | 0.54 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 260 | | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 24 | | 0.54 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 56 | | 2.2 | 0.95 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.019 | | 0.019 | 0.0062 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-28

## Lab Sample ID: 500-204465-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0093 | J | 0.018 | 0.0076 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Benzo[g,h,i]perylene | 0.016 | J | 0.038 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.019 | J | 0.038 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.0097 | J | 0.038 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.020 | J | 0.077 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.0072 | J | 0.038 | 0.0058 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.051 | | 0.038 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.019 | J | 0.038 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 8.8 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 48 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.043 | J | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 19 | | 1.1 | 0.55 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 12 | | 0.56 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.28 | J | 0.56 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.020 | | 0.019 | 0.0064 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.5 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-29

## Lab Sample ID: 500-204465-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.011 | J | 0.021 | 0.0089 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Acenaphthene | 0.0077 | J | 0.035 | 0.0064 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.013 | J | 0.035 | 0.0060 | mg/Kg | 1 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-29 (Continued)

## Lab Sample ID: 500-204465-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 0.077 | | 0.035 | 0.0048 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.071 | | 0.035 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.12 | | 0.035 | 0.0077 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.028 | J | 0.035 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.045 | | 0.035 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.10 | | 0.035 | 0.0097 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.0084 | J | 0.035 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.20 | | 0.035 | 0.0066 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0060 | J | 0.035 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.023 | J | 0.035 | 0.0093 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.022 | J | 0.072 | 0.0066 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.011 | J | 0.035 | 0.0055 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.14 | | 0.035 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.13 | | 0.035 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 8.2 | | 1.1 | 0.36 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 40 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.098 | J | 0.21 | 0.038 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 15 | | 1.1 | 0.52 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 15 | | 0.53 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.22 | J | 0.53 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.022 | | 0.018 | 0.0059 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.0 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8081B | Organochlorine Pesticides (GC) | SW846 | TAL CHI |
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL CHI |
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 7471B | Mercury (CVAA) | SW846 | TAL CHI |
| 9012B | Cyanide, Total andor Amenable | SW846 | TAL CHI |
| 9045D | pH | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 3050B | Preparation, Metals | SW846 | TAL CHI |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |
| 7471B | Preparation, Mercury | SW846 | TAL CHI |
| 9010C | Cyanide, Distillation | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204465-1 | B-19 | Solid | 08/26/21 09:10 | 08/27/21 15:00 |
| 500-204465-2 | B-20 | Solid | 08/26/21 08:45 | 08/27/21 15:00 |
| 500-204465-3 | B-21 | Solid | 08/26/21 09:20 | 08/27/21 15:00 |
| 500-204465-4 | B-22 | Solid | 08/26/21 09:50 | 08/27/21 15:00 |
| 500-204465-5 | B-23 | Solid | 08/26/21 10:30 | 08/27/21 15:00 |
| 500-204465-6 | B-24 | Solid | 08/26/21 10:55 | 08/27/21 15:00 |
| 500-204465-7 | B-25 | Solid | 08/26/21 11:30 | 08/27/21 15:00 |
| 500-204465-8 | B-26 | Solid | 08/26/21 12:20 | 08/27/21 15:00 |
| 500-204465-9 | B-27 | Solid | 08/26/21 13:00 | 08/27/21 15:00 |
| 500-204465-10 | B-28 | Solid | 08/26/21 13:30 | 08/27/21 15:00 |
| 500-204465-11 | B-29 | Solid | 08/26/21 14:15 | 08/27/21 15:00 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-19

**Date Collected: 08/26/21 09:10**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-1

**Matrix: Solid**
**Percent Solids: 80.0**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.019 | 0.0082 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Benzene | ND | | 0.0019 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Bromodichloromethane | ND | | 0.0019 | 0.00039 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Bromoform | ND | | 0.0019 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Bromomethane | ND | | 0.0047 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Carbon disulfide | ND | | 0.0047 | 0.00098 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Carbon tetrachloride | ND | | 0.0019 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Chlorobenzene | ND | | 0.0019 | 0.00070 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Chloroethane | ND | | 0.0047 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Chloroform | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Chloromethane | ND | | 0.0047 | 0.0019 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0019 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0019 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Dibromochloromethane | ND | | 0.0019 | 0.00062 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,1-Dichloroethane | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,2-Dichloroethane | ND | | 0.0047 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,1-Dichloroethene | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,2-Dichloropropane | ND | | 0.0019 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Ethylbenzene | ND | | 0.0019 | 0.00091 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 2-Hexanone | ND | | 0.0047 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Methylene Chloride | ND | | 0.0047 | 0.0019 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0047 | 0.0021 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| methyl isobutyl ketone | ND | | 0.0047 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Methyl tert-butyl ether | ND | | 0.0019 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Styrene | ND | | 0.0019 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0019 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Tetrachloroethene | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Toluene | ND | | 0.0019 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0019 | 0.00084 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0019 | 0.00063 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0019 | 0.00081 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Trichloroethene | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Vinyl chloride | ND | | 0.0019 | 0.00084 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |
| Xylenes, Total | ND | | 0.0038 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *75 - 131* | *08/27/21 18:07* | *08/31/21 16:20* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *08/31/21 16:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *115* | | *70 - 134* | *08/27/21 18:07* | *08/31/21 16:20* | *1* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* | *08/27/21 18:07* | *08/31/21 16:20* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.041 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Acenaphthylene | ND | | 0.041 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Anthracene | ND | | 0.041 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| **Benzo[a]anthracene** | **0.0073** | **J** | 0.041 | 0.0055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| **Benzo[a]pyrene** | **0.0079** | **J** | 0.041 | 0.0079 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-19**
**Date Collected: 08/26/21 09:10**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-1**
**Matrix: Solid**
**Percent Solids: 80.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **0.012** | **J** | 0.041 | 0.0088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.041 | 0.013 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Benzo[k]fluoranthene | ND | | 0.041 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.21 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.21 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.21 | 0.075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.21 | 0.054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Butyl benzyl phthalate | ND | | 0.21 | 0.078 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Carbazole | ND | | 0.21 | 0.10 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4-Chloroaniline | ND | | 0.82 | 0.19 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.41 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2-Chloronaphthalene | ND | | 0.21 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2-Chlorophenol | ND | | 0.21 | 0.070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.21 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Chrysene | ND | | 0.041 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.041 | 0.0079 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Dibenzofuran | ND | | 0.21 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.21 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.21 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.21 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.21 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,4-Dichlorophenol | ND | | 0.41 | 0.097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Diethyl phthalate | ND | | 0.21 | 0.069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,4-Dimethylphenol | ND | | 0.41 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Dimethyl phthalate | ND | | 0.21 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Di-n-butyl phthalate | ND | | 0.21 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.82 | 0.33 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,4-Dinitrophenol | ND | | 0.82 | 0.72 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.21 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.21 | 0.080 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Di-n-octyl phthalate | ND | | 0.21 | 0.067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| **Fluoranthene** | **0.014** | **J** | 0.041 | 0.0076 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Fluorene | ND | | 0.041 | 0.0057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Hexachlorobenzene | ND | | 0.082 | 0.0095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Hexachlorobutadiene | ND | | 0.21 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.82 | 0.23 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Hexachloroethane | ND | | 0.21 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.041 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Isophorone | ND | | 0.21 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2-Methylnaphthalene | ND | | 0.082 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2-Methylphenol | ND | | 0.21 | 0.066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 3 & 4 Methylphenol | ND | | 0.21 | 0.068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Naphthalene | ND | | 0.041 | 0.0063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2-Nitroaniline | ND | | 0.21 | 0.055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 3-Nitroaniline | ND | | 0.41 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4-Nitroaniline | ND | | 0.41 | 0.17 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Nitrobenzene | ND | | 0.041 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2-Nitrophenol | ND | | 0.41 | 0.097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 4-Nitrophenol | ND | | 0.82 | 0.39 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-19
**Date Collected: 08/26/21 09:10**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-1
**Matrix: Solid**
**Percent Solids: 80.0**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.082 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.21 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.21 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Pentachlorophenol | ND | | 0.82 | 0.66 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| **Phenanthrene** | **0.0074** | **J** | 0.041 | 0.0057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| Phenol | ND | | 0.21 | 0.091 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| **Pyrene** | **0.012** | **J** | 0.041 | 0.0081 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.21 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.41 | 0.093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.41 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *69* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 17:28* | *1* |
| *2-Fluorophenol* | *69* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 17:28* | *1* |
| *Nitrobenzene-d5* | *62* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 17:28* | *1* |
| *Phenol-d5* | *82* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 17:28* | *1* |
| *Terphenyl-d14* | *81* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 17:28* | *1* |
| *2,4,6-Tribromophenol* | *64* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 17:28* | *1* |

### Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0021 | 0.0014 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| alpha-BHC | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| beta-BHC | ND | | 0.0021 | 0.0016 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| cis-Chlordane | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| 4,4'-DDD | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| **4,4'-DDE** | **0.0046** | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| **4,4'-DDT** | **0.0023** | | 0.0021 | 0.00097 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| delta-BHC | ND | | 0.0021 | 0.00098 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Dieldrin | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Endosulfan I | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Endosulfan II | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Endosulfan sulfate | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Endrin | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Endrin aldehyde | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Endrin ketone | ND | | 0.0021 | 0.00099 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0021 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Heptachlor | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Heptachlor epoxide | ND | | 0.0021 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Methoxychlor | ND | | 0.010 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| Toxaphene | ND | | 0.020 | 0.0082 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |
| trans-Chlordane | ND | | 0.0021 | 0.0012 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *138* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 00:13* | *1* |
| *Tetrachloro-m-xylene* | *90* | | *30 - 121* | *08/31/21 08:03* | *09/02/21 00:13* | *1* |

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.020 | 0.0079 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |

**Client Sample ID: B-19**
**Date Collected: 08/26/21 09:10**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-1**
**Matrix: Solid**
**Percent Solids: 80.0**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.020 | 0.0079 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |
| PCB-1232 | ND | | 0.020 | 0.0055 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |
| PCB-1242 | ND | | 0.020 | 0.0079 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |
| PCB-1248 | ND | | 0.020 | 0.0096 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |
| PCB-1254 | ND | | 0.020 | 0.0069 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |
| PCB-1260 | ND | | 0.020 | 0.0076 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.020 | 0.0055 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *71* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 03:24* | *1* |
| *DCB Decachlorobiphenyl* | *82* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 03:24* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **18000** | | 21 | 8.7 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Antimony** | **1.5** | **J F1** | 2.1 | 0.41 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Arsenic** | **6.1** | | 1.1 | 0.36 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Barium** | **120** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Beryllium** | **1.1** | | 0.42 | 0.099 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Cadmium** | **0.12** | **J** | 0.21 | 0.038 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Calcium** | **6800** | | 21 | 3.6 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Chromium** | **24** | | 1.1 | 0.52 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Cobalt** | **8.7** | | 0.53 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Copper** | **23** | | 1.1 | 0.30 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Iron** | **22000** | | 21 | 11 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Lead** | **19** | | 0.53 | 0.24 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Magnesium** | **6300** | | 11 | 5.3 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Manganese** | **170** | **F1 F2** | 1.1 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Nickel** | **30** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Potassium** | **2000** | **F1** | 53 | 19 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| Selenium | ND | F1 | 1.1 | 0.62 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Silver** | **0.36** | **J** | 0.53 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Sodium** | **95** | **J** | 110 | 16 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| Thallium | ND | | 1.1 | 0.53 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Vanadium** | **34** | | 0.53 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |
| **Zinc** | **73** | | 2.1 | 0.93 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:21 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.042** | | 0.020 | 0.0068 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:01 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.29 | 0.15 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 13:00 | 1 |
| **pH** | **7.0** | | 0.2 | 0.2 | SU | | | 08/31/21 17:40 | 1 |

**Client Sample ID: B-20**
**Date Collected: 08/26/21 08:45**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-2**
**Matrix: Solid**
**Percent Solids: 84.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.016 | 0.0070 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Benzene | ND | | 0.0016 | 0.00041 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Bromodichloromethane | ND | | 0.0016 | 0.00033 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Bromoform | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Bromomethane | ND | | 0.0040 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Carbon disulfide | ND | | 0.0040 | 0.00083 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Carbon tetrachloride | ND | | 0.0016 | 0.00046 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Chlorobenzene | ND | | 0.0016 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Chloroethane | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Chloroform | ND | | 0.0016 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Chloromethane | ND | | 0.0040 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0016 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0016 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Dibromochloromethane | ND | | 0.0016 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,1-Dichloroethane | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,2-Dichloroethane | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,1-Dichloroethene | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,2-Dichloropropane | ND | | 0.0016 | 0.00041 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0016 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Ethylbenzene | ND | | 0.0016 | 0.00077 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 2-Hexanone | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Methylene Chloride | ND | | 0.0040 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0040 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| methyl isobutyl ketone | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Methyl tert-butyl ether | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Styrene | ND | | 0.0016 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0016 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Tetrachloroethene | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Toluene | ND | | 0.0016 | 0.00040 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0016 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0016 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0016 | 0.00069 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Trichloroethene | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Vinyl chloride | ND | | 0.0016 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |
| Xylenes, Total | ND | | 0.0032 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 16:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *111* | | *75 - 131* | *08/27/21 18:07* | *08/31/21 16:46* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *08/31/21 16:46* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *70 - 134* | *08/27/21 18:07* | *08/31/21 16:46* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/27/21 18:07* | *08/31/21 16:46* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.022** | **J** | 0.038 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Acenaphthylene | ND | | 0.038 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Anthracene** | **0.062** | | 0.038 | 0.0064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Benzo[a]anthracene** | **0.083** | | 0.038 | 0.0051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Benzo[a]pyrene** | **0.078** | | 0.038 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-20**
**Date Collected: 08/26/21 08:45**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-2**
**Matrix: Solid**
**Percent Solids: 84.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **0.10** | | 0.038 | 0.0082 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Benzo[g,h,i]perylene** | **0.039** | | 0.038 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Benzo[k]fluoranthene** | **0.034** | **J** | 0.038 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Carbazole | ND | | 0.19 | 0.095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4-Chloroaniline | ND | | 0.77 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Chrysene** | **0.095** | | 0.038 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Dibenz(a,h)anthracene** | **0.011** | **J** | 0.038 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,4-Dichlorophenol | ND | | 0.38 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,4-Dimethylphenol | ND | | 0.38 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.77 | 0.31 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,4-Dinitrophenol | ND | | 0.77 | 0.67 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Fluoranthene** | **0.25** | | 0.038 | 0.0071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Fluorene** | **0.024** | **J** | 0.038 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Hexachlorobenzene | ND | | 0.077 | 0.0088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.77 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.033** | **J** | 0.038 | 0.0099 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Isophorone | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **2-Methylnaphthalene** | **0.0084** | **J** | 0.077 | 0.0070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Naphthalene | ND | | 0.038 | 0.0059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 3-Nitroaniline | ND | | 0.38 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4-Nitroaniline | ND | | 0.38 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Nitrobenzene | ND | | 0.038 | 0.0095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2-Nitrophenol | ND | | 0.38 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 4-Nitrophenol | ND | | 0.77 | 0.36 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |

**Client Sample ID: B-20**
**Date Collected: 08/26/21 08:45**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-2**
**Matrix: Solid**
**Percent Solids: 84.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.077 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Pentachlorophenol | ND | | 0.77 | 0.61 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Phenanthrene** | **0.21** | | 0.038 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| Phenol | ND | | 0.19 | 0.085 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| **Pyrene** | **0.17** | | 0.038 | 0.0076 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.38 | 0.087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 17:52 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *83* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 17:52* | *1* |
| *2-Fluorophenol* | *89* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 17:52* | *1* |
| *Nitrobenzene-d5* | *78* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 17:52* | *1* |
| *Phenol-d5* | *102* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 17:52* | *1* |
| *Terphenyl-d14* | *85* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 17:52* | *1* |
| *2,4,6-Tribromophenol* | *61* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 17:52* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0020 | 0.0014 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| alpha-BHC | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| beta-BHC | ND | | 0.0020 | 0.0016 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| cis-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| **4,4'-DDD** | **0.0016** | **J** | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| **4,4'-DDE** | **0.0032** | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| **4,4'-DDT** | **0.0012** | **J** | 0.0020 | 0.00095 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| delta-BHC | ND | | 0.0020 | 0.00095 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Dieldrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Endosulfan I | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Endosulfan II | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Endosulfan sulfate | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Endrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Endrin aldehyde | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Endrin ketone | ND | | 0.0020 | 0.00097 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0020 | 0.00099 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Heptachlor | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Heptachlor epoxide | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Methoxychlor | ND | | 0.0098 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| Toxaphene | ND | | 0.020 | 0.0080 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |
| trans-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *90* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 00:34* | *1* |
| *Tetrachloro-m-xylene* | *69* | | *30 - 121* | *08/31/21 08:03* | *09/02/21 00:34* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.020 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |

**Client Sample ID: B-20**
**Date Collected: 08/26/21 08:45**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-2**
**Matrix: Solid**
**Percent Solids: 84.4**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.020 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |
| PCB-1232 | ND | | 0.020 | 0.0053 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |
| PCB-1242 | ND | | 0.020 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |
| PCB-1248 | ND | | 0.020 | 0.0094 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |
| PCB-1254 | ND | | 0.020 | 0.0067 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |
| PCB-1260 | ND | | 0.020 | 0.0074 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.020 | 0.0053 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *57* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 03:40* | *1* |
| *DCB Decachlorobiphenyl* | *119* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 03:40* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **11000** | | 23 | 9.5 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Antimony** | **1.2** | **J** | 2.3 | 0.45 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Arsenic** | **7.3** | | 1.2 | 0.40 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Barium** | **50** | | 1.2 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Beryllium** | **0.80** | | 0.47 | 0.11 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Cadmium** | **0.15** | **J** | 0.23 | 0.042 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Calcium** | **68000** | | 23 | 3.9 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Chromium** | **17** | | 1.2 | 0.58 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Cobalt** | **12** | | 0.58 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Copper** | **24** | | 1.2 | 0.33 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Iron** | **19000** | | 23 | 12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Lead** | **13** | | 0.58 | 0.27 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Magnesium** | **31000** | | 12 | 5.8 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Manganese** | **400** | | 1.2 | 0.17 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Nickel** | **29** | | 1.2 | 0.34 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Potassium** | **2700** | | 58 | 21 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| Selenium | ND | | 1.2 | 0.68 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Silver** | **0.23** | **J** | 0.58 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Sodium** | **160** | | 120 | 17 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| Thallium | ND | | 1.2 | 0.58 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Vanadium** | **24** | | 0.58 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |
| **Zinc** | **56** | | 2.3 | 1.0 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:54 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.032** | | 0.018 | 0.0061 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:03 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.25 | 0.12 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 13:05 | 1 |
| **pH** | **8.0** | | 0.2 | 0.2 | SU | | | 08/31/21 17:43 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-21**
**Date Collected: 08/26/21 09:20**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-3**
**Matrix: Solid**
**Percent Solids: 85.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.014 | J | 0.015 | 0.0065 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Benzene | ND | | 0.0015 | 0.00038 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Bromodichloromethane | ND | | 0.0015 | 0.00031 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Bromoform | ND | | 0.0015 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Bromomethane | ND | | 0.0038 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Carbon disulfide | ND | | 0.0038 | 0.00078 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Carbon tetrachloride | ND | | 0.0015 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Chlorobenzene | ND | | 0.0015 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Chloroethane | ND | | 0.0038 | 0.0011 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Chloroform | ND | | 0.0015 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Chloromethane | ND | | 0.0038 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0015 | 0.00042 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0015 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Dibromochloromethane | ND | | 0.0015 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,1-Dichloroethane | ND | | 0.0015 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,2-Dichloroethane | ND | | 0.0038 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,1-Dichloroethene | ND | | 0.0015 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,2-Dichloropropane | ND | | 0.0015 | 0.00039 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0015 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Ethylbenzene | ND | | 0.0015 | 0.00072 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 2-Hexanone | ND | | 0.0038 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Methylene Chloride | ND | | 0.0038 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0038 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| methyl isobutyl ketone | ND | | 0.0038 | 0.0011 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Methyl tert-butyl ether | ND | | 0.0015 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Styrene | ND | | 0.0015 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0015 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Tetrachloroethene | ND | | 0.0015 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Toluene | ND | | 0.0015 | 0.00038 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0015 | 0.00067 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0015 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0015 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0015 | 0.00064 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Trichloroethene | ND | | 0.0015 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Vinyl chloride | ND | | 0.0015 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |
| Xylenes, Total | ND | | 0.0030 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *115* | | *75 - 131* | *08/27/21 18:07* | *08/31/21 17:12* | *1* |
| *Dibromofluoromethane* | *109* | | *75 - 126* | *08/27/21 18:07* | *08/31/21 17:12* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *113* | | *70 - 134* | *08/27/21 18:07* | *08/31/21 17:12* | *1* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* | *08/27/21 18:07* | *08/31/21 17:12* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.037 | 0.0067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Anthracene | ND | | 0.037 | 0.0063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Benzo[a]anthracene | ND | | 0.037 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Benzo[a]pyrene | ND | | 0.037 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-21**
**Date Collected: 08/26/21 09:20**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-3**
**Matrix: Solid**
**Percent Solids: 85.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.037 | 0.0081 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.037 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Carbazole | ND | | 0.19 | 0.094 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4-Chloroaniline | ND | | 0.76 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| **Chrysene** | **0.014** | **J** | 0.037 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.037 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.76 | 0.30 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,4-Dinitrophenol | ND | | 0.76 | 0.66 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| **Fluoranthene** | **0.011** | **J** | 0.037 | 0.0070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Fluorene | ND | | 0.037 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Hexachlorobenzene | ND | | 0.076 | 0.0087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.76 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.0097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Isophorone | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| **2-Methylnaphthalene** | **0.0076** | **J** | 0.076 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Naphthalene | ND | | 0.037 | 0.0058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0094 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 4-Nitrophenol | ND | | 0.76 | 0.36 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-21
**Date Collected: 08/26/21 09:20**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-3
**Matrix: Solid**
**Percent Solids: 85.4**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.076 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Pentachlorophenol | ND | | 0.76 | 0.60 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| **Phenanthrene** | **0.022** | **J** | 0.037 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| Phenol | ND | | 0.19 | 0.083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| **Pyrene** | **0.012** | **J** | 0.037 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.086 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *87* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 18:16* | *1* |
| *2-Fluorophenol* | *95* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 18:16* | *1* |
| *Nitrobenzene-d5* | *85* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 18:16* | *1* |
| *Phenol-d5* | *104* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 18:16* | *1* |
| *Terphenyl-d14* | *86* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 18:16* | *1* |
| *2,4,6-Tribromophenol* | *70* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 18:16* | *1* |

### Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| beta-BHC | ND | | 0.0019 | 0.0015 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| **4,4'-DDD** | **0.051** | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| **4,4'-DDT** | **0.0054** | | 0.0019 | 0.00090 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00091 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Dieldrin | ND | | 0.0019 | 0.00099 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Endrin | ND | | 0.0019 | 0.00097 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00092 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00094 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Methoxychlor | ND | | 0.0093 | 0.0012 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| Toxaphene | ND | | 0.019 | 0.0076 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 00:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *101* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 00:54* | *1* |
| *Tetrachloro-m-xylene* | *91* | | *30 - 121* | *08/31/21 08:03* | *09/02/21 00:54* | *1* |

### Method: 8081B - Organochlorine Pesticides (GC) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **4,4'-DDE** | **0.068** | | 0.0038 | 0.0020 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 23:11 | 2 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-21
**Date Collected: 08/26/21 09:20**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-3
**Matrix: Solid**
**Percent Solids: 85.4**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| DCB Decachlorobiphenyl | 114 | | 33 - 148 | 08/31/21 08:03 | 09/02/21 23:11 | 2 |
| Tetrachloro-m-xylene | 75 | | 30 - 121 | 08/31/21 08:03 | 09/02/21 23:11 | 2 |

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| PCB-1221 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| PCB-1232 | ND | | 0.019 | 0.0051 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| PCB-1242 | ND | | 0.019 | 0.0073 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| PCB-1248 | ND | | 0.019 | 0.0089 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| PCB-1254 | ND | | 0.019 | 0.0064 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| PCB-1260 | ND | | 0.019 | 0.0071 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.019 | 0.0051 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 03:55 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 70 | | 49 - 129 | 08/31/21 08:03 | 09/02/21 03:55 | 1 |
| DCB Decachlorobiphenyl | 99 | | 37 - 121 | 08/31/21 08:03 | 09/02/21 03:55 | 1 |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **16000** | | 23 | 9.5 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Antimony** | **1.4** | **J** | 2.3 | 0.45 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Arsenic** | **3.9** | | 1.2 | 0.40 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Barium** | **96** | | 1.2 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Beryllium** | **0.98** | | 0.46 | 0.11 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Cadmium** | **0.23** | | 0.23 | 0.042 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Calcium** | **8700** | | 23 | 3.9 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Chromium** | **21** | | 1.2 | 0.57 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Cobalt** | **9.7** | | 0.58 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Copper** | **26** | | 1.2 | 0.32 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Iron** | **14000** | | 23 | 12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Lead** | **18** | | 0.58 | 0.27 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Magnesium** | **6100** | | 12 | 5.7 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Manganese** | **300** | | 1.2 | 0.17 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Nickel** | **26** | | 1.2 | 0.34 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Potassium** | **1900** | | 58 | 21 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| Selenium | ND | | 1.2 | 0.68 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Silver** | **0.39** | **J** | 0.58 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Sodium** | **290** | | 120 | 17 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| Thallium | ND | | 1.2 | 0.58 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Vanadium** | **33** | | 0.58 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |
| **Zinc** | **71** | | 2.3 | 1.0 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 16:57 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.024** | | 0.019 | 0.0062 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:05 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.25 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 13:06 | 1 |
| **pH** | **7.6** | | 0.2 | 0.2 | SU | | | 08/31/21 17:45 | 1 |

## Client Sample ID: B-22

**Date Collected: 08/26/21 09:50**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-4

**Matrix: Solid**
**Percent Solids: 84.5**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.013** | **J** | 0.017 | 0.0073 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Benzene | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Bromodichloromethane | ND | | 0.0017 | 0.00034 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Bromoform | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Bromomethane | ND | | 0.0042 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Carbon disulfide | ND | | 0.0042 | 0.00087 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Carbon tetrachloride | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Chlorobenzene | ND | | 0.0017 | 0.00062 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Chloroethane | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Chloroform | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Chloromethane | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0017 | 0.00047 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Dibromochloromethane | ND | | 0.0017 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,1-Dichloroethane | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,2-Dichloroethane | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,1-Dichloroethene | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,2-Dichloropropane | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Ethylbenzene | ND | | 0.0017 | 0.00080 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 2-Hexanone | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Methylene Chloride | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0042 | 0.0019 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| methyl isobutyl ketone | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Methyl tert-butyl ether | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Styrene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0017 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Tetrachloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Toluene | ND | | 0.0017 | 0.00042 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0017 | 0.00074 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0017 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0017 | 0.00072 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Trichloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Vinyl chloride | ND | | 0.0017 | 0.00074 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |
| Xylenes, Total | ND | | 0.0034 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 17:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *75 - 131* | *08/27/21 18:07* | *08/31/21 17:38* | *1* |
| *Dibromofluoromethane* | *106* | | *75 - 126* | *08/27/21 18:07* | *08/31/21 17:38* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *70 - 134* | *08/27/21 18:07* | *08/31/21 17:38* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/27/21 18:07* | *08/31/21 17:38* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.039 | 0.0071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Acenaphthylene | ND | | 0.039 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Anthracene | ND | | 0.039 | 0.0066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Benzo[a]anthracene | ND | | 0.039 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Benzo[a]pyrene | ND | | 0.039 | 0.0076 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-22**
**Date Collected: 08/26/21 09:50**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-4**
**Matrix: Solid**
**Percent Solids: 84.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.039 | 0.0085 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.039 | 0.013 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Benzo[k]fluoranthene | ND | | 0.039 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.20 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.20 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.20 | 0.072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.20 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Butyl benzyl phthalate | ND | | 0.20 | 0.075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Carbazole | ND | | 0.20 | 0.098 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4-Chloroaniline | ND | | 0.79 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.39 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2-Chloronaphthalene | ND | | 0.20 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2-Chlorophenol | ND | | 0.20 | 0.067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Chrysene | ND | | 0.039 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.039 | 0.0076 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Dibenzofuran | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.20 | 0.055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,4-Dichlorophenol | ND | | 0.39 | 0.093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Diethyl phthalate | ND | | 0.20 | 0.067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,4-Dimethylphenol | ND | | 0.39 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Dimethyl phthalate | ND | | 0.20 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Di-n-butyl phthalate | ND | | 0.20 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.79 | 0.32 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,4-Dinitrophenol | ND | | 0.79 | 0.69 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.20 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.20 | 0.077 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Di-n-octyl phthalate | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Fluoranthene | ND | | 0.039 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Fluorene | ND | | 0.039 | 0.0055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Hexachlorobenzene | ND | | 0.079 | 0.0091 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.79 | 0.23 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Hexachloroethane | ND | | 0.20 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.039 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Isophorone | ND | | 0.20 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2-Methylnaphthalene | ND | | 0.079 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2-Methylphenol | ND | | 0.20 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 3 & 4 Methylphenol | ND | | 0.20 | 0.066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Naphthalene | ND | | 0.039 | 0.0060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2-Nitroaniline | ND | | 0.20 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 3-Nitroaniline | ND | | 0.39 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4-Nitroaniline | ND | | 0.39 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Nitrobenzene | ND | | 0.039 | 0.0098 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2-Nitrophenol | ND | | 0.39 | 0.093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 4-Nitrophenol | ND | | 0.79 | 0.37 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |

**Client Sample ID: B-22**
**Date Collected: 08/26/21 09:50**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-4**
**Matrix: Solid**
**Percent Solids: 84.5**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.079 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Pentachlorophenol | ND | | 0.79 | 0.63 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Phenanthrene | ND | | 0.039 | 0.0055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Phenol | ND | | 0.20 | 0.087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| Pyrene | ND | | 0.039 | 0.0078 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.39 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.39 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 18:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *79* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 18:40* | *1* |
| *2-Fluorophenol* | *83* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 18:40* | *1* |
| *Nitrobenzene-d5* | *71* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 18:40* | *1* |
| *Phenol-d5* | *98* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 18:40* | *1* |
| *Terphenyl-d14* | *80* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 18:40* | *1* |
| *2,4,6-Tribromophenol* | *56* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 18:40* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0020 | 0.0014 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| alpha-BHC | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| beta-BHC | ND | | 0.0020 | 0.0016 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| cis-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| 4,4'-DDD | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| 4,4'-DDE | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| 4,4'-DDT | ND | | 0.0020 | 0.00094 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| delta-BHC | ND | | 0.0020 | 0.00095 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Dieldrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Endosulfan I | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Endosulfan II | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Endosulfan sulfate | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Endrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Endrin aldehyde | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Endrin ketone | ND | | 0.0020 | 0.00096 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0020 | 0.00099 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Heptachlor | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Heptachlor epoxide | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Methoxychlor | ND | | 0.0097 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| Toxaphene | ND | | 0.020 | 0.0079 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |
| trans-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:15 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *83* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 01:15* | *1* |
| *Tetrachloro-m-xylene* | *57* | | *30 - 121* | *08/31/21 08:03* | *09/02/21 01:15* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.020 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |

## Client Sample ID: B-22

**Date Collected: 08/26/21 09:50**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-4

**Matrix: Solid**
**Percent Solids: 84.5**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.020 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |
| PCB-1232 | ND | | 0.020 | 0.0053 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |
| PCB-1242 | ND | | 0.020 | 0.0076 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |
| PCB-1248 | ND | | 0.020 | 0.0093 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |
| PCB-1254 | ND | | 0.020 | 0.0066 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |
| PCB-1260 | ND | | 0.020 | 0.0074 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.020 | 0.0053 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:11 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *65* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 04:11* | *1* |
| *DCB Decachlorobiphenyl* | *87* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 04:11* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **12000** | | 22 | 9.1 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Antimony** | **0.79** | **J** | 2.2 | 0.43 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Arsenic** | **3.4** | | 1.1 | 0.38 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Barium** | **53** | | 1.1 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Beryllium** | **0.76** | | 0.44 | 0.10 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Cadmium** | **0.21** | **J** | 0.22 | 0.040 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Calcium** | **96000** | | 110 | 19 | mg/Kg | ☼ | 09/03/21 08:40 | 09/07/21 15:00 | 5 |
| **Chromium** | **17** | | 1.1 | 0.55 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Cobalt** | **6.3** | | 0.55 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Copper** | **14** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Iron** | **15000** | | 22 | 12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Lead** | **10** | | 0.55 | 0.26 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Magnesium** | **25000** | | 11 | 5.5 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Manganese** | **240** | | 1.1 | 0.16 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Nickel** | **22** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Potassium** | **3000** | | 55 | 20 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| Selenium | ND | | 1.1 | 0.65 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Silver** | **0.23** | **J** | 0.55 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Sodium** | **130** | | 110 | 16 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| Thallium | ND | | 1.1 | 0.55 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Vanadium** | **21** | | 0.55 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |
| **Zinc** | **52** | | 2.2 | 0.97 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:00 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.022** | | 0.018 | 0.0060 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:07 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.25 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 13:08 | 1 |
| **pH** | **8.3** | | 0.2 | 0.2 | SU | | | 08/31/21 17:48 | 1 |

## Client Sample ID: B-23

**Date Collected: 08/26/21 10:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-5

**Matrix: Solid**
**Percent Solids: 82.4**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0096 | J | 0.017 | 0.0072 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Benzene | ND | | 0.0017 | 0.00042 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Bromodichloromethane | ND | | 0.0017 | 0.00034 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Bromoform | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Bromomethane | ND | | 0.0042 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Carbon disulfide | ND | | 0.0042 | 0.00086 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Carbon tetrachloride | ND | | 0.0017 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Chlorobenzene | ND | | 0.0017 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Chloroethane | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Chloroform | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Chloromethane | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0017 | 0.00046 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0017 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Dibromochloromethane | ND | | 0.0017 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,1-Dichloroethane | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,2-Dichloroethane | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,1-Dichloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,2-Dichloropropane | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Ethylbenzene | ND | | 0.0017 | 0.00080 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 2-Hexanone | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Methylene Chloride | ND | | 0.0042 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0042 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| methyl isobutyl ketone | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Methyl tert-butyl ether | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Styrene | ND | | 0.0017 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0017 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Tetrachloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Toluene | ND | | 0.0017 | 0.00042 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0017 | 0.00074 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0017 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0017 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Trichloroethene | ND | | 0.0017 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Vinyl chloride | ND | | 0.0017 | 0.00074 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |
| Xylenes, Total | ND | | 0.0033 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *118* | | *75 - 131* | *08/27/21 18:07* | *08/31/21 18:04* | *1* |
| *Dibromofluoromethane* | *106* | | *75 - 126* | *08/27/21 18:07* | *08/31/21 18:04* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *70 - 134* | *08/27/21 18:07* | *08/31/21 18:04* | *1* |
| *Toluene-d8 (Surr)* | *111* | | *75 - 124* | *08/27/21 18:07* | *08/31/21 18:04* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.040 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Acenaphthylene | ND | | 0.040 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Anthracene | ND | | 0.040 | 0.0067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Benzo[a]anthracene | ND | | 0.040 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Benzo[a]pyrene | ND | | 0.040 | 0.0078 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-23**
**Date Collected: 08/26/21 10:30**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-5**
**Matrix: Solid**
**Percent Solids: 82.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.040 | 0.0087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Benzo[g,h,i]perylene** | **0.020** | **J** | 0.040 | 0.013 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Benzo[k]fluoranthene | ND | | 0.040 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.20 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.20 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.20 | 0.073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.20 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Butyl benzyl phthalate | ND | | 0.20 | 0.076 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Carbazole | ND | | 0.20 | 0.10 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4-Chloroaniline | ND | | 0.81 | 0.19 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2-Chloronaphthalene | ND | | 0.20 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2-Chlorophenol | ND | | 0.20 | 0.069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Chrysene** | **0.019** | **J** | 0.040 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.040 | 0.0078 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Dibenzofuran | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.20 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,4-Dichlorophenol | ND | | 0.40 | 0.095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Diethyl phthalate | ND | | 0.20 | 0.068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,4-Dimethylphenol | ND | | 0.40 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Dimethyl phthalate | ND | | 0.20 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Di-n-butyl phthalate | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.81 | 0.32 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,4-Dinitrophenol | ND | | 0.81 | 0.71 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.20 | 0.079 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Di-n-octyl phthalate | ND | | 0.20 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Fluoranthene** | **0.0082** | **J** | 0.040 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Fluorene** | **0.0076** | **J** | 0.040 | 0.0056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Hexachlorobenzene | ND | | 0.081 | 0.0093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.81 | 0.23 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Hexachloroethane | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.040 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Isophorone | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **2-Methylnaphthalene** | **0.046** | **J** | 0.081 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2-Methylphenol | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 3 & 4 Methylphenol | ND | | 0.20 | 0.067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Naphthalene** | **0.0088** | **J** | 0.040 | 0.0062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2-Nitroaniline | ND | | 0.20 | 0.054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 3-Nitroaniline | ND | | 0.40 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4-Nitroaniline | ND | | 0.40 | 0.17 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Nitrobenzene | ND | | 0.040 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2-Nitrophenol | ND | | 0.40 | 0.095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 4-Nitrophenol | ND | | 0.81 | 0.38 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |

**Client Sample ID: B-23**
**Date Collected: 08/26/21 10:30**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-5**
**Matrix: Solid**
**Percent Solids: 82.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.081 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Pentachlorophenol | ND | | 0.81 | 0.64 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Phenanthrene** | **0.051** | | 0.040 | 0.0056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| Phenol | ND | | 0.20 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| **Pyrene** | **0.017** | **J** | 0.040 | 0.0080 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.40 | 0.092 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *76* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 19:03* | *1* |
| *2-Fluorophenol* | *88* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 19:03* | *1* |
| *Nitrobenzene-d5* | *75* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 19:03* | *1* |
| *Phenol-d5* | *98* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 19:03* | *1* |
| *Terphenyl-d14* | *81* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 19:03* | *1* |
| *2,4,6-Tribromophenol* | *66* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 19:03* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.8** | | 1.2 | 0.39 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |
| **Barium** | **62** | | 1.2 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |
| Cadmium | ND | | 0.23 | 0.042 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |
| **Chromium** | **22** | | 1.2 | 0.57 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |
| **Lead** | **12** | | 0.58 | 0.27 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |
| Selenium | ND | | 1.2 | 0.68 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |
| **Silver** | **0.32** | **J** | 0.58 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:04 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.017** | **J** | 0.019 | 0.0065 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:09 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.2** | | 0.2 | 0.2 | SU | | | 08/31/21 17:50 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-24**
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-6**
**Matrix: Solid**
**Percent Solids: 83.7**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.017** | **J** | 0.018 | 0.0078 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Benzene | ND | | 0.0018 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Bromodichloromethane | ND | | 0.0018 | 0.00036 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Bromoform | ND | | 0.0018 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Bromomethane | ND | | 0.0045 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Carbon disulfide | ND | | 0.0045 | 0.00093 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Carbon tetrachloride | ND | | 0.0018 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Chlorobenzene | ND | | 0.0018 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Chloroethane | ND | | 0.0045 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Chloroform | ND | | 0.0018 | 0.00062 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Chloromethane | ND | | 0.0045 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0018 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0018 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Dibromochloromethane | ND | | 0.0018 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,1-Dichloroethane | ND | | 0.0018 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,2-Dichloroethane | ND | | 0.0045 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,1-Dichloroethene | ND | | 0.0018 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,2-Dichloropropane | ND | | 0.0018 | 0.00046 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0018 | 0.00063 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Ethylbenzene | ND | | 0.0018 | 0.00085 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 2-Hexanone | ND | | 0.0045 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Methylene Chloride | ND | | 0.0045 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0045 | 0.0020 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| methyl isobutyl ketone | ND | | 0.0045 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Methyl tert-butyl ether | ND | | 0.0018 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Styrene | ND | | 0.0018 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0018 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Tetrachloroethene | ND | | 0.0018 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Toluene | ND | | 0.0018 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0018 | 0.00079 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0018 | 0.00063 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0018 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0018 | 0.00076 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Trichloroethene | ND | | 0.0018 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Vinyl chloride | ND | | 0.0018 | 0.00079 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |
| Xylenes, Total | ND | | 0.0036 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 08/31/21 18:30 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *75 - 131* | *08/27/21 18:07* | *08/31/21 18:30* | *1* |
| *Dibromofluoromethane* | *108* | | *75 - 126* | *08/27/21 18:07* | *08/31/21 18:30* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *70 - 134* | *08/27/21 18:07* | *08/31/21 18:30* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/27/21 18:07* | *08/31/21 18:30* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **1.1** | | 0.038 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Acenaphthylene** | **0.024** | **J** | 0.038 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Anthracene** | **1.3** | | 0.038 | 0.0064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Benzo[a]anthracene** | **2.2** | | 0.038 | 0.0051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Benzo[a]pyrene** | **2.1** | | 0.038 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-24**
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-6**
**Matrix: Solid**
**Percent Solids: 83.7**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[g,h,i]perylene** | **0.59** | | 0.038 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Benzo[k]fluoranthene** | **1.2** | | 0.038 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Carbazole** | **0.75** | | 0.19 | 0.095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4-Chloroaniline | ND | | 0.77 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Chrysene** | **2.2** | | 0.038 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Dibenz(a,h)anthracene** | **0.22** | | 0.038 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Dibenzofuran** | **0.83** | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,4-Dichlorophenol | ND | | 0.38 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,4-Dimethylphenol | ND | | 0.38 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.77 | 0.31 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,4-Dinitrophenol | ND | | 0.77 | 0.67 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Fluorene** | **1.4** | | 0.038 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Hexachlorobenzene | ND | | 0.077 | 0.0088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.77 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.63** | | 0.038 | 0.0099 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Isophorone | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **2-Methylnaphthalene** | **0.23** | | 0.077 | 0.0070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| **Naphthalene** | **0.35** | | 0.038 | 0.0059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 3-Nitroaniline | ND | | 0.38 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4-Nitroaniline | ND | | 0.38 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Nitrobenzene | ND | | 0.038 | 0.0095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2-Nitrophenol | ND | | 0.38 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 4-Nitrophenol | ND | | 0.77 | 0.36 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.077 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |

**Client Sample ID: B-24**
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-6**
**Matrix: Solid**
**Percent Solids: 83.7**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Pentachlorophenol | ND | | 0.77 | 0.61 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| Phenol | ND | | 0.19 | 0.085 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.38 | 0.087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:27 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *82* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 19:27* | *1* |
| *2-Fluorophenol* | *94* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 19:27* | *1* |
| *Nitrobenzene-d5* | *83* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 19:27* | *1* |
| *Phenol-d5* | *112* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 19:27* | *1* |
| *Terphenyl-d14* | *94* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 19:27* | *1* |
| *2,4,6-Tribromophenol* | *77* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 19:27* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **2.2** | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/02/21 13:22 | 5 |
| **Fluoranthene** | **4.8** | | 0.19 | 0.035 | mg/Kg | ☼ | 09/01/21 06:24 | 09/02/21 13:22 | 5 |
| **Phenanthrene** | **4.9** | | 0.19 | 0.027 | mg/Kg | ☼ | 09/01/21 06:24 | 09/02/21 13:22 | 5 |
| **Pyrene** | **3.4** | | 0.19 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/02/21 13:22 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *93* | | *43 - 145* | *09/01/21 06:24* | *09/02/21 13:22* | *5* |
| *2-Fluorophenol* | *97* | | *31 - 166* | *09/01/21 06:24* | *09/02/21 13:22* | *5* |
| *Nitrobenzene-d5* | *118* | | *37 - 147* | *09/01/21 06:24* | *09/02/21 13:22* | *5* |
| *Phenol-d5* | *92* | | *30 - 153* | *09/01/21 06:24* | *09/02/21 13:22* | *5* |
| *Terphenyl-d14* | *100* | | *42 - 157* | *09/01/21 06:24* | *09/02/21 13:22* | *5* |
| *2,4,6-Tribromophenol* | *182* | *S1+* | *31 - 143* | *09/01/21 06:24* | *09/02/21 13:22* | *5* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0020 | 0.0014 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| alpha-BHC | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| beta-BHC | ND | | 0.0020 | 0.0016 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| cis-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| 4,4'-DDD | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| 4,4'-DDE | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| 4,4'-DDT | ND | | 0.0020 | 0.00096 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| delta-BHC | ND | | 0.0020 | 0.00096 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Dieldrin | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Endosulfan I | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Endosulfan II | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Endosulfan sulfate | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Endrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Endrin aldehyde | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Endrin ketone | ND | | 0.0020 | 0.00098 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Heptachlor | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Heptachlor epoxide | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |

**Client Sample ID: B-24**
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-6**
**Matrix: Solid**
**Percent Solids: 83.7**

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methoxychlor | ND | | 0.0099 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| Toxaphene | ND | | 0.020 | 0.0080 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |
| trans-Chlordane | ND | | 0.0020 | 0.0012 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 01:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *110* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 01:35* | *1* |
| *Tetrachloro-m-xylene* | *145* | *S1+* | *30 - 121* | *08/31/21 08:03* | *09/02/21 01:35* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.020 | 0.0078 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| PCB-1221 | ND | | 0.020 | 0.0078 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| PCB-1232 | ND | | 0.020 | 0.0054 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| PCB-1242 | ND | | 0.020 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| PCB-1248 | ND | | 0.020 | 0.0095 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| PCB-1254 | ND | | 0.020 | 0.0068 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| PCB-1260 | ND | | 0.020 | 0.0075 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.020 | 0.0054 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *49* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 04:26* | *1* |
| *DCB Decachlorobiphenyl* | *85* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 04:26* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **12000** | | 21 | 8.5 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Antimony** | **1.4** | **J** | 2.1 | 0.40 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Arsenic** | **7.2** | | 1.0 | 0.35 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Barium** | **46** | | 1.0 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Beryllium** | **0.92** | | 0.41 | 0.097 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| Cadmium | ND | | 0.21 | 0.037 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Calcium** | **44000** | | 21 | 3.5 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Chromium** | **18** | | 1.0 | 0.51 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Cobalt** | **11** | | 0.52 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Copper** | **24** | | 1.0 | 0.29 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Iron** | **26000** | | 21 | 11 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Lead** | **20** | | 0.52 | 0.24 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Magnesium** | **25000** | | 10 | 5.1 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Manganese** | **350** | | 1.0 | 0.15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Nickel** | **29** | | 1.0 | 0.30 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Potassium** | **3200** | | 52 | 18 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| Selenium | ND | | 1.0 | 0.61 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Silver** | **0.34** | **J** | 0.52 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Sodium** | **460** | | 100 | 15 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| Thallium | ND | | 1.0 | 0.52 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Vanadium** | **26** | | 0.52 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |
| **Zinc** | **56** | | 2.1 | 0.91 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:07 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.020** | | 0.019 | 0.0063 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:11 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-24**
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-6**
**Matrix: Solid**
**Percent Solids: 83.7**

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.27 | 0.13 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 13:20 | 1 |
| **pH** | **7.2** | | 0.2 | 0.2 | SU | | | 08/31/21 17:55 | 1 |

## Client Sample ID: B-25

**Date Collected: 08/26/21 11:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-7

**Matrix: Solid**
**Percent Solids: 85.6**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.010** | **J** | 0.017 | 0.0074 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Benzene | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Bromodichloromethane | ND | | 0.0017 | 0.00034 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Bromoform | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Bromomethane | ND | | 0.0042 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Carbon disulfide | ND | | 0.0042 | 0.00088 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Carbon tetrachloride | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Chlorobenzene | ND | | 0.0017 | 0.00062 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Chloroethane | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Chloroform | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Chloromethane | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0017 | 0.00047 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Dibromochloromethane | ND | | 0.0017 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,1-Dichloroethane | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,2-Dichloroethane | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,1-Dichloroethene | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,2-Dichloropropane | ND | | 0.0017 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Ethylbenzene | ND | | 0.0017 | 0.00081 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 2-Hexanone | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Methylene Chloride | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0042 | 0.0019 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| methyl isobutyl ketone | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Methyl tert-butyl ether | ND | | 0.0017 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Styrene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0017 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Tetrachloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Toluene | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0017 | 0.00075 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0017 | 0.00072 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Trichloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Vinyl chloride | ND | | 0.0017 | 0.00075 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |
| Xylenes, Total | ND | | 0.0034 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 11:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *75 - 131* | *08/27/21 18:07* | *09/01/21 11:50* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *09/01/21 11:50* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *116* | | *70 - 134* | *08/27/21 18:07* | *09/01/21 11:50* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/27/21 18:07* | *09/01/21 11:50* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.038 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Acenaphthylene | ND | | 0.038 | 0.0051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Anthracene | ND | | 0.038 | 0.0065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Benzo[a]anthracene** | **0.0052** | **J** | 0.038 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Benzo[a]pyrene | ND | | 0.038 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-25**
**Date Collected: 08/26/21 11:30**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-7**
**Matrix: Solid**
**Percent Solids: 85.6**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.038 | 0.0083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Benzo[g,h,i]perylene** | **0.019** | **J** | 0.038 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Benzo[k]fluoranthene | ND | | 0.038 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Carbazole | ND | | 0.19 | 0.097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4-Chloroaniline | ND | | 0.78 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Chrysene** | **0.026** | **J** | 0.038 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.038 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,4-Dichlorophenol | ND | | 0.38 | 0.092 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,4-Dimethylphenol | ND | | 0.38 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.78 | 0.31 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,4-Dinitrophenol | ND | | 0.78 | 0.68 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.076 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Fluoranthene** | **0.011** | **J** | 0.038 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Fluorene | ND | | 0.038 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Hexachlorobenzene | ND | | 0.078 | 0.0090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.78 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.038 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Isophorone | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **2-Methylnaphthalene** | **0.11** | | 0.078 | 0.0071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Naphthalene** | **0.032** | **J** | 0.038 | 0.0059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 3-Nitroaniline | ND | | 0.38 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4-Nitroaniline | ND | | 0.38 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Nitrobenzene | ND | | 0.038 | 0.0096 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2-Nitrophenol | ND | | 0.38 | 0.091 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 4-Nitrophenol | ND | | 0.78 | 0.37 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-25**
**Date Collected: 08/26/21 11:30**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-7**
**Matrix: Solid**
**Percent Solids: 85.6**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.078 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Pentachlorophenol | ND | | 0.78 | 0.62 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Phenanthrene** | **0.092** | | 0.038 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| Phenol | ND | | 0.19 | 0.086 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| **Pyrene** | **0.020** | **J** | 0.038 | 0.0077 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.38 | 0.088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 19:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *81* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 19:51* | *1* |
| *2-Fluorophenol* | *93* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 19:51* | *1* |
| *Nitrobenzene-d5* | *79* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 19:51* | *1* |
| *Phenol-d5* | *113* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 19:51* | *1* |
| *Terphenyl-d14* | *82* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 19:51* | *1* |
| *2,4,6-Tribromophenol* | *67* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 19:51* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.3** | | 1.1 | 0.38 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |
| **Barium** | **42** | | 1.1 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |
| **Cadmium** | **0.13** | **J** | 0.22 | 0.040 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |
| **Chromium** | **15** | | 1.1 | 0.55 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |
| **Lead** | **10** | | 0.56 | 0.26 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |
| Selenium | ND | | 1.1 | 0.66 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |
| **Silver** | **0.23** | **J** | 0.56 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:10 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.019** | | 0.019 | 0.0062 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:13 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.9** | | 0.2 | 0.2 | SU | | | 08/31/21 17:58 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-26**
**Date Collected: 08/26/21 12:20**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-8**
**Matrix: Solid**
**Percent Solids: 84.8**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.015 | 0.0065 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Benzene | ND | | 0.0015 | 0.00038 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Bromodichloromethane | ND | | 0.0015 | 0.00030 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Bromoform | ND | | 0.0015 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Bromomethane | ND | | 0.0037 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Carbon disulfide | ND | | 0.0037 | 0.00078 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Carbon tetrachloride | ND | | 0.0015 | 0.00043 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Chlorobenzene | ND | | 0.0015 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Chloroethane | ND | | 0.0037 | 0.0011 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Chloroform | ND | | 0.0015 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Chloromethane | ND | | 0.0037 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0015 | 0.00042 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0015 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Dibromochloromethane | ND | | 0.0015 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,1-Dichloroethane | ND | | 0.0015 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,2-Dichloroethane | ND | | 0.0037 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,1-Dichloroethene | ND | | 0.0015 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,2-Dichloropropane | ND | | 0.0015 | 0.00039 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0015 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Ethylbenzene | ND | | 0.0015 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 2-Hexanone | ND | | 0.0037 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Methylene Chloride | ND | | 0.0037 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0037 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| methyl isobutyl ketone | ND | | 0.0037 | 0.0011 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Methyl tert-butyl ether | ND | | 0.0015 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Styrene | ND | | 0.0015 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0015 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Tetrachloroethene | ND | | 0.0015 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Toluene | ND | | 0.0015 | 0.00038 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0015 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0015 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0015 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0015 | 0.00064 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Trichloroethene | ND | | 0.0015 | 0.00050 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Vinyl chloride | ND | | 0.0015 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |
| Xylenes, Total | ND | | 0.0030 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *75 - 131* | *08/27/21 18:07* | *09/01/21 12:16* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *09/01/21 12:16* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *116* | | *70 - 134* | *08/27/21 18:07* | *09/01/21 12:16* | *1* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* | *08/27/21 18:07* | *09/01/21 12:16* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.037 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Anthracene | ND | | 0.037 | 0.0063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Benzo[a]anthracene | ND | | 0.037 | 0.0051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Benzo[a]pyrene | ND | | 0.037 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-26**
**Date Collected: 08/26/21 12:20**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-8**
**Matrix: Solid**
**Percent Solids: 84.8**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.037 | 0.0081 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **Benzo[g,h,i]perylene** | **0.016** | **J** | 0.037 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Carbazole | ND | | 0.19 | 0.094 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4-Chloroaniline | ND | | 0.76 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **Chrysene** | **0.018** | **J** | 0.037 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.037 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.76 | 0.30 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,4-Dinitrophenol | ND | | 0.76 | 0.66 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **Fluoranthene** | **0.0072** | **J** | 0.037 | 0.0070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Fluorene | ND | | 0.037 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Hexachlorobenzene | ND | | 0.076 | 0.0087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.76 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.0097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Isophorone | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **2-Methylnaphthalene** | **0.058** | **J** | 0.076 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **Naphthalene** | **0.016** | **J** | 0.037 | 0.0058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0094 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 4-Nitrophenol | ND | | 0.76 | 0.36 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-26**
**Date Collected: 08/26/21 12:20**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-8**
**Matrix: Solid**
**Percent Solids: 84.8**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.076 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Pentachlorophenol | ND | | 0.76 | 0.60 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **Phenanthrene** | **0.054** | | 0.037 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| Phenol | ND | | 0.19 | 0.083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| **Pyrene** | **0.018** | **J** | 0.037 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.086 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *76* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 20:14* | *1* |
| *2-Fluorophenol* | *96* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 20:14* | *1* |
| *Nitrobenzene-d5* | *74* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 20:14* | *1* |
| *Phenol-d5* | *115* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 20:14* | *1* |
| *Terphenyl-d14* | *82* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 20:14* | *1* |
| *2,4,6-Tribromophenol* | *61* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 20:14* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.3** | | 1.0 | 0.35 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |
| **Barium** | **50** | | 1.0 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |
| Cadmium | ND | | 0.21 | 0.037 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |
| **Chromium** | **19** | | 1.0 | 0.51 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |
| **Lead** | **11** | | 0.52 | 0.24 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |
| Selenium | ND | | 1.0 | 0.61 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |
| **Silver** | **0.25** | **J** | 0.52 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:13 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.019** | | 0.019 | 0.0063 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:18 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **9.4** | | 0.2 | 0.2 | SU | | | 08/31/21 18:00 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-27

**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-9

**Matrix: Solid**
**Percent Solids: 85.1**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.0075** | **J** | 0.016 | 0.0070 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Benzene | ND | | 0.0016 | 0.00041 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Bromodichloromethane | ND | | 0.0016 | 0.00033 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Bromoform | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Bromomethane | ND | | 0.0040 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Carbon disulfide | ND | | 0.0040 | 0.00083 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Carbon tetrachloride | ND | | 0.0016 | 0.00046 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Chlorobenzene | ND | | 0.0016 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Chloroethane | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Chloroform | ND | | 0.0016 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Chloromethane | ND | | 0.0040 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0016 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0016 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Dibromochloromethane | ND | | 0.0016 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,1-Dichloroethane | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,2-Dichloroethane | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,1-Dichloroethene | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,2-Dichloropropane | ND | | 0.0016 | 0.00041 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0016 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Ethylbenzene | ND | | 0.0016 | 0.00077 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 2-Hexanone | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Methylene Chloride | ND | | 0.0040 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0040 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| methyl isobutyl ketone | ND | | 0.0040 | 0.0012 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Methyl tert-butyl ether | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Styrene | ND | | 0.0016 | 0.00048 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0016 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Tetrachloroethene | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Toluene | ND | | 0.0016 | 0.00040 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0016 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0016 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0016 | 0.00069 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Trichloroethene | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Vinyl chloride | ND | | 0.0016 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |
| Xylenes, Total | ND | | 0.0032 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 12:42 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *115* | | *75 - 131* | *08/27/21 18:07* | *09/01/21 12:42* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *09/01/21 12:42* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *70 - 134* | *08/27/21 18:07* | *09/01/21 12:42* | *1* |
| *Toluene-d8 (Surr)* | *111* | | *75 - 124* | *08/27/21 18:07* | *09/01/21 12:42* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.034** | **J** | 0.037 | 0.0067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Anthracene** | **0.11** | | 0.037 | 0.0063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Benzo[a]anthracene** | **0.39** | | 0.037 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Benzo[a]pyrene** | **0.38** | | 0.037 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-27**
**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-9**
**Matrix: Solid**
**Percent Solids: 85.1**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **0.58** | | 0.037 | 0.0081 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Benzo[g,h,i]perylene** | **0.12** | | 0.037 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Benzo[k]fluoranthene** | **0.20** | | 0.037 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Carbazole | ND | | 0.19 | 0.094 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4-Chloroaniline | ND | | 0.76 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Chrysene** | **0.43** | | 0.037 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Dibenz(a,h)anthracene** | **0.043** | | 0.037 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.76 | 0.30 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,4-Dinitrophenol | ND | | 0.76 | 0.66 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Fluoranthene** | **0.86** | | 0.037 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Fluorene** | **0.023** | **J** | 0.037 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Hexachlorobenzene | ND | | 0.076 | 0.0087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.76 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.11** | | 0.037 | 0.0097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Isophorone | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **2-Methylnaphthalene** | **0.044** | **J** | 0.076 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Naphthalene** | **0.018** | **J** | 0.037 | 0.0058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 4-Nitrophenol | ND | | 0.76 | 0.36 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |

**Client Sample ID: B-27**
**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-9**
**Matrix: Solid**
**Percent Solids: 85.1**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.076 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Pentachlorophenol | ND | | 0.76 | 0.60 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Phenanthrene** | **0.51** | | 0.037 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| Phenol | ND | | 0.19 | 0.083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| **Pyrene** | **0.54** | | 0.037 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.085 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 20:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *81* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 20:38* | *1* |
| *2-Fluorophenol* | *91* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 20:38* | *1* |
| *Nitrobenzene-d5* | *81* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 20:38* | *1* |
| *Phenol-d5* | *108* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 20:38* | *1* |
| *Terphenyl-d14* | *82* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 20:38* | *1* |
| *2,4,6-Tribromophenol* | *67* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 20:38* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| beta-BHC | ND | | 0.0019 | 0.0016 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| 4,4'-DDD | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| 4,4'-DDE | ND | | 0.0019 | 0.00099 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| 4,4'-DDT | ND | | 0.0019 | 0.00092 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00092 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Dieldrin | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Endrin | ND | | 0.0019 | 0.00098 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00094 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00096 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Methoxychlor | ND | | 0.0095 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| Toxaphene | ND | | 0.019 | 0.0077 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *88* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 02:17* | *1* |
| *Tetrachloro-m-xylene* | *58* | | *30 - 121* | *08/31/21 08:03* | *09/02/21 02:17* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |

## Client Sample ID: B-27

**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-9

**Matrix: Solid**
**Percent Solids: 85.1**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |
| PCB-1232 | ND | | 0.019 | 0.0052 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |
| PCB-1242 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |
| PCB-1248 | ND | | 0.019 | 0.0091 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |
| PCB-1254 | ND | | 0.019 | 0.0065 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |
| PCB-1260 | ND | | 0.019 | 0.0072 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.019 | 0.0052 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 04:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *51* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 04:57* | *1* |
| *DCB Decachlorobiphenyl* | *71* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 04:57* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **12000** | | 22 | 8.8 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Antimony** | **1.1** | **J** | 2.2 | 0.42 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Arsenic** | **11** | | 1.1 | 0.37 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Barium** | **47** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Beryllium** | **0.90** | | 0.43 | 0.10 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Cadmium** | **0.083** | **J** | 0.22 | 0.039 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Calcium** | **59000** | | 22 | 3.7 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Chromium** | **19** | | 1.1 | 0.53 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Cobalt** | **12** | | 0.54 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Copper** | **23** | | 1.1 | 0.30 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Iron** | **22000** | | 22 | 11 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Lead** | **12** | | 0.54 | 0.25 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Magnesium** | **30000** | | 11 | 5.3 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Manganese** | **420** | | 1.1 | 0.16 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Nickel** | **32** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Potassium** | **3800** | | 54 | 19 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| Selenium | ND | | 1.1 | 0.63 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Silver** | **0.16** | **J** | 0.54 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Sodium** | **260** | | 110 | 16 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| Thallium | ND | | 1.1 | 0.54 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Vanadium** | **24** | | 0.54 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |
| **Zinc** | **56** | | 2.2 | 0.95 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:16 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.019** | | 0.019 | 0.0062 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:20 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.24 | 0.12 | mg/Kg | ☼ | 09/02/21 10:35 | 09/02/21 13:22 | 1 |
| **pH** | **8.2** | | 0.2 | 0.2 | SU | | | 08/31/21 18:03 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-28

**Date Collected: 08/26/21 13:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-10

**Matrix: Solid**
**Percent Solids: 83.0**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0093 | J | 0.018 | 0.0076 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Benzene | ND | | 0.0018 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Bromodichloromethane | ND | | 0.0018 | 0.00036 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Bromoform | ND | | 0.0018 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Bromomethane | ND | | 0.0044 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Carbon disulfide | ND | | 0.0044 | 0.00091 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Carbon tetrachloride | ND | | 0.0018 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Chlorobenzene | ND | | 0.0018 | 0.00065 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Chloroethane | ND | | 0.0044 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Chloroform | ND | | 0.0018 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Chloromethane | ND | | 0.0044 | 0.0018 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0018 | 0.00049 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0018 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Dibromochloromethane | ND | | 0.0018 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,1-Dichloroethane | ND | | 0.0018 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,2-Dichloroethane | ND | | 0.0044 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,1-Dichloroethene | ND | | 0.0018 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,2-Dichloropropane | ND | | 0.0018 | 0.00045 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0018 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Ethylbenzene | ND | | 0.0018 | 0.00084 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 2-Hexanone | ND | | 0.0044 | 0.0014 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Methylene Chloride | ND | | 0.0044 | 0.0017 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0044 | 0.0019 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| methyl isobutyl ketone | ND | | 0.0044 | 0.0013 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Methyl tert-butyl ether | ND | | 0.0018 | 0.00051 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Styrene | ND | | 0.0018 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0018 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Tetrachloroethene | ND | | 0.0018 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Toluene | ND | | 0.0018 | 0.00044 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0018 | 0.00078 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0018 | 0.00061 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0018 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0018 | 0.00075 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Trichloroethene | ND | | 0.0018 | 0.00059 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Vinyl chloride | ND | | 0.0018 | 0.00078 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |
| Xylenes, Total | ND | | 0.0035 | 0.00056 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *75 - 131* | *08/27/21 18:07* | *09/01/21 13:09* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *09/01/21 13:09* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *115* | | *70 - 134* | *08/27/21 18:07* | *09/01/21 13:09* | *1* |
| *Toluene-d8 (Surr)* | *111* | | *75 - 124* | *08/27/21 18:07* | *09/01/21 13:09* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.038 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Acenaphthylene | ND | | 0.038 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Anthracene | ND | | 0.038 | 0.0063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Benzo[a]anthracene | ND | | 0.038 | 0.0051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Benzo[a]pyrene | ND | | 0.038 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-28**
**Date Collected: 08/26/21 13:30**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-10**
**Matrix: Solid**
**Percent Solids: 83.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.038 | 0.0082 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **Benzo[g,h,i]perylene** | **0.016** | **J** | 0.038 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Benzo[k]fluoranthene | ND | | 0.038 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Carbazole | ND | | 0.19 | 0.095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4-Chloroaniline | ND | | 0.77 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **Chrysene** | **0.019** | **J** | 0.038 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.038 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,4-Dichlorophenol | ND | | 0.38 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,4-Dimethylphenol | ND | | 0.38 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.77 | 0.31 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,4-Dinitrophenol | ND | | 0.77 | 0.67 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **Fluoranthene** | **0.0097** | **J** | 0.038 | 0.0070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Fluorene | ND | | 0.038 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Hexachlorobenzene | ND | | 0.077 | 0.0088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.77 | 0.22 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.038 | 0.0098 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Isophorone | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **2-Methylnaphthalene** | **0.020** | **J** | 0.077 | 0.0070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **Naphthalene** | **0.0072** | **J** | 0.038 | 0.0058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 3-Nitroaniline | ND | | 0.38 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4-Nitroaniline | ND | | 0.38 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Nitrobenzene | ND | | 0.038 | 0.0095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2-Nitrophenol | ND | | 0.38 | 0.090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 4-Nitrophenol | ND | | 0.77 | 0.36 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-28**
**Date Collected: 08/26/21 13:30**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-10**
**Matrix: Solid**
**Percent Solids: 83.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.077 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Pentachlorophenol | ND | | 0.77 | 0.61 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **Phenanthrene** | **0.051** | | 0.038 | 0.0053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| Phenol | ND | | 0.19 | 0.084 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| **Pyrene** | **0.019** | **J** | 0.038 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.38 | 0.087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.38 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:02 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *71* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 21:02* | *1* |
| *2-Fluorophenol* | *82* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 21:02* | *1* |
| *Nitrobenzene-d5* | *65* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 21:02* | *1* |
| *Phenol-d5* | *99* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 21:02* | *1* |
| *Terphenyl-d14* | *87* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 21:02* | *1* |
| *2,4,6-Tribromophenol* | *60* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 21:02* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **8.8** | | 1.1 | 0.38 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |
| **Barium** | **48** | | 1.1 | 0.13 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |
| **Cadmium** | **0.043** | **J** | 0.22 | 0.040 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |
| **Chromium** | **19** | | 1.1 | 0.55 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |
| **Lead** | **12** | | 0.56 | 0.26 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |
| Selenium | ND | | 1.1 | 0.66 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |
| **Silver** | **0.28** | **J** | 0.56 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:20 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.020** | | 0.019 | 0.0064 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:22 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.5** | | 0.2 | 0.2 | SU | | | 08/31/21 18:05 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-29

**Date Collected: 08/26/21 14:15**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-11

**Matrix: Solid**
**Percent Solids: 88.0**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.011** | **J** | 0.021 | 0.0089 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Benzene | ND | | 0.0021 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Bromodichloromethane | ND | | 0.0021 | 0.00042 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Bromoform | ND | | 0.0021 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Bromomethane | ND | | 0.0051 | 0.0019 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Carbon disulfide | ND | | 0.0051 | 0.0011 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Carbon tetrachloride | ND | | 0.0021 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Chlorobenzene | ND | | 0.0021 | 0.00076 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Chloroethane | ND | | 0.0051 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Chloroform | ND | | 0.0021 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Chloromethane | ND | | 0.0051 | 0.0021 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0021 | 0.00057 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0021 | 0.00062 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Dibromochloromethane | ND | | 0.0021 | 0.00067 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,1-Dichloroethane | ND | | 0.0021 | 0.00070 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,2-Dichloroethane | ND | | 0.0051 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,1-Dichloroethene | ND | | 0.0021 | 0.00071 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,2-Dichloropropane | ND | | 0.0021 | 0.00053 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0021 | 0.00072 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Ethylbenzene | ND | | 0.0021 | 0.00098 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 2-Hexanone | ND | | 0.0051 | 0.0016 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Methylene Chloride | ND | | 0.0051 | 0.0020 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0051 | 0.0023 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| methyl isobutyl ketone | ND | | 0.0051 | 0.0015 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Methyl tert-butyl ether | ND | | 0.0021 | 0.00060 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Styrene | ND | | 0.0021 | 0.00062 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0021 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Tetrachloroethene | ND | | 0.0021 | 0.00070 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Toluene | ND | | 0.0021 | 0.00052 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0021 | 0.00091 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0021 | 0.00072 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0021 | 0.00069 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0021 | 0.00088 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Trichloroethene | ND | | 0.0021 | 0.00069 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Vinyl chloride | ND | | 0.0021 | 0.00091 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |
| Xylenes, Total | ND | | 0.0041 | 0.00066 | mg/Kg | ☼ | 08/27/21 18:07 | 09/01/21 13:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *75 - 131* | *08/27/21 18:07* | *09/01/21 13:35* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | *08/27/21 18:07* | *09/01/21 13:35* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *70 - 134* | *08/27/21 18:07* | *09/01/21 13:35* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | *08/27/21 18:07* | *09/01/21 13:35* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.0077** | **J** | 0.035 | 0.0064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Acenaphthylene | ND | | 0.035 | 0.0047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Anthracene** | **0.013** | **J** | 0.035 | 0.0060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Benzo[a]anthracene** | **0.077** | | 0.035 | 0.0048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Benzo[a]pyrene** | **0.071** | | 0.035 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-29**
**Date Collected: 08/26/21 14:15**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-11**
**Matrix: Solid**
**Percent Solids: 88.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **0.12** | | 0.035 | 0.0077 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Benzo[g,h,i]perylene** | **0.028** | **J** | 0.035 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Benzo[k]fluoranthene** | **0.045** | | 0.035 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.18 | 0.036 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.18 | 0.054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.18 | 0.065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.18 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Butyl benzyl phthalate | ND | | 0.18 | 0.068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Carbazole | ND | | 0.18 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4-Chloroaniline | ND | | 0.72 | 0.17 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.35 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2-Chloronaphthalene | ND | | 0.18 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2-Chlorophenol | ND | | 0.18 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Chrysene** | **0.10** | | 0.035 | 0.0097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Dibenz(a,h)anthracene** | **0.0084** | **J** | 0.035 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Dibenzofuran | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.18 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.18 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.18 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.18 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,4-Dichlorophenol | ND | | 0.35 | 0.085 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Diethyl phthalate | ND | | 0.18 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,4-Dimethylphenol | ND | | 0.35 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Dimethyl phthalate | ND | | 0.18 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Di-n-butyl phthalate | ND | | 0.18 | 0.054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.72 | 0.29 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,4-Dinitrophenol | ND | | 0.72 | 0.63 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.18 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.18 | 0.070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Di-n-octyl phthalate | ND | | 0.18 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Fluoranthene** | **0.20** | | 0.035 | 0.0066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Fluorene** | **0.0060** | **J** | 0.035 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Hexachlorobenzene | ND | | 0.072 | 0.0083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Hexachlorobutadiene | ND | | 0.18 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.72 | 0.21 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Hexachloroethane | ND | | 0.18 | 0.054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.023** | **J** | 0.035 | 0.0093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Isophorone | ND | | 0.18 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **2-Methylnaphthalene** | **0.022** | **J** | 0.072 | 0.0066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2-Methylphenol | ND | | 0.18 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 3 & 4 Methylphenol | ND | | 0.18 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Naphthalene** | **0.011** | **J** | 0.035 | 0.0055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2-Nitroaniline | ND | | 0.18 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 3-Nitroaniline | ND | | 0.35 | 0.11 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4-Nitroaniline | ND | | 0.35 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Nitrobenzene | ND | | 0.035 | 0.0089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2-Nitrophenol | ND | | 0.35 | 0.084 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 4-Nitrophenol | ND | | 0.72 | 0.34 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

**Client Sample ID: B-29**
**Date Collected: 08/26/21 14:15**
**Date Received: 08/27/21 15:00**

**Lab Sample ID: 500-204465-11**
**Matrix: Solid**
**Percent Solids: 88.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.072 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Pentachlorophenol | ND | | 0.72 | 0.57 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Phenanthrene** | **0.14** | | 0.035 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| Phenol | ND | | 0.18 | 0.079 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| **Pyrene** | **0.13** | | 0.035 | 0.0071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.18 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.35 | 0.082 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.35 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 21:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *83* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 21:26* | *1* |
| *2-Fluorophenol* | *98* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 21:26* | *1* |
| *Nitrobenzene-d5* | *80* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 21:26* | *1* |
| *Phenol-d5* | *113* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 21:26* | *1* |
| *Terphenyl-d14* | *83* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 21:26* | *1* |
| *2,4,6-Tribromophenol* | *66* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 21:26* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **8.2** | | 1.1 | 0.36 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |
| **Barium** | **40** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |
| **Cadmium** | **0.098** | **J** | 0.21 | 0.038 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |
| **Chromium** | **15** | | 1.1 | 0.52 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |
| **Lead** | **15** | | 0.53 | 0.24 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |
| Selenium | ND | | 1.1 | 0.62 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |
| **Silver** | **0.22** | **J** | 0.53 | 0.14 | mg/Kg | ☼ | 09/03/21 08:40 | 09/03/21 17:23 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.022** | | 0.018 | 0.0059 | mg/Kg | ☼ | 09/01/21 12:40 | 09/02/21 12:29 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.0** | | 0.2 | 0.2 | SU | | | 08/31/21 18:08 | 1 |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| F2 | MS/MSD RPD exceeds control limits |
| F3 | Duplicate RPD exceeds the control limit |
| F5 | Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## GC/MS VOA

### Prep Batch: 616347

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 5035 | |
| 500-204465-2 | B-20 | Total/NA | Solid | 5035 | |
| 500-204465-3 | B-21 | Total/NA | Solid | 5035 | |
| 500-204465-4 | B-22 | Total/NA | Solid | 5035 | |
| 500-204465-5 | B-23 | Total/NA | Solid | 5035 | |
| 500-204465-6 | B-24 | Total/NA | Solid | 5035 | |
| 500-204465-7 | B-25 | Total/NA | Solid | 5035 | |
| 500-204465-8 | B-26 | Total/NA | Solid | 5035 | |
| 500-204465-9 | B-27 | Total/NA | Solid | 5035 | |
| 500-204465-10 | B-28 | Total/NA | Solid | 5035 | |
| 500-204465-11 | B-29 | Total/NA | Solid | 5035 | |

### Analysis Batch: 616653

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-2 | B-20 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-3 | B-21 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-4 | B-22 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-5 | B-23 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-6 | B-24 | Total/NA | Solid | 8260B | 616347 |
| MB 500-616653/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-616653/4 | Lab Control Sample | Total/NA | Solid | 8260B | |
| LCSD 500-616653/5 | Lab Control Sample Dup | Total/NA | Solid | 8260B | |

### Analysis Batch: 616850

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-7 | B-25 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-8 | B-26 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-9 | B-27 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-10 | B-28 | Total/NA | Solid | 8260B | 616347 |
| 500-204465-11 | B-29 | Total/NA | Solid | 8260B | 616347 |
| MB 500-616850/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-616850/4 | Lab Control Sample | Total/NA | Solid | 8260B | |
| LCSD 500-616850/5 | Lab Control Sample Dup | Total/NA | Solid | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 616812

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 3541 | |
| 500-204465-2 | B-20 | Total/NA | Solid | 3541 | |
| 500-204465-3 | B-21 | Total/NA | Solid | 3541 | |
| 500-204465-4 | B-22 | Total/NA | Solid | 3541 | |
| 500-204465-5 | B-23 | Total/NA | Solid | 3541 | |
| 500-204465-6 | B-24 | Total/NA | Solid | 3541 | |
| 500-204465-6 - DL | B-24 | Total/NA | Solid | 3541 | |
| 500-204465-7 | B-25 | Total/NA | Solid | 3541 | |
| 500-204465-8 | B-26 | Total/NA | Solid | 3541 | |
| 500-204465-9 | B-27 | Total/NA | Solid | 3541 | |
| 500-204465-10 | B-28 | Total/NA | Solid | 3541 | |
| 500-204465-11 | B-29 | Total/NA | Solid | 3541 | |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 616812 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-616812/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-616812/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 616935

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-2 | B-20 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-3 | B-21 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-4 | B-22 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-5 | B-23 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-6 | B-24 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-7 | B-25 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-8 | B-26 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-9 | B-27 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-10 | B-28 | Total/NA | Solid | 8270D | 616812 |
| 500-204465-11 | B-29 | Total/NA | Solid | 8270D | 616812 |
| MB 500-616812/1-A | Method Blank | Total/NA | Solid | 8270D | 616812 |
| LCS 500-616812/2-A | Lab Control Sample | Total/NA | Solid | 8270D | 616812 |

### Analysis Batch: 617090

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-6 - DL | B-24 | Total/NA | Solid | 8270D | 616812 |

## GC Semi VOA

### Prep Batch: 616666

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 3541 | |
| 500-204465-2 | B-20 | Total/NA | Solid | 3541 | |
| 500-204465-3 | B-21 | Total/NA | Solid | 3541 | |
| 500-204465-3 - DL | B-21 | Total/NA | Solid | 3541 | |
| 500-204465-4 | B-22 | Total/NA | Solid | 3541 | |
| 500-204465-6 | B-24 | Total/NA | Solid | 3541 | |
| 500-204465-9 | B-27 | Total/NA | Solid | 3541 | |
| MB 500-616666/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-616666/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| LCS 500-616666/3-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 616963

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 8081B | 616666 |
| 500-204465-2 | B-20 | Total/NA | Solid | 8081B | 616666 |
| 500-204465-3 | B-21 | Total/NA | Solid | 8081B | 616666 |
| 500-204465-4 | B-22 | Total/NA | Solid | 8081B | 616666 |
| 500-204465-6 | B-24 | Total/NA | Solid | 8081B | 616666 |
| 500-204465-9 | B-27 | Total/NA | Solid | 8081B | 616666 |
| MB 500-616666/1-A | Method Blank | Total/NA | Solid | 8081B | 616666 |
| LCS 500-616666/2-A | Lab Control Sample | Total/NA | Solid | 8081B | 616666 |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## GC Semi VOA

### Analysis Batch: 616981

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 8082A | 616666 |
| 500-204465-2 | B-20 | Total/NA | Solid | 8082A | 616666 |
| 500-204465-3 | B-21 | Total/NA | Solid | 8082A | 616666 |
| 500-204465-4 | B-22 | Total/NA | Solid | 8082A | 616666 |
| 500-204465-6 | B-24 | Total/NA | Solid | 8082A | 616666 |
| 500-204465-9 | B-27 | Total/NA | Solid | 8082A | 616666 |
| MB 500-616666/1-A | Method Blank | Total/NA | Solid | 8082A | 616666 |
| LCS 500-616666/3-A | Lab Control Sample | Total/NA | Solid | 8082A | 616666 |

### Analysis Batch: 617145

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-3 - DL | B-21 | Total/NA | Solid | 8081B | 616666 |

## Metals

### Prep Batch: 616904

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 7471B | |
| 500-204465-2 | B-20 | Total/NA | Solid | 7471B | |
| 500-204465-3 | B-21 | Total/NA | Solid | 7471B | |
| 500-204465-4 | B-22 | Total/NA | Solid | 7471B | |
| 500-204465-5 | B-23 | Total/NA | Solid | 7471B | |
| 500-204465-6 | B-24 | Total/NA | Solid | 7471B | |
| 500-204465-7 | B-25 | Total/NA | Solid | 7471B | |
| 500-204465-8 | B-26 | Total/NA | Solid | 7471B | |
| 500-204465-9 | B-27 | Total/NA | Solid | 7471B | |
| 500-204465-10 | B-28 | Total/NA | Solid | 7471B | |
| 500-204465-11 | B-29 | Total/NA | Solid | 7471B | |
| MB 500-616904/12-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 500-616904/13-A | Lab Control Sample | Total/NA | Solid | 7471B | |
| 500-204465-10 MS | B-28 | Total/NA | Solid | 7471B | |
| 500-204465-10 MSD | B-28 | Total/NA | Solid | 7471B | |
| 500-204465-10 DU | B-28 | Total/NA | Solid | 7471B | |

### Analysis Batch: 617114

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-2 | B-20 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-3 | B-21 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-4 | B-22 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-5 | B-23 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-6 | B-24 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-7 | B-25 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-8 | B-26 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-9 | B-27 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-10 | B-28 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-11 | B-29 | Total/NA | Solid | 7471B | 616904 |
| MB 500-616904/12-A | Method Blank | Total/NA | Solid | 7471B | 616904 |
| LCS 500-616904/13-A | Lab Control Sample | Total/NA | Solid | 7471B | 616904 |
| 500-204465-10 MS | B-28 | Total/NA | Solid | 7471B | 616904 |
| 500-204465-10 MSD | B-28 | Total/NA | Solid | 7471B | 616904 |

## Metals (Continued)

### Analysis Batch: 617114 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-10 DU | B-28 | Total/NA | Solid | 7471B | 616904 |

### Prep Batch: 617241

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 3050B | |
| 500-204465-2 | B-20 | Total/NA | Solid | 3050B | |
| 500-204465-3 | B-21 | Total/NA | Solid | 3050B | |
| 500-204465-4 | B-22 | Total/NA | Solid | 3050B | |
| 500-204465-5 | B-23 | Total/NA | Solid | 3050B | |
| 500-204465-6 | B-24 | Total/NA | Solid | 3050B | |
| 500-204465-7 | B-25 | Total/NA | Solid | 3050B | |
| 500-204465-8 | B-26 | Total/NA | Solid | 3050B | |
| 500-204465-9 | B-27 | Total/NA | Solid | 3050B | |
| 500-204465-10 | B-28 | Total/NA | Solid | 3050B | |
| 500-204465-11 | B-29 | Total/NA | Solid | 3050B | |
| MB 500-617241/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 500-617241/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 500-204465-1 MS | B-19 | Total/NA | Solid | 3050B | |
| 500-204465-1 MSD | B-19 | Total/NA | Solid | 3050B | |
| 500-204465-1 DU | B-19 | Total/NA | Solid | 3050B | |

### Analysis Batch: 617413

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-2 | B-20 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-3 | B-21 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-4 | B-22 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-5 | B-23 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-6 | B-24 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-7 | B-25 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-8 | B-26 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-9 | B-27 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-10 | B-28 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-11 | B-29 | Total/NA | Solid | 6010B | 617241 |
| MB 500-617241/1-A | Method Blank | Total/NA | Solid | 6010B | 617241 |
| LCS 500-617241/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 617241 |
| 500-204465-1 MS | B-19 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-1 MSD | B-19 | Total/NA | Solid | 6010B | 617241 |
| 500-204465-1 DU | B-19 | Total/NA | Solid | 6010B | 617241 |

### Analysis Batch: 617531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-4 | B-22 | Total/NA | Solid | 6010B | 617241 |

## General Chemistry

### Analysis Batch: 616684

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | Moisture | |
| 500-204465-2 | B-20 | Total/NA | Solid | Moisture | |
| 500-204465-3 | B-21 | Total/NA | Solid | Moisture | |

## General Chemistry (Continued)

### Analysis Batch: 616684 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-4 | B-22 | Total/NA | Solid | Moisture | |
| 500-204465-5 | B-23 | Total/NA | Solid | Moisture | |
| 500-204465-6 | B-24 | Total/NA | Solid | Moisture | |
| 500-204465-7 | B-25 | Total/NA | Solid | Moisture | |
| 500-204465-8 | B-26 | Total/NA | Solid | Moisture | |
| 500-204465-9 | B-27 | Total/NA | Solid | Moisture | |
| 500-204465-10 | B-28 | Total/NA | Solid | Moisture | |
| 500-204465-11 | B-29 | Total/NA | Solid | Moisture | |

### Analysis Batch: 616867

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 9045D | |
| 500-204465-2 | B-20 | Total/NA | Solid | 9045D | |
| 500-204465-3 | B-21 | Total/NA | Solid | 9045D | |
| 500-204465-4 | B-22 | Total/NA | Solid | 9045D | |
| 500-204465-5 | B-23 | Total/NA | Solid | 9045D | |
| 500-204465-6 | B-24 | Total/NA | Solid | 9045D | |
| 500-204465-7 | B-25 | Total/NA | Solid | 9045D | |
| 500-204465-8 | B-26 | Total/NA | Solid | 9045D | |
| 500-204465-9 | B-27 | Total/NA | Solid | 9045D | |
| 500-204465-10 | B-28 | Total/NA | Solid | 9045D | |
| 500-204465-11 | B-29 | Total/NA | Solid | 9045D | |
| LCS 500-616867/2 | Lab Control Sample | Total/NA | Solid | 9045D | |
| LCSD 500-616867/3 | Lab Control Sample Dup | Total/NA | Solid | 9045D | |

### Prep Batch: 617081

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 9010C | |
| 500-204465-2 | B-20 | Total/NA | Solid | 9010C | |
| 500-204465-3 | B-21 | Total/NA | Solid | 9010C | |
| 500-204465-4 | B-22 | Total/NA | Solid | 9010C | |
| 500-204465-6 | B-24 | Total/NA | Solid | 9010C | |
| 500-204465-9 | B-27 | Total/NA | Solid | 9010C | |
| MB 500-617081/1-A | Method Blank | Total/NA | Solid | 9010C | |
| HLCS 500-617081/2-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LCS 500-617081/3-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LLCS 500-617081/4-A | Lab Control Sample | Total/NA | Solid | 9010C | |

### Analysis Batch: 617124

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | Total/NA | Solid | 9012B | 617081 |
| 500-204465-2 | B-20 | Total/NA | Solid | 9012B | 617081 |
| 500-204465-3 | B-21 | Total/NA | Solid | 9012B | 617081 |
| 500-204465-4 | B-22 | Total/NA | Solid | 9012B | 617081 |
| 500-204465-6 | B-24 | Total/NA | Solid | 9012B | 617081 |
| 500-204465-9 | B-27 | Total/NA | Solid | 9012B | 617081 |
| MB 500-617081/1-A | Method Blank | Total/NA | Solid | 9012B | 617081 |
| HLCS 500-617081/2-A | Lab Control Sample | Total/NA | Solid | 9012B | 617081 |
| LCS 500-617081/3-A | Lab Control Sample | Total/NA | Solid | 9012B | 617081 |
| LLCS 500-617081/4-A | Lab Control Sample | Total/NA | Solid | 9012B | 617081 |

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | BFB | DBFM | DCA | TOL |
| Lab Sample ID | Client Sample ID | (75-131) | (75-126) | (70-134) | (75-124) |
| 500-204465-1 | B-19 | 117 | 107 | 115 | 110 |
| 500-204465-2 | B-20 | 111 | 107 | 114 | 109 |
| 500-204465-3 | B-21 | 115 | 109 | 113 | 110 |
| 500-204465-4 | B-22 | 112 | 106 | 112 | 109 |
| 500-204465-5 | B-23 | 118 | 106 | 110 | 111 |
| 500-204465-6 | B-24 | 112 | 108 | 111 | 109 |
| 500-204465-7 | B-25 | 114 | 107 | 116 | 109 |
| 500-204465-8 | B-26 | 116 | 107 | 116 | 110 |
| 500-204465-9 | B-27 | 115 | 107 | 112 | 111 |
| 500-204465-10 | B-28 | 117 | 107 | 115 | 111 |
| 500-204465-11 | B-29 | 112 | 107 | 110 | 109 |
| LCS 500-616653/4 | Lab Control Sample | 106 | 106 | 107 | 109 |
| LCS 500-616850/4 | Lab Control Sample | 104 | 102 | 100 | 110 |
| LCSD 500-616653/5 | Lab Control Sample Dup | 110 | 103 | 106 | 110 |
| LCSD 500-616850/5 | Lab Control Sample Dup | 104 | 100 | 99 | 111 |
| MB 500-616653/7 | Method Blank | 115 | 103 | 109 | 109 |
| MB 500-616850/7 | Method Blank | 110 | 101 | 103 | 108 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | FBP | 2FP | NBZ | PHL | TPHL | TBP |
| Lab Sample ID | Client Sample ID | (43-145) | (31-166) | (37-147) | (30-153) | (42-157) | (31-143) |
| 500-204465-1 | B-19 | 69 | 69 | 62 | 82 | 81 | 64 |
| 500-204465-2 | B-20 | 83 | 89 | 78 | 102 | 85 | 61 |
| 500-204465-3 | B-21 | 87 | 95 | 85 | 104 | 86 | 70 |
| 500-204465-4 | B-22 | 79 | 83 | 71 | 98 | 80 | 56 |
| 500-204465-5 | B-23 | 76 | 88 | 75 | 98 | 81 | 66 |
| 500-204465-6 | B-24 | 82 | 94 | 83 | 112 | 94 | 77 |
| 500-204465-6 - DL | B-24 | 93 | 97 | 118 | 92 | 100 | 182 S1+ |
| 500-204465-7 | B-25 | 81 | 93 | 79 | 113 | 82 | 67 |
| 500-204465-8 | B-26 | 76 | 96 | 74 | 115 | 82 | 61 |
| 500-204465-9 | B-27 | 81 | 91 | 81 | 108 | 82 | 67 |
| 500-204465-10 | B-28 | 71 | 82 | 65 | 99 | 87 | 60 |
| 500-204465-11 | B-29 | 83 | 98 | 80 | 113 | 83 | 66 |
| LCS 500-616812/2-A | Lab Control Sample | 85 | 95 | 88 | 106 | 92 | 82 |
| MB 500-616812/1-A | Method Blank | 93 | 97 | 84 | 111 | 92 | 76 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

TBP = 2,4,6-Tribromophenol

## Method: 8081B - Organochlorine Pesticides (GC)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCBP1 (33-148) | TCX1 (30-121) |
| 500-204465-1 | B-19 | 138 | 90 |
| 500-204465-2 | B-20 | 90 | 69 |
| 500-204465-3 | B-21 | 101 | 91 |
| 500-204465-4 | B-22 | 83 | 57 |
| 500-204465-6 | B-24 | 110 | 145 S1+ |
| 500-204465-9 | B-27 | 88 | 58 |
| LCS 500-616666/2-A | Lab Control Sample | 103 | 81 |
| MB 500-616666/1-A | Method Blank | 136 | 103 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

## Method: 8081B - Organochlorine Pesticides (GC)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCBP2 (33-148) | TCX2 (30-121) |
| 500-204465-3 - DL | B-21 | 114 | 75 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | TCX2 (49-129) | DCBP2 (37-121) |
| 500-204465-1 | B-19 | 71 | 82 |
| 500-204465-2 | B-20 | 57 | 119 |
| 500-204465-3 | B-21 | 70 | 99 |
| 500-204465-4 | B-22 | 65 | 87 |
| 500-204465-6 | B-24 | 49 | 85 |
| 500-204465-9 | B-27 | 51 | 71 |
| LCS 500-616666/3-A | Lab Control Sample | 69 | 93 |
| MB 500-616666/1-A | Method Blank | 63 | 89 |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-616653/7**
**Matrix: Solid**
**Analysis Batch: 616653**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 08/31/21 10:43 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 08/31/21 10:43 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 08/31/21 10:43 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 08/31/21 10:43 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 08/31/21 10:43 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 08/31/21 10:43 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 08/31/21 10:43 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 08/31/21 10:43 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *115* | | *75 - 131* | | *08/31/21 10:43* | *1* |
| *Dibromofluoromethane* | *103* | | *75 - 126* | | *08/31/21 10:43* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *109* | | *70 - 134* | | *08/31/21 10:43* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* | | *08/31/21 10:43* | *1* |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616653/4**
**Matrix: Solid**
**Analysis Batch: 616653**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0501 | | mg/Kg | | 100 | 40 - 150 |
| Benzene | 0.0500 | 0.0479 | | mg/Kg | | 96 | 70 - 125 |
| Bromodichloromethane | 0.0500 | 0.0475 | | mg/Kg | | 95 | 67 - 129 |
| Bromoform | 0.0500 | 0.0480 | | mg/Kg | | 96 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0470 | | mg/Kg | | 94 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0494 | | mg/Kg | | 99 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0472 | | mg/Kg | | 94 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0474 | | mg/Kg | | 95 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0489 | | mg/Kg | | 98 | 75 - 125 |
| Chloroform | 0.0500 | 0.0478 | | mg/Kg | | 96 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0483 | | mg/Kg | | 97 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0462 | | mg/Kg | | 92 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0498 | | mg/Kg | | 100 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0476 | | mg/Kg | | 95 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0481 | | mg/Kg | | 96 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0497 | | mg/Kg | | 99 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0476 | | mg/Kg | | 95 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0545 | | mg/Kg | | 109 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0461 | | mg/Kg | | 92 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0476 | | mg/Kg | | 95 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0539 | | mg/Kg | | 108 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0468 | | mg/Kg | | 94 | 50 - 140 |
| Styrene | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0496 | | mg/Kg | | 99 | 70 - 124 |
| Toluene | 0.0500 | 0.0481 | | mg/Kg | | 96 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0468 | | mg/Kg | | 94 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0494 | | mg/Kg | | 99 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0482 | | mg/Kg | | 96 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0489 | | mg/Kg | | 98 | 70 - 125 |
| Trichloroethene | 0.0500 | 0.0466 | | mg/Kg | | 93 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0489 | | mg/Kg | | 98 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0981 | | mg/Kg | | 98 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *106* | | *75 - 131* |
| *Dibromofluoromethane* | *106* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *109* | | *75 - 124* |

**Lab Sample ID: LCSD 500-616653/5**
**Matrix: Solid**
**Analysis Batch: 616653**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0565 | | mg/Kg | | 113 | 40 - 150 | 12 | 30 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 500-616653/5**
**Matrix: Solid**
**Analysis Batch: 616653**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.0500 | 0.0470 | | mg/Kg | | 94 | 70 - 125 | 2 | 30 |
| Bromodichloromethane | 0.0500 | 0.0473 | | mg/Kg | | 95 | 67 - 129 | 0 | 30 |
| Bromoform | 0.0500 | 0.0487 | | mg/Kg | | 97 | 68 - 136 | 1 | 30 |
| Bromomethane | 0.0500 | 0.0451 | | mg/Kg | | 90 | 70 - 130 | 4 | 30 |
| Carbon disulfide | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 129 | 3 | 30 |
| Carbon tetrachloride | 0.0500 | 0.0461 | | mg/Kg | | 92 | 75 - 125 | 2 | 30 |
| Chlorobenzene | 0.0500 | 0.0471 | | mg/Kg | | 94 | 50 - 150 | 1 | 30 |
| Chloroethane | 0.0500 | 0.0460 | | mg/Kg | | 92 | 75 - 125 | 6 | 30 |
| Chloroform | 0.0500 | 0.0463 | | mg/Kg | | 93 | 57 - 135 | 3 | 30 |
| Chloromethane | 0.0500 | 0.0456 | | mg/Kg | | 91 | 70 - 125 | 6 | 30 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0447 | | mg/Kg | | 89 | 70 - 125 | 3 | 30 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0498 | | mg/Kg | | 100 | 70 - 125 | 0 | 30 |
| Dibromochloromethane | 0.0500 | 0.0473 | | mg/Kg | | 95 | 69 - 125 | 1 | 30 |
| 1,1-Dichloroethane | 0.0500 | 0.0470 | | mg/Kg | | 94 | 70 - 125 | 2 | 30 |
| 1,2-Dichloroethane | 0.0500 | 0.0499 | | mg/Kg | | 100 | 70 - 130 | 0 | 30 |
| 1,1-Dichloroethene | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 120 | 3 | 30 |
| 1,2-Dichloropropane | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 125 | 2 | 30 |
| Ethylbenzene | 0.0500 | 0.0472 | | mg/Kg | | 94 | 61 - 136 | 1 | 30 |
| 2-Hexanone | 0.0500 | 0.0539 | | mg/Kg | | 108 | 48 - 146 | 1 | 30 |
| Methylene Chloride | 0.0500 | 0.0448 | | mg/Kg | | 90 | 70 - 126 | 3 | 30 |
| Methyl Ethyl Ketone | 0.0500 | 0.0515 | | mg/Kg | | 103 | 47 - 138 | 8 | 30 |
| methyl isobutyl ketone | 0.0500 | 0.0530 | | mg/Kg | | 106 | 50 - 148 | 2 | 30 |
| Methyl tert-butyl ether | 0.0500 | 0.0475 | | mg/Kg | | 95 | 50 - 140 | 1 | 30 |
| Styrene | 0.0500 | 0.0482 | | mg/Kg | | 96 | 70 - 125 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0514 | | mg/Kg | | 103 | 70 - 122 | 5 | 30 |
| Tetrachloroethene | 0.0500 | 0.0489 | | mg/Kg | | 98 | 70 - 124 | 1 | 30 |
| Toluene | 0.0500 | 0.0475 | | mg/Kg | | 95 | 70 - 125 | 1 | 30 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0458 | | mg/Kg | | 92 | 70 - 125 | 2 | 30 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0509 | | mg/Kg | | 102 | 70 - 125 | 3 | 30 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 128 | 2 | 30 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 | 0 | 30 |
| Trichloroethene | 0.0500 | 0.0467 | | mg/Kg | | 93 | 70 - 125 | 0 | 30 |
| Vinyl chloride | 0.0500 | 0.0455 | | mg/Kg | | 91 | 70 - 125 | 7 | 30 |
| Xylenes, Total | 0.100 | 0.0968 | | mg/Kg | | 97 | 53 - 147 | 1 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *75 - 131* |
| *Dibromofluoromethane* | *103* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: MB 500-616850/7**
**Matrix: Solid**
**Analysis Batch: 616850**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/01/21 11:24 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616850/7**
**Matrix: Solid**
**Analysis Batch: 616850**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/01/21 11:24 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 09/01/21 11:24 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 09/01/21 11:24 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/01/21 11:24 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/01/21 11:24 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 09/01/21 11:24 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/01/21 11:24 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 09/01/21 11:24 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *75 - 131* | | *09/01/21 11:24* | *1* |
| *Dibromofluoromethane* | *101* | | *75 - 126* | | *09/01/21 11:24* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 134* | | *09/01/21 11:24* | *1* |
| *Toluene-d8 (Surr)* | *108* | | *75 - 124* | | *09/01/21 11:24* | *1* |

**Lab Sample ID: LCS 500-616850/4**
**Matrix: Solid**
**Analysis Batch: 616850**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0495 | | mg/Kg | | 99 | 40 - 150 |
| Benzene | 0.0500 | 0.0462 | | mg/Kg | | 92 | 70 - 125 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616850/4**
**Matrix: Solid**
**Analysis Batch: 616850**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromodichloromethane | 0.0500 | 0.0446 | | mg/Kg | | 89 | 67 - 129 |
| Bromoform | 0.0500 | 0.0452 | | mg/Kg | | 90 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0412 | | mg/Kg | | 82 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0463 | | mg/Kg | | 93 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0434 | | mg/Kg | | 87 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0471 | | mg/Kg | | 94 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0448 | | mg/Kg | | 90 | 75 - 125 |
| Chloroform | 0.0500 | 0.0443 | | mg/Kg | | 89 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0433 | | mg/Kg | | 87 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0478 | | mg/Kg | | 96 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0445 | | mg/Kg | | 89 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0448 | | mg/Kg | | 90 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0455 | | mg/Kg | | 91 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0460 | | mg/Kg | | 92 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0466 | | mg/Kg | | 93 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0465 | | mg/Kg | | 93 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0474 | | mg/Kg | | 95 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0436 | | mg/Kg | | 87 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0533 | | mg/Kg | | 107 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0477 | | mg/Kg | | 95 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0439 | | mg/Kg | | 88 | 50 - 140 |
| Styrene | 0.0500 | 0.0471 | | mg/Kg | | 94 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0471 | | mg/Kg | | 94 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0489 | | mg/Kg | | 98 | 70 - 124 |
| Toluene | 0.0500 | 0.0475 | | mg/Kg | | 95 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0439 | | mg/Kg | | 88 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0484 | | mg/Kg | | 97 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0439 | | mg/Kg | | 88 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0485 | | mg/Kg | | 97 | 70 - 125 |
| Trichloroethene | 0.0500 | 0.0464 | | mg/Kg | | 93 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0459 | | mg/Kg | | 92 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0928 | | mg/Kg | | 93 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *75 - 131* |
| *Dibromofluoromethane* | *102* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: LCSD 500-616850/5**
**Matrix: Solid**
**Analysis Batch: 616850**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0491 | | mg/Kg | | 98 | 40 - 150 | 1 | 30 |
| Benzene | 0.0500 | 0.0452 | | mg/Kg | | 90 | 70 - 125 | 2 | 30 |
| Bromodichloromethane | 0.0500 | 0.0445 | | mg/Kg | | 89 | 67 - 129 | 0 | 30 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 500-616850/5**
**Matrix: Solid**
**Analysis Batch: 616850**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromoform | | | 0.0500 | 0.0460 | | mg/Kg | | 92 | 68 - 136 | 2 | 30 |
| Bromomethane | | | 0.0500 | 0.0441 | | mg/Kg | | 88 | 70 - 130 | 7 | 30 |
| Carbon disulfide | | | 0.0500 | 0.0454 | | mg/Kg | | 91 | 70 - 129 | 2 | 30 |
| Carbon tetrachloride | | | 0.0500 | 0.0422 | | mg/Kg | | 84 | 75 - 125 | 3 | 30 |
| Chlorobenzene | | | 0.0500 | 0.0465 | | mg/Kg | | 93 | 50 - 150 | 1 | 30 |
| Chloroethane | | | 0.0500 | 0.0470 | | mg/Kg | | 94 | 75 - 125 | 5 | 30 |
| Chloroform | | | 0.0500 | 0.0435 | | mg/Kg | | 87 | 57 - 135 | 2 | 30 |
| Chloromethane | | | 0.0500 | 0.0502 | | mg/Kg | | 100 | 70 - 125 | 6 | 30 |
| cis-1,2-Dichloroethene | | | 0.0500 | 0.0431 | | mg/Kg | | 86 | 70 - 125 | 1 | 30 |
| cis-1,3-Dichloropropene | | | 0.0500 | 0.0475 | | mg/Kg | | 95 | 70 - 125 | 1 | 30 |
| Dibromochloromethane | | | 0.0500 | 0.0455 | | mg/Kg | | 91 | 69 - 125 | 2 | 30 |
| 1,1-Dichloroethane | | | 0.0500 | 0.0444 | | mg/Kg | | 89 | 70 - 125 | 1 | 30 |
| 1,2-Dichloroethane | | | 0.0500 | 0.0445 | | mg/Kg | | 89 | 70 - 130 | 2 | 30 |
| 1,1-Dichloroethene | | | 0.0500 | 0.0449 | | mg/Kg | | 90 | 70 - 120 | 2 | 30 |
| 1,2-Dichloropropane | | | 0.0500 | 0.0463 | | mg/Kg | | 93 | 70 - 125 | 1 | 30 |
| Ethylbenzene | | | 0.0500 | 0.0466 | | mg/Kg | | 93 | 61 - 136 | 0 | 30 |
| 2-Hexanone | | | 0.0500 | 0.0526 | | mg/Kg | | 105 | 48 - 146 | 10 | 30 |
| Methylene Chloride | | | 0.0500 | 0.0431 | | mg/Kg | | 86 | 70 - 126 | 1 | 30 |
| Methyl Ethyl Ketone | | | 0.0500 | 0.0490 | | mg/Kg | | 98 | 47 - 138 | 8 | 30 |
| methyl isobutyl ketone | | | 0.0500 | 0.0519 | | mg/Kg | | 104 | 50 - 148 | 8 | 30 |
| Methyl tert-butyl ether | | | 0.0500 | 0.0425 | | mg/Kg | | 85 | 50 - 140 | 3 | 30 |
| Styrene | | | 0.0500 | 0.0470 | | mg/Kg | | 94 | 70 - 125 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | | | 0.0500 | 0.0472 | | mg/Kg | | 94 | 70 - 122 | 0 | 30 |
| Tetrachloroethene | | | 0.0500 | 0.0492 | | mg/Kg | | 98 | 70 - 124 | 0 | 30 |
| Toluene | | | 0.0500 | 0.0470 | | mg/Kg | | 94 | 70 - 125 | 1 | 30 |
| trans-1,2-Dichloroethene | | | 0.0500 | 0.0437 | | mg/Kg | | 87 | 70 - 125 | 1 | 30 |
| trans-1,3-Dichloropropene | | | 0.0500 | 0.0481 | | mg/Kg | | 96 | 70 - 125 | 1 | 30 |
| 1,1,1-Trichloroethane | | | 0.0500 | 0.0429 | | mg/Kg | | 86 | 70 - 128 | 2 | 30 |
| 1,1,2-Trichloroethane | | | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 125 | 2 | 30 |
| Trichloroethene | | | 0.0500 | 0.0454 | | mg/Kg | | 91 | 70 - 125 | 2 | 30 |
| Vinyl chloride | | | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 125 | 3 | 30 |
| Xylenes, Total | | | 0.100 | 0.0931 | | mg/Kg | | 93 | 53 - 147 | 0 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *104* | | *75 - 131* |
| *Dibromofluoromethane* | *100* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *111* | | *75 - 124* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-616812/1-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.033 | 0.0060 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Acenaphthylene | ND | | 0.033 | 0.0044 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Anthracene | ND | | 0.033 | 0.0056 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616812/1-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | ND | | 0.033 | 0.0045 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[a]pyrene | ND | | 0.033 | 0.0064 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.0072 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.011 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.0098 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.17 | 0.034 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.17 | 0.050 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.17 | 0.061 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.17 | 0.044 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Butyl benzyl phthalate | ND | | 0.17 | 0.063 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Carbazole | ND | | 0.17 | 0.083 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Chloroaniline | ND | | 0.67 | 0.16 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.33 | 0.11 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Chloronaphthalene | ND | | 0.17 | 0.037 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Chlorophenol | ND | | 0.17 | 0.057 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Chrysene | ND | | 0.033 | 0.0091 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.033 | 0.0064 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Dibenzofuran | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.17 | 0.040 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.17 | 0.037 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.17 | 0.043 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.17 | 0.047 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dichlorophenol | ND | | 0.33 | 0.079 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Diethyl phthalate | ND | | 0.17 | 0.056 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dimethylphenol | ND | | 0.33 | 0.13 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Dimethyl phthalate | ND | | 0.17 | 0.043 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Di-n-butyl phthalate | ND | | 0.17 | 0.051 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.67 | 0.27 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dinitrophenol | ND | | 0.67 | 0.59 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.17 | 0.053 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.17 | 0.065 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Di-n-octyl phthalate | ND | | 0.17 | 0.054 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Fluoranthene | ND | | 0.033 | 0.0062 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Fluorene | ND | | 0.033 | 0.0047 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachlorobenzene | ND | | 0.067 | 0.0077 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachlorobutadiene | ND | | 0.17 | 0.052 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.67 | 0.19 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachloroethane | ND | | 0.17 | 0.051 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.0086 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Isophorone | ND | | 0.17 | 0.037 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Methylnaphthalene | ND | | 0.067 | 0.0061 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Methylphenol | ND | | 0.17 | 0.053 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 3 & 4 Methylphenol | ND | | 0.17 | 0.055 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Naphthalene | ND | | 0.033 | 0.0051 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Nitroaniline | ND | | 0.17 | 0.045 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 3-Nitroaniline | ND | | 0.33 | 0.10 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Nitroaniline | ND | | 0.33 | 0.14 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Nitrobenzene | ND | | 0.033 | 0.0083 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616812/1-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | ND | | 0.33 | 0.079 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Nitrophenol | ND | | 0.67 | 0.32 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.067 | 0.041 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Pentachlorophenol | ND | | 0.67 | 0.53 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Phenanthrene | ND | | 0.033 | 0.0046 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Phenol | ND | | 0.17 | 0.074 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Pyrene | ND | | 0.033 | 0.0066 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.17 | 0.036 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.33 | 0.076 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.33 | 0.11 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *93* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *2-Fluorophenol* | *97* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *Nitrobenzene-d5* | *84* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *Phenol-d5* | *111* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *Terphenyl-d14* | *92* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *2,4,6-Tribromophenol* | *76* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |

**Lab Sample ID: LCS 500-616812/2-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.33 | 1.18 | | mg/Kg | | 88 | 65 - 124 |
| Acenaphthylene | 1.33 | 1.18 | | mg/Kg | | 89 | 68 - 120 |
| Anthracene | 1.33 | 1.20 | | mg/Kg | | 90 | 70 - 114 |
| Benzo[a]anthracene | 1.33 | 1.27 | | mg/Kg | | 95 | 67 - 122 |
| Benzo[a]pyrene | 1.33 | 1.50 | | mg/Kg | | 112 | 65 - 133 |
| Benzo[b]fluoranthene | 1.33 | 1.35 | | mg/Kg | | 102 | 69 - 129 |
| Benzo[g,h,i]perylene | 1.33 | 1.29 | | mg/Kg | | 97 | 72 - 131 |
| Benzo[k]fluoranthene | 1.33 | 1.28 | | mg/Kg | | 96 | 68 - 127 |
| Bis(2-chloroethoxy)methane | 1.33 | 1.36 | | mg/Kg | | 102 | 60 - 112 |
| Bis(2-chloroethyl)ether | 1.33 | 1.23 | | mg/Kg | | 92 | 55 - 111 |
| Bis(2-ethylhexyl) phthalate | 1.33 | 1.42 | | mg/Kg | | 106 | 72 - 131 |
| 4-Bromophenyl phenyl ether | 1.33 | 1.19 | | mg/Kg | | 89 | 68 - 118 |
| Butyl benzyl phthalate | 1.33 | 1.35 | | mg/Kg | | 101 | 71 - 129 |
| Carbazole | 1.33 | 1.54 | | mg/Kg | | 115 | 65 - 142 |
| 4-Chloroaniline | 1.33 | 1.07 | | mg/Kg | | 80 | 30 - 150 |
| 4-Chloro-3-methylphenol | 1.33 | 1.33 | | mg/Kg | | 100 | 65 - 122 |
| 2-Chloronaphthalene | 1.33 | 1.16 | | mg/Kg | | 87 | 69 - 114 |
| 2-Chlorophenol | 1.33 | 1.25 | | mg/Kg | | 94 | 64 - 110 |
| 4-Chlorophenyl phenyl ether | 1.33 | 1.18 | | mg/Kg | | 89 | 62 - 119 |
| Chrysene | 1.33 | 1.26 | | mg/Kg | | 95 | 63 - 120 |
| Dibenz(a,h)anthracene | 1.33 | 1.27 | | mg/Kg | | 95 | 64 - 131 |
| Dibenzofuran | 1.33 | 1.14 | | mg/Kg | | 85 | 66 - 115 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616812/2-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 1.33 | 1.11 | | mg/Kg | | 83 | 62 - 110 |
| 1,3-Dichlorobenzene | 1.33 | 1.09 | | mg/Kg | | 82 | 65 - 124 |
| 1,4-Dichlorobenzene | 1.33 | 1.10 | | mg/Kg | | 82 | 61 - 110 |
| 3,3'-Dichlorobenzidine | 1.33 | 1.77 | *+ | mg/Kg | | 133 | 35 - 128 |
| 2,4-Dichlorophenol | 1.33 | 1.28 | | mg/Kg | | 96 | 58 - 120 |
| Diethyl phthalate | 1.33 | 1.16 | | mg/Kg | | 87 | 58 - 120 |
| 2,4-Dimethylphenol | 1.33 | 1.28 | | mg/Kg | | 96 | 60 - 110 |
| Dimethyl phthalate | 1.33 | 1.18 | | mg/Kg | | 88 | 69 - 116 |
| Di-n-butyl phthalate | 1.33 | 1.29 | | mg/Kg | | 97 | 65 - 120 |
| 4,6-Dinitro-2-methylphenol | 2.67 | 1.31 | | mg/Kg | | 49 | 10 - 110 |
| 2,4-Dinitrophenol | 2.67 | 0.681 | | mg/Kg | | 26 | 10 - 100 |
| 2,4-Dinitrotoluene | 1.33 | 1.35 | | mg/Kg | | 101 | 69 - 124 |
| 2,6-Dinitrotoluene | 1.33 | 1.24 | | mg/Kg | | 93 | 70 - 123 |
| Di-n-octyl phthalate | 1.33 | 1.71 | | mg/Kg | | 128 | 68 - 134 |
| Fluoranthene | 1.33 | 1.32 | | mg/Kg | | 99 | 62 - 120 |
| Fluorene | 1.33 | 1.18 | | mg/Kg | | 88 | 62 - 120 |
| Hexachlorobenzene | 1.33 | 1.09 | | mg/Kg | | 82 | 63 - 124 |
| Hexachlorobutadiene | 1.33 | 1.10 | | mg/Kg | | 82 | 56 - 120 |
| Hexachlorocyclopentadiene | 1.33 | ND | | mg/Kg | | 12 | 10 - 133 |
| Hexachloroethane | 1.33 | 1.10 | | mg/Kg | | 82 | 60 - 114 |
| Indeno[1,2,3-cd]pyrene | 1.33 | 1.26 | | mg/Kg | | 94 | 68 - 130 |
| Isophorone | 1.33 | 1.24 | | mg/Kg | | 93 | 55 - 110 |
| 2-Methylnaphthalene | 1.33 | 1.14 | | mg/Kg | | 86 | 69 - 112 |
| 2-Methylphenol | 1.33 | 1.23 | | mg/Kg | | 92 | 60 - 120 |
| 3 & 4 Methylphenol | 1.33 | 1.24 | | mg/Kg | | 93 | 57 - 120 |
| Naphthalene | 1.33 | 1.10 | | mg/Kg | | 83 | 63 - 110 |
| 2-Nitroaniline | 1.33 | 1.36 | | mg/Kg | | 102 | 57 - 124 |
| 3-Nitroaniline | 1.33 | 1.42 | | mg/Kg | | 106 | 40 - 122 |
| 4-Nitroaniline | 1.33 | 1.73 | | mg/Kg | | 130 | 60 - 160 |
| Nitrobenzene | 1.33 | 1.24 | | mg/Kg | | 93 | 60 - 116 |
| 2-Nitrophenol | 1.33 | 1.25 | | mg/Kg | | 93 | 60 - 120 |
| 4-Nitrophenol | 2.67 | 2.03 | | mg/Kg | | 76 | 30 - 122 |
| N-Nitrosodi-n-propylamine | 1.33 | 1.12 | | mg/Kg | | 84 | 56 - 118 |
| N-Nitrosodiphenylamine | 1.33 | 1.43 | | mg/Kg | | 107 | 65 - 112 |
| 2,2'-oxybis[1-chloropropane] | 1.33 | 1.31 | | mg/Kg | | 98 | 40 - 124 |
| Pentachlorophenol | 2.67 | 1.35 | | mg/Kg | | 51 | 13 - 112 |
| Phenanthrene | 1.33 | 1.18 | | mg/Kg | | 89 | 62 - 120 |
| Phenol | 1.33 | 1.26 | | mg/Kg | | 95 | 56 - 122 |
| Pyrene | 1.33 | 1.18 | | mg/Kg | | 88 | 61 - 128 |
| 1,2,4-Trichlorobenzene | 1.33 | 1.15 | | mg/Kg | | 86 | 66 - 117 |
| 2,4,5-Trichlorophenol | 1.33 | 1.21 | | mg/Kg | | 91 | 50 - 120 |
| 2,4,6-Trichlorophenol | 1.33 | 1.14 | | mg/Kg | | 85 | 57 - 120 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *85* | | *43 - 145* |
| *2-Fluorophenol* | *95* | | *31 - 166* |
| *Nitrobenzene-d5* | *88* | | *37 - 147* |
| *Phenol-d5* | *106* | | *30 - 153* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616812/2-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Terphenyl-d14* | *92* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *82* | | *31 - 143* |

## Method: 8081B - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 500-616666/1-A**
**Matrix: Solid**
**Analysis Batch: 616963**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0017 | 0.0012 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| alpha-BHC | ND | | 0.0017 | 0.00095 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| beta-BHC | ND | | 0.0017 | 0.0014 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| cis-Chlordane | ND | | 0.0017 | 0.00090 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| 4,4'-DDD | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| 4,4'-DDE | ND | | 0.0017 | 0.00087 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| 4,4'-DDT | ND | | 0.0017 | 0.00080 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| delta-BHC | ND | | 0.0017 | 0.00081 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Dieldrin | ND | | 0.0017 | 0.00088 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endosulfan I | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endosulfan II | ND | | 0.0017 | 0.00093 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endosulfan sulfate | ND | | 0.0017 | 0.00093 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endrin | ND | | 0.0017 | 0.00086 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endrin aldehyde | ND | | 0.0017 | 0.00096 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endrin ketone | ND | | 0.0017 | 0.00082 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0017 | 0.00084 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Heptachlor | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Heptachlor epoxide | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Methoxychlor | ND | | 0.0083 | 0.0011 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Toxaphene | ND | | 0.017 | 0.0067 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| trans-Chlordane | ND | | 0.0017 | 0.00097 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *136* | | *33 - 148* | *08/31/21 08:03* | *09/01/21 22:30* | *1* |
| *Tetrachloro-m-xylene* | *103* | | *30 - 121* | *08/31/21 08:03* | *09/01/21 22:30* | *1* |

**Lab Sample ID: LCS 500-616666/2-A**
**Matrix: Solid**
**Analysis Batch: 616963**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aldrin | 0.0133 | 0.0109 | | mg/Kg | | 82 | 52 - 122 |
| alpha-BHC | 0.0133 | 0.0122 | | mg/Kg | | 92 | 50 - 123 |
| beta-BHC | 0.0133 | 0.0121 | | mg/Kg | | 91 | 44 - 140 |
| cis-Chlordane | 0.0133 | 0.0122 | | mg/Kg | | 91 | 52 - 129 |
| 4,4'-DDD | 0.0133 | 0.0142 | | mg/Kg | | 107 | 47 - 137 |
| 4,4'-DDE | 0.0133 | 0.0128 | | mg/Kg | | 96 | 50 - 130 |
| 4,4'-DDT | 0.0133 | 0.0131 | | mg/Kg | | 98 | 46 - 143 |

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: LCS 500-616666/2-A**
**Matrix: Solid**
**Analysis Batch: 616963**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| delta-BHC | 0.0133 | 0.0128 | | mg/Kg | | 96 | 57 - 125 |
| Dieldrin | 0.0133 | 0.0129 | | mg/Kg | | 97 | 51 - 133 |
| Endosulfan I | 0.0133 | 0.0125 | | mg/Kg | | 94 | 30 - 120 |
| Endosulfan II | 0.0133 | 0.0134 | | mg/Kg | | 100 | 30 - 120 |
| Endosulfan sulfate | 0.0133 | 0.0111 | | mg/Kg | | 83 | 42 - 150 |
| Endrin | 0.0133 | 0.0128 | | mg/Kg | | 96 | 43 - 144 |
| Endrin aldehyde | 0.0133 | 0.0120 | | mg/Kg | | 90 | 39 - 131 |
| Endrin ketone | 0.0133 | 0.0129 | | mg/Kg | | 96 | 51 - 135 |
| gamma-BHC (Lindane) | 0.0133 | 0.0119 | | mg/Kg | | 90 | 50 - 122 |
| Heptachlor | 0.0133 | 0.0119 | | mg/Kg | | 89 | 53 - 129 |
| Heptachlor epoxide | 0.0133 | 0.0121 | | mg/Kg | | 90 | 50 - 139 |
| Methoxychlor | 0.0133 | 0.0127 | | mg/Kg | | 95 | 45 - 144 |
| trans-Chlordane | 0.0133 | 0.0114 | | mg/Kg | | 85 | 52 - 132 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *103* | | *33 - 148* |
| *Tetrachloro-m-xylene* | *81* | | *30 - 121* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 500-616666/1-A**
**Matrix: Solid**
**Analysis Batch: 616981**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.017 | 0.0066 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1221 | ND | | 0.017 | 0.0066 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1232 | ND | | 0.017 | 0.0045 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1242 | ND | | 0.017 | 0.0065 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1248 | ND | | 0.017 | 0.0079 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1254 | ND | | 0.017 | 0.0057 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1260 | ND | | 0.017 | 0.0063 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.017 | 0.0045 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *63* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 02:08* | *1* |
| *DCB Decachlorobiphenyl* | *89* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 02:08* | *1* |

**Lab Sample ID: LCS 500-616666/3-A**
**Matrix: Solid**
**Analysis Batch: 616981**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| PCB-1016 | 0.167 | 0.135 | | mg/Kg | | 81 | 57 - 120 |
| PCB-1260 | 0.167 | 0.155 | | mg/Kg | | 93 | 61 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *69* | | *49 - 129* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: LCS 500-616666/3-A**
**Matrix: Solid**
**Analysis Batch: 616981**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| DCB Decachlorobiphenyl | 93 | | 37 - 121 |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-617241/1-A**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | | 20 | 8.2 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Antimony | ND | | 2.0 | 0.39 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Arsenic | ND | | 1.0 | 0.34 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Barium | ND | | 1.0 | 0.11 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Beryllium | ND | | 0.40 | 0.093 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Cadmium | ND | | 0.20 | 0.036 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Calcium | ND | | 20 | 3.4 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Chromium | ND | | 1.0 | 0.50 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Cobalt | ND | | 0.50 | 0.13 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Copper | ND | | 1.0 | 0.28 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Iron | ND | | 20 | 10 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Lead | ND | | 0.50 | 0.23 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Magnesium | ND | | 10 | 5.0 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Manganese | ND | | 1.0 | 0.15 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Nickel | ND | | 1.0 | 0.29 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Potassium | ND | | 50 | 18 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Selenium | ND | | 1.0 | 0.59 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Silver | ND | | 0.50 | 0.13 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Sodium | ND | | 100 | 15 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Thallium | ND | | 1.0 | 0.50 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Vanadium | ND | | 0.50 | 0.12 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |
| Zinc | ND | | 2.0 | 0.88 | mg/Kg | | 09/03/21 08:40 | 09/03/21 15:40 | 1 |

**Lab Sample ID: LCS 500-617241/2-A**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aluminum | 200 | 199 | | mg/Kg | | 100 | 80 - 120 |
| Antimony | 50.0 | 47.9 | | mg/Kg | | 96 | 80 - 120 |
| Arsenic | 10.0 | 9.44 | | mg/Kg | | 94 | 80 - 120 |
| Barium | 200 | 192 | | mg/Kg | | 96 | 80 - 120 |
| Beryllium | 5.00 | 4.61 | | mg/Kg | | 92 | 80 - 120 |
| Cadmium | 5.00 | 4.57 | | mg/Kg | | 91 | 80 - 120 |
| Calcium | 1000 | 946 | | mg/Kg | | 95 | 80 - 120 |
| Chromium | 20.0 | 18.8 | | mg/Kg | | 94 | 80 - 120 |
| Cobalt | 50.0 | 48.5 | | mg/Kg | | 97 | 80 - 120 |
| Copper | 25.0 | 24.8 | | mg/Kg | | 99 | 80 - 120 |
| Iron | 100 | 96.6 | | mg/Kg | | 97 | 80 - 120 |
| Lead | 10.0 | 9.16 | | mg/Kg | | 92 | 80 - 120 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 500-617241/2-A**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Magnesium | 1000 | 918 | | mg/Kg | | 92 | 80 - 120 |
| Manganese | 50.0 | 45.8 | | mg/Kg | | 92 | 80 - 120 |
| Nickel | 50.0 | 48.4 | | mg/Kg | | 97 | 80 - 120 |
| Potassium | 1000 | 955 | | mg/Kg | | 96 | 80 - 120 |
| Selenium | 10.0 | 8.47 | | mg/Kg | | 85 | 80 - 120 |
| Silver | 5.00 | 4.59 | | mg/Kg | | 92 | 80 - 120 |
| Sodium | 1000 | 960 | | mg/Kg | | 96 | 80 - 120 |
| Thallium | 10.0 | 9.32 | | mg/Kg | | 93 | 80 - 120 |
| Vanadium | 50.0 | 49.5 | | mg/Kg | | 99 | 80 - 120 |
| Zinc | 50.0 | 49.7 | | mg/Kg | | 99 | 80 - 120 |

**Lab Sample ID: 500-204465-1 MS**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: B-19**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 18000 | | 241 | 24900 | 4 | mg/Kg | ☼ | 2949 | 75 - 125 |
| Antimony | 1.5 | J F1 | 60.2 | 19.0 | F1 | mg/Kg | ☼ | 29 | 75 - 125 |
| Arsenic | 6.1 | | 12.0 | 15.4 | | mg/Kg | ☼ | 77 | 75 - 125 |
| Barium | 120 | | 241 | 341 | | mg/Kg | ☼ | 93 | 75 - 125 |
| Beryllium | 1.1 | | 6.02 | 6.05 | | mg/Kg | ☼ | 82 | 75 - 125 |
| Cadmium | 0.12 | J | 6.02 | 4.71 | | mg/Kg | ☼ | 76 | 75 - 125 |
| Calcium | 6800 | | 1200 | 5690 | 4 | mg/Kg | ☼ | -93 | 75 - 125 |
| Chromium | 24 | | 24.1 | 48.5 | | mg/Kg | ☼ | 102 | 75 - 125 |
| Cobalt | 8.7 | | 60.2 | 69.1 | | mg/Kg | ☼ | 100 | 75 - 125 |
| Copper | 23 | | 30.1 | 51.8 | | mg/Kg | ☼ | 95 | 75 - 125 |
| Iron | 22000 | | 120 | 23100 | 4 | mg/Kg | ☼ | 934 | 75 - 125 |
| Lead | 19 | | 12.0 | 29.1 | | mg/Kg | ☼ | 85 | 75 - 125 |
| Magnesium | 6300 | | 1200 | 6390 | 4 | mg/Kg | ☼ | 6 | 75 - 125 |
| Manganese | 170 | F1 F2 | 60.2 | 163 | F1 | mg/Kg | ☼ | -13 | 75 - 125 |
| Nickel | 30 | | 60.2 | 91.6 | | mg/Kg | ☼ | 103 | 75 - 125 |
| Potassium | 2000 | F1 | 1200 | 4080 | F1 | mg/Kg | ☼ | 173 | 75 - 125 |
| Selenium | ND | F1 | 12.0 | 8.72 | F1 | mg/Kg | ☼ | 72 | 75 - 125 |
| Silver | 0.36 | J | 6.02 | 5.32 | | mg/Kg | ☼ | 82 | 75 - 125 |
| Sodium | 95 | J | 1200 | 1100 | | mg/Kg | ☼ | 84 | 75 - 125 |
| Thallium | ND | | 12.0 | 11.2 | | mg/Kg | ☼ | 93 | 75 - 125 |
| Vanadium | 34 | | 60.2 | 96.7 | | mg/Kg | ☼ | 105 | 75 - 125 |
| Zinc | 73 | | 60.2 | 135 | | mg/Kg | ☼ | 103 | 75 - 125 |

**Lab Sample ID: 500-204465-1 MSD**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: B-19**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 18000 | | 223 | 25400 | 4 | mg/Kg | ☼ | 3409 | 75 - 125 | 2 | 20 |
| Antimony | 1.5 | J F1 | 55.7 | 18.3 | F1 | mg/Kg | ☼ | 30 | 75 - 125 | 4 | 20 |
| Arsenic | 6.1 | | 11.1 | 14.7 | | mg/Kg | ☼ | 77 | 75 - 125 | 5 | 20 |
| Barium | 120 | | 223 | 340 | | mg/Kg | ☼ | 100 | 75 - 125 | 0 | 20 |
| Beryllium | 1.1 | | 5.57 | 5.70 | | mg/Kg | ☼ | 82 | 75 - 125 | 6 | 20 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 500-204465-1 MSD**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: B-19**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 0.12 | J | 5.57 | 4.38 | | mg/Kg | ☼ | 77 | 75 - 125 | 7 | 20 |
| Calcium | 6800 | | 1110 | 5430 | 4 | mg/Kg | ☼ | -124 | 75 - 125 | 5 | 20 |
| Chromium | 24 | | 22.3 | 47.3 | | mg/Kg | ☼ | 105 | 75 - 125 | 2 | 20 |
| Cobalt | 8.7 | | 55.7 | 77.6 | | mg/Kg | ☼ | 124 | 75 - 125 | 12 | 20 |
| Copper | 23 | | 27.8 | 48.4 | | mg/Kg | ☼ | 90 | 75 - 125 | 7 | 20 |
| Iron | 22000 | | 111 | 23900 | 4 | mg/Kg | ☼ | 1698 | 75 - 125 | 3 | 20 |
| Lead | 19 | | 11.1 | 31.0 | | mg/Kg | ☼ | 109 | 75 - 125 | 6 | 20 |
| Magnesium | 6300 | | 1110 | 6490 | 4 | mg/Kg | ☼ | 16 | 75 - 125 | 2 | 20 |
| Manganese | 170 | F1 F2 | 55.7 | 368 | F1 F2 | mg/Kg | ☼ | 354 | 75 - 125 | 77 | 20 |
| Nickel | 30 | | 55.7 | 89.1 | | mg/Kg | ☼ | 107 | 75 - 125 | 3 | 20 |
| Potassium | 2000 | F1 | 1110 | 4150 | F1 | mg/Kg | ☼ | 192 | 75 - 125 | 2 | 20 |
| Selenium | ND | F1 | 11.1 | 7.90 | F1 | mg/Kg | ☼ | 71 | 75 - 125 | 10 | 20 |
| Silver | 0.36 | J | 5.57 | 4.84 | | mg/Kg | ☼ | 80 | 75 - 125 | 10 | 20 |
| Sodium | 95 | J | 1110 | 1020 | | mg/Kg | ☼ | 83 | 75 - 125 | 8 | 20 |
| Thallium | ND | | 11.1 | 9.80 | | mg/Kg | ☼ | 88 | 75 - 125 | 14 | 20 |
| Vanadium | 34 | | 55.7 | 94.1 | | mg/Kg | ☼ | 109 | 75 - 125 | 3 | 20 |
| Zinc | 73 | | 55.7 | 134 | | mg/Kg | ☼ | 110 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-204465-1 DU**
**Matrix: Solid**
**Analysis Batch: 617413**

**Client Sample ID: B-19**
**Prep Type: Total/NA**
**Prep Batch: 617241**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 18000 | | | 19000 | | mg/Kg | ☼ | | | 7 | 20 |
| Antimony | 1.5 | J F1 | | 1.29 | J | mg/Kg | ☼ | | | 12 | 20 |
| Arsenic | 6.1 | | | 4.98 | | mg/Kg | ☼ | | | 20 | 20 |
| Barium | 120 | | | 134 | | mg/Kg | ☼ | | | 14 | 20 |
| Beryllium | 1.1 | | | 1.21 | | mg/Kg | ☼ | | | 7 | 20 |
| Cadmium | 0.12 | J | | 0.121 | J | mg/Kg | ☼ | | | 5 | 20 |
| Calcium | 6800 | | | 5230 | F3 | mg/Kg | ☼ | | | 26 | 20 |
| Chromium | 24 | | | 24.6 | | mg/Kg | ☼ | | | 2 | 20 |
| Cobalt | 8.7 | | | 7.88 | | mg/Kg | ☼ | | | 9 | 20 |
| Copper | 23 | | | 21.9 | | mg/Kg | ☼ | | | 6 | 20 |
| Iron | 22000 | | | 21500 | | mg/Kg | ☼ | | | 2 | 20 |
| Lead | 19 | | | 16.9 | | mg/Kg | ☼ | | | 11 | 20 |
| Magnesium | 6300 | | | 5380 | | mg/Kg | ☼ | | | 16 | 20 |
| Manganese | 170 | F1 F2 | | 114 | F3 | mg/Kg | ☼ | | | 40 | 20 |
| Nickel | 30 | | | 29.3 | | mg/Kg | ☼ | | | 1 | 20 |
| Potassium | 2000 | F1 | | 2050 | | mg/Kg | ☼ | | | 2 | 20 |
| Selenium | ND | F1 | | ND | | mg/Kg | ☼ | | | NC | 20 |
| Silver | 0.36 | J | | 0.463 | J F5 | mg/Kg | ☼ | | | 25 | 20 |
| Sodium | 95 | J | | 90.6 | J | mg/Kg | ☼ | | | 5 | 20 |
| Thallium | ND | | | ND | | mg/Kg | ☼ | | | NC | 20 |
| Vanadium | 34 | | | 35.5 | | mg/Kg | ☼ | | | 5 | 20 |
| Zinc | 73 | | | 71.2 | | mg/Kg | ☼ | | | 2 | 20 |

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-616904/12-A**
**Matrix: Solid**
**Analysis Batch: 617114**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616904**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.017 | 0.0056 | mg/Kg | | 09/01/21 12:40 | 09/02/21 11:57 | 1 |

**Lab Sample ID: LCS 500-616904/13-A**
**Matrix: Solid**
**Analysis Batch: 617114**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616904**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.167 | 0.158 | | mg/Kg | | 95 | 80 - 120 |

**Lab Sample ID: 500-204465-10 MS**
**Matrix: Solid**
**Analysis Batch: 617114**

**Client Sample ID: B-28**
**Prep Type: Total/NA**
**Prep Batch: 616904**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.020 | | 0.0976 | 0.138 | | mg/Kg | ☼ | 121 | 75 - 125 |

**Lab Sample ID: 500-204465-10 MSD**
**Matrix: Solid**
**Analysis Batch: 617114**

**Client Sample ID: B-28**
**Prep Type: Total/NA**
**Prep Batch: 616904**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.020 | | 0.0963 | 0.133 | | mg/Kg | ☼ | 117 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-204465-10 DU**
**Matrix: Solid**
**Analysis Batch: 617114**

**Client Sample ID: B-28**
**Prep Type: Total/NA**
**Prep Batch: 616904**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.020 | | 0.0187 | J | mg/Kg | ☼ | 9 | 20 |

## Method: 9012B - Cyanide, Total andor Amenable

**Lab Sample ID: MB 500-617081/1-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.23 | 0.11 | mg/Kg | | 09/02/21 10:35 | 09/02/21 12:24 | 1 |

**Lab Sample ID: HLCS 500-617081/2-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 11.2 | 11.1 | | mg/Kg | | 99 | 90 - 110 |

## Method: 9012B - Cyanide, Total andor Amenable (Continued)

**Lab Sample ID: LCS 500-617081/3-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 2.28 | 2.24 | | mg/Kg | | 98 | 85 - 115 |

**Lab Sample ID: LLCS 500-617081/4-A**
**Matrix: Solid**
**Analysis Batch: 617124**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617081**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 1.07 | 1.11 | | mg/Kg | | 104 | 75 - 125 |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-19

**Lab Sample ID: 500-204465-1**

**Date Collected: 08/26/21 09:10**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:40 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-19

**Lab Sample ID: 500-204465-1**

**Date Collected: 08/26/21 09:10**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**
**Percent Solids: 80.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616653 | 08/31/21 16:20 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 17:28 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 00:13 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 03:24 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 16:21 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:01 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 13:00 | SB | TAL CHI |

## Client Sample ID: B-20

**Lab Sample ID: 500-204465-2**

**Date Collected: 08/26/21 08:45**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:43 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-20

**Lab Sample ID: 500-204465-2**

**Date Collected: 08/26/21 08:45**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**
**Percent Solids: 84.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616653 | 08/31/21 16:46 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 17:52 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 00:34 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 03:40 | SS | TAL CHI |

## Client Sample ID: B-20
**Lab Sample ID: 500-204465-2**
**Date Collected: 08/26/21 08:45**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**
**Percent Solids: 84.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 16:54 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:03 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 13:05 | SB | TAL CHI |

## Client Sample ID: B-21
**Lab Sample ID: 500-204465-3**
**Date Collected: 08/26/21 09:20**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:45 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-21
**Lab Sample ID: 500-204465-3**
**Date Collected: 08/26/21 09:20**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**
**Percent Solids: 85.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616653 | 08/31/21 17:12 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 18:16 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 00:54 | SS | TAL CHI |
| Total/NA | Prep | 3541 | DL | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | DL | 2 | 617145 | 09/02/21 23:11 | PJ1 | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 03:55 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 16:57 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:05 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 13:06 | SB | TAL CHI |

## Client Sample ID: B-22
**Lab Sample ID: 500-204465-4**
**Date Collected: 08/26/21 09:50**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:48 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-22

**Lab Sample ID: 500-204465-4**

**Date Collected: 08/26/21 09:50**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**
**Percent Solids: 84.5**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616653 | 08/31/21 17:38 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 18:40 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 01:15 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 04:11 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:00 | JJB | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 5 | 617531 | 09/07/21 15:00 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:07 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 13:08 | SB | TAL CHI |

## Client Sample ID: B-23

**Lab Sample ID: 500-204465-5**

**Date Collected: 08/26/21 10:30**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:50 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-23

**Lab Sample ID: 500-204465-5**

**Date Collected: 08/26/21 10:30**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**
**Percent Solids: 82.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616653 | 08/31/21 18:04 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 19:03 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:04 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:09 | MJG | TAL CHI |

## Client Sample ID: B-24

**Lab Sample ID: 500-204465-6**

**Date Collected: 08/26/21 10:55**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:55 | SMO | TAL CHI |

## Client Sample ID: B-24
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-6
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-24
**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-6
**Matrix: Solid**
**Percent Solids: 83.7**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616653 | 08/31/21 18:30 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 19:27 | SS | TAL CHI |
| Total/NA | Prep | 3541 | DL | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | DL | 5 | 617090 | 09/02/21 13:22 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 01:35 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 04:26 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:07 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:11 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 13:20 | SB | TAL CHI |

## Client Sample ID: B-25
**Date Collected: 08/26/21 11:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-7
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 17:58 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-25
**Date Collected: 08/26/21 11:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-7
**Matrix: Solid**
**Percent Solids: 85.6**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616850 | 09/01/21 11:50 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 19:51 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:10 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:13 | MJG | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-26
**Date Collected: 08/26/21 12:20**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-8
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:00 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-26
**Date Collected: 08/26/21 12:20**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-8
**Matrix: Solid**
**Percent Solids: 84.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616850 | 09/01/21 12:16 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 20:14 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:13 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:18 | MJG | TAL CHI |

## Client Sample ID: B-27
**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-9
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:03 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-27
**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-9
**Matrix: Solid**
**Percent Solids: 85.1**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616850 | 09/01/21 12:42 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 20:38 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 02:17 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 04:57 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:16 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:20 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617081 | 09/02/21 10:35 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617124 | 09/02/21 13:22 | SB | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-1

## Client Sample ID: B-28
**Date Collected: 08/26/21 13:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-10
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:05 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-28
**Date Collected: 08/26/21 13:30**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-10
**Matrix: Solid**
**Percent Solids: 83.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616850 | 09/01/21 13:09 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 21:02 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:20 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:22 | MJG | TAL CHI |

## Client Sample ID: B-29
**Date Collected: 08/26/21 14:15**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-11
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:08 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616684 | 08/31/21 10:25 | LWN | TAL CHI |

## Client Sample ID: B-29
**Date Collected: 08/26/21 14:15**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-11
**Matrix: Solid**
**Percent Solids: 88.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616347 | 08/27/21 18:07 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 616850 | 09/01/21 13:35 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 21:26 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617241 | 09/03/21 08:40 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617413 | 09/03/21 17:23 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 616904 | 09/01/21 12:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617114 | 09/02/21 12:29 | MJG | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-204465-1
Project/Site: Cloud HQ (53:2861-B)

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

500-204465 COC

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | COC No |
|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact: Jim Knapp | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | Job No 500-204465 |
| Buffalo Grove, IL 60089 | Calendar ( C ) or Work Days (W) | | SDG No |
| Phone | | | |
| 224-478-9420 FAX 847 279-0369 | ☐ 2 weeks | | |
| Project Name Cloud HQ | ☒ Standard | | |
| Site 53 2861-B | ☐ 3 day | | |
| P O # 53 2861-B | ☐ 1 day | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-19 | 8/26/21 | 910 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 2 | B-20 | 8/26/21 | 845 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 3 | B-21 | 8/26/21 | 920 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 4 | B-22 | 8/26/21 | 950 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 5 | B-23 | 8/26/21 | 1030 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 6 | B-24 | 8/26/21 | 1055 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 7 | B-25 | 8/26/21 | 1130 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 8 | B-26 | 8/26/21 | 1220 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 9 | B-27 | 8/26/21 | 1300 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 10 | B-28 | 8/26/21 | 1330 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 11 | B-29 | 8/26/21 | 1415 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| | | | | | | | | | | | | | | X | | | | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

***Possible Hazard Identification***

☐ Non-Hazard ☐ Flammable ☐ Irritant ☐ Poison B Unknown ☒

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

**Special Instructions/QC Requirements & Comments:** [redacted]

| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
|---|---|---|---|---|---|
| | ECS Midwest | 8/27 | | | 8/27/21 1035 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | 8/27/21 1500 | Stephanie Hernandez | ETA-CHI | 8/27/21 1500 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | | | | |

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204465-1

**Login Number: 204465**
**List Number: 1**
**Creator: Hernandez, Stephanie**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204465-2
Client Project/Site: Cloud HQ (53:2861-B)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/23/2021 12:09:35 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Job ID: 500-204465-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204465-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/27/2021 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-19 — Lab Sample ID: 500-204465-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.23 | | 0.20 | 0.20 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-20 — Lab Sample ID: 500-204465-2

No Detections.

## Client Sample ID: B-21 — Lab Sample ID: 500-204465-3

No Detections.

## Client Sample ID: B-22 — Lab Sample ID: 500-204465-4

No Detections.

## Client Sample ID: B-24 — Lab Sample ID: 500-204465-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 0.20 | | 0.20 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Cobalt | 0.016 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

## Client Sample ID: B-26 — Lab Sample ID: 500-204465-8

No Detections.

## Client Sample ID: B-27 — Lab Sample ID: 500-204465-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.027 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 1311 | TCLP Extraction | SW846 | TAL CHI |
| 3010A | Preparation, Total Metals | SW846 | TAL CHI |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204465-1 | B-19 | Solid | 08/26/21 09:10 | 08/27/21 15:00 |
| 500-204465-2 | B-20 | Solid | 08/26/21 08:45 | 08/27/21 15:00 |
| 500-204465-3 | B-21 | Solid | 08/26/21 09:20 | 08/27/21 15:00 |
| 500-204465-4 | B-22 | Solid | 08/26/21 09:50 | 08/27/21 15:00 |
| 500-204465-6 | B-24 | Solid | 08/26/21 10:55 | 08/27/21 15:00 |
| 500-204465-8 | B-26 | Solid | 08/26/21 12:20 | 08/27/21 15:00 |
| 500-204465-9 | B-27 | Solid | 08/26/21 13:00 | 08/27/21 15:00 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-19

**Date Collected: 08/26/21 09:10**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-1

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:58 | 1 |
| **Aluminum** | **0.23** | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 20:58 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-20

**Date Collected: 08/26/21 08:45**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-2

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 21:01 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 21:01 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 21:01 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-21

**Date Collected: 08/26/21 09:20**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-3

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 21:05 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 21:05 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-22

**Date Collected: 08/26/21 09:50**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-4

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0040 | 0.0040 | mg/L | | 09/21/21 07:39 | 09/21/21 21:08 | 1 |
| Nickel | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 21:08 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 21:08 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-24

**Date Collected: 08/26/21 10:55**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-6

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Iron** | **0.20** | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/22/21 16:16 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 21:18 | 1 |
| **Cobalt** | **0.016** | **J** | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/22/21 16:16 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-26

**Date Collected: 08/26/21 12:20**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-8

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/22/21 16:19 | 1 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-27

**Date Collected: 08/26/21 13:00**
**Date Received: 08/27/21 15:00**

## Lab Sample ID: 500-204465-9

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/22/21 16:22 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 21:25 | 1 |
| **Cobalt** | **0.027** | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/22/21 16:22 | 1 |

# Definitions/Glossary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Metals

### Leach Batch: 619217

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | TCLP | Solid | 1311 | |
| 500-204465-2 | B-20 | TCLP | Solid | 1311 | |
| 500-204465-3 | B-21 | TCLP | Solid | 1311 | |
| 500-204465-4 | B-22 | TCLP | Solid | 1311 | |
| 500-204465-6 | B-24 | TCLP | Solid | 1311 | |
| 500-204465-8 | B-26 | TCLP | Solid | 1311 | |
| 500-204465-9 | B-27 | TCLP | Solid | 1311 | |
| LB 500-619217/1-B | Method Blank | TCLP | Solid | 1311 | |

### Prep Batch: 619476

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | TCLP | Solid | 3010A | 619217 |
| 500-204465-2 | B-20 | TCLP | Solid | 3010A | 619217 |
| 500-204465-3 | B-21 | TCLP | Solid | 3010A | 619217 |
| 500-204465-4 | B-22 | TCLP | Solid | 3010A | 619217 |
| 500-204465-6 | B-24 | TCLP | Solid | 3010A | 619217 |
| 500-204465-8 | B-26 | TCLP | Solid | 3010A | 619217 |
| 500-204465-9 | B-27 | TCLP | Solid | 3010A | 619217 |
| LB 500-619217/1-B | Method Blank | TCLP | Solid | 3010A | 619217 |
| LCS 500-619476/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |

### Analysis Batch: 619756

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-1 | B-19 | TCLP | Solid | 6010B | 619476 |
| 500-204465-2 | B-20 | TCLP | Solid | 6010B | 619476 |
| 500-204465-3 | B-21 | TCLP | Solid | 6010B | 619476 |
| 500-204465-4 | B-22 | TCLP | Solid | 6010B | 619476 |
| 500-204465-6 | B-24 | TCLP | Solid | 6010B | 619476 |
| 500-204465-9 | B-27 | TCLP | Solid | 6010B | 619476 |
| LB 500-619217/1-B | Method Blank | TCLP | Solid | 6010B | 619476 |
| LCS 500-619476/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 619476 |

### Analysis Batch: 619928

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204465-6 | B-24 | TCLP | Solid | 6010B | 619476 |
| 500-204465-8 | B-26 | TCLP | Solid | 6010B | 619476 |
| 500-204465-9 | B-27 | TCLP | Solid | 6010B | 619476 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Method: 6010B - Metals (ICP)

**Lab Sample ID: LCS 500-619476/2-A**
**Matrix: Solid**
**Analysis Batch: 619756**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 619476**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0517 | | mg/L | | 103 | 80 - 120 |
| Iron | 1.00 | 1.18 | | mg/L | | 118 | 80 - 120 |
| Nickel | 0.500 | 0.527 | | mg/L | | 105 | 80 - 120 |
| Aluminum | 2.00 | 2.06 | | mg/L | | 103 | 80 - 120 |
| Chromium | 0.200 | 0.204 | | mg/L | | 102 | 80 - 120 |
| Cobalt | 0.500 | 0.531 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: LB 500-619217/1-B**
**Matrix: Solid**
**Analysis Batch: 619756**

**Client Sample ID: Method Blank**
**Prep Type: TCLP**
**Prep Batch: 619476**

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0040 | 0.0040 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Iron | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Nickel | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Aluminum | ND | | 0.20 | 0.20 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Chromium | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:39 | 09/21/21 19:58 | 1 |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53:2861-B)

Job ID: 500-204465-2

## Client Sample ID: B-19

**Lab Sample ID: 500-204465-1**

**Date Collected: 08/26/21 09:10**

**Matrix: Solid**

**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 20:58 | JJB | TAL CHI |

## Client Sample ID: B-20

**Lab Sample ID: 500-204465-2**

**Date Collected: 08/26/21 08:45**

**Matrix: Solid**

**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 21:01 | JJB | TAL CHI |

## Client Sample ID: B-21

**Lab Sample ID: 500-204465-3**

**Date Collected: 08/26/21 09:20**

**Matrix: Solid**

**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 21:05 | JJB | TAL CHI |

## Client Sample ID: B-22

**Lab Sample ID: 500-204465-4**

**Date Collected: 08/26/21 09:50**

**Matrix: Solid**

**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 21:08 | JJB | TAL CHI |

## Client Sample ID: B-24

**Lab Sample ID: 500-204465-6**

**Date Collected: 08/26/21 10:55**

**Matrix: Solid**

**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 21:18 | JJB | TAL CHI |
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619928 | 09/22/21 16:16 | JJB | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Job ID: 500-204465-2
Project/Site: Cloud HQ (53:2861-B)

## Client Sample ID: B-26
**Lab Sample ID: 500-204465-8**
**Date Collected: 08/26/21 12:20**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619928 | 09/22/21 16:19 | JJB | TAL CHI |

## Client Sample ID: B-27
**Lab Sample ID: 500-204465-9**
**Date Collected: 08/26/21 13:00**
**Matrix: Solid**
**Date Received: 08/27/21 15:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619756 | 09/21/21 21:25 | JJB | TAL CHI |
| TCLP | Leach | 1311 | | | 619217 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619476 | 09/21/21 07:39 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619928 | 09/22/21 16:22 | JJB | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-204465-2
Project/Site: Cloud HQ (53:2861-B)

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

500-204465 COC

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | COC No |
|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact: Jim Knapp | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | Job No 500-204465 |
| Buffalo Grove, IL 60089 | Calendar ( C ) or Work Days (W) | | SDG No |
| Phone | | | |
| 224-478-9420 FAX 847 279-0369 | ☐ 2 weeks | | |
| Project Name Cloud HQ | ☒ Standard | | |
| Site 53 2861-B | ☐ 3 day | | |
| P O # 53 2861-B | ☐ 1 day | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-19 | 8/26/21 | 910 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 2 | B-20 | 8/26/21 | 845 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 3 | B-21 | 8/26/21 | 920 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 4 | B-22 | 8/26/21 | 950 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 5 | B-23 | 8/26/21 | 1030 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 6 | B-24 | 8/26/21 | 1055 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 7 | B-25 | 8/26/21 | 1130 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 8 | B-26 | 8/26/21 | 1220 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 9 | B-27 | 8/26/21 | 1300 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 10 | B-28 | 8/26/21 | 1330 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 11 | B-29 | 8/26/21 | 1415 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| | | | | | | | | | | | | | | X | | | | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

***Possible Hazard Identification***

☐ Non-Hazard ☐ Flammable ☐ Irritant ☐ Poison B Unknown ☒

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

**Special Instructions/QC Requirements & Comments:** [redacted]

| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
|---|---|---|---|---|---|
| | ECS Midwest | 8/27 | | | 8/27/21 1035 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | 8/27/21 1500 | Stephanie Hernandez | ETA-CHI | 8/27/21 1500 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | | | | |

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204465-2

**Login Number: 204465**
**List Number: 1**
**Creator: Hernandez, Stephanie**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204508-1
Client Project/Site: Cloud HQ

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/7/2021 4:57:19 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-204508-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204508-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/30/2021 12:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.5º C.

**GC/MS VOA**
Method 8260B: Internal standard (1,4-Dichlorobenzene-d4) response was outside of acceptance limits for the following sample: B-32 (500-204508-3). The sample did not have detects of requested analytes using this internal standard. Surrogate 4-Bromofluorobenzene is also being quantitated with this internal standard.

Method 8260B: The laboratory control sample (LCS) for 617411 recovered outside control limits for the following analytes: Bromomethane, Chloroethane, and Chloromethane. These analytes were not detected in the associated samples; and the data have been reported.B-31 (500-204508-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC/MS Semi VOA**
Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-616935 was outside the method criteria for the following analyte(s): 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline, Di-n-octyl phthalate, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCS associated with preparation batch 500-616812 and analytical batch 500-616935 had 1 analyte outside control limits; 3,3'-Dichlorobenzidine. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC Semi VOA**
Method 8082A: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside control limits: B-32 (500-204508-3). The other surrogate was within limits and the sample is non-detect for the target analytes; therefore, re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## Client Sample ID: B-30 — Lab Sample ID: 500-204508-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.025 | | 0.016 | 0.0068 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Chrysene | 0.021 | J | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.0070 | J | 0.037 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0058 | J | 0.037 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.019 | J | 0.074 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.060 | | 0.037 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.013 | J | 0.037 | 0.0073 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 8.2 | F1 | 1.1 | 0.36 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 32 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 12 | | 1.1 | 0.52 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 11 | | 0.53 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.20 | J | 0.53 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.024 | | 0.017 | 0.0057 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.5 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-31 — Lab Sample ID: 500-204508-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.014 | J | 0.019 | 0.0083 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Benzo[a]anthracene | 0.0091 | J | 0.037 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.014 | J | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.016 | J | 0.037 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.038 | J | 0.075 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.0097 | J | 0.037 | 0.0057 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.041 | | 0.037 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.015 | J | 0.037 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 5.1 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 39 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 15 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 10 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.21 | J | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.023 | | 0.018 | 0.0060 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.4 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-32 — Lab Sample ID: 500-204508-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 0.012 | J | 0.035 | 0.0065 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0054 | J | 0.035 | 0.0049 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.011 | J | 0.070 | 0.0064 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.0061 | J | 0.035 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.030 | J | 0.035 | 0.0049 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.0099 | J | 0.035 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Aluminum | 6500 | | 20 | 8.1 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 0.75 | J | 2.0 | 0.39 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 6.3 | | 0.99 | 0.34 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 33 | | 0.99 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.56 | | 0.40 | 0.093 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 51000 | | 20 | 3.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 12 | | 0.99 | 0.49 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 9.5 | | 0.50 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 19 | | 0.99 | 0.28 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-32 (Continued)

## Lab Sample ID: 500-204508-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Iron | 15000 | | 20 | 10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 11 | | 0.50 | 0.23 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 24000 | | 9.9 | 4.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 330 | | 0.99 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 25 | | 0.99 | 0.29 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 1700 | | 50 | 18 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.17 | J | 0.50 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 160 | B | 99 | 15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 15 | | 0.50 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 42 | | 2.0 | 0.87 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.022 | | 0.017 | 0.0057 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.3 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8081B | Organochlorine Pesticides (GC) | SW846 | TAL CHI |
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL CHI |
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 7471B | Mercury (CVAA) | SW846 | TAL CHI |
| 9012B | Cyanide, Total andor Amenable | SW846 | TAL CHI |
| 9045D | pH | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 3050B | Preparation, Metals | SW846 | TAL CHI |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |
| 7471B | Preparation, Mercury | SW846 | TAL CHI |
| 9010C | Cyanide, Distillation | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204508-1 | B-30 | Solid | 08/27/21 10:30 | 08/30/21 12:45 |
| 500-204508-2 | B-31 | Solid | 08/27/21 11:00 | 08/30/21 12:45 |
| 500-204508-3 | B-32 | Solid | 08/27/21 11:15 | 08/30/21 12:45 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

**Client Sample ID: B-30**
**Date Collected: 08/27/21 10:30**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-1**
**Matrix: Solid**
**Percent Solids: 86.1**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.025** | | 0.016 | 0.0068 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Benzene | ND | | 0.0016 | 0.00040 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Bromodichloromethane | ND | | 0.0016 | 0.00032 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Bromoform | ND | | 0.0016 | 0.00045 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Bromomethane | ND | | 0.0039 | 0.0015 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Carbon disulfide | ND | | 0.0039 | 0.00081 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Carbon tetrachloride | ND | | 0.0016 | 0.00045 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Chlorobenzene | ND | | 0.0016 | 0.00057 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Chloroethane | ND | | 0.0039 | 0.0011 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Chloroform | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Chloromethane | ND | | 0.0039 | 0.0016 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0016 | 0.00043 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Dibromochloromethane | ND | | 0.0016 | 0.00051 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,1-Dichloroethane | ND | | 0.0016 | 0.00053 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,2-Dichloroethane | ND | | 0.0039 | 0.0012 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,1-Dichloroethene | ND | | 0.0016 | 0.00053 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,2-Dichloropropane | ND | | 0.0016 | 0.00040 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Ethylbenzene | ND | | 0.0016 | 0.00074 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 2-Hexanone | ND | | 0.0039 | 0.0012 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Methylene Chloride | ND | | 0.0039 | 0.0015 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0039 | 0.0017 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| methyl isobutyl ketone | ND | | 0.0039 | 0.0011 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Methyl tert-butyl ether | ND | | 0.0016 | 0.00046 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Styrene | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0016 | 0.00050 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Tetrachloroethene | ND | | 0.0016 | 0.00053 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Toluene | ND | | 0.0016 | 0.00039 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0016 | 0.00069 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0016 | 0.00052 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0016 | 0.00067 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Trichloroethene | ND | | 0.0016 | 0.00053 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Vinyl chloride | ND | | 0.0016 | 0.00069 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |
| Xylenes, Total | ND | | 0.0031 | 0.00050 | mg/Kg | ☼ | 08/27/21 12:40 | 09/02/21 13:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *117* | | *75 - 131* | *08/27/21 12:40* | *09/02/21 13:55* | *1* |
| *Dibromofluoromethane* | *109* | | *75 - 126* | *08/27/21 12:40* | *09/02/21 13:55* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *113* | | *70 - 134* | *08/27/21 12:40* | *09/02/21 13:55* | *1* |
| *Toluene-d8 (Surr)* | *111* | | *75 - 124* | *08/27/21 12:40* | *09/02/21 13:55* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.037 | 0.0066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Anthracene | ND | | 0.037 | 0.0062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Benzo[a]anthracene | ND | | 0.037 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Benzo[a]pyrene | ND | | 0.037 | 0.0071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |

**Client Sample ID: B-30**
**Date Collected: 08/27/21 10:30**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-1**
**Matrix: Solid**
**Percent Solids: 86.1**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.037 | 0.0080 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.037 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.070 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Carbazole | ND | | 0.19 | 0.092 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4-Chloroaniline | ND | | 0.74 | 0.17 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| **Chrysene** | **0.021** | **J** | 0.037 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.037 | 0.0071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.74 | 0.30 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,4-Dinitrophenol | ND | | 0.74 | 0.65 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| **Fluoranthene** | **0.0070** | **J** | 0.037 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| **Fluorene** | **0.0058** | **J** | 0.037 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Hexachlorobenzene | ND | | 0.074 | 0.0086 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.74 | 0.21 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.0096 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Isophorone | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| **2-Methylnaphthalene** | **0.019** | **J** | 0.074 | 0.0068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Naphthalene | ND | | 0.037 | 0.0057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.11 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0092 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 4-Nitrophenol | ND | | 0.74 | 0.35 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

**Client Sample ID: B-30**
**Date Collected: 08/27/21 10:30**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-1**
**Matrix: Solid**
**Percent Solids: 86.1**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.074 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Pentachlorophenol | ND | | 0.74 | 0.59 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| **Phenanthrene** | **0.060** | | 0.037 | 0.0051 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| Phenol | ND | | 0.19 | 0.082 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| **Pyrene** | **0.013** | **J** | 0.037 | 0.0073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.084 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *82* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 22:13* | *1* |
| *2-Fluorophenol* | *97* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 22:13* | *1* |
| *Nitrobenzene-d5* | *82* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 22:13* | *1* |
| *Phenol-d5* | *110* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 22:13* | *1* |
| *Terphenyl-d14* | *85* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 22:13* | *1* |
| *2,4,6-Tribromophenol* | *64* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 22:13* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **8.2** | **F1** | 1.1 | 0.36 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |
| **Barium** | **32** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |
| Cadmium | ND | | 0.21 | 0.038 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |
| **Chromium** | **12** | | 1.1 | 0.52 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |
| **Lead** | **11** | | 0.53 | 0.24 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |
| Selenium | ND | F1 | 1.1 | 0.62 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |
| **Silver** | **0.20** | **J** | 0.53 | 0.14 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:21 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.024** | | 0.017 | 0.0057 | mg/Kg | ☼ | 09/02/21 14:40 | 09/03/21 08:23 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.5** | | 0.2 | 0.2 | SU | | | 08/31/21 18:23 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

**Client Sample ID: B-31**
**Date Collected: 08/27/21 11:00**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-2**
**Matrix: Solid**
**Percent Solids: 84.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.014** | **J** | 0.019 | 0.0083 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Benzene | ND | | 0.0019 | 0.00049 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Bromodichloromethane | ND | | 0.0019 | 0.00039 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Bromoform | ND | | 0.0019 | 0.00056 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Bromomethane | ND | *+ | 0.0048 | 0.0018 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Carbon disulfide | ND | | 0.0048 | 0.00099 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Carbon tetrachloride | ND | | 0.0019 | 0.00055 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Chlorobenzene | ND | | 0.0019 | 0.00071 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Chloroethane | ND | *+ | 0.0048 | 0.0014 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Chloroform | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Chloromethane | ND | *- | 0.0048 | 0.0019 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0019 | 0.00053 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0019 | 0.00058 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Dibromochloromethane | ND | | 0.0019 | 0.00062 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,1-Dichloroethane | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,2-Dichloroethane | ND | | 0.0048 | 0.0015 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,1-Dichloroethene | ND | | 0.0019 | 0.00066 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,2-Dichloropropane | ND | | 0.0019 | 0.00049 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0019 | 0.00067 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Ethylbenzene | ND | | 0.0019 | 0.00091 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 2-Hexanone | ND | | 0.0048 | 0.0015 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Methylene Chloride | ND | | 0.0048 | 0.0019 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0048 | 0.0021 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| methyl isobutyl ketone | ND | | 0.0048 | 0.0014 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Methyl tert-butyl ether | ND | | 0.0019 | 0.00056 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Styrene | ND | | 0.0019 | 0.00058 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0019 | 0.00061 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Tetrachloroethene | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Toluene | ND | | 0.0019 | 0.00048 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0019 | 0.00085 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0019 | 0.00067 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0019 | 0.00064 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0019 | 0.00082 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Trichloroethene | ND | | 0.0019 | 0.00065 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Vinyl chloride | ND | | 0.0019 | 0.00085 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |
| Xylenes, Total | ND | | 0.0038 | 0.00061 | mg/Kg | ☼ | 08/27/21 11:00 | 09/07/21 12:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *75 - 131* | *08/27/21 11:00* | *09/07/21 12:12* | *1* |
| *Dibromofluoromethane* | *99* | | *75 - 126* | *08/27/21 11:00* | *09/07/21 12:12* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 134* | *08/27/21 11:00* | *09/07/21 12:12* | *1* |
| *Toluene-d8 (Surr)* | *103* | | *75 - 124* | *08/27/21 11:00* | *09/07/21 12:12* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.037 | 0.0067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Anthracene | ND | | 0.037 | 0.0062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **Benzo[a]anthracene** | **0.0091** | **J** | 0.037 | 0.0050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Benzo[a]pyrene | ND | | 0.037 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |

**Client Sample ID: B-31**
**Date Collected: 08/27/21 11:00**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-2**
**Matrix: Solid**
**Percent Solids: 84.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.037 | 0.0080 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.037 | 0.012 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.068 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.071 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Carbazole | ND | | 0.19 | 0.093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4-Chloroaniline | ND | | 0.75 | 0.18 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **Chrysene** | **0.014** | **J** | 0.037 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.037 | 0.0072 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.19 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.75 | 0.30 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,4-Dinitrophenol | ND | | 0.75 | 0.66 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.073 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **Fluoranthene** | **0.016** | **J** | 0.037 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Fluorene | ND | | 0.037 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Hexachlorobenzene | ND | | 0.075 | 0.0086 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.75 | 0.21 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.0097 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Isophorone | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **2-Methylnaphthalene** | **0.038** | **J** | 0.075 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **Naphthalene** | **0.0097** | **J** | 0.037 | 0.0057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0093 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.088 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 4-Nitrophenol | ND | | 0.75 | 0.35 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

**Client Sample ID: B-31**
**Date Collected: 08/27/21 11:00**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-2**
**Matrix: Solid**
**Percent Solids: 84.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.075 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Pentachlorophenol | ND | | 0.75 | 0.60 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **Phenanthrene** | **0.041** | | 0.037 | 0.0052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| Phenol | ND | | 0.19 | 0.083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| **Pyrene** | **0.015** | **J** | 0.037 | 0.0074 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.085 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 22:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *76* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 22:36* | *1* |
| *2-Fluorophenol* | *90* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 22:36* | *1* |
| *Nitrobenzene-d5* | *74* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 22:36* | *1* |
| *Phenol-d5* | *106* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 22:36* | *1* |
| *Terphenyl-d14* | *83* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 22:36* | *1* |
| *2,4,6-Tribromophenol* | *54* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 22:36* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.1** | | 1.1 | 0.37 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |
| **Barium** | **39** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |
| Cadmium | ND | | 0.22 | 0.039 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |
| **Chromium** | **15** | | 1.1 | 0.54 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |
| **Lead** | **10** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |
| Selenium | ND | | 1.1 | 0.64 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |
| **Silver** | **0.21** | **J** | 0.55 | 0.14 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:37 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.023** | | 0.018 | 0.0060 | mg/Kg | ☼ | 09/02/21 14:40 | 09/03/21 08:24 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.4** | | 0.2 | 0.2 | SU | | | 08/31/21 18:28 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

**Client Sample ID: B-32**
**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-3**
**Matrix: Solid**
**Percent Solids: 92.0**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.017 | 0.0073 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Benzene | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Bromodichloromethane | ND | | 0.0017 | 0.00034 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Bromoform | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Bromomethane | ND | | 0.0042 | 0.0016 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Carbon disulfide | ND | | 0.0042 | 0.00087 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Carbon tetrachloride | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Chlorobenzene | ND | | 0.0017 | 0.00062 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Chloroethane | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Chloroform | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Chloromethane | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0017 | 0.00047 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Dibromochloromethane | ND | | 0.0017 | 0.00055 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,1-Dichloroethane | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,2-Dichloroethane | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,1-Dichloroethene | ND | | 0.0017 | 0.00058 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,2-Dichloropropane | ND | | 0.0017 | 0.00043 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Ethylbenzene | ND | | 0.0017 | 0.00081 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 2-Hexanone | ND | | 0.0042 | 0.0013 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Methylene Chloride | ND | | 0.0042 | 0.0017 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0042 | 0.0019 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| methyl isobutyl ketone | ND | | 0.0042 | 0.0012 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Methyl tert-butyl ether | ND | | 0.0017 | 0.00049 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Styrene | ND | | 0.0017 | 0.00051 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | *3 | 0.0017 | 0.00054 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Tetrachloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Toluene | ND | | 0.0017 | 0.00042 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0017 | 0.00075 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0017 | 0.00059 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0017 | 0.00056 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0017 | 0.00072 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Trichloroethene | ND | | 0.0017 | 0.00057 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Vinyl chloride | ND | | 0.0017 | 0.00074 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |
| Xylenes, Total | ND | | 0.0034 | 0.00054 | mg/Kg | ☼ | 08/27/21 12:40 | 09/03/21 13:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | *3* | *75 - 131* | *08/27/21 12:40* | *09/03/21 13:57* | *1* |
| *Dibromofluoromethane* | *109* | | *75 - 126* | *08/27/21 12:40* | *09/03/21 13:57* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *70 - 134* | *08/27/21 12:40* | *09/03/21 13:57* | *1* |
| *Toluene-d8 (Surr)* | *111* | | *75 - 124* | *08/27/21 12:40* | *09/03/21 13:57* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.035 | 0.0063 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Acenaphthylene | ND | | 0.035 | 0.0046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Anthracene | ND | | 0.035 | 0.0058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Benzo[a]anthracene | ND | | 0.035 | 0.0047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Benzo[a]pyrene | ND | | 0.035 | 0.0067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

**Client Sample ID: B-32**
**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-3**
**Matrix: Solid**
**Percent Solids: 92.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.035 | 0.0075 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.035 | 0.011 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Benzo[k]fluoranthene | ND | | 0.035 | 0.010 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.18 | 0.036 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.18 | 0.052 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.18 | 0.064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.18 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Butyl benzyl phthalate | ND | | 0.18 | 0.066 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Carbazole | ND | | 0.18 | 0.087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4-Chloroaniline | ND | | 0.70 | 0.16 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.35 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2-Chloronaphthalene | ND | | 0.18 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2-Chlorophenol | ND | | 0.18 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Chrysene | ND | | 0.035 | 0.0095 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.035 | 0.0067 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Dibenzofuran | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.18 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.18 | 0.045 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 3,3'-Dichlorobenzidine | ND | *+ | 0.18 | 0.049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,4-Dichlorophenol | ND | | 0.35 | 0.083 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Diethyl phthalate | ND | | 0.18 | 0.059 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,4-Dimethylphenol | ND | | 0.35 | 0.13 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Dimethyl phthalate | ND | | 0.18 | 0.046 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Di-n-butyl phthalate | ND | | 0.18 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.70 | 0.28 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,4-Dinitrophenol | ND | | 0.70 | 0.61 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.18 | 0.069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Di-n-octyl phthalate | ND | | 0.18 | 0.057 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| **Fluoranthene** | **0.012** | **J** | 0.035 | 0.0065 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| **Fluorene** | **0.0054** | **J** | 0.035 | 0.0049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Hexachlorobenzene | ND | | 0.070 | 0.0081 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Hexachlorobutadiene | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.70 | 0.20 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Hexachloroethane | ND | | 0.18 | 0.053 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.035 | 0.0090 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Isophorone | ND | | 0.18 | 0.039 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| **2-Methylnaphthalene** | **0.011** | **J** | 0.070 | 0.0064 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2-Methylphenol | ND | | 0.18 | 0.056 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 3 & 4 Methylphenol | ND | | 0.18 | 0.058 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| **Naphthalene** | **0.0061** | **J** | 0.035 | 0.0054 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2-Nitroaniline | ND | | 0.18 | 0.047 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 3-Nitroaniline | ND | | 0.35 | 0.11 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4-Nitroaniline | ND | | 0.35 | 0.15 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Nitrobenzene | ND | | 0.035 | 0.0087 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2-Nitrophenol | ND | | 0.35 | 0.082 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 4-Nitrophenol | ND | | 0.70 | 0.33 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |

**Client Sample ID: B-32**
**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-3**
**Matrix: Solid**
**Percent Solids: 92.0**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.070 | 0.043 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.18 | 0.040 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Pentachlorophenol | ND | | 0.70 | 0.56 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| **Phenanthrene** | **0.030** | **J** | 0.035 | 0.0049 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| Phenol | ND | | 0.18 | 0.077 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| **Pyrene** | **0.0099** | **J** | 0.035 | 0.0069 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.18 | 0.038 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.35 | 0.080 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.35 | 0.12 | mg/Kg | ☼ | 09/01/21 06:24 | 09/01/21 23:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *85* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 23:00* | *1* |
| *2-Fluorophenol* | *98* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 23:00* | *1* |
| *Nitrobenzene-d5* | *82* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 23:00* | *1* |
| *Phenol-d5* | *109* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 23:00* | *1* |
| *Terphenyl-d14* | *87* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 23:00* | *1* |
| *2,4,6-Tribromophenol* | *72* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 23:00* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0018 | 0.0013 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| alpha-BHC | ND | | 0.0018 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| beta-BHC | ND | | 0.0018 | 0.0015 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| cis-Chlordane | ND | | 0.0018 | 0.00097 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| 4,4'-DDD | ND | | 0.0018 | 0.00097 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| 4,4'-DDE | ND | | 0.0018 | 0.00093 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| 4,4'-DDT | ND | | 0.0018 | 0.00086 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| delta-BHC | ND | | 0.0018 | 0.00087 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Dieldrin | ND | | 0.0018 | 0.00095 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Endosulfan I | ND | | 0.0018 | 0.00098 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Endosulfan II | ND | | 0.0018 | 0.00099 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Endosulfan sulfate | ND | | 0.0018 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Endrin | ND | | 0.0018 | 0.00092 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Endrin aldehyde | ND | | 0.0018 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Endrin ketone | ND | | 0.0018 | 0.00088 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0018 | 0.00090 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Heptachlor | ND | | 0.0018 | 0.00098 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Heptachlor epoxide | ND | | 0.0018 | 0.00098 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Methoxychlor | ND | | 0.0089 | 0.0012 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| Toxaphene | ND | | 0.018 | 0.0072 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |
| trans-Chlordane | ND | | 0.0018 | 0.0010 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 02:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *93* | | *33 - 148* | *08/31/21 08:03* | *09/02/21 02:58* | *1* |
| *Tetrachloro-m-xylene* | *77* | | *30 - 121* | *08/31/21 08:03* | *09/02/21 02:58* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.018 | 0.0070 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |

**Client Sample ID: B-32**
**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

**Lab Sample ID: 500-204508-3**
**Matrix: Solid**
**Percent Solids: 92.0**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.018 | 0.0070 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |
| PCB-1232 | ND | | 0.018 | 0.0049 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |
| PCB-1242 | ND | | 0.018 | 0.0070 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |
| PCB-1248 | ND | | 0.018 | 0.0085 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |
| PCB-1254 | ND | | 0.018 | 0.0061 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |
| PCB-1260 | ND | | 0.018 | 0.0068 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.018 | 0.0049 | mg/Kg | ☼ | 08/31/21 08:03 | 09/02/21 05:59 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *38* | *S1-* | *49 - 129* | *08/31/21 08:03* | *09/02/21 05:59* | *1* |
| *DCB Decachlorobiphenyl* | *77* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 05:59* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **6500** | | 20 | 8.1 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Antimony** | **0.75** | **J** | 2.0 | 0.39 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Arsenic** | **6.3** | | 0.99 | 0.34 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Barium** | **33** | | 0.99 | 0.11 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Beryllium** | **0.56** | | 0.40 | 0.093 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| Cadmium | ND | | 0.20 | 0.036 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Calcium** | **51000** | | 20 | 3.4 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Chromium** | **12** | | 0.99 | 0.49 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Cobalt** | **9.5** | | 0.50 | 0.13 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Copper** | **19** | | 0.99 | 0.28 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Iron** | **15000** | | 20 | 10 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Lead** | **11** | | 0.50 | 0.23 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Magnesium** | **24000** | | 9.9 | 4.9 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Manganese** | **330** | | 0.99 | 0.14 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Nickel** | **25** | | 0.99 | 0.29 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Potassium** | **1700** | | 50 | 18 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| Selenium | ND | | 0.99 | 0.58 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Silver** | **0.17** | **J** | 0.50 | 0.13 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Sodium** | **160** | **B** | 99 | 15 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| Thallium | ND | | 0.99 | 0.49 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Vanadium** | **15** | | 0.50 | 0.12 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |
| **Zinc** | **42** | | 2.0 | 0.87 | mg/Kg | ☼ | 09/03/21 13:37 | 09/07/21 14:40 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.022** | | 0.017 | 0.0057 | mg/Kg | ☼ | 09/02/21 14:40 | 09/03/21 08:26 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.24 | 0.12 | mg/Kg | ☼ | 09/02/21 15:23 | 09/02/21 16:51 | 1 |
| **pH** | **8.3** | | 0.2 | 0.2 | SU | | | 08/31/21 18:31 | 1 |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| *3 | ISTD response or retention time outside acceptable limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| S1- | Surrogate recovery exceeds control limits, low biased. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| B | Compound was found in the blank and sample. |
| E | Result exceeded calibration range. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| F3 | Duplicate RPD exceeds the control limit |
| F5 | Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## GC/MS VOA

### Prep Batch: 616586

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 5035 | |
| 500-204508-2 | B-31 | Total/NA | Solid | 5035 | |
| 500-204508-3 | B-32 | Total/NA | Solid | 5035 | |

### Analysis Batch: 617031

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 8260B | 616586 |
| MB 500-617031/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-617031/4 | Lab Control Sample | Total/NA | Solid | 8260B | |

### Analysis Batch: 617209

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | Total/NA | Solid | 8260B | 616586 |
| MB 500-617209/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-617209/4 | Lab Control Sample | Total/NA | Solid | 8260B | |
| LCSD 500-617209/10 | Lab Control Sample Dup | Total/NA | Solid | 8260B | |

### Analysis Batch: 617411

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-2 | B-31 | Total/NA | Solid | 8260B | 616586 |
| MB 500-617411/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-617411/16 | Lab Control Sample | Total/NA | Solid | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 616812

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 3541 | |
| 500-204508-2 | B-31 | Total/NA | Solid | 3541 | |
| 500-204508-3 | B-32 | Total/NA | Solid | 3541 | |
| MB 500-616812/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-616812/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 616935

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 8270D | 616812 |
| 500-204508-2 | B-31 | Total/NA | Solid | 8270D | 616812 |
| 500-204508-3 | B-32 | Total/NA | Solid | 8270D | 616812 |
| MB 500-616812/1-A | Method Blank | Total/NA | Solid | 8270D | 616812 |
| LCS 500-616812/2-A | Lab Control Sample | Total/NA | Solid | 8270D | 616812 |

## GC Semi VOA

### Prep Batch: 616666

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | Total/NA | Solid | 3541 | |
| MB 500-616666/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-616666/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| LCS 500-616666/3-A | Lab Control Sample | Total/NA | Solid | 3541 | |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## GC Semi VOA

### Analysis Batch: 616963

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | Total/NA | Solid | 8081B | 616666 |
| MB 500-616666/1-A | Method Blank | Total/NA | Solid | 8081B | 616666 |
| LCS 500-616666/2-A | Lab Control Sample | Total/NA | Solid | 8081B | 616666 |

### Analysis Batch: 616981

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | Total/NA | Solid | 8082A | 616666 |
| MB 500-616666/1-A | Method Blank | Total/NA | Solid | 8082A | 616666 |
| LCS 500-616666/3-A | Lab Control Sample | Total/NA | Solid | 8082A | 616666 |

## Metals

### Prep Batch: 617085

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 7471B | |
| 500-204508-2 | B-31 | Total/NA | Solid | 7471B | |
| 500-204508-3 | B-32 | Total/NA | Solid | 7471B | |
| MB 500-617085/12-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 500-617085/13-A | Lab Control Sample | Total/NA | Solid | 7471B | |

### Analysis Batch: 617264

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 7471B | 617085 |
| 500-204508-2 | B-31 | Total/NA | Solid | 7471B | 617085 |
| 500-204508-3 | B-32 | Total/NA | Solid | 7471B | 617085 |
| MB 500-617085/12-A | Method Blank | Total/NA | Solid | 7471B | 617085 |
| LCS 500-617085/13-A | Lab Control Sample | Total/NA | Solid | 7471B | 617085 |

### Prep Batch: 617296

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 3050B | |
| 500-204508-2 | B-31 | Total/NA | Solid | 3050B | |
| 500-204508-3 | B-32 | Total/NA | Solid | 3050B | |
| MB 500-617296/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 500-617296/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 500-204508-1 MS | B-30 | Total/NA | Solid | 3050B | |
| 500-204508-1 MSD | B-30 | Total/NA | Solid | 3050B | |
| 500-204508-1 DU | B-30 | Total/NA | Solid | 3050B | |

### Analysis Batch: 617530

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 6010B | 617296 |
| 500-204508-2 | B-31 | Total/NA | Solid | 6010B | 617296 |
| 500-204508-3 | B-32 | Total/NA | Solid | 6010B | 617296 |
| MB 500-617296/1-A | Method Blank | Total/NA | Solid | 6010B | 617296 |
| LCS 500-617296/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 617296 |
| 500-204508-1 MS | B-30 | Total/NA | Solid | 6010B | 617296 |
| 500-204508-1 MSD | B-30 | Total/NA | Solid | 6010B | 617296 |
| 500-204508-1 DU | B-30 | Total/NA | Solid | 6010B | 617296 |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## General Chemistry

### Analysis Batch: 616717

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | Moisture | |
| 500-204508-2 | B-31 | Total/NA | Solid | Moisture | |
| 500-204508-3 | B-32 | Total/NA | Solid | Moisture | |

### Analysis Batch: 616867

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-1 | B-30 | Total/NA | Solid | 9045D | |
| 500-204508-2 | B-31 | Total/NA | Solid | 9045D | |
| 500-204508-3 | B-32 | Total/NA | Solid | 9045D | |
| LCS 500-616867/2 | Lab Control Sample | Total/NA | Solid | 9045D | |
| LCSD 500-616867/3 | Lab Control Sample Dup | Total/NA | Solid | 9045D | |
| 500-204508-1 DU | B-30 | Total/NA | Solid | 9045D | |

### Prep Batch: 617116

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | Total/NA | Solid | 9010C | |
| MB 500-617116/1-A | Method Blank | Total/NA | Solid | 9010C | |
| HLCS 500-617116/2-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LCS 500-617116/3-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LLCS 500-617116/4-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| 500-204508-3 MS | B-32 | Total/NA | Solid | 9010C | |
| 500-204508-3 MSD | B-32 | Total/NA | Solid | 9010C | |

### Analysis Batch: 617235

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | Total/NA | Solid | 9012B | 617116 |
| MB 500-617116/1-A | Method Blank | Total/NA | Solid | 9012B | 617116 |
| HLCS 500-617116/2-A | Lab Control Sample | Total/NA | Solid | 9012B | 617116 |
| LCS 500-617116/3-A | Lab Control Sample | Total/NA | Solid | 9012B | 617116 |
| LLCS 500-617116/4-A | Lab Control Sample | Total/NA | Solid | 9012B | 617116 |
| 500-204508-3 MS | B-32 | Total/NA | Solid | 9012B | 617116 |
| 500-204508-3 MSD | B-32 | Total/NA | Solid | 9012B | 617116 |

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | BFB | DBFM | DCA | TOL |
| Lab Sample ID | Client Sample ID | (75-131) | (75-126) | (70-134) | (75-124) |
| 500-204508-1 | B-30 | 117 | 109 | 113 | 111 |
| 500-204508-2 | B-31 | 103 | 99 | 101 | 103 |
| 500-204508-3 | B-32 | 114 *3 | 109 | 108 | 111 |
| LCS 500-617031/4 | Lab Control Sample | 103 | 106 | 104 | 110 |
| LCS 500-617209/4 | Lab Control Sample | 108 | 105 | 102 | 110 |
| LCS 500-617411/16 | Lab Control Sample | 80 | 89 | 82 | 100 |
| LCSD 500-617209/10 | Lab Control Sample Dup | 105 | 102 | 100 | 110 |
| MB 500-617031/7 | Method Blank | 109 | 107 | 106 | 106 |
| MB 500-617209/7 | Method Blank | 112 | 106 | 104 | 108 |
| MB 500-617411/7 | Method Blank | 86 | 92 | 86 | 97 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | FBP | 2FP | NBZ | PHL | TPHL | TBP |
| Lab Sample ID | Client Sample ID | (43-145) | (31-166) | (37-147) | (30-153) | (42-157) | (31-143) |
| 500-204508-1 | B-30 | 82 | 97 | 82 | 110 | 85 | 64 |
| 500-204508-2 | B-31 | 76 | 90 | 74 | 106 | 83 | 54 |
| 500-204508-3 | B-32 | 85 | 98 | 82 | 109 | 87 | 72 |
| LCS 500-616812/2-A | Lab Control Sample | 85 | 95 | 88 | 106 | 92 | 82 |
| MB 500-616812/1-A | Method Blank | 93 | 97 | 84 | 111 | 92 | 76 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

## Method: 8081B - Organochlorine Pesticides (GC)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | DCBP1 | TCX1 |
| Lab Sample ID | Client Sample ID | (33-148) | (30-121) |
| 500-204508-3 | B-32 | 93 | 77 |
| LCS 500-616666/2-A | Lab Control Sample | 103 | 81 |
| MB 500-616666/1-A | Method Blank | 136 | 103 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Solid**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TCX2 | DCBP2 | | | | | | | | |
| Lab Sample ID | Client Sample ID | (49-129) | (37-121) | | | | | | | | |
| 500-204508-3 | B-32 | 38 S1- | 77 | | | | | | | | |
| LCS 500-616666/3-A | Lab Control Sample | 69 | 93 | | | | | | | | |
| MB 500-616666/1-A | Method Blank | 63 | 89 | | | | | | | | |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-617031/7**
**Matrix: Solid**
**Analysis Batch: 617031**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/02/21 11:19 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 09/02/21 11:19 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 09/02/21 11:19 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/02/21 11:19 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/02/21 11:19 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 09/02/21 11:19 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/02/21 11:19 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 09/02/21 11:19 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *109* | | *75 - 131* | | *09/02/21 11:19* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 126* | | *09/02/21 11:19* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 134* | | *09/02/21 11:19* | *1* |
| *Toluene-d8 (Surr)* | *106* | | *75 - 124* | | *09/02/21 11:19* | *1* |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617031/4**
**Matrix: Solid**
**Analysis Batch: 617031**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0599 | | mg/Kg | | 120 | 40 - 150 |
| Benzene | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 125 |
| Bromodichloromethane | 0.0500 | 0.0465 | | mg/Kg | | 93 | 67 - 129 |
| Bromoform | 0.0500 | 0.0494 | | mg/Kg | | 99 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0558 | | mg/Kg | | 112 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0484 | | mg/Kg | | 97 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0448 | | mg/Kg | | 90 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0470 | | mg/Kg | | 94 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0478 | | mg/Kg | | 96 | 75 - 125 |
| Chloroform | 0.0500 | 0.0468 | | mg/Kg | | 94 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0493 | | mg/Kg | | 99 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0456 | | mg/Kg | | 91 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0470 | | mg/Kg | | 94 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0471 | | mg/Kg | | 94 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0473 | | mg/Kg | | 95 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0478 | | mg/Kg | | 96 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0486 | | mg/Kg | | 97 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0480 | | mg/Kg | | 96 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0467 | | mg/Kg | | 93 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0482 | | mg/Kg | | 96 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0469 | | mg/Kg | | 94 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0480 | | mg/Kg | | 96 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0495 | | mg/Kg | | 99 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0452 | | mg/Kg | | 90 | 50 - 140 |
| Styrene | 0.0500 | 0.0481 | | mg/Kg | | 96 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0473 | | mg/Kg | | 95 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0496 | | mg/Kg | | 99 | 70 - 124 |
| Toluene | 0.0500 | 0.0473 | | mg/Kg | | 95 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0460 | | mg/Kg | | 92 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0467 | | mg/Kg | | 93 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0458 | | mg/Kg | | 92 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0486 | | mg/Kg | | 97 | 70 - 125 |
| Trichloroethene | 0.0500 | 0.0472 | | mg/Kg | | 94 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0475 | | mg/Kg | | 95 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0945 | | mg/Kg | | 95 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *103* | | *75 - 131* |
| *Dibromofluoromethane* | *106* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: MB 500-617209/7**
**Matrix: Solid**
**Analysis Batch: 617209**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 09/03/21 10:55 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-617209/7**
**Matrix: Solid**
**Analysis Batch: 617209**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/03/21 10:55 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 09/03/21 10:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 09/03/21 10:55 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/03/21 10:55 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/03/21 10:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 09/03/21 10:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/03/21 10:55 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 09/03/21 10:55 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *112* | | *75 - 131* | | *09/03/21 10:55* | *1* |
| *Dibromofluoromethane* | *106* | | *75 - 126* | | *09/03/21 10:55* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 134* | | *09/03/21 10:55* | *1* |
| *Toluene-d8 (Surr)* | *108* | | *75 - 124* | | *09/03/21 10:55* | *1* |

**Lab Sample ID: LCS 500-617209/4**
**Matrix: Solid**
**Analysis Batch: 617209**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0603 | | mg/Kg | | 121 | 40 - 150 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617209/4**
**Matrix: Solid**
**Analysis Batch: 617209**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 125 |
| Bromodichloromethane | 0.0500 | 0.0489 | | mg/Kg | | 98 | 67 - 129 |
| Bromoform | 0.0500 | 0.0532 | | mg/Kg | | 106 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0509 | | mg/Kg | | 102 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0459 | | mg/Kg | | 92 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0496 | | mg/Kg | | 99 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0456 | | mg/Kg | | 91 | 75 - 125 |
| Chloroform | 0.0500 | 0.0469 | | mg/Kg | | 94 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0478 | | mg/Kg | | 96 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0462 | | mg/Kg | | 92 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0510 | | mg/Kg | | 102 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0505 | | mg/Kg | | 101 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0505 | | mg/Kg | | 101 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0473 | | mg/Kg | | 95 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0513 | | mg/Kg | | 103 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0486 | | mg/Kg | | 97 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0562 | | mg/Kg | | 112 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0469 | | mg/Kg | | 94 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0586 | | mg/Kg | | 117 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0545 | | mg/Kg | | 109 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0483 | | mg/Kg | | 97 | 50 - 140 |
| Styrene | 0.0500 | 0.0496 | | mg/Kg | | 99 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0553 | | mg/Kg | | 111 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0516 | | mg/Kg | | 103 | 70 - 124 |
| Toluene | 0.0500 | 0.0501 | | mg/Kg | | 100 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0521 | | mg/Kg | | 104 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0458 | | mg/Kg | | 92 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0539 | | mg/Kg | | 108 | 70 - 125 |
| Trichloroethene | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0453 | | mg/Kg | | 91 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0972 | | mg/Kg | | 97 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *108* | | *75 - 131* |
| *Dibromofluoromethane* | *105* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: LCSD 500-617209/10**
**Matrix: Solid**
**Analysis Batch: 617209**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0518 | | mg/Kg | | 104 | 40 - 150 | 15 | 30 |
| Benzene | 0.0500 | 0.0492 | | mg/Kg | | 98 | 70 - 125 | 1 | 30 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 500-617209/10**
**Matrix: Solid**
**Analysis Batch: 617209**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromodichloromethane | | | 0.0500 | 0.0491 | | mg/Kg | | 98 | 67 - 129 | 0 | 30 |
| Bromoform | | | 0.0500 | 0.0522 | | mg/Kg | | 104 | 68 - 136 | 2 | 30 |
| Bromomethane | | | 0.0500 | 0.0529 | | mg/Kg | | 106 | 70 - 130 | 4 | 30 |
| Carbon disulfide | | | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 129 | 3 | 30 |
| Carbon tetrachloride | | | 0.0500 | 0.0460 | | mg/Kg | | 92 | 75 - 125 | 0 | 30 |
| Chlorobenzene | | | 0.0500 | 0.0499 | | mg/Kg | | 100 | 50 - 150 | 1 | 30 |
| Chloroethane | | | 0.0500 | 0.0472 | | mg/Kg | | 94 | 75 - 125 | 3 | 30 |
| Chloroform | | | 0.0500 | 0.0476 | | mg/Kg | | 95 | 57 - 135 | 1 | 30 |
| Chloromethane | | | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 | 2 | 30 |
| cis-1,2-Dichloroethene | | | 0.0500 | 0.0466 | | mg/Kg | | 93 | 70 - 125 | 1 | 30 |
| cis-1,3-Dichloropropene | | | 0.0500 | 0.0510 | | mg/Kg | | 102 | 70 - 125 | 0 | 30 |
| Dibromochloromethane | | | 0.0500 | 0.0515 | | mg/Kg | | 103 | 69 - 125 | 2 | 30 |
| 1,1-Dichloroethane | | | 0.0500 | 0.0482 | | mg/Kg | | 96 | 70 - 125 | 1 | 30 |
| 1,2-Dichloroethane | | | 0.0500 | 0.0503 | | mg/Kg | | 101 | 70 - 130 | 0 | 30 |
| 1,1-Dichloroethene | | | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 120 | 1 | 30 |
| 1,2-Dichloropropane | | | 0.0500 | 0.0514 | | mg/Kg | | 103 | 70 - 125 | 0 | 30 |
| Ethylbenzene | | | 0.0500 | 0.0496 | | mg/Kg | | 99 | 61 - 136 | 2 | 30 |
| 2-Hexanone | | | 0.0500 | 0.0464 | | mg/Kg | | 93 | 48 - 146 | 19 | 30 |
| Methylene Chloride | | | 0.0500 | 0.0471 | | mg/Kg | | 94 | 70 - 126 | 0 | 30 |
| Methyl Ethyl Ketone | | | 0.0500 | 0.0491 | | mg/Kg | | 98 | 47 - 138 | 18 | 30 |
| methyl isobutyl ketone | | | 0.0500 | 0.0488 | | mg/Kg | | 98 | 50 - 148 | 11 | 30 |
| Methyl tert-butyl ether | | | 0.0500 | 0.0465 | | mg/Kg | | 93 | 50 - 140 | 4 | 30 |
| Styrene | | | 0.0500 | 0.0508 | | mg/Kg | | 102 | 70 - 125 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | | | 0.0500 | 0.0542 | | mg/Kg | | 108 | 70 - 122 | 2 | 30 |
| Tetrachloroethene | | | 0.0500 | 0.0520 | | mg/Kg | | 104 | 70 - 124 | 1 | 30 |
| Toluene | | | 0.0500 | 0.0503 | | mg/Kg | | 101 | 70 - 125 | 1 | 30 |
| trans-1,2-Dichloroethene | | | 0.0500 | 0.0477 | | mg/Kg | | 95 | 70 - 125 | 3 | 30 |
| trans-1,3-Dichloropropene | | | 0.0500 | 0.0513 | | mg/Kg | | 103 | 70 - 125 | 2 | 30 |
| 1,1,1-Trichloroethane | | | 0.0500 | 0.0466 | | mg/Kg | | 93 | 70 - 128 | 2 | 30 |
| 1,1,2-Trichloroethane | | | 0.0500 | 0.0536 | | mg/Kg | | 107 | 70 - 125 | 0 | 30 |
| Trichloroethene | | | 0.0500 | 0.0487 | | mg/Kg | | 97 | 70 - 125 | 0 | 30 |
| Vinyl chloride | | | 0.0500 | 0.0460 | | mg/Kg | | 92 | 70 - 125 | 2 | 30 |
| Xylenes, Total | | | 0.100 | 0.0986 | | mg/Kg | | 99 | 53 - 147 | 2 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *105* | | *75 - 131* |
| *Dibromofluoromethane* | *102* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *110* | | *75 - 124* |

**Lab Sample ID: MB 500-617411/7**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 09/07/21 11:20 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-617411/7**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/07/21 11:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 09/07/21 11:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 09/07/21 11:20 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/07/21 11:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/07/21 11:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 09/07/21 11:20 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *86* | | *75 - 131* | | *09/07/21 11:20* | *1* |
| *Dibromofluoromethane* | *92* | | *75 - 126* | | *09/07/21 11:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *86* | | *70 - 134* | | *09/07/21 11:20* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 124* | | *09/07/21 11:20* | *1* |

**Lab Sample ID: LCS 500-617411/16**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0457 | | mg/Kg | | 91 | 40 - 150 |
| Benzene | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 |
| Bromodichloromethane | 0.0500 | 0.0474 | | mg/Kg | | 95 | 67 - 129 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617411/16**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromoform | 0.0500 | 0.0486 | | mg/Kg | | 97 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0752 | *+ | mg/Kg | | 150 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0460 | | mg/Kg | | 92 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0438 | | mg/Kg | | 88 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0482 | | mg/Kg | | 96 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0640 | *+ | mg/Kg | | 128 | 75 - 125 |
| Chloroform | 0.0500 | 0.0473 | | mg/Kg | | 95 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0335 | *- | mg/Kg | | 67 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0517 | | mg/Kg | | 103 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0422 | | mg/Kg | | 84 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0427 | | mg/Kg | | 85 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0452 | | mg/Kg | | 90 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0525 | | mg/Kg | | 105 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0480 | | mg/Kg | | 96 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0463 | | mg/Kg | | 93 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0461 | | mg/Kg | | 92 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0445 | | mg/Kg | | 89 | 50 - 140 |
| Styrene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0384 | | mg/Kg | | 77 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0503 | | mg/Kg | | 101 | 70 - 124 |
| Toluene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0432 | | mg/Kg | | 86 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0533 | | mg/Kg | | 107 | 70 - 125 |
| Trichloroethene | 0.0500 | 0.0533 | | mg/Kg | | 107 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0407 | | mg/Kg | | 81 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0953 | | mg/Kg | | 95 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *80* | | *75 - 131* |
| *Dibromofluoromethane* | *89* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 124* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-616812/1-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.033 | 0.0060 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Acenaphthylene | ND | | 0.033 | 0.0044 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Anthracene | ND | | 0.033 | 0.0056 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616812/1-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | ND | | 0.033 | 0.0045 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[a]pyrene | ND | | 0.033 | 0.0064 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.0072 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.011 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.0098 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.17 | 0.034 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.17 | 0.050 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.17 | 0.061 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.17 | 0.044 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Butyl benzyl phthalate | ND | | 0.17 | 0.063 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Carbazole | ND | | 0.17 | 0.083 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Chloroaniline | ND | | 0.67 | 0.16 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.33 | 0.11 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Chloronaphthalene | ND | | 0.17 | 0.037 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Chlorophenol | ND | | 0.17 | 0.057 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Chrysene | ND | | 0.033 | 0.0091 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.033 | 0.0064 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Dibenzofuran | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.17 | 0.040 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.17 | 0.037 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.17 | 0.043 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.17 | 0.047 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dichlorophenol | ND | | 0.33 | 0.079 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Diethyl phthalate | ND | | 0.17 | 0.056 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dimethylphenol | ND | | 0.33 | 0.13 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Dimethyl phthalate | ND | | 0.17 | 0.043 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Di-n-butyl phthalate | ND | | 0.17 | 0.051 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.67 | 0.27 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dinitrophenol | ND | | 0.67 | 0.59 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.17 | 0.053 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.17 | 0.065 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Di-n-octyl phthalate | ND | | 0.17 | 0.054 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Fluoranthene | ND | | 0.033 | 0.0062 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Fluorene | ND | | 0.033 | 0.0047 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachlorobenzene | ND | | 0.067 | 0.0077 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachlorobutadiene | ND | | 0.17 | 0.052 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.67 | 0.19 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Hexachloroethane | ND | | 0.17 | 0.051 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.0086 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Isophorone | ND | | 0.17 | 0.037 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Methylnaphthalene | ND | | 0.067 | 0.0061 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Methylphenol | ND | | 0.17 | 0.053 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 3 & 4 Methylphenol | ND | | 0.17 | 0.055 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Naphthalene | ND | | 0.033 | 0.0051 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2-Nitroaniline | ND | | 0.17 | 0.045 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 3-Nitroaniline | ND | | 0.33 | 0.10 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Nitroaniline | ND | | 0.33 | 0.14 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Nitrobenzene | ND | | 0.033 | 0.0083 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-616812/1-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | ND | | 0.33 | 0.079 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 4-Nitrophenol | ND | | 0.67 | 0.32 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.067 | 0.041 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.17 | 0.039 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Pentachlorophenol | ND | | 0.67 | 0.53 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Phenanthrene | ND | | 0.033 | 0.0046 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Phenol | ND | | 0.17 | 0.074 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| Pyrene | ND | | 0.033 | 0.0066 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.17 | 0.036 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.33 | 0.076 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.33 | 0.11 | mg/Kg | | 09/01/21 06:24 | 09/01/21 15:54 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *93* | | *43 - 145* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *2-Fluorophenol* | *97* | | *31 - 166* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *Nitrobenzene-d5* | *84* | | *37 - 147* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *Phenol-d5* | *111* | | *30 - 153* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *Terphenyl-d14* | *92* | | *42 - 157* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |
| *2,4,6-Tribromophenol* | *76* | | *31 - 143* | *09/01/21 06:24* | *09/01/21 15:54* | *1* |

**Lab Sample ID: LCS 500-616812/2-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.33 | 1.18 | | mg/Kg | | 88 | 65 - 124 |
| Acenaphthylene | 1.33 | 1.18 | | mg/Kg | | 89 | 68 - 120 |
| Anthracene | 1.33 | 1.20 | | mg/Kg | | 90 | 70 - 114 |
| Benzo[a]anthracene | 1.33 | 1.27 | | mg/Kg | | 95 | 67 - 122 |
| Benzo[a]pyrene | 1.33 | 1.50 | | mg/Kg | | 112 | 65 - 133 |
| Benzo[b]fluoranthene | 1.33 | 1.35 | | mg/Kg | | 102 | 69 - 129 |
| Benzo[g,h,i]perylene | 1.33 | 1.29 | | mg/Kg | | 97 | 72 - 131 |
| Benzo[k]fluoranthene | 1.33 | 1.28 | | mg/Kg | | 96 | 68 - 127 |
| Bis(2-chloroethoxy)methane | 1.33 | 1.36 | | mg/Kg | | 102 | 60 - 112 |
| Bis(2-chloroethyl)ether | 1.33 | 1.23 | | mg/Kg | | 92 | 55 - 111 |
| Bis(2-ethylhexyl) phthalate | 1.33 | 1.42 | | mg/Kg | | 106 | 72 - 131 |
| 4-Bromophenyl phenyl ether | 1.33 | 1.19 | | mg/Kg | | 89 | 68 - 118 |
| Butyl benzyl phthalate | 1.33 | 1.35 | | mg/Kg | | 101 | 71 - 129 |
| Carbazole | 1.33 | 1.54 | | mg/Kg | | 115 | 65 - 142 |
| 4-Chloroaniline | 1.33 | 1.07 | | mg/Kg | | 80 | 30 - 150 |
| 4-Chloro-3-methylphenol | 1.33 | 1.33 | | mg/Kg | | 100 | 65 - 122 |
| 2-Chloronaphthalene | 1.33 | 1.16 | | mg/Kg | | 87 | 69 - 114 |
| 2-Chlorophenol | 1.33 | 1.25 | | mg/Kg | | 94 | 64 - 110 |
| 4-Chlorophenyl phenyl ether | 1.33 | 1.18 | | mg/Kg | | 89 | 62 - 119 |
| Chrysene | 1.33 | 1.26 | | mg/Kg | | 95 | 63 - 120 |
| Dibenz(a,h)anthracene | 1.33 | 1.27 | | mg/Kg | | 95 | 64 - 131 |
| Dibenzofuran | 1.33 | 1.14 | | mg/Kg | | 85 | 66 - 115 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616812/2-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 1.33 | 1.11 | | mg/Kg | | 83 | 62 - 110 |
| 1,3-Dichlorobenzene | 1.33 | 1.09 | | mg/Kg | | 82 | 65 - 124 |
| 1,4-Dichlorobenzene | 1.33 | 1.10 | | mg/Kg | | 82 | 61 - 110 |
| 3,3'-Dichlorobenzidine | 1.33 | 1.77 | *+ | mg/Kg | | 133 | 35 - 128 |
| 2,4-Dichlorophenol | 1.33 | 1.28 | | mg/Kg | | 96 | 58 - 120 |
| Diethyl phthalate | 1.33 | 1.16 | | mg/Kg | | 87 | 58 - 120 |
| 2,4-Dimethylphenol | 1.33 | 1.28 | | mg/Kg | | 96 | 60 - 110 |
| Dimethyl phthalate | 1.33 | 1.18 | | mg/Kg | | 88 | 69 - 116 |
| Di-n-butyl phthalate | 1.33 | 1.29 | | mg/Kg | | 97 | 65 - 120 |
| 4,6-Dinitro-2-methylphenol | 2.67 | 1.31 | | mg/Kg | | 49 | 10 - 110 |
| 2,4-Dinitrophenol | 2.67 | 0.681 | | mg/Kg | | 26 | 10 - 100 |
| 2,4-Dinitrotoluene | 1.33 | 1.35 | | mg/Kg | | 101 | 69 - 124 |
| 2,6-Dinitrotoluene | 1.33 | 1.24 | | mg/Kg | | 93 | 70 - 123 |
| Di-n-octyl phthalate | 1.33 | 1.71 | | mg/Kg | | 128 | 68 - 134 |
| Fluoranthene | 1.33 | 1.32 | | mg/Kg | | 99 | 62 - 120 |
| Fluorene | 1.33 | 1.18 | | mg/Kg | | 88 | 62 - 120 |
| Hexachlorobenzene | 1.33 | 1.09 | | mg/Kg | | 82 | 63 - 124 |
| Hexachlorobutadiene | 1.33 | 1.10 | | mg/Kg | | 82 | 56 - 120 |
| Hexachlorocyclopentadiene | 1.33 | ND | | mg/Kg | | 12 | 10 - 133 |
| Hexachloroethane | 1.33 | 1.10 | | mg/Kg | | 82 | 60 - 114 |
| Indeno[1,2,3-cd]pyrene | 1.33 | 1.26 | | mg/Kg | | 94 | 68 - 130 |
| Isophorone | 1.33 | 1.24 | | mg/Kg | | 93 | 55 - 110 |
| 2-Methylnaphthalene | 1.33 | 1.14 | | mg/Kg | | 86 | 69 - 112 |
| 2-Methylphenol | 1.33 | 1.23 | | mg/Kg | | 92 | 60 - 120 |
| 3 & 4 Methylphenol | 1.33 | 1.24 | | mg/Kg | | 93 | 57 - 120 |
| Naphthalene | 1.33 | 1.10 | | mg/Kg | | 83 | 63 - 110 |
| 2-Nitroaniline | 1.33 | 1.36 | | mg/Kg | | 102 | 57 - 124 |
| 3-Nitroaniline | 1.33 | 1.42 | | mg/Kg | | 106 | 40 - 122 |
| 4-Nitroaniline | 1.33 | 1.73 | | mg/Kg | | 130 | 60 - 160 |
| Nitrobenzene | 1.33 | 1.24 | | mg/Kg | | 93 | 60 - 116 |
| 2-Nitrophenol | 1.33 | 1.25 | | mg/Kg | | 93 | 60 - 120 |
| 4-Nitrophenol | 2.67 | 2.03 | | mg/Kg | | 76 | 30 - 122 |
| N-Nitrosodi-n-propylamine | 1.33 | 1.12 | | mg/Kg | | 84 | 56 - 118 |
| N-Nitrosodiphenylamine | 1.33 | 1.43 | | mg/Kg | | 107 | 65 - 112 |
| 2,2'-oxybis[1-chloropropane] | 1.33 | 1.31 | | mg/Kg | | 98 | 40 - 124 |
| Pentachlorophenol | 2.67 | 1.35 | | mg/Kg | | 51 | 13 - 112 |
| Phenanthrene | 1.33 | 1.18 | | mg/Kg | | 89 | 62 - 120 |
| Phenol | 1.33 | 1.26 | | mg/Kg | | 95 | 56 - 122 |
| Pyrene | 1.33 | 1.18 | | mg/Kg | | 88 | 61 - 128 |
| 1,2,4-Trichlorobenzene | 1.33 | 1.15 | | mg/Kg | | 86 | 66 - 117 |
| 2,4,5-Trichlorophenol | 1.33 | 1.21 | | mg/Kg | | 91 | 50 - 120 |
| 2,4,6-Trichlorophenol | 1.33 | 1.14 | | mg/Kg | | 85 | 57 - 120 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *85* | | *43 - 145* |
| *2-Fluorophenol* | *95* | | *31 - 166* |
| *Nitrobenzene-d5* | *88* | | *37 - 147* |
| *Phenol-d5* | *106* | | *30 - 153* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-616812/2-A**
**Matrix: Solid**
**Analysis Batch: 616935**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616812**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Terphenyl-d14* | *92* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *82* | | *31 - 143* |

## Method: 8081B - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 500-616666/1-A**
**Matrix: Solid**
**Analysis Batch: 616963**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0017 | 0.0012 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| alpha-BHC | ND | | 0.0017 | 0.00095 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| beta-BHC | ND | | 0.0017 | 0.0014 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| cis-Chlordane | ND | | 0.0017 | 0.00090 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| 4,4'-DDD | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| 4,4'-DDE | ND | | 0.0017 | 0.00087 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| 4,4'-DDT | ND | | 0.0017 | 0.00080 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| delta-BHC | ND | | 0.0017 | 0.00081 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Dieldrin | ND | | 0.0017 | 0.00088 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endosulfan I | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endosulfan II | ND | | 0.0017 | 0.00093 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endosulfan sulfate | ND | | 0.0017 | 0.00093 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endrin | ND | | 0.0017 | 0.00086 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endrin aldehyde | ND | | 0.0017 | 0.00096 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Endrin ketone | ND | | 0.0017 | 0.00082 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0017 | 0.00084 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Heptachlor | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Heptachlor epoxide | ND | | 0.0017 | 0.00091 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Methoxychlor | ND | | 0.0083 | 0.0011 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| Toxaphene | ND | | 0.017 | 0.0067 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |
| trans-Chlordane | ND | | 0.0017 | 0.00097 | mg/Kg | | 08/31/21 08:03 | 09/01/21 22:30 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *136* | | *33 - 148* | *08/31/21 08:03* | *09/01/21 22:30* | *1* |
| *Tetrachloro-m-xylene* | *103* | | *30 - 121* | *08/31/21 08:03* | *09/01/21 22:30* | *1* |

**Lab Sample ID: LCS 500-616666/2-A**
**Matrix: Solid**
**Analysis Batch: 616963**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aldrin | 0.0133 | 0.0109 | | mg/Kg | | 82 | 52 - 122 |
| alpha-BHC | 0.0133 | 0.0122 | | mg/Kg | | 92 | 50 - 123 |
| beta-BHC | 0.0133 | 0.0121 | | mg/Kg | | 91 | 44 - 140 |
| cis-Chlordane | 0.0133 | 0.0122 | | mg/Kg | | 91 | 52 - 129 |
| 4,4'-DDD | 0.0133 | 0.0142 | | mg/Kg | | 107 | 47 - 137 |
| 4,4'-DDE | 0.0133 | 0.0128 | | mg/Kg | | 96 | 50 - 130 |
| 4,4'-DDT | 0.0133 | 0.0131 | | mg/Kg | | 98 | 46 - 143 |

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: LCS 500-616666/2-A**
**Matrix: Solid**
**Analysis Batch: 616963**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| delta-BHC | 0.0133 | 0.0128 | | mg/Kg | | 96 | 57 - 125 |
| Dieldrin | 0.0133 | 0.0129 | | mg/Kg | | 97 | 51 - 133 |
| Endosulfan I | 0.0133 | 0.0125 | | mg/Kg | | 94 | 30 - 120 |
| Endosulfan II | 0.0133 | 0.0134 | | mg/Kg | | 100 | 30 - 120 |
| Endosulfan sulfate | 0.0133 | 0.0111 | | mg/Kg | | 83 | 42 - 150 |
| Endrin | 0.0133 | 0.0128 | | mg/Kg | | 96 | 43 - 144 |
| Endrin aldehyde | 0.0133 | 0.0120 | | mg/Kg | | 90 | 39 - 131 |
| Endrin ketone | 0.0133 | 0.0129 | | mg/Kg | | 96 | 51 - 135 |
| gamma-BHC (Lindane) | 0.0133 | 0.0119 | | mg/Kg | | 90 | 50 - 122 |
| Heptachlor | 0.0133 | 0.0119 | | mg/Kg | | 89 | 53 - 129 |
| Heptachlor epoxide | 0.0133 | 0.0121 | | mg/Kg | | 90 | 50 - 139 |
| Methoxychlor | 0.0133 | 0.0127 | | mg/Kg | | 95 | 45 - 144 |
| trans-Chlordane | 0.0133 | 0.0114 | | mg/Kg | | 85 | 52 - 132 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *103* | | *33 - 148* |
| *Tetrachloro-m-xylene* | *81* | | *30 - 121* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 500-616666/1-A**
**Matrix: Solid**
**Analysis Batch: 616981**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.017 | 0.0066 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1221 | ND | | 0.017 | 0.0066 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1232 | ND | | 0.017 | 0.0045 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1242 | ND | | 0.017 | 0.0065 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1248 | ND | | 0.017 | 0.0079 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1254 | ND | | 0.017 | 0.0057 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| PCB-1260 | ND | | 0.017 | 0.0063 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.017 | 0.0045 | mg/Kg | | 08/31/21 08:03 | 09/02/21 02:08 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *63* | | *49 - 129* | *08/31/21 08:03* | *09/02/21 02:08* | *1* |
| *DCB Decachlorobiphenyl* | *89* | | *37 - 121* | *08/31/21 08:03* | *09/02/21 02:08* | *1* |

**Lab Sample ID: LCS 500-616666/3-A**
**Matrix: Solid**
**Analysis Batch: 616981**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| PCB-1016 | 0.167 | 0.135 | | mg/Kg | | 81 | 57 - 120 |
| PCB-1260 | 0.167 | 0.155 | | mg/Kg | | 93 | 61 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *69* | | *49 - 129* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: LCS 500-616666/3-A**
**Matrix: Solid**
**Analysis Batch: 616981**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 616666**

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| DCB Decachlorobiphenyl | 93 | | 37 - 121 |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-617296/1-A**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | | 20 | 8.2 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Antimony | ND | | 2.0 | 0.39 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Arsenic | ND | | 1.0 | 0.34 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Barium | ND | | 1.0 | 0.11 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Beryllium | ND | | 0.40 | 0.093 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Cadmium | 0.0488 | J | 0.20 | 0.036 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Calcium | ND | | 20 | 3.4 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Chromium | ND | | 1.0 | 0.50 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Cobalt | ND | | 0.50 | 0.13 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Copper | ND | | 1.0 | 0.28 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Iron | ND | | 20 | 10 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Lead | ND | | 0.50 | 0.23 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Magnesium | ND | | 10 | 5.0 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Manganese | ND | | 1.0 | 0.15 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Nickel | ND | | 1.0 | 0.29 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Potassium | ND | | 50 | 18 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Selenium | ND | | 1.0 | 0.59 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Silver | ND | | 0.50 | 0.13 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Sodium | 29.0 | J | 100 | 15 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Thallium | ND | | 1.0 | 0.50 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Vanadium | ND | | 0.50 | 0.12 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |
| Zinc | ND | | 2.0 | 0.88 | mg/Kg | | 09/03/21 13:37 | 09/07/21 14:14 | 1 |

**Lab Sample ID: LCS 500-617296/2-A**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aluminum | 200 | 194 | | mg/Kg | | 97 | 80 - 120 |
| Antimony | 50.0 | 48.6 | | mg/Kg | | 97 | 80 - 120 |
| Arsenic | 10.0 | 9.10 | | mg/Kg | | 91 | 80 - 120 |
| Barium | 200 | 197 | | mg/Kg | | 99 | 80 - 120 |
| Beryllium | 5.00 | 4.58 | | mg/Kg | | 92 | 80 - 120 |
| Cadmium | 5.00 | 4.56 | | mg/Kg | | 91 | 80 - 120 |
| Calcium | 1000 | 959 | | mg/Kg | | 96 | 80 - 120 |
| Chromium | 20.0 | 19.6 | | mg/Kg | | 98 | 80 - 120 |
| Cobalt | 50.0 | 48.8 | | mg/Kg | | 98 | 80 - 120 |
| Copper | 25.0 | 24.1 | | mg/Kg | | 96 | 80 - 120 |
| Iron | 100 | 102 | | mg/Kg | | 102 | 80 - 120 |
| Lead | 10.0 | 8.96 | | mg/Kg | | 90 | 80 - 120 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 500-617296/2-A**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Magnesium | 1000 | 925 | | mg/Kg | | 92 | 80 - 120 |
| Manganese | 50.0 | 45.9 | | mg/Kg | | 92 | 80 - 120 |
| Nickel | 50.0 | 48.3 | | mg/Kg | | 97 | 80 - 120 |
| Potassium | 1000 | 986 | | mg/Kg | | 99 | 80 - 120 |
| Selenium | 10.0 | 8.25 | | mg/Kg | | 82 | 80 - 120 |
| Silver | 5.00 | 4.59 | | mg/Kg | | 92 | 80 - 120 |
| Sodium | 1000 | 979 | | mg/Kg | | 98 | 80 - 120 |
| Thallium | 10.0 | 8.88 | | mg/Kg | | 89 | 80 - 120 |
| Vanadium | 50.0 | 51.7 | | mg/Kg | | 103 | 80 - 120 |
| Zinc | 50.0 | 48.2 | | mg/Kg | | 96 | 80 - 120 |

**Lab Sample ID: 500-204508-1 MS**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: B-30**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6700 | | 226 | 10400 | 4 | mg/Kg | ☼ | 1617 | 75 - 125 |
| Antimony | 1.0 | J F1 | 56.4 | 18.4 | F1 | mg/Kg | ☼ | 31 | 75 - 125 |
| Arsenic | 8.2 | F1 | 11.3 | 16.1 | F1 | mg/Kg | ☼ | 70 | 75 - 125 |
| Barium | 32 | | 226 | 225 | | mg/Kg | ☼ | 85 | 75 - 125 |
| Beryllium | 0.59 | | 5.64 | 5.31 | | mg/Kg | ☼ | 83 | 75 - 125 |
| Cadmium | ND | | 5.64 | 4.72 | | mg/Kg | ☼ | 84 | 75 - 125 |
| Calcium | 60000 | | 1130 | 71300 | E 4 | mg/Kg | ☼ | 1013 | 75 - 125 |
| Chromium | 12 | | 22.6 | 32.1 | | mg/Kg | ☼ | 89 | 75 - 125 |
| Cobalt | 11 | | 56.4 | 62.5 | | mg/Kg | ☼ | 91 | 75 - 125 |
| Copper | 22 | | 28.2 | 45.6 | | mg/Kg | ☼ | 83 | 75 - 125 |
| Iron | 17000 | | 113 | 16600 | 4 | mg/Kg | ☼ | 53 | 75 - 125 |
| Lead | 11 | | 11.3 | 20.3 | | mg/Kg | ☼ | 82 | 75 - 125 |
| Magnesium | 31000 | | 1130 | 38100 | 4 | mg/Kg | ☼ | 582 | 75 - 125 |
| Manganese | 420 | | 56.4 | 468 | 4 | mg/Kg | ☼ | 87 | 75 - 125 |
| Nickel | 28 | | 56.4 | 77.9 | | mg/Kg | ☼ | 89 | 75 - 125 |
| Potassium | 1900 | F1 | 1130 | 4140 | F1 | mg/Kg | ☼ | 199 | 75 - 125 |
| Selenium | ND | F1 | 11.3 | 8.43 | | mg/Kg | ☼ | 75 | 75 - 125 |
| Silver | 0.20 | J | 5.64 | 5.01 | | mg/Kg | ☼ | 85 | 75 - 125 |
| Sodium | 330 | B | 1130 | 1390 | | mg/Kg | ☼ | 93 | 75 - 125 |
| Thallium | ND | | 11.3 | 8.98 | | mg/Kg | ☼ | 80 | 75 - 125 |
| Vanadium | 17 | | 56.4 | 66.6 | | mg/Kg | ☼ | 87 | 75 - 125 |
| Zinc | 44 | F1 | 56.4 | 118 | F1 | mg/Kg | ☼ | 132 | 75 - 125 |

**Lab Sample ID: 500-204508-1 MSD**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: B-30**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6700 | | 218 | 10600 | 4 | mg/Kg | ☼ | 1786 | 75 - 125 | 2 | 20 |
| Antimony | 1.0 | J F1 | 54.6 | 17.7 | F1 | mg/Kg | ☼ | 31 | 75 - 125 | 4 | 20 |
| Arsenic | 8.2 | F1 | 10.9 | 15.6 | F1 | mg/Kg | ☼ | 68 | 75 - 125 | 3 | 20 |
| Barium | 32 | | 218 | 211 | | mg/Kg | ☼ | 82 | 75 - 125 | 6 | 20 |
| Beryllium | 0.59 | | 5.46 | 5.08 | | mg/Kg | ☼ | 82 | 75 - 125 | 4 | 20 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 500-204508-1 MSD**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: B-30**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | | 5.46 | 4.42 | | mg/Kg | ☼ | 81 | 75 - 125 | 6 | 20 |
| Calcium | 60000 | | 1090 | 58200 | 4 | mg/Kg | ☼ | -150 | 75 - 125 | 20 | 20 |
| Chromium | 12 | | 21.8 | 32.4 | | mg/Kg | ☼ | 93 | 75 - 125 | 1 | 20 |
| Cobalt | 11 | | 54.6 | 61.4 | | mg/Kg | ☼ | 92 | 75 - 125 | 2 | 20 |
| Copper | 22 | | 27.3 | 45.3 | | mg/Kg | ☼ | 84 | 75 - 125 | 1 | 20 |
| Iron | 17000 | | 109 | 17500 | 4 | mg/Kg | ☼ | 895 | 75 - 125 | 5 | 20 |
| Lead | 11 | | 10.9 | 20.8 | | mg/Kg | ☼ | 89 | 75 - 125 | 2 | 20 |
| Magnesium | 31000 | | 1090 | 31400 | 4 | mg/Kg | ☼ | -4 | 75 - 125 | 19 | 20 |
| Manganese | 420 | | 54.6 | 420 | 4 | mg/Kg | ☼ | 3 | 75 - 125 | 11 | 20 |
| Nickel | 28 | | 54.6 | 77.7 | | mg/Kg | ☼ | 92 | 75 - 125 | 0 | 20 |
| Potassium | 1900 | F1 | 1090 | 4100 | F1 | mg/Kg | ☼ | 202 | 75 - 125 | 1 | 20 |
| Selenium | ND | F1 | 10.9 | 7.99 | F1 | mg/Kg | ☼ | 73 | 75 - 125 | 5 | 20 |
| Silver | 0.20 | J | 5.46 | 4.72 | | mg/Kg | ☼ | 83 | 75 - 125 | 6 | 20 |
| Sodium | 330 | B | 1090 | 1300 | | mg/Kg | ☼ | 89 | 75 - 125 | 6 | 20 |
| Thallium | ND | | 10.9 | 8.56 | | mg/Kg | ☼ | 78 | 75 - 125 | 5 | 20 |
| Vanadium | 17 | | 54.6 | 65.6 | | mg/Kg | ☼ | 88 | 75 - 125 | 2 | 20 |
| Zinc | 44 | F1 | 54.6 | 98.7 | | mg/Kg | ☼ | 101 | 75 - 125 | 18 | 20 |

**Lab Sample ID: 500-204508-1 DU**
**Matrix: Solid**
**Analysis Batch: 617530**

**Client Sample ID: B-30**
**Prep Type: Total/NA**
**Prep Batch: 617296**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 6700 | | | 7020 | | mg/Kg | ☼ | | | 4 | 20 |
| Antimony | 1.0 | J F1 | | 0.567 | J F5 | mg/Kg | ☼ | | | 56 | 20 |
| Arsenic | 8.2 | F1 | | 5.30 | F3 | mg/Kg | ☼ | | | 43 | 20 |
| Barium | 32 | | | 35.5 | | mg/Kg | ☼ | | | 10 | 20 |
| Beryllium | 0.59 | | | 0.564 | | mg/Kg | ☼ | | | 5 | 20 |
| Cadmium | ND | | | 0.0451 | J | mg/Kg | ☼ | | | NC | 20 |
| Calcium | 60000 | | | 59900 | | mg/Kg | ☼ | | | 0 | 20 |
| Chromium | 12 | | | 12.2 | | mg/Kg | ☼ | | | 1 | 20 |
| Cobalt | 11 | | | 9.52 | | mg/Kg | ☼ | | | 14 | 20 |
| Copper | 22 | | | 18.8 | | mg/Kg | ☼ | | | 17 | 20 |
| Iron | 17000 | | | 15000 | | mg/Kg | ☼ | | | 10 | 20 |
| Lead | 11 | | | 9.84 | | mg/Kg | ☼ | | | 12 | 20 |
| Magnesium | 31000 | | | 32700 | | mg/Kg | ☼ | | | 4 | 20 |
| Manganese | 420 | | | 323 | F3 | mg/Kg | ☼ | | | 26 | 20 |
| Nickel | 28 | | | 24.9 | | mg/Kg | ☼ | | | 10 | 20 |
| Potassium | 1900 | F1 | | 1910 | | mg/Kg | ☼ | | | 0.8 | 20 |
| Selenium | ND | F1 | | ND | | mg/Kg | ☼ | | | NC | 20 |
| Silver | 0.20 | J | | 0.181 | J | mg/Kg | ☼ | | | 11 | 20 |
| Sodium | 330 | B | | 393 | | mg/Kg | ☼ | | | 17 | 20 |
| Thallium | ND | | | ND | | mg/Kg | ☼ | | | NC | 20 |
| Vanadium | 17 | | | 15.7 | | mg/Kg | ☼ | | | 10 | 20 |
| Zinc | 44 | F1 | | 45.8 | | mg/Kg | ☼ | | | 5 | 20 |

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-617085/12-A**
**Matrix: Solid**
**Analysis Batch: 617264**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617085**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.017 | 0.0056 | mg/Kg | | 09/02/21 14:40 | 09/03/21 08:11 | 1 |

**Lab Sample ID: LCS 500-617085/13-A**
**Matrix: Solid**
**Analysis Batch: 617264**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617085**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.167 | 0.184 | | mg/Kg | | 111 | 80 - 120 |

## Method: 9012B - Cyanide, Total andor Amenable

**Lab Sample ID: MB 500-617116/1-A**
**Matrix: Solid**
**Analysis Batch: 617235**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617116**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.24 | 0.12 | mg/Kg | | 09/02/21 15:23 | 09/02/21 16:22 | 1 |

**Lab Sample ID: HLCS 500-617116/2-A**
**Matrix: Solid**
**Analysis Batch: 617235**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617116**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 9.41 | 10.3 | | mg/Kg | | 110 | 90 - 110 |

**Lab Sample ID: LCS 500-617116/3-A**
**Matrix: Solid**
**Analysis Batch: 617235**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617116**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 2.40 | 2.70 | | mg/Kg | | 112 | 85 - 115 |

**Lab Sample ID: LLCS 500-617116/4-A**
**Matrix: Solid**
**Analysis Batch: 617235**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617116**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 1.18 | 1.37 | | mg/Kg | | 116 | 75 - 125 |

**Lab Sample ID: 500-204508-3 MS**
**Matrix: Solid**
**Analysis Batch: 617235**

**Client Sample ID: B-32**
**Prep Type: Total/NA**
**Prep Batch: 617116**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 1.21 | 1.03 | | mg/Kg | ☼ | 85 | 75 - 125 |

## Method: 9012B - Cyanide, Total andor Amenable (Continued)

**Lab Sample ID: 500-204508-3 MSD**
**Matrix: Solid**
**Analysis Batch: 617235**

**Client Sample ID: B-32**
**Prep Type: Total/NA**
**Prep Batch: 617116**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 1.29 | 1.15 | | mg/Kg | ☼ | 89 | 75 - 125 | 10 | 20 |

## Method: 9045D - pH

**Lab Sample ID: 500-204508-1 DU**
**Matrix: Solid**
**Analysis Batch: 616867**

**Client Sample ID: B-30**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 8.5 | | | 8.4 | | SU | | | | 0.6 | |

## Client Sample ID: B-30
**Lab Sample ID: 500-204508-1**
**Date Collected: 08/27/21 10:30**
**Matrix: Solid**
**Date Received: 08/30/21 12:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:23 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616717 | 08/31/21 12:25 | LWN | TAL CHI |

## Client Sample ID: B-30
**Lab Sample ID: 500-204508-1**
**Date Collected: 08/27/21 10:30**
**Matrix: Solid**
**Date Received: 08/30/21 12:45**
**Percent Solids: 86.1**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616586 | 08/27/21 12:40 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617031 | 09/02/21 13:55 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 22:13 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617296 | 09/03/21 13:37 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617530 | 09/07/21 14:21 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617085 | 09/02/21 14:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617264 | 09/03/21 08:23 | MJG | TAL CHI |

## Client Sample ID: B-31
**Lab Sample ID: 500-204508-2**
**Date Collected: 08/27/21 11:00**
**Matrix: Solid**
**Date Received: 08/30/21 12:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:28 | SMO | TAL CHI |
| Total/NA | Analysis | Moisture | | 1 | 616717 | 08/31/21 12:25 | LWN | TAL CHI |

## Client Sample ID: B-31
**Lab Sample ID: 500-204508-2**
**Date Collected: 08/27/21 11:00**
**Matrix: Solid**
**Date Received: 08/30/21 12:45**
**Percent Solids: 84.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616586 | 08/27/21 11:00 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617411 | 09/07/21 12:12 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 22:36 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617296 | 09/03/21 13:37 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617530 | 09/07/21 14:37 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617085 | 09/02/21 14:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617264 | 09/03/21 08:24 | MJG | TAL CHI |

## Client Sample ID: B-32
**Lab Sample ID: 500-204508-3**
**Date Collected: 08/27/21 11:15**
**Matrix: Solid**
**Date Received: 08/30/21 12:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 616867 | 08/31/21 18:31 | SMO | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## Client Sample ID: B-32
**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

## Lab Sample ID: 500-204508-3
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 616717 | 08/31/21 12:25 | LWN | TAL CHI |

## Client Sample ID: B-32
**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

## Lab Sample ID: 500-204508-3
**Matrix: Solid**
**Percent Solids: 92.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616586 | 08/27/21 12:40 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617209 | 09/03/21 13:57 | STW | TAL CHI |
| Total/NA | Prep | 3541 | | | 616812 | 09/01/21 06:24 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 616935 | 09/01/21 23:00 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 616963 | 09/02/21 02:58 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 616666 | 08/31/21 08:03 | SMD | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 616981 | 09/02/21 05:59 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617296 | 09/03/21 13:37 | BDE | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617530 | 09/07/21 14:40 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617085 | 09/02/21 14:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617264 | 09/03/21 08:26 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617116 | 09/02/21 15:23 | SB | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617235 | 09/02/21 16:51 | PSP | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

500-204508 COC

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | | COC No |
|---|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact: Jim Knapp | | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | | Job No 500-204508 |
| Buffalo Grove, IL 60089 | Calendar ( C ) or Work Days (W) | | | |
| Phone | ☐ 2 weeks | | | SDG No |
| 224-478-9420 FAX 847 279-0369 | ☒ Standard | | | |
| Project Name Cloud HQ | ☐ 3 day | | | |
| Site 53 2861-B | ☐ 1 day | | | |
| P O # 53 2861-B | | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-30 | 8/27/21 | 1030 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| B-31 | 8/27/21 | 1100 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| B-32 | 8/27/21 | 1115 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |
| | 8/27/21 | | Grab | Soil | Kit | | | | | | | | | | | | |

3 22 1

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B Unknown ☒

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

**Special Instructions/QC Requirements & Comments:**

DI Water in freezer 8/27 @1240 0.5 → 0.5

| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
|---|---|---|---|---|---|
| | ECS Midwest | 8/30 | | | 8/30/21 1100 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | TA 8/30/21 | 1245 | | | 8/30/21 1245 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | | | | |

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204508-1

**Login Number: 204508**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | -0.5 samples not frozen |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204508-2
Client Project/Site: Cloud HQ

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/22/2021 3:11:26 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Job ID: 500-204508-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204508-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/30/2021 12:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.5º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Client Sample ID: B-32

## Lab Sample ID: 500-204508-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.015 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 1311 | TCLP Extraction | SW846 | TAL CHI |
| 3010A | Preparation, Total Metals | SW846 | TAL CHI |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204508-3 | B-32 | Solid | 08/27/21 11:15 | 08/30/21 12:45 |

# Client Sample Results

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Client Sample ID: B-32

**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

## Lab Sample ID: 500-204508-3

**Matrix: Solid**

### Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.015 | J | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:07 | 1 |

# Definitions/Glossary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Metals

### Leach Batch: 619220

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | TCLP | Solid | 1311 | |
| LB 500-619220/2-B | Method Blank | TCLP | Solid | 1311 | |

### Prep Batch: 619477

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | TCLP | Solid | 3010A | 619220 |
| LB 500-619220/2-B | Method Blank | TCLP | Solid | 3010A | 619220 |
| LCS 500-619477/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |

### Analysis Batch: 619755

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204508-3 | B-32 | TCLP | Solid | 6010B | 619477 |
| LB 500-619220/2-B | Method Blank | TCLP | Solid | 6010B | 619477 |
| LCS 500-619477/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 619477 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Method: 6010B - Metals (ICP)

**Lab Sample ID: LCS 500-619477/2-A**
**Matrix: Solid**
**Analysis Batch: 619755**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 619477**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cobalt | | | 0.500 | 0.518 | | mg/L | | 104 | 80 - 120 | | |

**Lab Sample ID: LB 500-619220/2-B**
**Matrix: Solid**
**Analysis Batch: 619755**

**Client Sample ID: Method Blank**
**Prep Type: TCLP**
**Prep Batch: 619477**

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | ND | | 0.025 | 0.010 | mg/L | | 09/21/21 07:42 | 09/21/21 16:00 | 1 |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Client Sample ID: B-32

**Date Collected: 08/27/21 11:15**
**Date Received: 08/30/21 12:45**

## Lab Sample ID: 500-204508-3

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| TCLP | Leach | 1311 | | | 619220 | 09/17/21 15:07 | EA | TAL CHI |
| TCLP | Prep | 3010A | | | 619477 | 09/21/21 07:42 | BDE | TAL CHI |
| TCLP | Analysis | 6010B | | 1 | 619755 | 09/21/21 16:07 | JJB | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ

Job ID: 500-204508-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204508-2

**Login Number: 204508**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | -0.5 samples not frozen |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

**APPENDIX I**
**Analytical Laboratory Reports**

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# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-204605-1
Client Project/Site: Cloud HQ (53: 2861-B)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Mike McGee

*Authorized for release by:*
*9/9/2021 3:15:21 PM*

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-204605-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-204605-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 9/1/2021 1:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6º C.

**GC/MS VOA**
Method 8260B: The following samples were first analyzed low level for 8260. All provided low level vials had internal standard failures and yielded no usable data. The high level methanol vial was analyzed, and internal standards were acceptable. This high level analysis was performed at a 1/50 dilution. Elevated reporting limits are provided.B-18D (500-204605-5)

Method 8260B: The laboratory control sample (LCS) for 617411 recovered outside control limits for the following analytes: Chloromethane, Chloroethane, and Bromomethane. These analytes were not detected in the associated samples; and the data have been reported.B-33 (500-204605-1), B-34 (500-204605-2), B-7D (500-204605-4), B-20D (500-204605-6) and B-23D (500-204605-7)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC/MS Semi VOA**
Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-617418 was outside the method criteria for the following analyte(s): multi analytes. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The following samples were diluted due to the nature of the sample matrix: B-33 (500-204605-1), (500-204605-F-1-B MS) and (500-204605-F-1-C MSD). Elevated reporting limits (RLs) are provided.

Method 8270D: The following samples were diluted to bring the concentration of target analytes within the calibration range: B-34 (500-204605-2) and B-14 (500-204605-3). Elevated reporting limits (RLs) are provided.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-617626 was outside the method criteria for the following analyte(s): 4-Nitrophenol, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-617626 was outside the method criteria for the following analyte(s): 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline and Di-n-butyl phthalate. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 500-617169 and analytical batch 500-617626 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC Semi VOA**
Method 8082A: The following sample contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor PCB-1254: B-18D (500-204605-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**

## Job ID: 500-204605-1 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-33 — Lab Sample ID: 500-204605-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 0.0018 | J | 0.0058 | 0.0012 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Acenaphthene | 0.085 | | 0.079 | 0.014 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 0.017 | J F2 | 0.079 | 0.010 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Anthracene | 0.24 | | 0.079 | 0.013 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 1.2 | F1 | 0.079 | 0.011 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 1.5 | F1 | 0.079 | 0.015 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 2.0 | F1 | 0.079 | 0.017 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.74 | F1 F2 | 0.079 | 0.026 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.83 | F1 | 0.079 | 0.023 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Bis(2-ethylhexyl) phthalate | 0.15 | J F2 | 0.40 | 0.15 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Carbazole | 0.28 | J | 0.40 | 0.20 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Chrysene | 1.5 | F1 | 0.079 | 0.022 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.19 | F1 F2 | 0.079 | 0.015 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Fluoranthene | 2.8 | F1 | 0.079 | 0.015 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Fluorene | 0.083 | | 0.079 | 0.011 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.71 | F1 F2 | 0.079 | 0.021 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Phenanthrene | 1.3 | F1 | 0.079 | 0.011 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Pyrene | 2.1 | F1 | 0.079 | 0.016 | mg/Kg | 2 | ☼ | 8270D | Total/NA |
| Arsenic | 7.4 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 96 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.37 | B | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 28 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 39 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Selenium | 0.71 | J | 1.1 | 0.64 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.36 | J | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.098 | | 0.019 | 0.0063 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-34 — Lab Sample ID: 500-204605-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.012 | J | 0.025 | 0.011 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Carbon disulfide | 0.0062 | J | 0.0064 | 0.0013 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Acenaphthene | 0.85 | | 0.040 | 0.0072 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 0.016 | J | 0.040 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 1.3 | | 0.040 | 0.0067 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 1.4 | | 0.040 | 0.013 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 2.1 | | 0.040 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Bis(2-ethylhexyl) phthalate | 0.24 | | 0.20 | 0.073 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Carbazole | 1.1 | | 0.20 | 0.10 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.53 | | 0.040 | 0.0077 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenzofuran | 0.30 | | 0.20 | 0.047 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.63 | | 0.040 | 0.0056 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 1.4 | | 0.040 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.095 | | 0.080 | 0.0073 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 0.079 | | 0.040 | 0.0061 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene - DL | 4.3 | | 0.20 | 0.027 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene - DL | 4.4 | | 0.20 | 0.039 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene - DL | 6.1 | | 0.20 | 0.043 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Chrysene - DL | 4.8 | | 0.20 | 0.054 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Fluoranthene - DL | 9.9 | | 0.20 | 0.037 | mg/Kg | 5 | ☼ | 8270D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

## Client Sample ID: B-34 (Continued) — Lab Sample ID: 500-204605-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene - DL | 6.9 | | 0.20 | 0.028 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Pyrene - DL | 7.3 | | 0.20 | 0.040 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Arsenic | 6.8 | | 1.0 | 0.36 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 110 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.50 | B | 0.21 | 0.037 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 22 | | 1.0 | 0.51 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 53 | | 0.52 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.36 | J | 0.52 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.11 | | 0.019 | 0.0064 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.3 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-14 — Lab Sample ID: 500-204605-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 0.012 | J | 0.039 | 0.0061 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 0.016 | J | 0.039 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthene | 0.19 | | 0.039 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.18 | | 0.039 | 0.0055 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.47 | | 0.039 | 0.0066 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 2.5 | | 0.039 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 1.6 | | 0.039 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.95 | | 0.039 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.29 | | 0.039 | 0.0076 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.93 | | 0.039 | 0.013 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene - DL | 3.5 | | 0.20 | 0.027 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Fluoranthene - DL | 6.4 | | 0.20 | 0.036 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Pyrene - DL | 4.5 | | 0.20 | 0.039 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Chrysene - DL | 2.9 | | 0.20 | 0.054 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene - DL | 4.0 | | 0.20 | 0.042 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene - DL | 2.8 | | 0.20 | 0.038 | mg/Kg | 5 | ☼ | 8270D | Total/NA |
| Lead | 35 | | 0.57 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| pH | 7.4 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-7D — Lab Sample ID: 500-204605-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.011 | J | 0.013 | 0.0058 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Carbon disulfide | 0.0025 | J | 0.0033 | 0.00069 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Acenaphthene | 0.0077 | J | 0.037 | 0.0066 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.013 | J | 0.037 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.016 | J | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.0096 | J | 0.074 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.035 | J | 0.037 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.011 | J | 0.037 | 0.0073 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Aluminum | 12000 | | 22 | 8.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 0.86 | J | 2.2 | 0.42 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 8.7 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 44 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.93 | | 0.44 | 0.10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.049 | J B | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 70000 | | 22 | 3.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 18 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-7D (Continued)

## Lab Sample ID: 500-204605-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 17 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 27 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 22000 | | 22 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 16 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 38000 | | 11 | 5.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 510 | | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 39 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3400 | | 55 | 19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 220 | | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Thallium | 0.54 | J | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 22 | | 0.55 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 57 | | 2.2 | 0.96 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.020 | | 0.019 | 0.0062 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.9 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-18D

## Lab Sample ID: 500-204605-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[g,h,i]perylene | 0.019 | J | 0.037 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.025 | J | 0.037 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0076 | J | 0.037 | 0.0053 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.012 | J | 0.076 | 0.0069 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.048 | | 0.037 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.018 | J | 0.037 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| PCB-1254 | 0.013 | J | 0.018 | 0.0062 | mg/Kg | 1 | ☼ | 8082A | Total/NA |
| Polychlorinated biphenyls, Total | 0.013 | J | 0.018 | 0.0050 | mg/Kg | 1 | ☼ | 8082A | Total/NA |
| Aluminum | 12000 | | 23 | 9.3 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 0.89 | J | 2.3 | 0.44 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 8.3 | | 1.1 | 0.39 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 44 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.88 | | 0.45 | 0.11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 64000 | | 23 | 3.8 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 18 | | 1.1 | 0.56 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 14 | | 0.57 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 24 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 20000 | | 23 | 12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 13 | | 0.57 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 35000 | | 11 | 5.6 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 430 | | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 35 | | 1.1 | 0.33 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3300 | | 57 | 20 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Silver | 0.21 | J | 0.57 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 230 | | 110 | 17 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 23 | | 0.57 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 53 | | 2.3 | 0.99 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.020 | | 0.018 | 0.0061 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.0 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-20D

## Lab Sample ID: 500-204605-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.0096 | J | 0.016 | 0.0068 | mg/Kg | 1 | ☼ | 8260B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-20D (Continued)

## Lab Sample ID: 500-204605-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 0.0017 | J | 0.0039 | 0.00082 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Chrysene | 0.015 | J | 0.036 | 0.0099 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.0095 | J | 0.073 | 0.0067 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.029 | J | 0.036 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.012 | J | 0.036 | 0.0072 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Aluminum | 8500 | | 22 | 8.9 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 1.1 | J | 2.2 | 0.43 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 9.4 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 30 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.79 | | 0.44 | 0.10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 6.8 | B | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 48000 | | 22 | 3.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 14 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 16 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 30 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 21000 | | 22 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 15 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 26000 | | 11 | 5.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 380 | | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 38 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2500 | | 55 | 19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 170 | | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 16 | | 0.55 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 1300 | | 2.2 | 0.96 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.019 | | 0.017 | 0.0057 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.2 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

## Client Sample ID: B-23D

## Lab Sample ID: 500-204605-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.011 | J | 0.014 | 0.0062 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Carbon disulfide | 0.0012 | J | 0.0036 | 0.00074 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Benzo[g,h,i]perylene | 0.017 | J | 0.036 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.028 | J | 0.036 | 0.0098 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.012 | J | 0.073 | 0.0066 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.049 | | 0.036 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.020 | J | 0.036 | 0.0072 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Aluminum | 8200 | | 22 | 9.0 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Antimony | 0.61 | J | 2.2 | 0.43 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 8.2 | | 1.1 | 0.37 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 35 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.68 | | 0.44 | 0.10 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.062 | J B | 0.22 | 0.039 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 54000 | | 22 | 3.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Chromium | 13 | | 1.1 | 0.54 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 10 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 21 | | 1.1 | 0.31 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 17000 | | 22 | 11 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 12 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 28000 | | 11 | 5.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 340 | | 1.1 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B-23D (Continued)

## Lab Sample ID: 500-204605-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Nickel | 26 | | 1.1 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2400 | | 55 | 19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 200 | | 110 | 16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 17 | | 0.55 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 57 | | 2.2 | 0.96 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Mercury | 0.017 | | 0.017 | 0.0057 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.3 | | 0.2 | 0.2 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8081B | Organochlorine Pesticides (GC) | SW846 | TAL CHI |
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL CHI |
| 6010B | Metals (ICP) | SW846 | TAL CHI |
| 7471B | Mercury (CVAA) | SW846 | TAL CHI |
| 9012B | Cyanide, Total andor Amenable | SW846 | TAL CHI |
| 9045D | pH | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 3050B | Preparation, Metals | SW846 | TAL CHI |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |
| 7471B | Preparation, Mercury | SW846 | TAL CHI |
| 9010C | Cyanide, Distillation | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-204605-1 | B-33 | Solid | 08/31/21 11:30 | 09/01/21 13:30 |
| 500-204605-2 | B-34 | Solid | 08/31/21 12:00 | 09/01/21 13:30 |
| 500-204605-3 | B-14 | Solid | 08/31/21 12:45 | 09/01/21 13:30 |
| 500-204605-4 | B-7D | Solid | 08/31/21 13:30 | 09/01/21 13:30 |
| 500-204605-5 | B-18D | Solid | 08/31/21 13:50 | 09/01/21 13:30 |
| 500-204605-6 | B-20D | Solid | 08/31/21 14:20 | 09/01/21 13:30 |
| 500-204605-7 | B-23D | Solid | 08/31/21 14:45 | 09/01/21 13:30 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-33

**Date Collected: 08/31/21 11:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-1

**Matrix: Solid**
**Percent Solids: 80.7**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.023 | 0.010 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Benzene | ND | | 0.0023 | 0.00060 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Bromodichloromethane | ND | | 0.0023 | 0.00048 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Bromoform | ND | | 0.0023 | 0.00068 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Bromomethane | ND | *+ | 0.0058 | 0.0022 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| **Carbon disulfide** | **0.0018** | **J** | 0.0058 | 0.0012 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Carbon tetrachloride | ND | | 0.0023 | 0.00068 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Chlorobenzene | ND | | 0.0023 | 0.00086 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Chloroethane | ND | *+ | 0.0058 | 0.0017 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Chloroform | ND | | 0.0023 | 0.00081 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Chloromethane | ND | *- | 0.0058 | 0.0023 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0023 | 0.00065 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0023 | 0.00070 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Dibromochloromethane | ND | | 0.0023 | 0.00076 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,1-Dichloroethane | ND | | 0.0023 | 0.00080 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,2-Dichloroethane | ND | | 0.0058 | 0.0018 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,1-Dichloroethene | ND | | 0.0023 | 0.00080 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,2-Dichloropropane | ND | | 0.0023 | 0.00060 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0023 | 0.00082 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Ethylbenzene | ND | | 0.0023 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 2-Hexanone | ND | | 0.0058 | 0.0018 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Methylene Chloride | ND | | 0.0058 | 0.0023 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0058 | 0.0026 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| methyl isobutyl ketone | ND | | 0.0058 | 0.0017 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Methyl tert-butyl ether | ND | | 0.0023 | 0.00069 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Styrene | ND | | 0.0023 | 0.00071 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0023 | 0.00075 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Tetrachloroethene | ND | | 0.0023 | 0.00079 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Toluene | ND | | 0.0023 | 0.00059 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0023 | 0.0010 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0023 | 0.00082 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0023 | 0.00078 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0023 | 0.0010 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Trichloroethene | ND | | 0.0023 | 0.00079 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Vinyl chloride | ND | | 0.0023 | 0.0010 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |
| Xylenes, Total | ND | | 0.0047 | 0.00075 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 14:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *84* | | *75 - 131* | *09/01/21 15:08* | *09/07/21 14:51* | *1* |
| *Dibromofluoromethane* | *99* | | *75 - 126* | *09/01/21 15:08* | *09/07/21 14:51* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 134* | *09/01/21 15:08* | *09/07/21 14:51* | *1* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 124* | *09/01/21 15:08* | *09/07/21 14:51* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.085** | | 0.079 | 0.014 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Acenaphthylene** | **0.017** | **J F2** | 0.079 | 0.010 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Anthracene** | **0.24** | | 0.079 | 0.013 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Benzo[a]anthracene** | **1.2** | **F1** | 0.079 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Benzo[a]pyrene** | **1.5** | **F1** | 0.079 | 0.015 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |

**Client Sample ID: B-33**
**Date Collected: 08/31/21 11:30**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-1**
**Matrix: Solid**
**Percent Solids: 80.7**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[b]fluoranthene** | **2.0** | **F1** | 0.079 | 0.017 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Benzo[g,h,i]perylene** | **0.74** | **F1 F2** | 0.079 | 0.026 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Benzo[k]fluoranthene** | **0.83** | **F1** | 0.079 | 0.023 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Bis(2-chloroethoxy)methane | ND | F2 | 0.40 | 0.081 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Bis(2-chloroethyl)ether | ND | F2 | 0.40 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Bis(2-ethylhexyl) phthalate** | **0.15** | **J F2** | 0.40 | 0.15 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4-Bromophenyl phenyl ether | ND | F1 F2 | 0.40 | 0.10 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Butyl benzyl phthalate | ND | F2 | 0.40 | 0.15 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Carbazole** | **0.28** | **J** | 0.40 | 0.20 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4-Chloroaniline | ND | F1 | 1.6 | 0.37 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4-Chloro-3-methylphenol | ND | F2 | 0.79 | 0.27 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2-Chloronaphthalene | ND | F1 F2 | 0.40 | 0.088 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2-Chlorophenol | ND | F2 | 0.40 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4-Chlorophenyl phenyl ether | ND | F2 | 0.40 | 0.093 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Chrysene** | **1.5** | **F1** | 0.079 | 0.022 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Dibenz(a,h)anthracene** | **0.19** | **F1 F2** | 0.079 | 0.015 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Dibenzofuran | ND | F2 | 0.40 | 0.093 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 1,2-Dichlorobenzene | ND | F1 F2 | 0.40 | 0.095 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 1,3-Dichlorobenzene | ND | F1 F2 | 0.40 | 0.089 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 1,4-Dichlorobenzene | ND | F1 F2 | 0.40 | 0.10 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 3,3'-Dichlorobenzidine | ND | F1 | 0.40 | 0.11 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,4-Dichlorophenol | ND | F2 | 0.79 | 0.19 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Diethyl phthalate | ND | F2 | 0.40 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,4-Dimethylphenol | ND | F2 | 0.79 | 0.30 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Dimethyl phthalate | ND | F1 F2 | 0.40 | 0.10 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Di-n-butyl phthalate | ND | F2 | 0.40 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4,6-Dinitro-2-methylphenol | ND | F2 | 1.6 | 0.64 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,4-Dinitrophenol | ND | F1 | 1.6 | 1.4 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,4-Dinitrotoluene | ND | F1 F2 | 0.40 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,6-Dinitrotoluene | ND | F1 F2 | 0.40 | 0.16 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Di-n-octyl phthalate | ND | F2 | 0.40 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Fluoranthene** | **2.8** | **F1** | 0.079 | 0.015 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Fluorene** | **0.083** | | 0.079 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Hexachlorobenzene | ND | F1 F2 | 0.16 | 0.018 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Hexachlorobutadiene | ND | F1 F2 | 0.40 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Hexachlorocyclopentadiene | ND | F1 | 1.6 | 0.46 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Hexachloroethane | ND | F1 F2 | 0.40 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Indeno[1,2,3-cd]pyrene** | **0.71** | **F1 F2** | 0.079 | 0.021 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Isophorone | ND | F2 | 0.40 | 0.089 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2-Methylnaphthalene | ND | F1 F2 | 0.16 | 0.015 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2-Methylphenol | ND | F1 F2 | 0.40 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 3 & 4 Methylphenol | ND | F2 | 0.40 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Naphthalene | ND | F2 | 0.079 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2-Nitroaniline | ND | F2 | 0.40 | 0.11 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 3-Nitroaniline | ND | | 0.79 | 0.25 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4-Nitroaniline | ND | F2 | 0.79 | 0.33 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Nitrobenzene | ND | F2 | 0.079 | 0.020 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2-Nitrophenol | ND | F2 | 0.79 | 0.19 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 4-Nitrophenol | ND | F2 | 1.6 | 0.76 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-33**
**Date Collected: 08/31/21 11:30**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-1**
**Matrix: Solid**
**Percent Solids: 80.7**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | F2 | 0.16 | 0.097 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| N-Nitrosodiphenylamine | ND | F2 | 0.40 | 0.094 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,2'-oxybis[1-chloropropane] | ND | F2 | 0.40 | 0.092 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Pentachlorophenol | ND | F1 | 1.6 | 1.3 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Phenanthrene** | **1.3** | **F1** | 0.079 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| Phenol | ND | F2 | 0.40 | 0.18 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| **Pyrene** | **2.1** | **F1** | 0.079 | 0.016 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 1,2,4-Trichlorobenzene | ND | F1 F2 | 0.40 | 0.086 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,4,5-Trichlorophenol | ND | F2 | 0.79 | 0.18 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |
| 2,4,6-Trichlorophenol | ND | F2 | 0.79 | 0.27 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:33 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *44* | | *43 - 145* | *09/03/21 06:28* | *09/08/21 10:33* | *2* |
| *2-Fluorophenol* | *47* | | *31 - 166* | *09/03/21 06:28* | *09/08/21 10:33* | *2* |
| *Nitrobenzene-d5* | *39* | | *37 - 147* | *09/03/21 06:28* | *09/08/21 10:33* | *2* |
| *Phenol-d5* | *53* | | *30 - 153* | *09/03/21 06:28* | *09/08/21 10:33* | *2* |
| *Terphenyl-d14* | *43* | | *42 - 157* | *09/03/21 06:28* | *09/08/21 10:33* | *2* |
| *2,4,6-Tribromophenol* | *33* | | *31 - 143* | *09/03/21 06:28* | *09/08/21 10:33* | *2* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **7.4** | | 1.1 | 0.37 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |
| **Barium** | **96** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |
| **Cadmium** | **0.37** | **B** | 0.22 | 0.039 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |
| **Chromium** | **28** | | 1.1 | 0.54 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |
| **Lead** | **39** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |
| **Selenium** | **0.71** | **J** | 1.1 | 0.64 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |
| **Silver** | **0.36** | **J** | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:25 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.098** | | 0.019 | 0.0063 | mg/Kg | ☼ | 09/03/21 13:40 | 09/07/21 09:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.2** | | 0.2 | 0.2 | SU | | | 09/03/21 14:32 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-34
**Date Collected: 08/31/21 12:00**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-2
**Matrix: Solid**
**Percent Solids: 80.3**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.012** | **J** | 0.025 | 0.011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Benzene | ND | | 0.0025 | 0.00065 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Bromodichloromethane | ND | | 0.0025 | 0.00052 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Bromoform | ND | | 0.0025 | 0.00074 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Bromomethane | ND | *+ | 0.0064 | 0.0024 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| **Carbon disulfide** | **0.0062** | **J** | 0.0064 | 0.0013 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Carbon tetrachloride | ND | | 0.0025 | 0.00074 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Chlorobenzene | ND | | 0.0025 | 0.00094 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Chloroethane | ND | *+ | 0.0064 | 0.0019 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Chloroform | ND | | 0.0025 | 0.00088 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Chloromethane | ND | *- | 0.0064 | 0.0026 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0025 | 0.00071 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0025 | 0.00077 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Dibromochloromethane | ND | | 0.0025 | 0.00083 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,1-Dichloroethane | ND | | 0.0025 | 0.00087 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,2-Dichloroethane | ND | | 0.0064 | 0.0020 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,1-Dichloroethene | ND | | 0.0025 | 0.00087 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,2-Dichloropropane | ND | | 0.0025 | 0.00066 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0025 | 0.00089 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Ethylbenzene | ND | | 0.0025 | 0.0012 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 2-Hexanone | ND | | 0.0064 | 0.0020 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Methylene Chloride | ND | | 0.0064 | 0.0025 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0064 | 0.0028 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| methyl isobutyl ketone | ND | | 0.0064 | 0.0019 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Methyl tert-butyl ether | ND | | 0.0025 | 0.00075 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Styrene | ND | | 0.0025 | 0.00077 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0025 | 0.00081 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Tetrachloroethene | ND | | 0.0025 | 0.00087 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Toluene | ND | | 0.0025 | 0.00064 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0025 | 0.00089 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0025 | 0.00085 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Trichloroethene | ND | | 0.0025 | 0.00086 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Vinyl chloride | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |
| Xylenes, Total | ND | | 0.0051 | 0.00081 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 15:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *84* | | *75 - 131* | *09/01/21 15:08* | *09/07/21 15:43* | *1* |
| *Dibromofluoromethane* | *100* | | *75 - 126* | *09/01/21 15:08* | *09/07/21 15:43* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 134* | *09/01/21 15:08* | *09/07/21 15:43* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 124* | *09/01/21 15:08* | *09/07/21 15:43* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.85** | | 0.040 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Acenaphthylene** | **0.016** | **J** | 0.040 | 0.0053 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Anthracene** | **1.3** | | 0.040 | 0.0067 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Benzo[g,h,i]perylene** | **1.4** | | 0.040 | 0.013 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Benzo[k]fluoranthene** | **2.1** | | 0.040 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-34**
**Date Collected: 08/31/21 12:00**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-2**
**Matrix: Solid**
**Percent Solids: 80.3**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-chloroethoxy)methane | ND | | 0.20 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.20 | 0.060 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Bis(2-ethylhexyl) phthalate** | **0.24** | | 0.20 | 0.073 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.20 | 0.053 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Butyl benzyl phthalate | ND | | 0.20 | 0.076 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Carbazole** | **1.1** | | 0.20 | 0.10 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4-Chloroaniline | ND | | 0.80 | 0.19 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2-Chloronaphthalene | ND | | 0.20 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2-Chlorophenol | ND | | 0.20 | 0.068 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Dibenz(a,h)anthracene** | **0.53** | | 0.040 | 0.0077 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Dibenzofuran** | **0.30** | | 0.20 | 0.047 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.20 | 0.048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.20 | 0.051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.20 | 0.056 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,4-Dichlorophenol | ND | | 0.40 | 0.095 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Diethyl phthalate | ND | | 0.20 | 0.067 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,4-Dimethylphenol | ND | | 0.40 | 0.15 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Dimethyl phthalate | ND | | 0.20 | 0.052 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Di-n-butyl phthalate | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.80 | 0.32 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,4-Dinitrophenol | ND | | 0.80 | 0.70 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.20 | 0.063 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.20 | 0.078 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Di-n-octyl phthalate | ND | | 0.20 | 0.065 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Fluorene** | **0.63** | | 0.040 | 0.0056 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Hexachlorobenzene | ND | | 0.080 | 0.0092 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Hexachlorobutadiene | ND | | 0.20 | 0.063 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.80 | 0.23 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Hexachloroethane | ND | | 0.20 | 0.061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **1.4** | | 0.040 | 0.010 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Isophorone | ND | | 0.20 | 0.045 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **2-Methylnaphthalene** | **0.095** | | 0.080 | 0.0073 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2-Methylphenol | ND | | 0.20 | 0.064 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 3 & 4 Methylphenol | ND | | 0.20 | 0.066 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| **Naphthalene** | **0.079** | | 0.040 | 0.0061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2-Nitroaniline | ND | | 0.20 | 0.054 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 3-Nitroaniline | ND | | 0.40 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4-Nitroaniline | ND | | 0.40 | 0.17 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Nitrobenzene | ND | | 0.040 | 0.0099 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2-Nitrophenol | ND | | 0.40 | 0.094 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 4-Nitrophenol | ND | | 0.80 | 0.38 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.080 | 0.049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.20 | 0.047 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.20 | 0.046 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Pentachlorophenol | ND | | 0.80 | 0.64 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| Phenol | ND | | 0.20 | 0.088 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-34**
**Date Collected: 08/31/21 12:00**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-2**
**Matrix: Solid**
**Percent Solids: 80.3**

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | | 0.20 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.40 | 0.091 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.40 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *76* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 16:54* | *1* |
| *2-Fluorophenol* | *92* | | *31 - 166* | *09/03/21 06:28* | *09/07/21 16:54* | *1* |
| *Nitrobenzene-d5* | *70* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 16:54* | *1* |
| *Phenol-d5* | *90* | | *30 - 153* | *09/03/21 06:28* | *09/07/21 16:54* | *1* |
| *Terphenyl-d14* | *89* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 16:54* | *1* |
| *2,4,6-Tribromophenol* | *43* | | *31 - 143* | *09/03/21 06:28* | *09/07/21 16:54* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo[a]anthracene** | **4.3** | | 0.20 | 0.027 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |
| **Benzo[a]pyrene** | **4.4** | | 0.20 | 0.039 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |
| **Benzo[b]fluoranthene** | **6.1** | | 0.20 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |
| **Chrysene** | **4.8** | | 0.20 | 0.054 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |
| **Fluoranthene** | **9.9** | | 0.20 | 0.037 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |
| **Phenanthrene** | **6.9** | | 0.20 | 0.028 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |
| **Pyrene** | **7.3** | | 0.20 | 0.040 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 10:09 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *94* | | *43 - 145* | *09/03/21 06:28* | *09/08/21 10:09* | *5* |
| *2-Fluorophenol* | *108* | | *31 - 166* | *09/03/21 06:28* | *09/08/21 10:09* | *5* |
| *Nitrobenzene-d5* | *82* | | *37 - 147* | *09/03/21 06:28* | *09/08/21 10:09* | *5* |
| *Phenol-d5* | *123* | | *30 - 153* | *09/03/21 06:28* | *09/08/21 10:09* | *5* |
| *Terphenyl-d14* | *91* | | *42 - 157* | *09/03/21 06:28* | *09/08/21 10:09* | *5* |
| *2,4,6-Tribromophenol* | *71* | | *31 - 143* | *09/03/21 06:28* | *09/08/21 10:09* | *5* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.8** | | 1.0 | 0.36 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |
| **Barium** | **110** | | 1.0 | 0.12 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |
| **Cadmium** | **0.50** | **B** | 0.21 | 0.037 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |
| **Chromium** | **22** | | 1.0 | 0.51 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |
| **Lead** | **53** | | 0.52 | 0.24 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |
| Selenium | ND | | 1.0 | 0.61 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |
| **Silver** | **0.36** | **J** | 0.52 | 0.13 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:28 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.11** | | 0.019 | 0.0064 | mg/Kg | ☼ | 09/03/21 13:40 | 09/07/21 09:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.3** | | 0.2 | 0.2 | SU | | | 09/03/21 14:36 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-14

**Date Collected: 08/31/21 12:45**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-3

**Matrix: Solid**
**Percent Solids: 81.8**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.017 | 0.0097 | mg/Kg | ☼ | 08/31/21 12:45 | 09/07/21 12:52 | 50 |
| Toluene | ND | | 0.017 | 0.0098 | mg/Kg | ☼ | 08/31/21 12:45 | 09/07/21 12:52 | 50 |
| Ethylbenzene | ND | | 0.017 | 0.012 | mg/Kg | ☼ | 08/31/21 12:45 | 09/07/21 12:52 | 50 |
| Xylenes, Total | ND | | 0.033 | 0.015 | mg/Kg | ☼ | 08/31/21 12:45 | 09/07/21 12:52 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *75 - 126* | *08/31/21 12:45* | *09/07/21 12:52* | *50* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 120* | *08/31/21 12:45* | *09/07/21 12:52* | *50* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *72 - 124* | *08/31/21 12:45* | *09/07/21 12:52* | *50* |
| *Dibromofluoromethane* | *111* | | *75 - 120* | *08/31/21 12:45* | *09/07/21 12:52* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Naphthalene** | **0.012** | **J** | 0.039 | 0.0061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Acenaphthylene** | **0.016** | **J** | 0.039 | 0.0052 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Acenaphthene** | **0.19** | | 0.039 | 0.0071 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Fluorene** | **0.18** | | 0.039 | 0.0055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Anthracene** | **0.47** | | 0.039 | 0.0066 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Benzo[a]anthracene** | **2.5** | | 0.039 | 0.0053 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Benzo[k]fluoranthene** | **1.6** | | 0.039 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.95** | | 0.039 | 0.010 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Dibenz(a,h)anthracene** | **0.29** | | 0.039 | 0.0076 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |
| **Benzo[g,h,i]perylene** | **0.93** | | 0.039 | 0.013 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 17:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *76* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 17:17* | *1* |
| *2-Fluorobiphenyl* | *81* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 17:17* | *1* |
| *Terphenyl-d14* | *98* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 17:17* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Phenanthrene** | **3.5** | | 0.20 | 0.027 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 11:43 | 5 |
| **Fluoranthene** | **6.4** | | 0.20 | 0.036 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 11:43 | 5 |
| **Pyrene** | **4.5** | | 0.20 | 0.039 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 11:43 | 5 |
| **Chrysene** | **2.9** | | 0.20 | 0.054 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 11:43 | 5 |
| **Benzo[b]fluoranthene** | **4.0** | | 0.20 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 11:43 | 5 |
| **Benzo[a]pyrene** | **2.8** | | 0.20 | 0.038 | mg/Kg | ☼ | 09/03/21 06:28 | 09/08/21 11:43 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Nitrobenzene-d5* | *88* | | *37 - 147* | *09/03/21 06:28* | *09/08/21 11:43* | *5* |
| *2-Fluorobiphenyl* | *97* | | *43 - 145* | *09/03/21 06:28* | *09/08/21 11:43* | *5* |
| *Terphenyl-d14* | *90* | | *42 - 157* | *09/03/21 06:28* | *09/08/21 11:43* | *5* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **35** | | 0.57 | 0.26 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:38 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.4** | | 0.2 | 0.2 | SU | | | 09/03/21 14:40 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-7D

**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-4

**Matrix: Solid**
**Percent Solids: 86.9**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.011** | **J** | 0.013 | 0.0058 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Benzene | ND | | 0.0013 | 0.00034 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Bromodichloromethane | ND | | 0.0013 | 0.00027 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Bromoform | ND | | 0.0013 | 0.00039 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Bromomethane | ND | *+ | 0.0033 | 0.0013 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| **Carbon disulfide** | **0.0025** | **J** | 0.0033 | 0.00069 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Carbon tetrachloride | ND | | 0.0013 | 0.00039 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Chlorobenzene | ND | | 0.0013 | 0.00049 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Chloroethane | ND | *+ | 0.0033 | 0.00098 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Chloroform | ND | | 0.0013 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Chloromethane | ND | *- | 0.0033 | 0.0013 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0013 | 0.00037 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0013 | 0.00040 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Dibromochloromethane | ND | | 0.0013 | 0.00043 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,1-Dichloroethane | ND | | 0.0013 | 0.00045 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,2-Dichloroethane | ND | | 0.0033 | 0.0010 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,1-Dichloroethene | ND | | 0.0013 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,2-Dichloropropane | ND | | 0.0013 | 0.00034 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0013 | 0.00047 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Ethylbenzene | ND | | 0.0013 | 0.00064 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 2-Hexanone | ND | | 0.0033 | 0.0010 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Methylene Chloride | ND | | 0.0033 | 0.0013 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0033 | 0.0015 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| methyl isobutyl ketone | ND | | 0.0033 | 0.00098 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Methyl tert-butyl ether | ND | | 0.0013 | 0.00039 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Styrene | ND | | 0.0013 | 0.00040 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0013 | 0.00042 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Tetrachloroethene | ND | | 0.0013 | 0.00045 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Toluene | ND | | 0.0013 | 0.00034 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0013 | 0.00059 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0013 | 0.00047 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0013 | 0.00045 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0013 | 0.00057 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Trichloroethene | ND | | 0.0013 | 0.00045 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Vinyl chloride | ND | | 0.0013 | 0.00059 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |
| Xylenes, Total | ND | | 0.0027 | 0.00042 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 16:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *75 - 131* | *09/01/21 15:08* | *09/07/21 16:09* | *1* |
| *Dibromofluoromethane* | *99* | | *75 - 126* | *09/01/21 15:08* | *09/07/21 16:09* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *70 - 134* | *09/01/21 15:08* | *09/07/21 16:09* | *1* |
| *Toluene-d8 (Surr)* | *101* | | *75 - 124* | *09/01/21 15:08* | *09/07/21 16:09* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acenaphthene** | **0.0077** | **J** | 0.037 | 0.0066 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Anthracene | ND | | 0.037 | 0.0062 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Benzo[a]anthracene | ND | | 0.037 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Benzo[a]pyrene | ND | | 0.037 | 0.0071 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-7D**
**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-4**
**Matrix: Solid**
**Percent Solids: 86.9**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.037 | 0.0080 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| **Benzo[g,h,i]perylene** | **0.013** | **J** | 0.037 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.067 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.070 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Carbazole | ND | | 0.19 | 0.092 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4-Chloroaniline | ND | | 0.74 | 0.17 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| **Chrysene** | **0.016** | **J** | 0.037 | 0.010 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.037 | 0.0071 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.047 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.19 | 0.052 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.087 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.062 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.74 | 0.30 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,4-Dinitrophenol | ND | | 0.74 | 0.65 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.072 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Fluoranthene | ND | | 0.037 | 0.0068 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Fluorene | ND | | 0.037 | 0.0052 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Hexachlorobenzene | ND | | 0.074 | 0.0085 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.058 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.74 | 0.21 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.0095 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Isophorone | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| **2-Methylnaphthalene** | **0.0096** | **J** | 0.074 | 0.0068 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Naphthalene | ND | | 0.037 | 0.0057 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.11 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.15 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0092 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.087 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 4-Nitrophenol | ND | | 0.74 | 0.35 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |

**Client Sample ID: B-7D**
**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-4**
**Matrix: Solid**
**Percent Solids: 86.9**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.074 | 0.045 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Pentachlorophenol | ND | | 0.74 | 0.59 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| **Phenanthrene** | **0.035** | **J** | 0.037 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| Phenol | ND | | 0.19 | 0.082 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| **Pyrene** | **0.011** | **J** | 0.037 | 0.0073 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.040 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.084 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 10:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *79* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 10:56* | *1* |
| *2-Fluorophenol* | *100* | | *31 - 166* | *09/03/21 06:28* | *09/07/21 10:56* | *1* |
| *Nitrobenzene-d5* | *75* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 10:56* | *1* |
| *Phenol-d5* | *94* | | *30 - 153* | *09/03/21 06:28* | *09/07/21 10:56* | *1* |
| *Terphenyl-d14* | *89* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 10:56* | *1* |
| *2,4,6-Tribromophenol* | *39* | | *31 - 143* | *09/03/21 06:28* | *09/07/21 10:56* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0020 | 0.0013 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| alpha-BHC | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| beta-BHC | ND | | 0.0020 | 0.0016 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| cis-Chlordane | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| 4,4'-DDD | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| 4,4'-DDE | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| 4,4'-DDT | ND | | 0.0020 | 0.00092 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| delta-BHC | ND | | 0.0020 | 0.00093 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Dieldrin | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Endosulfan I | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Endosulfan II | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Endosulfan sulfate | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Endrin | ND | | 0.0020 | 0.00099 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Endrin aldehyde | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Endrin ketone | ND | | 0.0020 | 0.00095 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0020 | 0.00097 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Heptachlor | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Heptachlor epoxide | ND | | 0.0020 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Methoxychlor | ND | | 0.0096 | 0.0013 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| Toxaphene | ND | | 0.019 | 0.0078 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |
| trans-Chlordane | ND | | 0.0020 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *115* | | *33 - 148* | *09/03/21 06:31* | *09/03/21 23:22* | *1* |
| *Tetrachloro-m-xylene* | *97* | | *30 - 121* | *09/03/21 06:31* | *09/03/21 23:22* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |

## Client Sample ID: B-7D

**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-4

**Matrix: Solid**
**Percent Solids: 86.9**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |
| PCB-1232 | ND | | 0.019 | 0.0052 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |
| PCB-1242 | ND | | 0.019 | 0.0075 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |
| PCB-1248 | ND | | 0.019 | 0.0091 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |
| PCB-1254 | ND | | 0.019 | 0.0065 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |
| PCB-1260 | ND | | 0.019 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.019 | 0.0052 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 20:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *70* | | *49 - 129* | *09/03/21 06:31* | *09/03/21 20:51* | *1* |
| *DCB Decachlorobiphenyl* | *106* | | *37 - 121* | *09/03/21 06:31* | *09/03/21 20:51* | *1* |

### Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **12000** | | 22 | 8.9 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Antimony** | **0.86** | **J** | 2.2 | 0.42 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Arsenic** | **8.7** | | 1.1 | 0.37 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Barium** | **44** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Beryllium** | **0.93** | | 0.44 | 0.10 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Cadmium** | **0.049** | **J B** | 0.22 | 0.039 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Calcium** | **70000** | | 22 | 3.7 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Chromium** | **18** | | 1.1 | 0.54 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Cobalt** | **17** | | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Copper** | **27** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Iron** | **22000** | | 22 | 11 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Lead** | **16** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Magnesium** | **38000** | | 11 | 5.4 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Manganese** | **510** | | 1.1 | 0.16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Nickel** | **39** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Potassium** | **3400** | | 55 | 19 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| Selenium | ND | | 1.1 | 0.64 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| Silver | ND | | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Sodium** | **220** | | 110 | 16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Thallium** | **0.54** | **J** | 1.1 | 0.54 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Vanadium** | **22** | | 0.55 | 0.13 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |
| **Zinc** | **57** | | 2.2 | 0.96 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:41 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.020** | | 0.019 | 0.0062 | mg/Kg | ☼ | 09/03/21 13:40 | 09/07/21 09:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.27 | 0.14 | mg/Kg | ☼ | 09/07/21 10:49 | 09/07/21 14:51 | 1 |
| **pH** | **7.9** | | 0.2 | 0.2 | SU | | | 09/03/21 14:47 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-18D**
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-5**
**Matrix: Solid**
**Percent Solids: 86.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.46 | 0.079 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Benzene | ND | | 0.011 | 0.0067 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Bromodichloromethane | ND | | 0.046 | 0.017 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Bromoform | ND | | 0.046 | 0.022 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Bromomethane | ND | | 0.14 | 0.036 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Carbon disulfide | ND | | 0.092 | 0.037 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Carbon tetrachloride | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Chlorobenzene | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Chloroethane | ND | | 0.046 | 0.023 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Chloroform | ND | | 0.092 | 0.017 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Chloromethane | ND | | 0.046 | 0.015 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| cis-1,2-Dichloroethene | ND | | 0.046 | 0.019 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| cis-1,3-Dichloropropene | ND | | 0.046 | 0.019 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Dibromochloromethane | ND | | 0.046 | 0.022 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,1-Dichloroethane | ND | | 0.046 | 0.019 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,2-Dichloroethane | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,1-Dichloroethene | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,2-Dichloropropane | ND | | 0.046 | 0.020 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,3-Dichloropropene, Total | ND | | 0.046 | 0.019 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Ethylbenzene | ND | | 0.011 | 0.0084 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 2-Hexanone | ND | | 0.23 | 0.071 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Methylene Chloride | ND | | 0.23 | 0.075 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Methyl Ethyl Ketone | ND | | 0.23 | 0.097 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| methyl isobutyl ketone | ND | | 0.23 | 0.098 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Methyl tert-butyl ether | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Styrene | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.046 | 0.018 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Tetrachloroethene | ND | | 0.046 | 0.017 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Toluene | ND | | 0.011 | 0.0067 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| trans-1,2-Dichloroethene | ND | | 0.046 | 0.016 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| trans-1,3-Dichloropropene | ND | | 0.046 | 0.017 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,1,1-Trichloroethane | ND | | 0.046 | 0.017 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| 1,1,2-Trichloroethane | ND | | 0.046 | 0.016 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Trichloroethene | ND | | 0.023 | 0.0075 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Vinyl chloride | ND | | 0.046 | 0.012 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |
| Xylenes, Total | ND | | 0.023 | 0.010 | mg/Kg | ☼ | 08/31/21 13:50 | 09/09/21 11:37 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *72 - 124* | *08/31/21 13:50* | *09/09/21 11:37* | *50* |
| *Dibromofluoromethane* | *88* | | *75 - 120* | *08/31/21 13:50* | *09/09/21 11:37* | *50* |
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *75 - 126* | *08/31/21 13:50* | *09/09/21 11:37* | *50* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | *08/31/21 13:50* | *09/09/21 11:37* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.037 | 0.0068 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Acenaphthylene | ND | | 0.037 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Anthracene | ND | | 0.037 | 0.0063 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Benzo[a]anthracene | ND | | 0.037 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Benzo[a]pyrene | ND | | 0.037 | 0.0073 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-18D**
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-5**
**Matrix: Solid**
**Percent Solids: 86.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.037 | 0.0081 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| **Benzo[g,h,i]perylene** | **0.019** | **J** | 0.037 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Benzo[k]fluoranthene | ND | | 0.037 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.19 | 0.038 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.19 | 0.056 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.19 | 0.069 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.19 | 0.050 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Butyl benzyl phthalate | ND | | 0.19 | 0.072 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Carbazole | ND | | 0.19 | 0.094 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4-Chloroaniline | ND | | 0.76 | 0.18 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2-Chloronaphthalene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2-Chlorophenol | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| **Chrysene** | **0.025** | **J** | 0.037 | 0.010 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.037 | 0.0073 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Dibenzofuran | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.19 | 0.045 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.19 | 0.048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.19 | 0.053 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,4-Dichlorophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Diethyl phthalate | ND | | 0.19 | 0.064 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,4-Dimethylphenol | ND | | 0.37 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Dimethyl phthalate | ND | | 0.19 | 0.049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Di-n-butyl phthalate | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.76 | 0.30 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,4-Dinitrophenol | ND | | 0.76 | 0.66 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.19 | 0.074 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Di-n-octyl phthalate | ND | | 0.19 | 0.061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Fluoranthene | ND | | 0.037 | 0.0070 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| **Fluorene** | **0.0076** | **J** | 0.037 | 0.0053 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Hexachlorobenzene | ND | | 0.076 | 0.0087 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Hexachlorobutadiene | ND | | 0.19 | 0.059 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.76 | 0.22 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Hexachloroethane | ND | | 0.19 | 0.057 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.037 | 0.0098 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Isophorone | ND | | 0.19 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| **2-Methylnaphthalene** | **0.012** | **J** | 0.076 | 0.0069 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2-Methylphenol | ND | | 0.19 | 0.060 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 3 & 4 Methylphenol | ND | | 0.19 | 0.063 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Naphthalene | ND | | 0.037 | 0.0058 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2-Nitroaniline | ND | | 0.19 | 0.051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 3-Nitroaniline | ND | | 0.37 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4-Nitroaniline | ND | | 0.37 | 0.16 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Nitrobenzene | ND | | 0.037 | 0.0094 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2-Nitrophenol | ND | | 0.37 | 0.089 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 4-Nitrophenol | ND | | 0.76 | 0.36 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |

**Client Sample ID: B-18D**
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-5**
**Matrix: Solid**
**Percent Solids: 86.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.076 | 0.046 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.19 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Pentachlorophenol | ND | | 0.76 | 0.60 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| **Phenanthrene** | **0.048** | | 0.037 | 0.0052 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| Phenol | ND | | 0.19 | 0.084 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| **Pyrene** | **0.018** | **J** | 0.037 | 0.0075 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.19 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.37 | 0.086 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.37 | 0.13 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *83* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 11:18* | *1* |
| *2-Fluorophenol* | *103* | | *31 - 166* | *09/03/21 06:28* | *09/07/21 11:18* | *1* |
| *Nitrobenzene-d5* | *80* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 11:18* | *1* |
| *Phenol-d5* | *97* | | *30 - 153* | *09/03/21 06:28* | *09/07/21 11:18* | *1* |
| *Terphenyl-d14* | *89* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 11:18* | *1* |
| *2,4,6-Tribromophenol* | *45* | | *31 - 143* | *09/03/21 06:28* | *09/07/21 11:18* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| beta-BHC | ND | | 0.0019 | 0.0015 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.00099 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| 4,4'-DDD | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| 4,4'-DDE | ND | | 0.0019 | 0.00096 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| 4,4'-DDT | ND | | 0.0019 | 0.00088 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00089 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Dieldrin | ND | | 0.0019 | 0.00097 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Endrin | ND | | 0.0019 | 0.00095 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00090 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00092 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Methoxychlor | ND | | 0.0091 | 0.0012 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| Toxaphene | ND | | 0.018 | 0.0074 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 23:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *106* | | *33 - 148* | *09/03/21 06:31* | *09/03/21 23:43* | *1* |
| *Tetrachloro-m-xylene* | *99* | | *30 - 121* | *09/03/21 06:31* | *09/03/21 23:43* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.018 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |

**Client Sample ID: B-18D**
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-5**
**Matrix: Solid**
**Percent Solids: 86.4**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.018 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |
| PCB-1232 | ND | | 0.018 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |
| PCB-1242 | ND | | 0.018 | 0.0071 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |
| PCB-1248 | ND | | 0.018 | 0.0087 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |
| **PCB-1254** | **0.013** | **J** | 0.018 | 0.0062 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |
| PCB-1260 | ND | | 0.018 | 0.0069 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |
| **Polychlorinated biphenyls, Total** | **0.013** | **J** | 0.018 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *59* | | *49 - 129* | *09/03/21 06:31* | *09/03/21 21:06* | *1* |
| *DCB Decachlorobiphenyl* | *81* | | *37 - 121* | *09/03/21 06:31* | *09/03/21 21:06* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **12000** | | 23 | 9.3 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Antimony** | **0.89** | **J** | 2.3 | 0.44 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Arsenic** | **8.3** | | 1.1 | 0.39 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Barium** | **44** | | 1.1 | 0.13 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Beryllium** | **0.88** | | 0.45 | 0.11 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| Cadmium | ND | | 0.23 | 0.041 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Calcium** | **64000** | | 23 | 3.8 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Chromium** | **18** | | 1.1 | 0.56 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Cobalt** | **14** | | 0.57 | 0.15 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Copper** | **24** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Iron** | **20000** | | 23 | 12 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Lead** | **13** | | 0.57 | 0.26 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Magnesium** | **35000** | | 11 | 5.6 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Manganese** | **430** | | 1.1 | 0.16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Nickel** | **35** | | 1.1 | 0.33 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Potassium** | **3300** | | 57 | 20 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| Selenium | ND | | 1.1 | 0.67 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Silver** | **0.21** | **J** | 0.57 | 0.15 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Sodium** | **230** | | 110 | 17 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| Thallium | ND | | 1.1 | 0.57 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Vanadium** | **23** | | 0.57 | 0.13 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |
| **Zinc** | **53** | | 2.3 | 0.99 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:44 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.020** | | 0.018 | 0.0061 | mg/Kg | ☼ | 09/03/21 13:40 | 09/07/21 09:27 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.27 | 0.14 | mg/Kg | ☼ | 09/07/21 10:49 | 09/07/21 14:53 | 1 |
| **pH** | **8.0** | | 0.2 | 0.2 | SU | | | 09/03/21 14:51 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-20D**
**Date Collected: 08/31/21 14:20**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-6**
**Matrix: Solid**
**Percent Solids: 86.2**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.0096** | **J** | 0.016 | 0.0068 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Benzene | ND | | 0.0016 | 0.00040 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Bromodichloromethane | ND | | 0.0016 | 0.00032 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Bromoform | ND | | 0.0016 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Bromomethane | ND | *+ | 0.0039 | 0.0015 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| **Carbon disulfide** | **0.0017** | **J** | 0.0039 | 0.00082 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Carbon tetrachloride | ND | | 0.0016 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Chlorobenzene | ND | | 0.0016 | 0.00058 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Chloroethane | ND | *+ | 0.0039 | 0.0012 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Chloroform | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Chloromethane | ND | *- | 0.0039 | 0.0016 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0016 | 0.00044 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Dibromochloromethane | ND | | 0.0016 | 0.00051 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,1-Dichloroethane | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,2-Dichloroethane | ND | | 0.0039 | 0.0012 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,1-Dichloroethene | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,2-Dichloropropane | ND | | 0.0016 | 0.00041 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Ethylbenzene | ND | | 0.0016 | 0.00075 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 2-Hexanone | ND | | 0.0039 | 0.0012 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Methylene Chloride | ND | | 0.0039 | 0.0015 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0039 | 0.0017 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| methyl isobutyl ketone | ND | | 0.0039 | 0.0012 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Methyl tert-butyl ether | ND | | 0.0016 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Styrene | ND | | 0.0016 | 0.00047 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0016 | 0.00050 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Tetrachloroethene | ND | | 0.0016 | 0.00054 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Toluene | ND | | 0.0016 | 0.00040 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0016 | 0.00070 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0016 | 0.00055 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0016 | 0.00053 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0016 | 0.00067 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Trichloroethene | ND | | 0.0016 | 0.00053 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Vinyl chloride | ND | | 0.0016 | 0.00070 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |
| Xylenes, Total | ND | | 0.0031 | 0.00050 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *84* | | *75 - 131* | *09/01/21 15:08* | *09/07/21 17:01* | *1* |
| *Dibromofluoromethane* | *100* | | *75 - 126* | *09/01/21 15:08* | *09/07/21 17:01* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *70 - 134* | *09/01/21 15:08* | *09/07/21 17:01* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 124* | *09/01/21 15:08* | *09/07/21 17:01* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.036 | 0.0065 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Acenaphthylene | ND | | 0.036 | 0.0048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Anthracene | ND | | 0.036 | 0.0061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Benzo[a]anthracene | ND | | 0.036 | 0.0049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Benzo[a]pyrene | ND | | 0.036 | 0.0070 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-20D**
**Date Collected: 08/31/21 14:20**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-6**
**Matrix: Solid**
**Percent Solids: 86.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.036 | 0.0079 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.036 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Benzo[k]fluoranthene | ND | | 0.036 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.18 | 0.037 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.18 | 0.067 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.18 | 0.048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Butyl benzyl phthalate | ND | | 0.18 | 0.069 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Carbazole | ND | | 0.18 | 0.091 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4-Chloroaniline | ND | | 0.73 | 0.17 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.36 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2-Chloronaphthalene | ND | | 0.18 | 0.040 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2-Chlorophenol | ND | | 0.18 | 0.062 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.18 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| **Chrysene** | **0.015** | **J** | 0.036 | 0.0099 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.036 | 0.0070 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Dibenzofuran | ND | | 0.18 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.18 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.18 | 0.047 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.18 | 0.051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,4-Dichlorophenol | ND | | 0.36 | 0.086 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Diethyl phthalate | ND | | 0.18 | 0.062 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,4-Dimethylphenol | ND | | 0.36 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Dimethyl phthalate | ND | | 0.18 | 0.048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Di-n-butyl phthalate | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.73 | 0.29 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,4-Dinitrophenol | ND | | 0.73 | 0.64 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.18 | 0.058 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.18 | 0.072 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Di-n-octyl phthalate | ND | | 0.18 | 0.059 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Fluoranthene | ND | | 0.036 | 0.0068 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Fluorene | ND | | 0.036 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Hexachlorobenzene | ND | | 0.073 | 0.0084 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Hexachlorobutadiene | ND | | 0.18 | 0.057 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.73 | 0.21 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Hexachloroethane | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.036 | 0.0094 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Isophorone | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| **2-Methylnaphthalene** | **0.0095** | **J** | 0.073 | 0.0067 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2-Methylphenol | ND | | 0.18 | 0.058 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 3 & 4 Methylphenol | ND | | 0.18 | 0.061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Naphthalene | ND | | 0.036 | 0.0056 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2-Nitroaniline | ND | | 0.18 | 0.049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 3-Nitroaniline | ND | | 0.36 | 0.11 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4-Nitroaniline | ND | | 0.36 | 0.15 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Nitrobenzene | ND | | 0.036 | 0.0091 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2-Nitrophenol | ND | | 0.36 | 0.086 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 4-Nitrophenol | ND | | 0.73 | 0.35 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |

**Client Sample ID: B-20D**
**Date Collected: 08/31/21 14:20**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-6**
**Matrix: Solid**
**Percent Solids: 86.2**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.073 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.18 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Pentachlorophenol | ND | | 0.73 | 0.58 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| **Phenanthrene** | **0.029** | **J** | 0.036 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| Phenol | ND | | 0.18 | 0.081 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| **Pyrene** | **0.012** | **J** | 0.036 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.18 | 0.039 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.36 | 0.083 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.36 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 11:41 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *74* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 11:41* | *1* |
| *2-Fluorophenol* | *94* | | *31 - 166* | *09/03/21 06:28* | *09/07/21 11:41* | *1* |
| *Nitrobenzene-d5* | *68* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 11:41* | *1* |
| *Phenol-d5* | *91* | | *30 - 153* | *09/03/21 06:28* | *09/07/21 11:41* | *1* |
| *Terphenyl-d14* | *93* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 11:41* | *1* |
| *2,4,6-Tribromophenol* | *35* | | *31 - 143* | *09/03/21 06:28* | *09/07/21 11:41* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| beta-BHC | ND | | 0.0019 | 0.0015 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| 4,4'-DDD | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| 4,4'-DDE | ND | | 0.0019 | 0.00098 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| 4,4'-DDT | ND | | 0.0019 | 0.00090 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00091 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Dieldrin | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Endrin | ND | | 0.0019 | 0.00097 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00093 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00095 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Methoxychlor | ND | | 0.0094 | 0.0013 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| Toxaphene | ND | | 0.019 | 0.0076 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:03 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *103* | | *33 - 148* | *09/03/21 06:31* | *09/04/21 00:03* | *1* |
| *Tetrachloro-m-xylene* | *75* | | *30 - 121* | *09/03/21 06:31* | *09/04/21 00:03* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |

**Client Sample ID: B-20D**
**Date Collected: 08/31/21 14:20**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-6**
**Matrix: Solid**
**Percent Solids: 86.2**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.019 | 0.0074 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |
| PCB-1232 | ND | | 0.019 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |
| PCB-1242 | ND | | 0.019 | 0.0073 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |
| PCB-1248 | ND | | 0.019 | 0.0090 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |
| PCB-1254 | ND | | 0.019 | 0.0064 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |
| PCB-1260 | ND | | 0.019 | 0.0071 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.019 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *60* | | *49 - 129* | *09/03/21 06:31* | *09/03/21 21:22* | *1* |
| *DCB Decachlorobiphenyl* | *88* | | *37 - 121* | *09/03/21 06:31* | *09/03/21 21:22* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **8500** | | 22 | 8.9 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Antimony** | **1.1** | **J** | 2.2 | 0.43 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Arsenic** | **9.4** | | 1.1 | 0.37 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Barium** | **30** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Beryllium** | **0.79** | | 0.44 | 0.10 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Cadmium** | **6.8** | **B** | 0.22 | 0.039 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Calcium** | **48000** | | 22 | 3.7 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Chromium** | **14** | | 1.1 | 0.54 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Cobalt** | **16** | | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Copper** | **30** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Iron** | **21000** | | 22 | 11 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Lead** | **15** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Magnesium** | **26000** | | 11 | 5.4 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Manganese** | **380** | | 1.1 | 0.16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Nickel** | **38** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Potassium** | **2500** | | 55 | 19 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| Selenium | ND | | 1.1 | 0.64 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| Silver | ND | | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Sodium** | **170** | | 110 | 16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| Thallium | ND | | 1.1 | 0.55 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Vanadium** | **16** | | 0.55 | 0.13 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |
| **Zinc** | **1300** | | 2.2 | 0.96 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:47 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.019** | | 0.017 | 0.0057 | mg/Kg | ☼ | 09/03/21 13:40 | 09/07/21 09:29 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.27 | 0.13 | mg/Kg | ☼ | 09/07/21 10:49 | 09/07/21 14:55 | 1 |
| **pH** | **8.2** | | 0.2 | 0.2 | SU | | | 09/03/21 15:05 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-23D**
**Date Collected: 08/31/21 14:45**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-7**
**Matrix: Solid**
**Percent Solids: 89.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **0.011** | **J** | 0.014 | 0.0062 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Benzene | ND | | 0.0014 | 0.00036 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Bromodichloromethane | ND | | 0.0014 | 0.00029 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Bromoform | ND | | 0.0014 | 0.00042 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Bromomethane | ND | *+ | 0.0036 | 0.0014 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| **Carbon disulfide** | **0.0012** | **J** | 0.0036 | 0.00074 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Carbon tetrachloride | ND | | 0.0014 | 0.00041 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Chlorobenzene | ND | | 0.0014 | 0.00053 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Chloroethane | ND | *+ | 0.0036 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Chloroform | ND | | 0.0014 | 0.00050 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Chloromethane | ND | *- | 0.0036 | 0.0014 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0014 | 0.00040 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0014 | 0.00043 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Dibromochloromethane | ND | | 0.0014 | 0.00047 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,1-Dichloroethane | ND | | 0.0014 | 0.00049 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,2-Dichloroethane | ND | | 0.0036 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,1-Dichloroethene | ND | | 0.0014 | 0.00049 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,2-Dichloropropane | ND | | 0.0014 | 0.00037 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0014 | 0.00050 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Ethylbenzene | ND | | 0.0014 | 0.00068 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 2-Hexanone | ND | | 0.0036 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Methylene Chloride | ND | | 0.0036 | 0.0014 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0036 | 0.0016 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| methyl isobutyl ketone | ND | | 0.0036 | 0.0011 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Methyl tert-butyl ether | ND | | 0.0014 | 0.00042 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Styrene | ND | | 0.0014 | 0.00043 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0014 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Tetrachloroethene | ND | | 0.0014 | 0.00049 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Toluene | ND | | 0.0014 | 0.00036 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0014 | 0.00063 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0014 | 0.00050 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0014 | 0.00048 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0014 | 0.00061 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Trichloroethene | ND | | 0.0014 | 0.00048 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Vinyl chloride | ND | | 0.0014 | 0.00063 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |
| Xylenes, Total | ND | | 0.0029 | 0.00046 | mg/Kg | ☼ | 09/01/21 15:08 | 09/07/21 17:28 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *75 - 131* | *09/01/21 15:08* | *09/07/21 17:28* | *1* |
| *Dibromofluoromethane* | *99* | | *75 - 126* | *09/01/21 15:08* | *09/07/21 17:28* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 134* | *09/01/21 15:08* | *09/07/21 17:28* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 124* | *09/01/21 15:08* | *09/07/21 17:28* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | | 0.036 | 0.0065 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Acenaphthylene | ND | | 0.036 | 0.0048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Anthracene | ND | | 0.036 | 0.0060 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Benzo[a]anthracene | ND | | 0.036 | 0.0049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Benzo[a]pyrene | ND | | 0.036 | 0.0070 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Client Sample ID: B-23D**
**Date Collected: 08/31/21 14:45**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-7**
**Matrix: Solid**
**Percent Solids: 89.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | ND | | 0.036 | 0.0078 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| **Benzo[g,h,i]perylene** | **0.017** | **J** | 0.036 | 0.012 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Benzo[k]fluoranthene | ND | | 0.036 | 0.011 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.18 | 0.037 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.18 | 0.054 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.18 | 0.066 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.18 | 0.048 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Butyl benzyl phthalate | ND | | 0.18 | 0.069 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Carbazole | ND | | 0.18 | 0.090 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4-Chloroaniline | ND | | 0.73 | 0.17 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.36 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2-Chloronaphthalene | ND | | 0.18 | 0.040 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2-Chlorophenol | ND | | 0.18 | 0.062 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| **Chrysene** | **0.028** | **J** | 0.036 | 0.0098 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.036 | 0.0070 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Dibenzofuran | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.18 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.18 | 0.046 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.18 | 0.050 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,4-Dichlorophenol | ND | | 0.36 | 0.086 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Diethyl phthalate | ND | | 0.18 | 0.061 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,4-Dimethylphenol | ND | | 0.36 | 0.14 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Dimethyl phthalate | ND | | 0.18 | 0.047 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Di-n-butyl phthalate | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.73 | 0.29 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,4-Dinitrophenol | ND | | 0.73 | 0.64 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.18 | 0.057 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.18 | 0.071 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Di-n-octyl phthalate | ND | | 0.18 | 0.059 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Fluoranthene | ND | | 0.036 | 0.0067 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Fluorene | ND | | 0.036 | 0.0051 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Hexachlorobenzene | ND | | 0.073 | 0.0084 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Hexachlorobutadiene | ND | | 0.18 | 0.057 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.73 | 0.21 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Hexachloroethane | ND | | 0.18 | 0.055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.036 | 0.0094 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Isophorone | ND | | 0.18 | 0.041 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| **2-Methylnaphthalene** | **0.012** | **J** | 0.073 | 0.0066 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2-Methylphenol | ND | | 0.18 | 0.058 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 3 & 4 Methylphenol | ND | | 0.18 | 0.060 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Naphthalene | ND | | 0.036 | 0.0055 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2-Nitroaniline | ND | | 0.18 | 0.049 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 3-Nitroaniline | ND | | 0.36 | 0.11 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4-Nitroaniline | ND | | 0.36 | 0.15 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Nitrobenzene | ND | | 0.036 | 0.0090 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2-Nitrophenol | ND | | 0.36 | 0.085 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 4-Nitrophenol | ND | | 0.73 | 0.34 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |

**Client Sample ID: B-23D**
**Date Collected: 08/31/21 14:45**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-7**
**Matrix: Solid**
**Percent Solids: 89.4**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodi-n-propylamine | ND | | 0.073 | 0.044 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.18 | 0.043 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.18 | 0.042 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Pentachlorophenol | ND | | 0.73 | 0.58 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| **Phenanthrene** | **0.049** | | 0.036 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| Phenol | ND | | 0.18 | 0.080 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| **Pyrene** | **0.020** | **J** | 0.036 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.18 | 0.039 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.36 | 0.082 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.36 | 0.12 | mg/Kg | ☼ | 09/03/21 06:28 | 09/07/21 16:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *80* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 16:10* | *1* |
| *2-Fluorophenol* | *102* | | *31 - 166* | *09/03/21 06:28* | *09/07/21 16:10* | *1* |
| *Nitrobenzene-d5* | *75* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 16:10* | *1* |
| *Phenol-d5* | *90* | | *30 - 153* | *09/03/21 06:28* | *09/07/21 16:10* | *1* |
| *Terphenyl-d14* | *87* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 16:10* | *1* |
| *2,4,6-Tribromophenol* | *37* | | *31 - 143* | *09/03/21 06:28* | *09/07/21 16:10* | *1* |

## Method: 8081B - Organochlorine Pesticides (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0019 | 0.0013 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| alpha-BHC | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| beta-BHC | ND | | 0.0019 | 0.0015 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| cis-Chlordane | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| 4,4'-DDD | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| 4,4'-DDE | ND | | 0.0019 | 0.00096 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| 4,4'-DDT | ND | | 0.0019 | 0.00089 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| delta-BHC | ND | | 0.0019 | 0.00089 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Dieldrin | ND | | 0.0019 | 0.00098 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Endosulfan I | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Endosulfan II | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Endosulfan sulfate | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Endrin | ND | | 0.0019 | 0.00095 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Endrin aldehyde | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Endrin ketone | ND | | 0.0019 | 0.00091 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0019 | 0.00093 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Heptachlor | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Heptachlor epoxide | ND | | 0.0019 | 0.0010 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Methoxychlor | ND | | 0.0092 | 0.0012 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| Toxaphene | ND | | 0.018 | 0.0075 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |
| trans-Chlordane | ND | | 0.0019 | 0.0011 | mg/Kg | ☼ | 09/03/21 06:31 | 09/04/21 00:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *115* | | *33 - 148* | *09/03/21 06:31* | *09/04/21 00:24* | *1* |
| *Tetrachloro-m-xylene* | *100* | | *30 - 121* | *09/03/21 06:31* | *09/04/21 00:24* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.018 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |

**Client Sample ID: B-23D**
**Date Collected: 08/31/21 14:45**
**Date Received: 09/01/21 13:30**

**Lab Sample ID: 500-204605-7**
**Matrix: Solid**
**Percent Solids: 89.4**

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1221 | ND | | 0.018 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |
| PCB-1232 | ND | | 0.018 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |
| PCB-1242 | ND | | 0.018 | 0.0072 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |
| PCB-1248 | ND | | 0.018 | 0.0088 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |
| PCB-1254 | ND | | 0.018 | 0.0063 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |
| PCB-1260 | ND | | 0.018 | 0.0070 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.018 | 0.0050 | mg/Kg | ☼ | 09/03/21 06:31 | 09/03/21 21:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *81* | | *49 - 129* | *09/03/21 06:31* | *09/03/21 21:37* | *1* |
| *DCB Decachlorobiphenyl* | *107* | | *37 - 121* | *09/03/21 06:31* | *09/03/21 21:37* | *1* |

## Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **8200** | | 22 | 9.0 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Antimony** | **0.61** | **J** | 2.2 | 0.43 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Arsenic** | **8.2** | | 1.1 | 0.37 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Barium** | **35** | | 1.1 | 0.12 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Beryllium** | **0.68** | | 0.44 | 0.10 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Cadmium** | **0.062** | **J B** | 0.22 | 0.039 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Calcium** | **54000** | | 22 | 3.7 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Chromium** | **13** | | 1.1 | 0.54 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Cobalt** | **10** | | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Copper** | **21** | | 1.1 | 0.31 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Iron** | **17000** | | 22 | 11 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Lead** | **12** | | 0.55 | 0.25 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Magnesium** | **28000** | | 11 | 5.4 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Manganese** | **340** | | 1.1 | 0.16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Nickel** | **26** | | 1.1 | 0.32 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Potassium** | **2400** | | 55 | 19 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| Selenium | ND | | 1.1 | 0.64 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| Silver | ND | | 0.55 | 0.14 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Sodium** | **200** | | 110 | 16 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| Thallium | ND | | 1.1 | 0.55 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Vanadium** | **17** | | 0.55 | 0.13 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |
| **Zinc** | **57** | | 2.2 | 0.96 | mg/Kg | ☼ | 09/06/21 09:00 | 09/07/21 20:51 | 1 |

## Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.017** | | 0.017 | 0.0057 | mg/Kg | ☼ | 09/03/21 13:40 | 09/07/21 09:31 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.25 | 0.13 | mg/Kg | ☼ | 09/07/21 10:49 | 09/07/21 14:56 | 1 |
| **pH** | **8.3** | | 0.2 | 0.2 | SU | | | 09/03/21 15:05 | 1 |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| E | Result exceeded calibration range. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| F2 | MS/MSD RPD exceeds control limits |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## GC/MS VOA

### Prep Batch: 616979

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-3 | B-14 | Total/NA | Solid | 5035 | |
| 500-204605-5 | B-18D | Total/NA | Solid | 5035 | |
| 500-204605-3 MS | B-14 | Total/NA | Solid | 5035 | |
| 500-204605-3 MSD | B-14 | Total/NA | Solid | 5035 | |

### Prep Batch: 616985

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 5035 | |
| 500-204605-2 | B-34 | Total/NA | Solid | 5035 | |
| 500-204605-4 | B-7D | Total/NA | Solid | 5035 | |
| 500-204605-6 | B-20D | Total/NA | Solid | 5035 | |
| 500-204605-7 | B-23D | Total/NA | Solid | 5035 | |

### Analysis Batch: 617403

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-3 | B-14 | Total/NA | Solid | 8260B | 616979 |
| MB 500-617403/6 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-617403/4 | Lab Control Sample | Total/NA | Solid | 8260B | |
| 500-204605-3 MS | B-14 | Total/NA | Solid | 8260B | 616979 |
| 500-204605-3 MSD | B-14 | Total/NA | Solid | 8260B | 616979 |

### Analysis Batch: 617411

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 8260B | 616985 |
| 500-204605-2 | B-34 | Total/NA | Solid | 8260B | 616985 |
| 500-204605-4 | B-7D | Total/NA | Solid | 8260B | 616985 |
| 500-204605-6 | B-20D | Total/NA | Solid | 8260B | 616985 |
| 500-204605-7 | B-23D | Total/NA | Solid | 8260B | 616985 |
| MB 500-617411/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-617411/16 | Lab Control Sample | Total/NA | Solid | 8260B | |

### Analysis Batch: 617825

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-5 | B-18D | Total/NA | Solid | 8260B | 616979 |
| MB 500-617825/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-617825/5 | Lab Control Sample | Total/NA | Solid | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 617169

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 3541 | |
| 500-204605-2 - DL | B-34 | Total/NA | Solid | 3541 | |
| 500-204605-2 | B-34 | Total/NA | Solid | 3541 | |
| 500-204605-3 - DL | B-14 | Total/NA | Solid | 3541 | |
| 500-204605-3 | B-14 | Total/NA | Solid | 3541 | |
| 500-204605-4 | B-7D | Total/NA | Solid | 3541 | |
| 500-204605-5 | B-18D | Total/NA | Solid | 3541 | |
| 500-204605-6 | B-20D | Total/NA | Solid | 3541 | |
| 500-204605-7 | B-23D | Total/NA | Solid | 3541 | |
| MB 500-617169/1-A | Method Blank | Total/NA | Solid | 3541 | |

## GC/MS Semi VOA (Continued)

### Prep Batch: 617169 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-617169/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| 500-204605-1 MS | B-33 | Total/NA | Solid | 3541 | |
| 500-204605-1 MSD | B-33 | Total/NA | Solid | 3541 | |

### Analysis Batch: 617418

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-2 | B-34 | Total/NA | Solid | 8270D | 617169 |
| 500-204605-3 | B-14 | Total/NA | Solid | 8270D | 617169 |
| 500-204605-4 | B-7D | Total/NA | Solid | 8270D | 617169 |
| 500-204605-5 | B-18D | Total/NA | Solid | 8270D | 617169 |
| 500-204605-6 | B-20D | Total/NA | Solid | 8270D | 617169 |
| 500-204605-7 | B-23D | Total/NA | Solid | 8270D | 617169 |
| MB 500-617169/1-A | Method Blank | Total/NA | Solid | 8270D | 617169 |
| LCS 500-617169/2-A | Lab Control Sample | Total/NA | Solid | 8270D | 617169 |

### Analysis Batch: 617626

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 8270D | 617169 |
| 500-204605-2 - DL | B-34 | Total/NA | Solid | 8270D | 617169 |
| 500-204605-3 - DL | B-14 | Total/NA | Solid | 8270D | 617169 |
| 500-204605-1 MS | B-33 | Total/NA | Solid | 8270D | 617169 |
| 500-204605-1 MSD | B-33 | Total/NA | Solid | 8270D | 617169 |

## GC Semi VOA

### Prep Batch: 617170

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | Total/NA | Solid | 3541 | |
| 500-204605-5 | B-18D | Total/NA | Solid | 3541 | |
| 500-204605-6 | B-20D | Total/NA | Solid | 3541 | |
| 500-204605-7 | B-23D | Total/NA | Solid | 3541 | |
| MB 500-617170/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-617170/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| LCS 500-617170/3-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 617340

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | Total/NA | Solid | 8081B | 617170 |
| 500-204605-5 | B-18D | Total/NA | Solid | 8081B | 617170 |
| 500-204605-6 | B-20D | Total/NA | Solid | 8081B | 617170 |
| 500-204605-7 | B-23D | Total/NA | Solid | 8081B | 617170 |
| MB 500-617170/1-A | Method Blank | Total/NA | Solid | 8081B | 617170 |
| LCS 500-617170/2-A | Lab Control Sample | Total/NA | Solid | 8081B | 617170 |

### Analysis Batch: 617343

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | Total/NA | Solid | 8082A | 617170 |
| 500-204605-5 | B-18D | Total/NA | Solid | 8082A | 617170 |
| 500-204605-6 | B-20D | Total/NA | Solid | 8082A | 617170 |
| 500-204605-7 | B-23D | Total/NA | Solid | 8082A | 617170 |
| MB 500-617170/1-A | Method Blank | Total/NA | Solid | 8082A | 617170 |

## GC Semi VOA (Continued)

### Analysis Batch: 617343 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-617170/3-A | Lab Control Sample | Total/NA | Solid | 8082A | 617170 |

## Metals

### Prep Batch: 617276

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 7471B | |
| 500-204605-2 | B-34 | Total/NA | Solid | 7471B | |
| 500-204605-4 | B-7D | Total/NA | Solid | 7471B | |
| 500-204605-5 | B-18D | Total/NA | Solid | 7471B | |
| 500-204605-6 | B-20D | Total/NA | Solid | 7471B | |
| 500-204605-7 | B-23D | Total/NA | Solid | 7471B | |
| MB 500-617276/12-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 500-617276/13-A | Lab Control Sample | Total/NA | Solid | 7471B | |

### Prep Batch: 617366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 3050B | |
| 500-204605-2 | B-34 | Total/NA | Solid | 3050B | |
| 500-204605-3 | B-14 | Total/NA | Solid | 3050B | |
| 500-204605-4 | B-7D | Total/NA | Solid | 3050B | |
| 500-204605-5 | B-18D | Total/NA | Solid | 3050B | |
| 500-204605-6 | B-20D | Total/NA | Solid | 3050B | |
| 500-204605-7 | B-23D | Total/NA | Solid | 3050B | |
| MB 500-617366/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 500-617366/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |

### Analysis Batch: 617460

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 7471B | 617276 |
| 500-204605-2 | B-34 | Total/NA | Solid | 7471B | 617276 |
| 500-204605-4 | B-7D | Total/NA | Solid | 7471B | 617276 |
| 500-204605-5 | B-18D | Total/NA | Solid | 7471B | 617276 |
| 500-204605-6 | B-20D | Total/NA | Solid | 7471B | 617276 |
| 500-204605-7 | B-23D | Total/NA | Solid | 7471B | 617276 |
| MB 500-617276/12-A | Method Blank | Total/NA | Solid | 7471B | 617276 |
| LCS 500-617276/13-A | Lab Control Sample | Total/NA | Solid | 7471B | 617276 |

### Analysis Batch: 617622

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 6010B | 617366 |
| 500-204605-2 | B-34 | Total/NA | Solid | 6010B | 617366 |
| 500-204605-3 | B-14 | Total/NA | Solid | 6010B | 617366 |
| 500-204605-4 | B-7D | Total/NA | Solid | 6010B | 617366 |
| 500-204605-5 | B-18D | Total/NA | Solid | 6010B | 617366 |
| 500-204605-6 | B-20D | Total/NA | Solid | 6010B | 617366 |
| 500-204605-7 | B-23D | Total/NA | Solid | 6010B | 617366 |
| MB 500-617366/1-A | Method Blank | Total/NA | Solid | 6010B | 617366 |
| LCS 500-617366/2-A | Lab Control Sample | Total/NA | Solid | 6010B | 617366 |

# QC Association Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## General Chemistry

### Analysis Batch: 617279

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | 9045D | |
| 500-204605-2 | B-34 | Total/NA | Solid | 9045D | |
| 500-204605-3 | B-14 | Total/NA | Solid | 9045D | |
| 500-204605-4 | B-7D | Total/NA | Solid | 9045D | |
| 500-204605-5 | B-18D | Total/NA | Solid | 9045D | |
| 500-204605-6 | B-20D | Total/NA | Solid | 9045D | |
| 500-204605-7 | B-23D | Total/NA | Solid | 9045D | |
| LCS 500-617279/5 | Lab Control Sample | Total/NA | Solid | 9045D | |
| LCSD 500-617279/6 | Lab Control Sample Dup | Total/NA | Solid | 9045D | |

### Prep Batch: 617459

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | Total/NA | Solid | 9010C | |
| 500-204605-5 | B-18D | Total/NA | Solid | 9010C | |
| 500-204605-6 | B-20D | Total/NA | Solid | 9010C | |
| 500-204605-7 | B-23D | Total/NA | Solid | 9010C | |
| MB 500-617459/1-A | Method Blank | Total/NA | Solid | 9010C | |
| HLCS 500-617459/2-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LCS 500-617459/3-A | Lab Control Sample | Total/NA | Solid | 9010C | |
| LLCS 500-617459/4-A | Lab Control Sample | Total/NA | Solid | 9010C | |

### Analysis Batch: 617528

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-4 | B-7D | Total/NA | Solid | 9012B | 617459 |
| 500-204605-5 | B-18D | Total/NA | Solid | 9012B | 617459 |
| 500-204605-6 | B-20D | Total/NA | Solid | 9012B | 617459 |
| 500-204605-7 | B-23D | Total/NA | Solid | 9012B | 617459 |
| MB 500-617459/1-A | Method Blank | Total/NA | Solid | 9012B | 617459 |
| HLCS 500-617459/2-A | Lab Control Sample | Total/NA | Solid | 9012B | 617459 |
| LCS 500-617459/3-A | Lab Control Sample | Total/NA | Solid | 9012B | 617459 |
| LLCS 500-617459/4-A | Lab Control Sample | Total/NA | Solid | 9012B | 617459 |

### Analysis Batch: 617554

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-204605-1 | B-33 | Total/NA | Solid | Moisture | |
| 500-204605-2 | B-34 | Total/NA | Solid | Moisture | |
| 500-204605-3 | B-14 | Total/NA | Solid | Moisture | |
| 500-204605-4 | B-7D | Total/NA | Solid | Moisture | |
| 500-204605-5 | B-18D | Total/NA | Solid | Moisture | |
| 500-204605-6 | B-20D | Total/NA | Solid | Moisture | |
| 500-204605-7 | B-23D | Total/NA | Solid | Moisture | |
| 500-204605-2 DU | B-34 | Total/NA | Solid | Moisture | |

# Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | BFB | DBFM | DCA | TOL |
| Lab Sample ID | Client Sample ID | (75-131) | (75-126) | (70-134) | (75-124) |
| 500-204605-1 | B-33 | 84 | 99 | 96 | 96 |
| 500-204605-2 | B-34 | 84 | 100 | 96 | 98 |
| 500-204605-4 | B-7D | 87 | 99 | 93 | 101 |
| 500-204605-6 | B-20D | 84 | 100 | 92 | 98 |
| 500-204605-7 | B-23D | 91 | 99 | 95 | 100 |
| LCS 500-617411/16 | Lab Control Sample | 80 | 89 | 82 | 100 |
| MB 500-617411/7 | Method Blank | 86 | 92 | 86 | 97 |

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | TOL | BFB | DBFM |
| Lab Sample ID | Client Sample ID | (75-126) | (75-120) | (72-124) | (75-120) |
| 500-204605-3 | B-14 | 111 | 97 | 91 | 111 |
| 500-204605-3 MS | B-14 | 106 | 98 | 88 | 108 |
| 500-204605-3 MSD | B-14 | 104 | 99 | 92 | 108 |
| 500-204605-5 | B-18D | 82 | 95 | 92 | 88 |
| LCS 500-617403/4 | Lab Control Sample | 101 | 102 | 91 | 104 |
| LCS 500-617825/5 | Lab Control Sample | 81 | 95 | 94 | 91 |
| MB 500-617403/6 | Method Blank | 111 | 95 | 93 | 109 |
| MB 500-617825/7 | Method Blank | 82 | 97 | 93 | 87 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Solid** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | FBP | 2FP | NBZ | PHL | TPHL | TBP |
| Lab Sample ID | Client Sample ID | (43-145) | (31-166) | (37-147) | (30-153) | (42-157) | (31-143) |
| 500-204605-1 | B-33 | 44 | 47 | 39 | 53 | 43 | 33 |
| 500-204605-1 MS | B-33 | 90 | 102 | 86 | 112 | 92 | 79 |
| 500-204605-1 MSD | B-33 | 65 | 72 | 60 | 80 | 65 | 54 |
| 500-204605-2 | B-34 | 76 | 92 | 70 | 90 | 89 | 43 |
| 500-204605-2 - DL | B-34 | 94 | 108 | 82 | 123 | 91 | 71 |
| 500-204605-3 | B-14 | 81 | | 76 | | 98 | |
| 500-204605-3 - DL | B-14 | 97 | | 88 | | 90 | |
| 500-204605-4 | B-7D | 79 | 100 | 75 | 94 | 89 | 39 |
| 500-204605-5 | B-18D | 83 | 103 | 80 | 97 | 89 | 45 |
| 500-204605-6 | B-20D | 74 | 94 | 68 | 91 | 93 | 35 |

# Surrogate Summary

Client: ECS Midwest LLC
Job ID: 500-204605-1
Project/Site: Cloud HQ (53: 2861-B)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | |
|---|---|---|---|---|---|---|---|
| | | FBP | 2FP | NBZ | PHL | TPHL | TBP |
| Lab Sample ID | Client Sample ID | (43-145) | (31-166) | (37-147) | (30-153) | (42-157) | (31-143) |
| 500-204605-7 | B-23D | 80 | 102 | 75 | 90 | 87 | 37 |
| LCS 500-617169/2-A | Lab Control Sample | 79 | 103 | 74 | 95 | 91 | 47 |
| MB 500-617169/1-A | Method Blank | 83 | 103 | 75 | 98 | 101 | 52 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

## Method: 8081B - Organochlorine Pesticides (GC)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | DCBP2 | TCX2 |
| Lab Sample ID | Client Sample ID | (33-148) | (30-121) |
| 500-204605-4 | B-7D | 115 | 97 |
| 500-204605-5 | B-18D | 106 | 99 |
| 500-204605-6 | B-20D | 103 | 75 |
| 500-204605-7 | B-23D | 115 | 100 |
| LCS 500-617170/2-A | Lab Control Sample | 107 | 85 |
| MB 500-617170/1-A | Method Blank | 120 | 71 |

**Surrogate Legend**

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | TCX1 | TCX2 | DCBP1 | DCBP2 |
| Lab Sample ID | Client Sample ID | (49-129) | (49-129) | (37-121) | (37-121) |
| 500-204605-4 | B-7D | 70 | | 106 | |
| 500-204605-5 | B-18D | | 59 | | 81 |
| 500-204605-6 | B-20D | 60 | | 88 | |
| 500-204605-7 | B-23D | 81 | | 107 | |
| LCS 500-617170/3-A | Lab Control Sample | 78 | 73 | 110 | 99 |
| MB 500-617170/1-A | Method Blank | 71 | 64 | 113 | 100 |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: 500-204605-3 MS**
**Matrix: Solid**
**Analysis Batch: 617403**

**Client Sample ID: B-14**
**Prep Type: Total/NA**
**Prep Batch: 616979**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 3.33 | 3.32 | | mg/Kg | ☼ | 100 | 70 - 120 |
| Ethylbenzene | ND | | 3.33 | 2.95 | | mg/Kg | ☼ | 89 | 70 - 123 |
| Toluene | ND | | 3.33 | 3.27 | | mg/Kg | ☼ | 98 | 70 - 125 |
| Xylenes, Total | ND | | 6.65 | 5.95 | | mg/Kg | ☼ | 89 | 70 - 125 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *72 - 124* |
| *Dibromofluoromethane* | *108* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *98* | | *75 - 120* |

**Lab Sample ID: 500-204605-3 MSD**
**Matrix: Solid**
**Analysis Batch: 617403**

**Client Sample ID: B-14**
**Prep Type: Total/NA**
**Prep Batch: 616979**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 3.33 | 3.32 | | mg/Kg | ☼ | 100 | 70 - 120 | 0 | 30 |
| Ethylbenzene | ND | | 3.33 | 2.94 | | mg/Kg | ☼ | 88 | 70 - 123 | 1 | 30 |
| Toluene | ND | | 3.33 | 3.29 | | mg/Kg | ☼ | 99 | 70 - 125 | 1 | 30 |
| Xylenes, Total | ND | | 6.65 | 5.99 | | mg/Kg | ☼ | 90 | 70 - 125 | 1 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *92* | | *72 - 124* |
| *Dibromofluoromethane* | *108* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *99* | | *75 - 120* |

**Lab Sample ID: MB 500-617403/6**
**Matrix: Solid**
**Analysis Batch: 617403**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 09/07/21 10:40 | 1 |
| Ethylbenzene | ND | | 0.00025 | 0.00018 | mg/Kg | | | 09/07/21 10:40 | 1 |
| Toluene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 09/07/21 10:40 | 1 |
| Xylenes, Total | ND | | 0.00050 | 0.00022 | mg/Kg | | | 09/07/21 10:40 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *72 - 124* | | *09/07/21 10:40* | *1* |
| *Dibromofluoromethane* | *109* | | *75 - 120* | | *09/07/21 10:40* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *75 - 126* | | *09/07/21 10:40* | *1* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | | *09/07/21 10:40* | *1* |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617403/4**
**Matrix: Solid**
**Analysis Batch: 617403**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 0.0500 | 0.0507 | | mg/Kg | | 101 | 70 - 120 |
| Ethylbenzene | 0.0500 | 0.0478 | | mg/Kg | | 96 | 70 - 123 |
| Toluene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0946 | | mg/Kg | | 95 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *72 - 124* |
| *Dibromofluoromethane* | *104* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *102* | | *75 - 120* |

**Lab Sample ID: MB 500-617411/7**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.020 | 0.0087 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Benzene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Bromodichloromethane | ND | | 0.0020 | 0.00041 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Bromoform | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Bromomethane | ND | | 0.0050 | 0.0019 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Carbon disulfide | ND | | 0.0050 | 0.0010 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Carbon tetrachloride | ND | | 0.0020 | 0.00058 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chlorobenzene | ND | | 0.0020 | 0.00074 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chloroethane | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chloroform | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Chloromethane | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/07/21 11:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0020 | 0.00056 | mg/Kg | | | 09/07/21 11:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Dibromochloromethane | ND | | 0.0020 | 0.00065 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1-Dichloroethane | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,2-Dichloroethane | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1-Dichloroethene | ND | | 0.0020 | 0.00069 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,2-Dichloropropane | ND | | 0.0020 | 0.00052 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Ethylbenzene | ND | | 0.0020 | 0.00096 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0020 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 09/07/21 11:20 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0015 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Methyl tert-butyl ether | ND | | 0.0020 | 0.00059 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Styrene | ND | | 0.0020 | 0.00060 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0020 | 0.00064 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Tetrachloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Toluene | ND | | 0.0020 | 0.00051 | mg/Kg | | | 09/07/21 11:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/07/21 11:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0020 | 0.00070 | mg/Kg | | | 09/07/21 11:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0020 | 0.00067 | mg/Kg | | | 09/07/21 11:20 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-617411/7**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.0020 | 0.00086 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Trichloroethene | ND | | 0.0020 | 0.00068 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Vinyl chloride | ND | | 0.0020 | 0.00089 | mg/Kg | | | 09/07/21 11:20 | 1 |
| Xylenes, Total | ND | | 0.0040 | 0.00064 | mg/Kg | | | 09/07/21 11:20 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *86* | | *75 - 131* | | *09/07/21 11:20* | *1* |
| *Dibromofluoromethane* | *92* | | *75 - 126* | | *09/07/21 11:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *86* | | *70 - 134* | | *09/07/21 11:20* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 124* | | *09/07/21 11:20* | *1* |

**Lab Sample ID: LCS 500-617411/16**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0457 | | mg/Kg | | 91 | 40 - 150 |
| Benzene | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 |
| Bromodichloromethane | 0.0500 | 0.0474 | | mg/Kg | | 95 | 67 - 129 |
| Bromoform | 0.0500 | 0.0486 | | mg/Kg | | 97 | 68 - 136 |
| Bromomethane | 0.0500 | 0.0752 | *+ | mg/Kg | | 150 | 70 - 130 |
| Carbon disulfide | 0.0500 | 0.0460 | | mg/Kg | | 92 | 70 - 129 |
| Carbon tetrachloride | 0.0500 | 0.0438 | | mg/Kg | | 88 | 75 - 125 |
| Chlorobenzene | 0.0500 | 0.0482 | | mg/Kg | | 96 | 50 - 150 |
| Chloroethane | 0.0500 | 0.0640 | *+ | mg/Kg | | 128 | 75 - 125 |
| Chloroform | 0.0500 | 0.0473 | | mg/Kg | | 95 | 57 - 135 |
| Chloromethane | 0.0500 | 0.0335 | *- | mg/Kg | | 67 | 70 - 125 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| Dibromochloromethane | 0.0500 | 0.0517 | | mg/Kg | | 103 | 69 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0422 | | mg/Kg | | 84 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0427 | | mg/Kg | | 85 | 70 - 130 |
| 1,1-Dichloroethene | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 120 |
| 1,2-Dichloropropane | 0.0500 | 0.0452 | | mg/Kg | | 90 | 70 - 125 |
| Ethylbenzene | 0.0500 | 0.0525 | | mg/Kg | | 105 | 61 - 136 |
| 2-Hexanone | 0.0500 | 0.0480 | | mg/Kg | | 96 | 48 - 146 |
| Methylene Chloride | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 126 |
| Methyl Ethyl Ketone | 0.0500 | 0.0463 | | mg/Kg | | 93 | 47 - 138 |
| methyl isobutyl ketone | 0.0500 | 0.0461 | | mg/Kg | | 92 | 50 - 148 |
| Methyl tert-butyl ether | 0.0500 | 0.0445 | | mg/Kg | | 89 | 50 - 140 |
| Styrene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0384 | | mg/Kg | | 77 | 70 - 122 |
| Tetrachloroethene | 0.0500 | 0.0503 | | mg/Kg | | 101 | 70 - 124 |
| Toluene | 0.0500 | 0.0512 | | mg/Kg | | 102 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0465 | | mg/Kg | | 93 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0488 | | mg/Kg | | 98 | 70 - 125 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0432 | | mg/Kg | | 86 | 70 - 128 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0533 | | mg/Kg | | 107 | 70 - 125 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617411/16**
**Matrix: Solid**
**Analysis Batch: 617411**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 0.0500 | 0.0533 | | mg/Kg | | 107 | 70 - 125 |
| Vinyl chloride | 0.0500 | 0.0407 | | mg/Kg | | 81 | 70 - 125 |
| Xylenes, Total | 0.100 | 0.0953 | | mg/Kg | | 95 | 53 - 147 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *80* | | *75 - 131* |
| *Dibromofluoromethane* | *89* | | *75 - 126* |
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *70 - 134* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 124* |

**Lab Sample ID: MB 500-617825/7**
**Matrix: Solid**
**Analysis Batch: 617825**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 0.010 | 0.0017 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Benzene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Bromodichloromethane | ND | | 0.0010 | 0.00037 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Bromoform | ND | | 0.0010 | 0.00048 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Bromomethane | ND | | 0.0030 | 0.00080 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Carbon disulfide | ND | | 0.0020 | 0.00080 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Carbon tetrachloride | ND | | 0.0010 | 0.00038 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Chlorobenzene | ND | | 0.0010 | 0.00039 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Chloroethane | ND | | 0.0010 | 0.00050 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Chloroform | ND | | 0.0020 | 0.00037 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Chloromethane | ND | | 0.0010 | 0.00032 | mg/Kg | | | 09/09/21 11:11 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.0010 | 0.00041 | mg/Kg | | | 09/09/21 11:11 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.0010 | 0.00042 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Dibromochloromethane | ND | | 0.0010 | 0.00049 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,1-Dichloroethane | ND | | 0.0010 | 0.00041 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,2-Dichloroethane | ND | | 0.0010 | 0.00039 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,1-Dichloroethene | ND | | 0.0010 | 0.00039 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,2-Dichloropropane | ND | | 0.0010 | 0.00043 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.0010 | 0.00042 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Ethylbenzene | ND | | 0.00025 | 0.00018 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 2-Hexanone | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Methylene Chloride | ND | | 0.0050 | 0.0016 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Methyl Ethyl Ketone | ND | | 0.0050 | 0.0021 | mg/Kg | | | 09/09/21 11:11 | 1 |
| methyl isobutyl ketone | ND | | 0.0050 | 0.0022 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Methyl tert-butyl ether | ND | | 0.0010 | 0.00039 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Styrene | ND | | 0.0010 | 0.00039 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0010 | 0.00040 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Tetrachloroethene | ND | | 0.0010 | 0.00037 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Toluene | ND | | 0.00025 | 0.00015 | mg/Kg | | | 09/09/21 11:11 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.0010 | 0.00035 | mg/Kg | | | 09/09/21 11:11 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.0010 | 0.00036 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.0010 | 0.00038 | mg/Kg | | | 09/09/21 11:11 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.0010 | 0.00035 | mg/Kg | | | 09/09/21 11:11 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-617825/7**
**Matrix: Solid**
**Analysis Batch: 617825**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | ND | | 0.00050 | 0.00016 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Vinyl chloride | ND | | 0.0010 | 0.00026 | mg/Kg | | | 09/09/21 11:11 | 1 |
| Xylenes, Total | ND | | 0.00050 | 0.00022 | mg/Kg | | | 09/09/21 11:11 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *93* | | *72 - 124* | | *09/09/21 11:11* | *1* |
| *Dibromofluoromethane* | *87* | | *75 - 120* | | *09/09/21 11:11* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *82* | | *75 - 126* | | *09/09/21 11:11* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *75 - 120* | | *09/09/21 11:11* | *1* |

**Lab Sample ID: LCS 500-617825/5**
**Matrix: Solid**
**Analysis Batch: 617825**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acetone | 0.0500 | 0.0373 | | mg/Kg | | 75 | 40 - 143 |
| Benzene | 0.0500 | 0.0466 | | mg/Kg | | 93 | 70 - 120 |
| Bromodichloromethane | 0.0500 | 0.0428 | | mg/Kg | | 86 | 69 - 120 |
| Bromoform | 0.0500 | 0.0466 | | mg/Kg | | 93 | 56 - 132 |
| Bromomethane | 0.0500 | 0.0378 | | mg/Kg | | 76 | 40 - 152 |
| Carbon disulfide | 0.0500 | 0.0447 | | mg/Kg | | 89 | 66 - 120 |
| Carbon tetrachloride | 0.0500 | 0.0447 | | mg/Kg | | 89 | 59 - 133 |
| Chlorobenzene | 0.0500 | 0.0473 | | mg/Kg | | 95 | 70 - 120 |
| Chloroethane | 0.0500 | 0.0297 | | mg/Kg | | 59 | 48 - 136 |
| Chloroform | 0.0500 | 0.0438 | | mg/Kg | | 88 | 70 - 120 |
| Chloromethane | 0.0500 | 0.0383 | | mg/Kg | | 77 | 56 - 152 |
| cis-1,2-Dichloroethene | 0.0500 | 0.0469 | | mg/Kg | | 94 | 70 - 125 |
| cis-1,3-Dichloropropene | 0.0500 | 0.0459 | | mg/Kg | | 92 | 64 - 127 |
| Dibromochloromethane | 0.0500 | 0.0445 | | mg/Kg | | 89 | 68 - 125 |
| 1,1-Dichloroethane | 0.0500 | 0.0441 | | mg/Kg | | 88 | 70 - 125 |
| 1,2-Dichloroethane | 0.0500 | 0.0409 | | mg/Kg | | 82 | 68 - 127 |
| 1,1-Dichloroethene | 0.0500 | 0.0450 | | mg/Kg | | 90 | 67 - 122 |
| 1,2-Dichloropropane | 0.0500 | 0.0473 | | mg/Kg | | 95 | 67 - 130 |
| Ethylbenzene | 0.0500 | 0.0466 | | mg/Kg | | 93 | 70 - 123 |
| 2-Hexanone | 0.0500 | 0.0358 | | mg/Kg | | 72 | 54 - 146 |
| Methylene Chloride | 0.0500 | 0.0456 | | mg/Kg | | 91 | 69 - 125 |
| Methyl Ethyl Ketone | 0.0500 | 0.0387 | | mg/Kg | | 77 | 46 - 144 |
| methyl isobutyl ketone | 0.0500 | 0.0361 | | mg/Kg | | 72 | 55 - 139 |
| Methyl tert-butyl ether | 0.0500 | 0.0445 | | mg/Kg | | 89 | 55 - 123 |
| Styrene | 0.0500 | 0.0467 | | mg/Kg | | 93 | 70 - 120 |
| 1,1,2,2-Tetrachloroethane | 0.0500 | 0.0446 | | mg/Kg | | 89 | 62 - 140 |
| Tetrachloroethene | 0.0500 | 0.0513 | | mg/Kg | | 103 | 70 - 128 |
| Toluene | 0.0500 | 0.0474 | | mg/Kg | | 95 | 70 - 125 |
| trans-1,2-Dichloroethene | 0.0500 | 0.0457 | | mg/Kg | | 91 | 70 - 125 |
| trans-1,3-Dichloropropene | 0.0500 | 0.0440 | | mg/Kg | | 88 | 62 - 128 |
| 1,1,1-Trichloroethane | 0.0500 | 0.0427 | | mg/Kg | | 85 | 70 - 125 |
| 1,1,2-Trichloroethane | 0.0500 | 0.0451 | | mg/Kg | | 90 | 71 - 130 |
| Trichloroethene | 0.0500 | 0.0490 | | mg/Kg | | 98 | 70 - 125 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617825/5**
**Matrix: Solid**
**Analysis Batch: 617825**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Vinyl chloride | 0.0500 | 0.0450 | | mg/Kg | | 90 | 64 - 126 |
| Xylenes, Total | 0.100 | 0.0913 | | mg/Kg | | 91 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *94* | | *72 - 124* |
| *Dibromofluoromethane* | *91* | | *75 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *81* | | *75 - 126* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-617169/1-A**
**Matrix: Solid**
**Analysis Batch: 617418**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | ND | | 0.033 | 0.0044 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Acenaphthene | ND | | 0.033 | 0.0060 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Anthracene | ND | | 0.033 | 0.0056 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Benzo[a]anthracene | ND | | 0.033 | 0.0045 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Bis(2-chloroethoxy)methane | ND | | 0.17 | 0.034 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Bis(2-chloroethyl)ether | ND | | 0.17 | 0.050 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Benzo[b]fluoranthene | ND | | 0.033 | 0.0072 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.17 | 0.061 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4-Bromophenyl phenyl ether | ND | | 0.17 | 0.044 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Benzo[k]fluoranthene | ND | | 0.033 | 0.0098 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Benzo[a]pyrene | ND | | 0.033 | 0.0064 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Butyl benzyl phthalate | ND | | 0.17 | 0.063 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Carbazole | ND | | 0.17 | 0.083 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4-Chloroaniline | ND | | 0.67 | 0.16 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.33 | 0.11 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.033 | 0.011 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2-Chloronaphthalene | ND | | 0.17 | 0.037 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2-Chlorophenol | ND | | 0.17 | 0.057 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4-Chlorophenyl phenyl ether | ND | | 0.17 | 0.039 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Chrysene | ND | | 0.033 | 0.0091 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.033 | 0.0064 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Dibenzofuran | ND | | 0.17 | 0.039 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.17 | 0.040 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.17 | 0.037 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.17 | 0.043 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 3,3'-Dichlorobenzidine | ND | | 0.17 | 0.047 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,4-Dichlorophenol | ND | | 0.33 | 0.079 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Diethyl phthalate | ND | | 0.17 | 0.056 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,4-Dimethylphenol | ND | | 0.33 | 0.13 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Dimethyl phthalate | ND | | 0.17 | 0.043 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Di-n-butyl phthalate | ND | | 0.17 | 0.051 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4,6-Dinitro-2-methylphenol | ND | | 0.67 | 0.27 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,4-Dinitrophenol | ND | | 0.67 | 0.59 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-617169/1-A**
**Matrix: Solid**
**Analysis Batch: 617418**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-Dinitrotoluene | ND | | 0.17 | 0.053 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.17 | 0.065 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Di-n-octyl phthalate | ND | | 0.17 | 0.054 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Fluoranthene | ND | | 0.033 | 0.0062 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Fluorene | ND | | 0.033 | 0.0047 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Hexachlorobenzene | ND | | 0.067 | 0.0077 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Hexachlorobutadiene | ND | | 0.17 | 0.052 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.67 | 0.19 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Hexachloroethane | ND | | 0.17 | 0.051 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.033 | 0.0086 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Isophorone | ND | | 0.17 | 0.037 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2-Methylnaphthalene | ND | | 0.067 | 0.0061 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2-Methylphenol | ND | | 0.17 | 0.053 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 3 & 4 Methylphenol | ND | | 0.17 | 0.055 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Naphthalene | ND | | 0.033 | 0.0051 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2-Nitroaniline | ND | | 0.17 | 0.045 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 3-Nitroaniline | ND | | 0.33 | 0.10 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4-Nitroaniline | ND | | 0.33 | 0.14 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Nitrobenzene | ND | | 0.033 | 0.0083 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2-Nitrophenol | ND | | 0.33 | 0.079 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 4-Nitrophenol | ND | | 0.67 | 0.32 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.067 | 0.041 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.17 | 0.039 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,2'-oxybis[1-chloropropane] | ND | | 0.17 | 0.039 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Pentachlorophenol | ND | | 0.67 | 0.53 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Phenanthrene | ND | | 0.033 | 0.0046 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Phenol | ND | | 0.17 | 0.074 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| Pyrene | ND | | 0.033 | 0.0066 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.17 | 0.036 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.33 | 0.076 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.33 | 0.11 | mg/Kg | | 09/03/21 06:28 | 09/07/21 10:34 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *83* | | *43 - 145* | *09/03/21 06:28* | *09/07/21 10:34* | *1* |
| *2-Fluorophenol* | *103* | | *31 - 166* | *09/03/21 06:28* | *09/07/21 10:34* | *1* |
| *Nitrobenzene-d5* | *75* | | *37 - 147* | *09/03/21 06:28* | *09/07/21 10:34* | *1* |
| *Phenol-d5* | *98* | | *30 - 153* | *09/03/21 06:28* | *09/07/21 10:34* | *1* |
| *Terphenyl-d14* | *101* | | *42 - 157* | *09/03/21 06:28* | *09/07/21 10:34* | *1* |
| *2,4,6-Tribromophenol* | *52* | | *31 - 143* | *09/03/21 06:28* | *09/07/21 10:34* | *1* |

**Lab Sample ID: LCS 500-617169/2-A**
**Matrix: Solid**
**Analysis Batch: 617418**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Acenaphthylene | 1.33 | 1.13 | | mg/Kg | | 85 | 68 - 120 |
| Acenaphthene | 1.33 | 1.11 | | mg/Kg | | 83 | 65 - 124 |
| Anthracene | 1.33 | 1.15 | | mg/Kg | | 86 | 70 - 114 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617169/2-A**
**Matrix: Solid**
**Analysis Batch: 617418**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzo[a]anthracene | 1.33 | 1.27 | | mg/Kg | | 95 | 67 - 122 |
| Bis(2-chloroethoxy)methane | 1.33 | 1.09 | | mg/Kg | | 81 | 60 - 112 |
| Bis(2-chloroethyl)ether | 1.33 | 1.12 | | mg/Kg | | 84 | 55 - 111 |
| Benzo[b]fluoranthene | 1.33 | 1.36 | | mg/Kg | | 102 | 69 - 129 |
| Bis(2-ethylhexyl) phthalate | 1.33 | 1.31 | | mg/Kg | | 99 | 72 - 131 |
| 4-Bromophenyl phenyl ether | 1.33 | 1.02 | | mg/Kg | | 77 | 68 - 118 |
| Benzo[k]fluoranthene | 1.33 | 1.29 | | mg/Kg | | 97 | 68 - 127 |
| Benzo[a]pyrene | 1.33 | 1.52 | | mg/Kg | | 114 | 65 - 133 |
| Butyl benzyl phthalate | 1.33 | 1.31 | | mg/Kg | | 99 | 71 - 129 |
| Carbazole | 1.33 | 1.18 | | mg/Kg | | 88 | 65 - 142 |
| 4-Chloroaniline | 1.33 | 0.757 | | mg/Kg | | 57 | 30 - 150 |
| 4-Chloro-3-methylphenol | 1.33 | 1.18 | | mg/Kg | | 89 | 65 - 122 |
| Benzo[g,h,i]perylene | 1.33 | 1.40 | | mg/Kg | | 105 | 72 - 131 |
| 2-Chloronaphthalene | 1.33 | 1.10 | | mg/Kg | | 82 | 69 - 114 |
| 2-Chlorophenol | 1.33 | 1.19 | | mg/Kg | | 90 | 64 - 110 |
| 4-Chlorophenyl phenyl ether | 1.33 | 1.05 | | mg/Kg | | 79 | 62 - 119 |
| Chrysene | 1.33 | 1.27 | | mg/Kg | | 95 | 63 - 120 |
| Dibenz(a,h)anthracene | 1.33 | 1.24 | | mg/Kg | | 93 | 64 - 131 |
| Dibenzofuran | 1.33 | 1.08 | | mg/Kg | | 81 | 66 - 115 |
| 1,2-Dichlorobenzene | 1.33 | 1.10 | | mg/Kg | | 82 | 62 - 110 |
| 1,3-Dichlorobenzene | 1.33 | 1.12 | | mg/Kg | | 84 | 65 - 124 |
| 1,4-Dichlorobenzene | 1.33 | 1.14 | | mg/Kg | | 85 | 61 - 110 |
| 3,3'-Dichlorobenzidine | 1.33 | 0.823 | | mg/Kg | | 62 | 35 - 128 |
| 2,4-Dichlorophenol | 1.33 | 1.10 | | mg/Kg | | 83 | 58 - 120 |
| Diethyl phthalate | 1.33 | 1.00 | | mg/Kg | | 75 | 58 - 120 |
| 2,4-Dimethylphenol | 1.33 | 1.13 | | mg/Kg | | 85 | 60 - 110 |
| Dimethyl phthalate | 1.33 | 1.04 | | mg/Kg | | 78 | 69 - 116 |
| Di-n-butyl phthalate | 1.33 | 1.13 | | mg/Kg | | 85 | 65 - 120 |
| 4,6-Dinitro-2-methylphenol | 2.67 | 1.46 | | mg/Kg | | 55 | 10 - 110 |
| 2,4-Dinitrophenol | 2.67 | 0.732 | | mg/Kg | | 27 | 10 - 100 |
| 2,4-Dinitrotoluene | 1.33 | 1.15 | | mg/Kg | | 86 | 69 - 124 |
| 2,6-Dinitrotoluene | 1.33 | 1.15 | | mg/Kg | | 86 | 70 - 123 |
| Di-n-octyl phthalate | 1.33 | 1.01 | | mg/Kg | | 76 | 68 - 134 |
| Fluoranthene | 1.33 | 1.12 | | mg/Kg | | 84 | 62 - 120 |
| Fluorene | 1.33 | 1.09 | | mg/Kg | | 82 | 62 - 120 |
| Hexachlorobenzene | 1.33 | 0.863 | | mg/Kg | | 65 | 63 - 124 |
| Hexachlorobutadiene | 1.33 | 1.02 | | mg/Kg | | 76 | 56 - 120 |
| Hexachlorocyclopentadiene | 1.33 | 0.338 | J | mg/Kg | | 25 | 10 - 133 |
| Hexachloroethane | 1.33 | 1.09 | | mg/Kg | | 82 | 60 - 114 |
| Indeno[1,2,3-cd]pyrene | 1.33 | 1.22 | | mg/Kg | | 92 | 68 - 130 |
| Isophorone | 1.33 | 1.06 | | mg/Kg | | 80 | 55 - 110 |
| 2-Methylnaphthalene | 1.33 | 1.10 | | mg/Kg | | 82 | 69 - 112 |
| 2-Methylphenol | 1.33 | 1.27 | | mg/Kg | | 95 | 60 - 120 |
| 3 & 4 Methylphenol | 1.33 | 1.13 | | mg/Kg | | 84 | 57 - 120 |
| Naphthalene | 1.33 | 1.09 | | mg/Kg | | 82 | 63 - 110 |
| 2-Nitroaniline | 1.33 | 1.01 | | mg/Kg | | 76 | 57 - 124 |
| 3-Nitroaniline | 1.33 | 0.646 | | mg/Kg | | 48 | 40 - 122 |
| 4-Nitroaniline | 1.33 | 0.986 | | mg/Kg | | 74 | 60 - 160 |
| Nitrobenzene | 1.33 | 1.13 | | mg/Kg | | 85 | 60 - 116 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-617169/2-A**
**Matrix: Solid**
**Analysis Batch: 617418**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | 1.33 | 1.23 | | mg/Kg | | 93 | 60 - 120 |
| 4-Nitrophenol | 2.67 | 1.93 | | mg/Kg | | 72 | 30 - 122 |
| N-Nitrosodi-n-propylamine | 1.33 | 1.20 | | mg/Kg | | 90 | 56 - 118 |
| N-Nitrosodiphenylamine | 1.33 | 1.17 | | mg/Kg | | 88 | 65 - 112 |
| 2,2'-oxybis[1-chloropropane] | 1.33 | 0.907 | | mg/Kg | | 68 | 40 - 124 |
| Pentachlorophenol | 2.67 | 1.21 | | mg/Kg | | 45 | 13 - 112 |
| Phenanthrene | 1.33 | 1.12 | | mg/Kg | | 84 | 62 - 120 |
| Phenol | 1.33 | 1.21 | | mg/Kg | | 91 | 56 - 122 |
| Pyrene | 1.33 | 1.38 | | mg/Kg | | 104 | 61 - 128 |
| 1,2,4-Trichlorobenzene | 1.33 | 1.04 | | mg/Kg | | 78 | 66 - 117 |
| 2,4,5-Trichlorophenol | 1.33 | 1.11 | | mg/Kg | | 83 | 50 - 120 |
| 2,4,6-Trichlorophenol | 1.33 | 1.04 | | mg/Kg | | 78 | 57 - 120 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *79* | | *43 - 145* |
| *2-Fluorophenol* | *103* | | *31 - 166* |
| *Nitrobenzene-d5* | *74* | | *37 - 147* |
| *Phenol-d5* | *95* | | *30 - 153* |
| *Terphenyl-d14* | *91* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *47* | | *31 - 143* |

**Lab Sample ID: 500-204605-1 MS**
**Matrix: Solid**
**Analysis Batch: 617626**

**Client Sample ID: B-33**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | 0.017 | J F2 | 1.64 | 1.65 | | mg/Kg | ☼ | 100 | 68 - 120 |
| Acenaphthene | 0.085 | | 1.64 | 1.69 | | mg/Kg | ☼ | 98 | 65 - 124 |
| Anthracene | 0.24 | | 1.64 | 1.88 | | mg/Kg | ☼ | 100 | 70 - 114 |
| Benzo[a]anthracene | 1.2 | F1 | 1.64 | 3.82 | F1 | mg/Kg | ☼ | 158 | 67 - 122 |
| Bis(2-chloroethoxy)methane | ND | F2 | 1.64 | 1.76 | | mg/Kg | ☼ | 107 | 60 - 112 |
| Bis(2-chloroethyl)ether | ND | F2 | 1.64 | 1.72 | | mg/Kg | ☼ | 105 | 55 - 111 |
| Benzo[b]fluoranthene | 2.0 | F1 | 1.64 | 5.70 | F1 | mg/Kg | ☼ | 227 | 69 - 129 |
| Bis(2-ethylhexyl) phthalate | 0.15 | J F2 | 1.64 | 1.79 | | mg/Kg | ☼ | 109 | 72 - 131 |
| 4-Bromophenyl phenyl ether | ND | F1 F2 | 1.64 | 1.41 | | mg/Kg | ☼ | 86 | 68 - 118 |
| Benzo[k]fluoranthene | 0.83 | F1 | 1.64 | 3.03 | F1 | mg/Kg | ☼ | 134 | 68 - 127 |
| Benzo[a]pyrene | 1.5 | F1 | 1.64 | 4.61 | F1 | mg/Kg | ☼ | 190 | 65 - 133 |
| Butyl benzyl phthalate | ND | F2 | 1.64 | 1.65 | | mg/Kg | ☼ | 101 | 71 - 129 |
| Carbazole | 0.28 | J | 1.64 | 2.47 | | mg/Kg | ☼ | 133 | 65 - 142 |
| 4-Chloroaniline | ND | F1 | 1.64 | 0.491 | J | mg/Kg | ☼ | 30 | 30 - 150 |
| 4-Chloro-3-methylphenol | ND | F2 | 1.64 | 1.66 | | mg/Kg | ☼ | 101 | 65 - 122 |
| Benzo[g,h,i]perylene | 0.74 | F1 F2 | 1.64 | 2.02 | | mg/Kg | ☼ | 78 | 72 - 131 |
| 2-Chloronaphthalene | ND | F1 F2 | 1.64 | 1.52 | | mg/Kg | ☼ | 92 | 69 - 114 |
| 2-Chlorophenol | ND | F2 | 1.64 | 1.61 | | mg/Kg | ☼ | 98 | 64 - 110 |
| 4-Chlorophenyl phenyl ether | ND | F2 | 1.64 | 1.50 | | mg/Kg | ☼ | 91 | 62 - 119 |
| Chrysene | 1.5 | F1 | 1.64 | 4.31 | F1 | mg/Kg | ☼ | 171 | 63 - 120 |
| Dibenz(a,h)anthracene | 0.19 | F1 F2 | 1.64 | 1.37 | | mg/Kg | ☼ | 71 | 64 - 131 |
| Dibenzofuran | ND | F2 | 1.64 | 1.60 | | mg/Kg | ☼ | 97 | 66 - 115 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-204605-1 MS**
**Matrix: Solid**
**Analysis Batch: 617626**

**Client Sample ID: B-33**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | F1 F2 | 1.64 | 1.38 | | mg/Kg | ☼ | 84 | 62 - 110 |
| 1,3-Dichlorobenzene | ND | F1 F2 | 1.64 | 1.31 | | mg/Kg | ☼ | 80 | 60 - 110 |
| 1,4-Dichlorobenzene | ND | F1 F2 | 1.64 | 1.37 | | mg/Kg | ☼ | 83 | 61 - 110 |
| 3,3'-Dichlorobenzidine | ND | F1 | 1.64 | ND | F1 | mg/Kg | ☼ | 0 | 35 - 128 |
| 2,4-Dichlorophenol | ND | F2 | 1.64 | 1.56 | | mg/Kg | ☼ | 95 | 58 - 120 |
| Diethyl phthalate | ND | F2 | 1.64 | 1.57 | | mg/Kg | ☼ | 96 | 58 - 120 |
| 2,4-Dimethylphenol | ND | F2 | 1.64 | 1.59 | | mg/Kg | ☼ | 97 | 60 - 110 |
| Dimethyl phthalate | ND | F1 F2 | 1.64 | 1.56 | | mg/Kg | ☼ | 95 | 69 - 116 |
| Di-n-butyl phthalate | ND | F2 | 1.64 | 1.70 | | mg/Kg | ☼ | 104 | 65 - 120 |
| 4,6-Dinitro-2-methylphenol | ND | F2 | 3.28 | 2.01 | | mg/Kg | ☼ | 61 | 10 - 110 |
| 2,4-Dinitrophenol | ND | F1 | 3.28 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 100 |
| 2,4-Dinitrotoluene | ND | F1 F2 | 1.64 | 1.64 | | mg/Kg | ☼ | 100 | 69 - 124 |
| 2,6-Dinitrotoluene | ND | F1 F2 | 1.64 | 1.61 | | mg/Kg | ☼ | 98 | 70 - 123 |
| Di-n-octyl phthalate | ND | F2 | 1.64 | 2.18 | | mg/Kg | ☼ | 133 | 68 - 134 |
| Fluoranthene | 2.8 | F1 | 1.64 | 6.28 | E F1 | mg/Kg | ☼ | 209 | 62 - 120 |
| Fluorene | 0.083 | | 1.64 | 1.70 | | mg/Kg | ☼ | 98 | 62 - 120 |
| Hexachlorobenzene | ND | F1 F2 | 1.64 | 1.31 | | mg/Kg | ☼ | 80 | 63 - 124 |
| Hexachlorobutadiene | ND | F1 F2 | 1.64 | 1.23 | | mg/Kg | ☼ | 75 | 56 - 120 |
| Hexachlorocyclopentadiene | ND | F1 | 1.64 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 133 |
| Hexachloroethane | ND | F1 F2 | 1.64 | 1.18 | | mg/Kg | ☼ | 72 | 60 - 114 |
| Indeno[1,2,3-cd]pyrene | 0.71 | F1 F2 | 1.64 | 2.15 | | mg/Kg | ☼ | 88 | 68 - 130 |
| Isophorone | ND | F2 | 1.64 | 1.63 | | mg/Kg | ☼ | 99 | 55 - 110 |
| 2-Methylnaphthalene | ND | F1 F2 | 1.64 | 1.52 | | mg/Kg | ☼ | 93 | 69 - 112 |
| 2-Methylphenol | ND | F1 F2 | 1.64 | 2.15 | F1 | mg/Kg | ☼ | 131 | 60 - 120 |
| 3 & 4 Methylphenol | ND | F2 | 1.64 | 1.85 | | mg/Kg | ☼ | 113 | 57 - 120 |
| Naphthalene | ND | F2 | 1.64 | 1.53 | | mg/Kg | ☼ | 93 | 63 - 110 |
| 2-Nitroaniline | ND | F2 | 1.64 | 1.70 | | mg/Kg | ☼ | 103 | 57 - 124 |
| 3-Nitroaniline | ND | | 1.64 | 1.27 | | mg/Kg | ☼ | 77 | 40 - 122 |
| 4-Nitroaniline | ND | F2 | 1.64 | 1.45 | | mg/Kg | ☼ | 88 | 60 - 160 |
| Nitrobenzene | ND | F2 | 1.64 | 1.63 | | mg/Kg | ☼ | 99 | 60 - 116 |
| 2-Nitrophenol | ND | F2 | 1.64 | 1.58 | | mg/Kg | ☼ | 96 | 60 - 120 |
| 4-Nitrophenol | ND | F2 | 3.28 | 2.54 | | mg/Kg | ☼ | 77 | 30 - 122 |
| N-Nitrosodi-n-propylamine | ND | F2 | 1.64 | 1.58 | | mg/Kg | ☼ | 97 | 56 - 118 |
| N-Nitrosodiphenylamine | ND | F2 | 1.64 | 1.74 | | mg/Kg | ☼ | 106 | 65 - 112 |
| 2,2'-oxybis[1-chloropropane] | ND | F2 | 1.64 | 1.85 | | mg/Kg | ☼ | 113 | 40 - 124 |
| Pentachlorophenol | ND | F1 | 3.28 | 1.86 | | mg/Kg | ☼ | 57 | 13 - 112 |
| Phenanthrene | 1.3 | F1 | 1.64 | 3.31 | F1 | mg/Kg | ☼ | 123 | 62 - 120 |
| Phenol | ND | F2 | 1.64 | 1.89 | | mg/Kg | ☼ | 115 | 56 - 122 |
| Pyrene | 2.1 | F1 | 1.64 | 4.81 | F1 | mg/Kg | ☼ | 168 | 61 - 128 |
| 1,2,4-Trichlorobenzene | ND | F1 F2 | 1.64 | 1.33 | | mg/Kg | ☼ | 81 | 66 - 117 |
| 2,4,5-Trichlorophenol | ND | F2 | 1.64 | 1.42 | | mg/Kg | ☼ | 86 | 50 - 120 |
| 2,4,6-Trichlorophenol | ND | F2 | 1.64 | 1.36 | | mg/Kg | ☼ | 83 | 57 - 120 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *90* | | *43 - 145* |
| *2-Fluorophenol* | *102* | | *31 - 166* |
| *Nitrobenzene-d5* | *86* | | *37 - 147* |
| *Phenol-d5* | *112* | | *30 - 153* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-204605-1 MS**
**Matrix: Solid**
**Analysis Batch: 617626**

**Client Sample ID: B-33**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Terphenyl-d14* | *92* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *79* | | *31 - 143* |

**Lab Sample ID: 500-204605-1 MSD**
**Matrix: Solid**
**Analysis Batch: 617626**

**Client Sample ID: B-33**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthylene | 0.017 | J F2 | 1.61 | 1.16 | F2 | mg/Kg | ☼ | 71 | 68 - 120 | 35 | 30 |
| Acenaphthene | 0.085 | | 1.61 | 1.27 | | mg/Kg | ☼ | 74 | 65 - 124 | 29 | 30 |
| Anthracene | 0.24 | | 1.61 | 1.49 | | mg/Kg | ☼ | 78 | 70 - 114 | 23 | 30 |
| Benzo[a]anthracene | 1.2 | F1 | 1.61 | 3.02 | | mg/Kg | ☼ | 111 | 67 - 122 | 23 | 30 |
| Bis(2-chloroethoxy)methane | ND | F2 | 1.61 | 1.22 | F2 | mg/Kg | ☼ | 76 | 60 - 112 | 37 | 30 |
| Bis(2-chloroethyl)ether | ND | F2 | 1.61 | 1.12 | F2 | mg/Kg | ☼ | 69 | 55 - 111 | 43 | 30 |
| Benzo[b]fluoranthene | 2.0 | F1 | 1.61 | 4.41 | F1 | mg/Kg | ☼ | 150 | 69 - 129 | 26 | 30 |
| Bis(2-ethylhexyl) phthalate | 0.15 | J F2 | 1.61 | 1.28 | F2 | mg/Kg | ☼ | 79 | 72 - 131 | 33 | 30 |
| 4-Bromophenyl phenyl ether | ND | F1 F2 | 1.61 | 0.980 | F1 F2 | mg/Kg | ☼ | 61 | 68 - 118 | 36 | 30 |
| Benzo[k]fluoranthene | 0.83 | F1 | 1.61 | 2.29 | | mg/Kg | ☼ | 91 | 68 - 127 | 28 | 30 |
| Benzo[a]pyrene | 1.5 | F1 | 1.61 | 3.50 | | mg/Kg | ☼ | 124 | 65 - 133 | 28 | 30 |
| Butyl benzyl phthalate | ND | F2 | 1.61 | 1.15 | F2 | mg/Kg | ☼ | 72 | 71 - 129 | 36 | 30 |
| Carbazole | 0.28 | J | 1.61 | 1.90 | | mg/Kg | ☼ | 101 | 65 - 142 | 26 | 30 |
| 4-Chloroaniline | ND | F1 | 1.61 | 0.400 | J F1 | mg/Kg | ☼ | 25 | 30 - 150 | 20 | 30 |
| 4-Chloro-3-methylphenol | ND | F2 | 1.61 | 1.14 | F2 | mg/Kg | ☼ | 71 | 65 - 122 | 37 | 30 |
| Benzo[g,h,i]perylene | 0.74 | F1 F2 | 1.61 | 1.46 | F1 F2 | mg/Kg | ☼ | 45 | 72 - 131 | 32 | 30 |
| 2-Chloronaphthalene | ND | F1 F2 | 1.61 | 1.06 | F1 F2 | mg/Kg | ☼ | 66 | 69 - 114 | 36 | 30 |
| 2-Chlorophenol | ND | F2 | 1.61 | 1.14 | F2 | mg/Kg | ☼ | 71 | 64 - 110 | 34 | 30 |
| 4-Chlorophenyl phenyl ether | ND | F2 | 1.61 | 1.01 | F2 | mg/Kg | ☼ | 63 | 62 - 119 | 38 | 30 |
| Chrysene | 1.5 | F1 | 1.61 | 3.39 | | mg/Kg | ☼ | 118 | 63 - 120 | 24 | 30 |
| Dibenz(a,h)anthracene | 0.19 | F1 F2 | 1.61 | 0.943 | F1 F2 | mg/Kg | ☼ | 46 | 64 - 131 | 37 | 30 |
| Dibenzofuran | ND | F2 | 1.61 | 1.16 | F2 | mg/Kg | ☼ | 72 | 66 - 115 | 31 | 30 |
| 1,2-Dichlorobenzene | ND | F1 F2 | 1.61 | 0.936 | F1 F2 | mg/Kg | ☼ | 58 | 62 - 110 | 38 | 30 |
| 1,3-Dichlorobenzene | ND | F1 F2 | 1.61 | 0.905 | F1 F2 | mg/Kg | ☼ | 56 | 60 - 110 | 37 | 30 |
| 1,4-Dichlorobenzene | ND | F1 F2 | 1.61 | 0.912 | F1 F2 | mg/Kg | ☼ | 57 | 61 - 110 | 40 | 30 |
| 3,3'-Dichlorobenzidine | ND | F1 | 1.61 | ND | F1 | mg/Kg | ☼ | 0 | 35 - 128 | NC | 30 |
| 2,4-Dichlorophenol | ND | F2 | 1.61 | 1.08 | F2 | mg/Kg | ☼ | 67 | 58 - 120 | 36 | 30 |
| Diethyl phthalate | ND | F2 | 1.61 | 1.09 | F2 | mg/Kg | ☼ | 68 | 58 - 120 | 36 | 30 |
| 2,4-Dimethylphenol | ND | F2 | 1.61 | 1.08 | F2 | mg/Kg | ☼ | 67 | 60 - 110 | 38 | 30 |
| Dimethyl phthalate | ND | F1 F2 | 1.61 | 1.06 | F1 F2 | mg/Kg | ☼ | 66 | 69 - 116 | 38 | 30 |
| Di-n-butyl phthalate | ND | F2 | 1.61 | 1.19 | F2 | mg/Kg | ☼ | 74 | 65 - 120 | 35 | 30 |
| 4,6-Dinitro-2-methylphenol | ND | F2 | 3.22 | 0.850 | J F2 | mg/Kg | ☼ | 26 | 10 - 110 | 81 | 30 |
| 2,4-Dinitrophenol | ND | F1 | 3.22 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 100 | NC | 30 |
| 2,4-Dinitrotoluene | ND | F1 F2 | 1.61 | 1.08 | F1 F2 | mg/Kg | ☼ | 67 | 69 - 124 | 42 | 30 |
| 2,6-Dinitrotoluene | ND | F1 F2 | 1.61 | 1.06 | F1 F2 | mg/Kg | ☼ | 66 | 70 - 123 | 41 | 30 |
| Di-n-octyl phthalate | ND | F2 | 1.61 | 1.52 | F2 | mg/Kg | ☼ | 94 | 68 - 134 | 36 | 30 |
| Fluoranthene | 2.8 | F1 | 1.61 | 5.23 | F1 | mg/Kg | ☼ | 148 | 62 - 120 | 18 | 30 |
| Fluorene | 0.083 | | 1.61 | 1.25 | | mg/Kg | ☼ | 73 | 62 - 120 | 30 | 30 |
| Hexachlorobenzene | ND | F1 F2 | 1.61 | 0.922 | F1 F2 | mg/Kg | ☼ | 57 | 63 - 124 | 35 | 30 |
| Hexachlorobutadiene | ND | F1 F2 | 1.61 | 0.823 | F1 F2 | mg/Kg | ☼ | 51 | 56 - 120 | 39 | 30 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-204605-1 MSD**
**Matrix: Solid**
**Analysis Batch: 617626**

**Client Sample ID: B-33**
**Prep Type: Total/NA**
**Prep Batch: 617169**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | ND | F1 | 1.61 | ND | F1 | mg/Kg | ☼ | 0 | 10 - 133 | NC | 30 |
| Hexachloroethane | ND | F1 F2 | 1.61 | 0.718 | F1 F2 | mg/Kg | ☼ | 45 | 60 - 114 | 49 | 30 |
| Indeno[1,2,3-cd]pyrene | 0.71 | F1 F2 | 1.61 | 1.57 | F1 F2 | mg/Kg | ☼ | 54 | 68 - 130 | 31 | 30 |
| Isophorone | ND | F2 | 1.61 | 1.14 | F2 | mg/Kg | ☼ | 71 | 55 - 110 | 35 | 30 |
| 2-Methylnaphthalene | ND | F1 F2 | 1.61 | 1.07 | F1 F2 | mg/Kg | ☼ | 67 | 69 - 112 | 35 | 30 |
| 2-Methylphenol | ND | F1 F2 | 1.61 | 1.54 | F2 | mg/Kg | ☼ | 96 | 60 - 120 | 33 | 30 |
| 3 & 4 Methylphenol | ND | F2 | 1.61 | 1.21 | F2 | mg/Kg | ☼ | 75 | 57 - 120 | 42 | 30 |
| Naphthalene | ND | F2 | 1.61 | 1.09 | F2 | mg/Kg | ☼ | 68 | 63 - 110 | 34 | 30 |
| 2-Nitroaniline | ND | F2 | 1.61 | 1.14 | F2 | mg/Kg | ☼ | 71 | 57 - 124 | 40 | 30 |
| 3-Nitroaniline | ND | | 1.61 | 1.15 | | mg/Kg | ☼ | 72 | 40 - 122 | 10 | 30 |
| 4-Nitroaniline | ND | F2 | 1.61 | 1.02 | F2 | mg/Kg | ☼ | 64 | 60 - 160 | 34 | 30 |
| Nitrobenzene | ND | F2 | 1.61 | 1.11 | F2 | mg/Kg | ☼ | 69 | 60 - 116 | 38 | 30 |
| 2-Nitrophenol | ND | F2 | 1.61 | 1.08 | F2 | mg/Kg | ☼ | 67 | 60 - 120 | 38 | 30 |
| 4-Nitrophenol | ND | F2 | 3.22 | 1.56 | J F2 | mg/Kg | ☼ | 48 | 30 - 122 | 48 | 30 |
| N-Nitrosodi-n-propylamine | ND | F2 | 1.61 | 1.09 | F2 | mg/Kg | ☼ | 68 | 56 - 118 | 37 | 30 |
| N-Nitrosodiphenylamine | ND | F2 | 1.61 | 1.23 | F2 | mg/Kg | ☼ | 77 | 65 - 112 | 34 | 30 |
| 2,2'-oxybis[1-chloropropane] | ND | F2 | 1.61 | 1.27 | F2 | mg/Kg | ☼ | 79 | 40 - 124 | 37 | 30 |
| Pentachlorophenol | ND | F1 | 3.22 | ND | F1 | mg/Kg | ☼ | 0 | 13 - 112 | NC | 30 |
| Phenanthrene | 1.3 | F1 | 1.61 | 2.99 | | mg/Kg | ☼ | 106 | 62 - 120 | 10 | 30 |
| Phenol | ND | F2 | 1.61 | 1.32 | F2 | mg/Kg | ☼ | 82 | 56 - 122 | 36 | 30 |
| Pyrene | 2.1 | F1 | 1.61 | 4.06 | | mg/Kg | ☼ | 124 | 61 - 128 | 17 | 30 |
| 1,2,4-Trichlorobenzene | ND | F1 F2 | 1.61 | 0.906 | F1 F2 | mg/Kg | ☼ | 56 | 66 - 117 | 38 | 30 |
| 2,4,5-Trichlorophenol | ND | F2 | 1.61 | 1.01 | F2 | mg/Kg | ☼ | 63 | 50 - 120 | 34 | 30 |
| 2,4,6-Trichlorophenol | ND | F2 | 1.61 | 0.921 | F2 | mg/Kg | ☼ | 57 | 57 - 120 | 39 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *65* | | *43 - 145* |
| *2-Fluorophenol* | *72* | | *31 - 166* |
| *Nitrobenzene-d5* | *60* | | *37 - 147* |
| *Phenol-d5* | *80* | | *30 - 153* |
| *Terphenyl-d14* | *65* | | *42 - 157* |
| *2,4,6-Tribromophenol* | *54* | | *31 - 143* |

## Method: 8081B - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 500-617170/1-A**
**Matrix: Solid**
**Analysis Batch: 617340**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617170**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | ND | | 0.0017 | 0.0012 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| alpha-BHC | ND | | 0.0017 | 0.00095 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| beta-BHC | ND | | 0.0017 | 0.0014 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| cis-Chlordane | ND | | 0.0017 | 0.00090 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| 4,4'-DDD | ND | | 0.0017 | 0.00091 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| 4,4'-DDE | ND | | 0.0017 | 0.00087 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| 4,4'-DDT | ND | | 0.0017 | 0.00080 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| delta-BHC | ND | | 0.0017 | 0.00081 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Dieldrin | ND | | 0.0017 | 0.00088 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |

## Method: 8081B - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: MB 500-617170/1-A**
**Matrix: Solid**
**Analysis Batch: 617340**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617170**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Endosulfan I | ND | | 0.0017 | 0.00091 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Endosulfan II | ND | | 0.0017 | 0.00093 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Endosulfan sulfate | ND | | 0.0017 | 0.00093 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Endrin | ND | | 0.0017 | 0.00086 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Endrin aldehyde | ND | | 0.0017 | 0.00096 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Endrin ketone | ND | | 0.0017 | 0.00082 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0017 | 0.00084 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Heptachlor | ND | | 0.0017 | 0.00091 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Heptachlor epoxide | ND | | 0.0017 | 0.00091 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Methoxychlor | ND | | 0.0083 | 0.0011 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| Toxaphene | ND | | 0.017 | 0.0067 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |
| trans-Chlordane | ND | | 0.0017 | 0.00097 | mg/Kg | | 09/03/21 06:31 | 09/03/21 22:41 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *DCB Decachlorobiphenyl* | *120* | | *33 - 148* | *09/03/21 06:31* | *09/03/21 22:41* | *1* |
| *Tetrachloro-m-xylene* | *71* | | *30 - 121* | *09/03/21 06:31* | *09/03/21 22:41* | *1* |

**Lab Sample ID: LCS 500-617170/2-A**
**Matrix: Solid**
**Analysis Batch: 617340**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617170**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aldrin | 0.0133 | 0.0119 | | mg/Kg | | 89 | 52 - 122 |
| alpha-BHC | 0.0133 | 0.0117 | | mg/Kg | | 88 | 50 - 123 |
| beta-BHC | 0.0133 | 0.0126 | | mg/Kg | | 94 | 44 - 140 |
| cis-Chlordane | 0.0133 | 0.0123 | | mg/Kg | | 93 | 52 - 129 |
| 4,4'-DDD | 0.0133 | 0.0129 | | mg/Kg | | 97 | 47 - 137 |
| 4,4'-DDE | 0.0133 | 0.0128 | | mg/Kg | | 96 | 50 - 130 |
| 4,4'-DDT | 0.0133 | 0.0133 | | mg/Kg | | 100 | 46 - 143 |
| delta-BHC | 0.0133 | 0.0113 | | mg/Kg | | 85 | 57 - 125 |
| Dieldrin | 0.0133 | 0.0128 | | mg/Kg | | 96 | 51 - 133 |
| Endosulfan I | 0.0133 | 0.0123 | | mg/Kg | | 92 | 30 - 120 |
| Endosulfan II | 0.0133 | 0.0126 | | mg/Kg | | 95 | 30 - 120 |
| Endosulfan sulfate | 0.0133 | 0.0127 | | mg/Kg | | 95 | 42 - 150 |
| Endrin | 0.0133 | 0.0128 | | mg/Kg | | 96 | 43 - 144 |
| Endrin aldehyde | 0.0133 | 0.0126 | | mg/Kg | | 95 | 39 - 131 |
| Endrin ketone | 0.0133 | 0.0128 | | mg/Kg | | 96 | 51 - 135 |
| gamma-BHC (Lindane) | 0.0133 | 0.0120 | | mg/Kg | | 90 | 50 - 122 |
| Heptachlor | 0.0133 | 0.0119 | | mg/Kg | | 89 | 53 - 129 |
| Heptachlor epoxide | 0.0133 | 0.0129 | | mg/Kg | | 97 | 50 - 139 |
| Methoxychlor | 0.0133 | 0.0138 | | mg/Kg | | 103 | 45 - 144 |
| trans-Chlordane | 0.0133 | 0.0125 | | mg/Kg | | 94 | 52 - 132 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *DCB Decachlorobiphenyl* | *107* | | *33 - 148* |
| *Tetrachloro-m-xylene* | *85* | | *30 - 121* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 500-617170/1-A**
**Matrix: Solid**
**Analysis Batch: 617343**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617170**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | ND | | 0.017 | 0.0066 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1016 | ND | | 0.017 | 0.0066 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1221 | ND | | 0.017 | 0.0066 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1221 | ND | | 0.017 | 0.0066 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1232 | ND | | 0.017 | 0.0045 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1232 | ND | | 0.017 | 0.0045 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1242 | ND | | 0.017 | 0.0065 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1242 | ND | | 0.017 | 0.0065 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1248 | ND | | 0.017 | 0.0079 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1248 | ND | | 0.017 | 0.0079 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1254 | ND | | 0.017 | 0.0057 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1254 | ND | | 0.017 | 0.0057 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1260 | ND | | 0.017 | 0.0063 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| PCB-1260 | ND | | 0.017 | 0.0063 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.017 | 0.0045 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.017 | 0.0045 | mg/Kg | | 09/03/21 06:31 | 09/03/21 20:20 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *71* | | *49 - 129* | *09/03/21 06:31* | *09/03/21 20:20* | *1* |
| *Tetrachloro-m-xylene* | *64* | | *49 - 129* | *09/03/21 06:31* | *09/03/21 20:20* | *1* |
| *DCB Decachlorobiphenyl* | *113* | | *37 - 121* | *09/03/21 06:31* | *09/03/21 20:20* | *1* |
| *DCB Decachlorobiphenyl* | *100* | | *37 - 121* | *09/03/21 06:31* | *09/03/21 20:20* | *1* |

**Lab Sample ID: LCS 500-617170/3-A**
**Matrix: Solid**
**Analysis Batch: 617343**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617170**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| PCB-1016 | 0.167 | 0.139 | | mg/Kg | | 83 | 57 - 120 |
| PCB-1016 | 0.167 | 0.162 | | mg/Kg | | 97 | 57 - 120 |
| PCB-1260 | 0.167 | 0.167 | | mg/Kg | | 100 | 61 - 125 |
| PCB-1260 | 0.167 | 0.177 | | mg/Kg | | 106 | 61 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *78* | | *49 - 129* |
| *Tetrachloro-m-xylene* | *73* | | *49 - 129* |
| *DCB Decachlorobiphenyl* | *110* | | *37 - 121* |
| *DCB Decachlorobiphenyl* | *99* | | *37 - 121* |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-617366/1-A**
**Matrix: Solid**
**Analysis Batch: 617622**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617366**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | | 20 | 8.2 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Antimony | ND | | 2.0 | 0.39 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: MB 500-617366/1-A**
**Matrix: Solid**
**Analysis Batch: 617622**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617366**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.34 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Barium | ND | | 1.0 | 0.11 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Beryllium | ND | | 0.40 | 0.093 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Cadmium | 0.0459 | J | 0.20 | 0.036 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Chromium | ND | | 1.0 | 0.50 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Cobalt | ND | | 0.50 | 0.13 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Copper | ND | | 1.0 | 0.28 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Iron | ND | | 20 | 10 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Lead | ND | | 0.50 | 0.23 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Manganese | ND | | 1.0 | 0.15 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Nickel | ND | | 1.0 | 0.29 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Potassium | ND | | 50 | 18 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Selenium | ND | | 1.0 | 0.59 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Silver | ND | | 0.50 | 0.13 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Sodium | ND | | 100 | 15 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Thallium | ND | | 1.0 | 0.50 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Vanadium | ND | | 0.50 | 0.12 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |
| Zinc | ND | | 2.0 | 0.88 | mg/Kg | | 09/06/21 09:00 | 09/07/21 19:13 | 1 |

**Lab Sample ID: LCS 500-617366/2-A**
**Matrix: Solid**
**Analysis Batch: 617622**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617366**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Aluminum | 200 | 198 | | mg/Kg | | 99 | 80 - 120 |
| Antimony | 50.0 | 47.6 | | mg/Kg | | 95 | 80 - 120 |
| Arsenic | 10.0 | 8.80 | | mg/Kg | | 88 | 80 - 120 |
| Barium | 200 | 193 | | mg/Kg | | 97 | 80 - 120 |
| Beryllium | 5.00 | 4.54 | | mg/Kg | | 91 | 80 - 120 |
| Cadmium | 5.00 | 4.56 | | mg/Kg | | 91 | 80 - 120 |
| Chromium | 20.0 | 18.5 | | mg/Kg | | 92 | 80 - 120 |
| Cobalt | 50.0 | 46.3 | | mg/Kg | | 93 | 80 - 120 |
| Copper | 25.0 | 23.6 | | mg/Kg | | 95 | 80 - 120 |
| Iron | 100 | 84.5 | | mg/Kg | | 84 | 80 - 120 |
| Lead | 10.0 | 8.82 | | mg/Kg | | 88 | 80 - 120 |
| Manganese | 50.0 | 44.6 | | mg/Kg | | 89 | 80 - 120 |
| Nickel | 50.0 | 46.7 | | mg/Kg | | 93 | 80 - 120 |
| Potassium | 1000 | 978 | | mg/Kg | | 98 | 80 - 120 |
| Selenium | 10.0 | 8.15 | | mg/Kg | | 81 | 80 - 120 |
| Silver | 5.00 | 4.40 | | mg/Kg | | 88 | 80 - 120 |
| Sodium | 1000 | 985 | | mg/Kg | | 99 | 80 - 120 |
| Thallium | 10.0 | 8.72 | | mg/Kg | | 87 | 80 - 120 |
| Vanadium | 50.0 | 46.6 | | mg/Kg | | 93 | 80 - 120 |
| Zinc | 50.0 | 48.5 | | mg/Kg | | 97 | 80 - 120 |

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-617276/12-A**
**Matrix: Solid**
**Analysis Batch: 617460**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617276**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.017 | 0.0056 | mg/Kg | | 09/03/21 13:40 | 09/07/21 08:24 | 1 |

**Lab Sample ID: LCS 500-617276/13-A**
**Matrix: Solid**
**Analysis Batch: 617460**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617276**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.167 | 0.177 | | mg/Kg | | 106 | 80 - 120 |

## Method: 9012B - Cyanide, Total andor Amenable

**Lab Sample ID: MB 500-617459/1-A**
**Matrix: Solid**
**Analysis Batch: 617528**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 617459**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Total | ND | | 0.23 | 0.12 | mg/Kg | | 09/07/21 10:49 | 09/07/21 14:43 | 1 |

**Lab Sample ID: HLCS 500-617459/2-A**
**Matrix: Solid**
**Analysis Batch: 617528**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617459**

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 11.9 | 11.2 | | mg/Kg | | 94 | 90 - 110 |

**Lab Sample ID: LCS 500-617459/3-A**
**Matrix: Solid**
**Analysis Batch: 617528**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617459**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 2.40 | 2.16 | | mg/Kg | | 90 | 85 - 115 |

**Lab Sample ID: LLCS 500-617459/4-A**
**Matrix: Solid**
**Analysis Batch: 617528**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 617459**

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cyanide, Total | 1.10 | 0.976 | | mg/Kg | | 89 | 75 - 125 |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-33
**Date Collected: 08/31/21 11:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-1
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | (Start) | 09/03/21 14:32 | | |
| | | | | | (End) | 09/03/21 14:36 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-33
**Date Collected: 08/31/21 11:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-1
**Matrix: Solid**
**Percent Solids: 80.7**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616985 | 09/01/21 15:08 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617411 | 09/07/21 14:51 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 2 | 617626 | 09/08/21 10:33 | EF | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:25 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617276 | 09/03/21 13:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617460 | 09/07/21 09:21 | MJG | TAL CHI |

## Client Sample ID: B-34
**Date Collected: 08/31/21 12:00**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-2
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | (Start) | 09/03/21 14:36 | | |
| | | | | | (End) | 09/03/21 14:40 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-34
**Date Collected: 08/31/21 12:00**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-2
**Matrix: Solid**
**Percent Solids: 80.3**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616985 | 09/01/21 15:08 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617411 | 09/07/21 15:43 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | DL | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | DL | 5 | 617626 | 09/08/21 10:09 | EF | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 617418 | 09/07/21 16:54 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:28 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617276 | 09/03/21 13:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617460 | 09/07/21 09:23 | MJG | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-14
**Date Collected: 08/31/21 12:45**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-3
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | | (Start) 09/03/21 14:40 | | |
| | | | | | | (End) 09/03/21 14:43 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-14
**Date Collected: 08/31/21 12:45**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-3
**Matrix: Solid**
**Percent Solids: 81.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616979 | 08/31/21 12:45 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 617403 | 09/07/21 12:52 | JDD | TAL CHI |
| Total/NA | Prep | 3541 | DL | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | DL | 5 | 617626 | 09/08/21 11:43 | EF | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 617418 | 09/07/21 17:17 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:38 | JJB | TAL CHI |

## Client Sample ID: B-7D
**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | | (Start) 09/03/21 14:47 | | |
| | | | | | | (End) 09/03/21 14:51 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-7D
**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-4
**Matrix: Solid**
**Percent Solids: 86.9**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616985 | 09/01/21 15:08 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617411 | 09/07/21 16:09 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 617418 | 09/07/21 10:56 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 617340 | 09/03/21 23:22 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 617343 | 09/03/21 20:51 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:41 | JJB | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

## Client Sample ID: B-7D
**Date Collected: 08/31/21 13:30**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-4
**Matrix: Solid**
**Percent Solids: 86.9**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7471B | | | 617276 | 09/03/21 13:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617460 | 09/07/21 09:25 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617459 | 09/07/21 10:49 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617528 | 09/07/21 14:51 | SB | TAL CHI |

## Client Sample ID: B-18D
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-5
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | (Start) | 09/03/21 14:51 | | |
| | | | | | (End) | 09/03/21 14:55 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-18D
**Date Collected: 08/31/21 13:50**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-5
**Matrix: Solid**
**Percent Solids: 86.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616979 | 08/31/21 13:50 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 617825 | 09/09/21 11:37 | STW | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 617418 | 09/07/21 11:18 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 617340 | 09/03/21 23:43 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 617343 | 09/03/21 21:06 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:44 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617276 | 09/03/21 13:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617460 | 09/07/21 09:27 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617459 | 09/07/21 10:49 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617528 | 09/07/21 14:53 | SB | TAL CHI |

## Client Sample ID: B-20D
**Date Collected: 08/31/21 14:20**
**Date Received: 09/01/21 13:30**

## Lab Sample ID: 500-204605-6
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | (Start) | 09/03/21 15:05 | | |
| | | | | | (End) | 09/03/21 14:55 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-20D
**Lab Sample ID: 500-204605-6**

**Date Collected: 08/31/21 14:20**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**
**Percent Solids: 86.2**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616985 | 09/01/21 15:08 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617411 | 09/07/21 17:01 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 617418 | 09/07/21 11:41 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 617340 | 09/04/21 00:03 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 617343 | 09/03/21 21:22 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:47 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617276 | 09/03/21 13:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617460 | 09/07/21 09:29 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617459 | 09/07/21 10:49 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617528 | 09/07/21 14:55 | SB | TAL CHI |

## Client Sample ID: B-23D
**Lab Sample ID: 500-204605-7**

**Date Collected: 08/31/21 14:45**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 9045D | | 1 | 617279 | | SMO | TAL CHI |
| | | | | | (Start) | 09/03/21 15:05 | | |
| | | | | | (End) | 09/03/21 14:55 | | |
| Total/NA | Analysis | Moisture | | 1 | 617554 | 09/08/21 06:16 | LWN | TAL CHI |

## Client Sample ID: B-23D
**Lab Sample ID: 500-204605-7**

**Date Collected: 08/31/21 14:45**
**Matrix: Solid**
**Date Received: 09/01/21 13:30**
**Percent Solids: 89.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 616985 | 09/01/21 15:08 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 1 | 617411 | 09/07/21 17:28 | PMF | TAL CHI |
| Total/NA | Prep | 3541 | | | 617169 | 09/03/21 06:28 | CLL | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 617418 | 09/07/21 16:10 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8081B | | 1 | 617340 | 09/04/21 00:24 | SS | TAL CHI |
| Total/NA | Prep | 3541 | | | 617170 | 09/03/21 06:31 | CLL | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 617343 | 09/03/21 21:37 | SS | TAL CHI |
| Total/NA | Prep | 3050B | | | 617366 | 09/06/21 09:00 | DAJ | TAL CHI |
| Total/NA | Analysis | 6010B | | 1 | 617622 | 09/07/21 20:51 | JJB | TAL CHI |
| Total/NA | Prep | 7471B | | | 617276 | 09/03/21 13:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 617460 | 09/07/21 09:31 | MJG | TAL CHI |
| Total/NA | Prep | 9010C | | | 617459 | 09/07/21 10:49 | PSP | TAL CHI |
| Total/NA | Analysis | 9012B | | 1 | 617528 | 09/07/21 14:56 | SB | TAL CHI |

# Lab Chronicle

Client: ECS Midwest LLC
Project/Site: Cloud HQ (53: 2861-B)

Job ID: 500-204605-1

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-204605-1
Project/Site: Cloud HQ (53: 2861-B)

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-22 |

**Chicago**
2417 Bond Street

University Park, IL 60466
phone 708 534 5200 fax 708 534 5363

500-204605 COC

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Mike McGee | Site Contact: Mike McGee | COC No |
|---|---|---|---|
| ECS Midwest LLC | Tel/Fax:Same | Lab Contact. Jim Knapp | 1 of 1 COCs |
| 1575 Barclay Blvd | **Analysis Turnaround Time** | | Job No 500-204605 |
| Buffalo Grove IL 60089 | Calendar ( C ) or Work Days (W) | | SDG No |
| Phone | | | |
| 224-478-9420 FAX 847 279-0369 | ☐ 2 weeks | | |
| Project Name Cloud HQ | ☒ Standard | | |
| Site 53 2861-B | ☐ 3 day | | |
| P O # 53 2861-B | ☐ 1 day | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs | SVOCs | Pesticides | PCBs | TAL Metals/Cyanide | pH | RCRA Metals | BTEX | PNA | Lead | Sample Specific Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-33 | 8/31/21 | 1130 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 2 | ~~B-35~~ B-34 | 8/31/21 | 1200 | Grab | Soil | Kit | | X | X | | | | X | X | | | | |
| 3 | B-14 | 8/31/21 | 1245 | Grab | Soil | Kit | | | | | | | X | | X | X | X | |
| 4 | B-7D | 8/31/21 | 1330 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 5 | B-18D | 8/31/21 | 1350 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 6 | B-20D | 8/31/21 | 1420 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |
| 7 | B-23D | 8/31/21 | 1445 | Grab | Soil | Kit | | X | X | X | X | X | X | | | | | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ In Irritant ☐ son B Unknown

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☒ Disposal By Lab ☐ chive For _____ Months

**Special Instructions/QC Requirements & Comments:**

| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
|---|---|---|---|---|---|
| | ECS Midwest | 9/1/21 | | TA | 9/1/21 1000 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | TA 9/1/21 | 1330 | Paula Buckley | EST CAN | 9/1/21 1330 |
| Relinquished by | Company | Date/Time | Received by | Company | Date/Time |
| | | | | | |



1.60

48 hr

# Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-204605-1

**Login Number: 204605**
**List Number: 1**
**Creator: Buckley, Paula M**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.6 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |






# ECS Midwest, LLC

Geotechnical Engineering Report

**Proposed Cloud HQ**

1200 East Algonquin Road
Mount Prospect, Cook County, Illinois

ECS Project Number 16:13881-D

August 25, 2025

August 25, 2025

Mr. Chris Warnke
**Cloud HQ**
1212 New York Avenue NW
Suite 1000
Washington, District of Columbia 20005

ECS Project No. 16:13881-D

Reference: Geotechnical Engineering Report
**Cloud HQ**
1200 East Algonquin Road
Mount Prospect, Cook County, Illinois

Dear Mr. Warnke:

ECS Midwest, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our agreed to scope of work. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted, and our design and construction recommendations. **The thermal resistivity tests were in progress at the time of this report. Therefore, an addendum report will be issued that address the electric duct banks (borings E-01 through E-11).**

It has been our pleasure to be of service to you during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify subsurface conditions determined for this report. Should you have questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

**ECS Midwest, LLC**

*David T. Lewandowski, P.E.*
*Geotechnical Associate Principal*
*dtlewandowski@ecslimited.com*
*Illinois P.E., Renews 11/30/2025*

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*Senior Principal Engineer*
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**APPENDICES**

**Appendix A – Drawings & Reports**

- Site Location Diagram
- Boring Location Diagram
- Subsurface Cross-Section(s)

**Appendix B – Field Operations**

- Reference Notes for Boring Logs
- Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
- Boring Logs (current)

**Appendix C – Laboratory Testing**

- Thermal Resistivity Test Results
- Moisture-Density Test Results

**Appendix D – Supplemental Report Documents**

- Appendices from Report No. 13881 (August 30, 2021)

**Appendix E – Supplemental Report Documents**

- GBA - Geotechnical Engineering Report Information Sheet

## EXECUTIVE SUMMARY

The following summarizes the main findings of the exploration, particularly those that may have a cost impact on the planned development. Further, our principal foundation recommendations are summarized. Information gleaned from the Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

- The project is planned to consist of a three-story, slab-on-grade data center building with elevator and HVR pits depressed below the slab-on-grade. The building will include two loading docks. An equipment yard will be located just north of the building.
- Given the structural loads, settlement criteria and the subsurface conditions, a deep foundation system is recommended for foundation support of the new building. Steel H-piles driven to "full" capacity or straight drilled shafts may be considered. Allowable capacities are discussed in the report text.
- Based on the results of the borings and our local experience, a Seismic Site Class D is recommended for this site.
- The existing detention basins are within the proposed building plan. During site preparation, **the basins should be dewatered, prepared and backfilled with engineered fill. Subsequently, the settlement of the new fill should be monitored. Floor slab construction should not begin until the measured settlement rate is no more than 0.1 inch per week, or 90 days after engineered fill placement in the detention basins has been completed, whichever is later.**
- **Highly organic soils were encountered in two borings within the proposed floor slab. These soils should be delineated, completely removed and replaced with engineered fill prior to slab construction.**
- After proper site preparation and a waiting period for settlement monitoring, the floor slab thickness of the proposed building may be determined using an estimated modulus of subgrade reaction (kv) of 100 psi/in based on 1-foot by 1-foot plate load test.
- For the design of pavements, the project team may consider an Illinois Bearing Ratio (IBR) design value of 3 (for flexible pavements) on stabilized undocumented fill/natural lean clay/engineered fill and a modulus of subgrade reaction, k of 100 pci for rigid pavements on stabilized undocumented fill/natural lean clay/engineered fill.

## 1.0 INTRODUCTION

The purpose of this study was to provide geotechnical information for the design of foundations and the floor slab for a new three-story data center headquarters. The recommendations developed for this report are based on the following:

- Updated Loading For Geotech Report dated December 2, 2024
- 2nd Floor Plan – Overall, Sheet S03-01
- Site Plan – Level 1, Sheet A01-01
- Emails (2) with attachments dated April 4, 2025, from CloudHQ
- Email dated April 5, 2025, from CloudHQ
- Email dated April 9, 2025, from CloudHQ (2-story Admin. Bldg.)
- Email dated April 14, 2025, from CloudHQ (Updated Column Load)
- 24-248_ CHQ ORD1 Building loading update (For Geotech - 12.2.2024)
- Below-Grade Wall Markup for Geotech (1A & 1B)_ 04.04.2025
- Teams meeting with CloudHQ 08.15.2025 (Updated Column Load)

Our services were provided in accordance with our Proposal No. 16:24774(REV02)-GP, dated April 15, 2025. These services were authorized per the contract with CloudHQ.

This report contains the procedures and results of our subsurface exploration and laboratory testing programs, review of existing site conditions, engineering analyses, and recommendations for the design and construction of the project. The report includes the following items.

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of subsurface soil and rock stratigraphy with pertinent physical properties.
- Final soil exploration test boring logs.
- Recommendations for site preparation and construction of compacted fills, including an evaluation of on-site soils for use as compacted fills and identification of potentially unsuitable soils and/or soils exhibiting excessive moisture at the time of sampling.
- Recommended foundation type(s) for the proposed building including recommended maximum allowable soil bearing pressure and settlement estimates.
- Recommendations for the design and constructions of below grade walls (i.e. loading dock walls and elevator pits)
- Recommendations for the Seismic Site Class.
- Recommendations for the design and construction of soil-supported slabs.
- Estimate of static long-term groundwater level and seasonal high groundwater level.
- General recommendations for pavement design

## 2.0 PROJECT INFORMATION

### 2.1 PROJECT LOCATION AND CURRENT SITE USE

The project site is located at 1200 East Algonquin Road in Mount Prospect, Cook County, Illinois. The site is bounded to the north by Dempster Street, to the south by East Algonquin Road, to the east by South Linneman Road and to the west by a United Airlines Facility. The site location is shown below, and on the Site Location Diagram in Appendix A.




**Site Location Map (Site outlined in RED)**

The former buildings, pavement and landscape areas have been removed since the previous subsurface exploration. Per our recent site visit, the existing ground surface is largely covered by weeds. Two existing detention ponds are located along the southern perimeter of the site (within the new building plan).

At this time, a site-specific topographic survey was not available. Based on our review of available online resources (i.e., Google Earth Pro), the existing site grades generally range from about EL. 670 feet to EL. 675 feet above MSL. *Site grades determined without a professional survey should not be utilized in the design of structures and site amenities.*



*Photo of existing detention pond taken near boring B-17, facing west*

**2.2 PROPOSED CONSTRUCTION**

Based on the available information, ECS understands that the proposed construction consists of a new data center headquarters. The proposed building has been divided into two phases, Phase 1 (Eastern Half) and Phase 2 (Western Half). Each phase has a plan area of 207,800 square feet (excluding the administration areas). The administration areas are proposed on the eastern end of the Phase 1 building and on the western end of the proposed Phase 2 building. The administration buildings will be two stories. The data center buildings will be three (3) stories above grade (plus a general penthouse). The buildings are assumed to be constructed of tilt-up wall panels (bearing) or structural steel framing with precast. The new data building will include two (2) loading dock walls at the northwest and southeast corners of the new building complex. In addition, several elevator pits and HVR pits will be located within the new building complex. Our understanding of the proposed construction can be described as follows:

| STRUCTURAL DESIGN | | |
|---|---|---|
| **SUBJECT** | **DESIGN INFORMATION / EXPECTATIONS** | |
| Building Footprint | Phase 1 (Eastern Half) 207,800 in plan view<br>Phase 2 (Western Half) 207,800 in plan view<br>Administration Building at both ends of data center building (7,000± sf in plan) | R |
| Framing | Tilt-up concrete wall panels (bearing) or structural steel framing with precast | R |
| No. of Stories (Data Center): | Three stories above grade<br>(plus general penthouse) | R |
| Column Loads | Maximum 4,500 kips in data center building<br>400 kips in administration areas | R |
| Wall Loads | Maximum 50 kips per linear foot (klf) in data center<br>8 - 16 kips per linear foot (klf) in admin. buildings | R |
| Slab-on-Grade Floor Live Load | 400 psf data center building<br>250 psf administration areas | R |
| Finished Floor Elevation | 672.5 feet (MSL) | R |
| HVR Pits | 6 feet in depth | R |
| Elevator Pits | 4 feet in depth | B |
| Pavement Area | Light Duty Design 30,000 ESALs<br>Heavy Duty Design 100,000 ESALs<br>Design Life: 20 years | B |
| Grading | 2½ feet cuts/fills<br>Backfill existing detention basins 8± feet | B |

*R: Reported by client and/or Design Team*
*B: Based on ECS estimates in absence of information from Client and/or Design Team*

**Settlement Tolerance**: The settlement tolerance for the proposed development was provided as a maximum of 1 inch total and ½ inches of differential (over 40 feet) settlement.

***If our understanding of the proposed development is inaccurate or the design changes, please notify ECS immediately so we can review (and revise, if required) the recommendations provided in this report.***

## 3.0 FIELD EXPLORATION AND LABORATORY TESTING

The exploration procedures are explained in greater detail in Appendix B including the insert titled *Subsurface Exploration Procedures: SPT*. Our current scope of services included drilling nine (9) borings – A-01, B-01a, B-05a and B-13 through B-18. In addition, rock cores were performed in B-01a and B-16. Borings B-01a and B-05a were continuations of borings performed during the previous exploration in the year 2021.

Our recent borings were located with a handheld GPS unit and their approximate locations are shown on the Boring Location Diagram in Appendix A. Ground surface elevations at the boring locations were estimated from Google Earth Pro. Ground surface elevations and boring locations determined without professional survey are approximate and may not be appropriate for final design and construction.

The drill crew backfilled the boreholes at completion of drilling. Rock cores were backfilled with a cement-bentonite grout. Settlement of borehole backfill can occur over time resulting in a hazard. Monitoring the boreholes after initial drilling activities is not within our scope but should be done by the client or property owner.

Borings within or near the proposed building plan from the previous exploration (ECS Report No. 13881 dated August 30, 2021) are included in the Appendices. The borings from the previous exploration located within or near the proposed building plan include – B-01 through B-05, B-08, D-1 through D-4, P-1, P-2 and P-6.

### 3.1 SUBSURFACE CHARACTERIZATION

The subsurface conditions encountered were generally consistent with published geological mapping. Listed in the following Table is a generalized characterization of the soil strata encountered at the boring locations during the subsurface exploration. For subsurface information at a specific location, refer to the Boring Logs in Appendix B. Generalized Subsurface Soil Profiles (cross-sections) of the borings are included in Appendix A.

| GENERALIZED SUBSURFACE STRATIGRAPHY | | | | | |
|---|---|---|---|---|---|
| **Approximate Depth Range (feet)** | **Stratum No.** | **Material Description** | **Calibrated Penetrometer Resistance Qp (tsf)** | **Natural Moisture Content (%)** | **SPT (1) N-values (bpf) (2)** |
| Surficial Materials | N/A | **TOPSOIL**: 3 to 16 inches | N/A | N/A | N/A |
| ½ - 6 | IA | **UNDOCUMENTED FILL**: Lean Clay with gravel / Sandy Clay, brown, gray & black, moist[3] | 2 - 4½ | 18 - 31 | 5 - 29 |
| ½ - 12½ | IB | **UNDOCUMENTED FILL**: Silty Clayey Sand / Clayey Gravel with concrete/brick debris, brown[4] | --- | --- | 19 - 50+ |
| ½ - 6 | IC | **UNDOCUMENTED FILL**: Poorly Graded Gravel with concrete debris, brown and gray[5] | --- | --- | 20 - 22 |
| 1 - 3 | ID | **UNDOCUMENTED FILL**: Sandy Clay with organics/Organic Lean Clay, black (LOI = 16.5%)[6] | --- | 31 - 34 | 4 - 9 |
| 1 - 62 | II | **(CL) LEAN CLAY/SANDY LEAN CLAY**: brown and gray, moist, stiff to hard | 1 - 5 | 13 - 28 | 5 - 33 |
| 17 - 62 | III | **(ML) SANDY SILT**, gray, moist to wet, medium dense to dense | --- | 16 - 22 | 17 - 36 |
| 32 - 42 | IV | **(SC) CLAYEY SAND WITH GRAVEL/ (GC) CLAYEY GRAVEL**, wet, medium dense | --- | --- | 15 - 30 |
| 27 - 73 | V | **(SP-SC) POORLY GRADED SAND WITH CLAY and GRAVEL / (SP) POORLY GRADED SAND** with weathered limestone **/ (SP-SM) POORLY GRADED SAND WITH SILT / (GP) POORLY GRADED GRAVEL / (GP-GC) POORLY GRADED GRAVEL WITH CLAY / (GC) CLAYEY GRAVEL** wet, medium dense to very dense (apparent cobbles/boulders) | --- | --- | 21 – 50+ |
| 28 - 98 | VI | **WEATHERED ROCK** (Limestone) with gravel, wet very dense (apparent cobbles/boulders) | --- | --- | 45 - 50+ |
| 91 to 110 | VII | **LIMESTONE**, light gray, moderately weathered, with vertical joints and solution cavities RQD = 26% - 71% | --- | --- | --- |

Notes:
(1) Standard Penetration Testing
(2) Blows Per Foot or 50 blows per stated inches
(3) Encountered in B-01, B-03, B-04, B-13, B-17, D-4, P-2 & P-6
(4) Encountered in B-14 & D-3
(5) Encountered in B-18
(6) Encountered in D-3 & P-1

The soil stratification shown on the boring logs represents the interpreted soil conditions at the actual boring locations. Variations in the stratification can occur between sample intervals and boring locations. The subsurface conditions at other times and locations on the site may differ from those found at the boring locations. If different site conditions are encountered during construction, ECS should be contacted to review our recommendations relative to the new information.

Because the split-spoon sampler has a 1⅜-inch inside diameter, the soil classifications noted on the boring logs may not be representative of the entire soil matrix. Material larger than the 1⅜-inch inside diameter of the split-spoon sampler cannot be collected and observed directly.

### 3.2 GROUNDWATER OBSERVATIONS

The drillers observed the boreholes for the presence of free groundwater during drilling. However, the use of mud rotary drilling precluded measurable data in most borings. Shallow groundwater was encountered at approximately 6 feet below existing grade (EL. 664 feet – EL. 665 feet) in Borings B-14 and B-18 during drilling.

Please note that in predominantly cohesive clayey soils, groundwater may take several days or weeks to stabilize in the boreholes. The boreholes were backfilled a couple of hours after drilling. As such, stabilized groundwater readings were not possible.

Based upon the soil color change from brown to gray, the long-term water table is estimated as 6 to 10 feet below existing grades (EL. 660 feet to EL. 668 feet). Please note variations in the long-term water table elevation may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, adjacent drainage activities and other factors. Perched water conditions may also develop and/or exist at shallower depths seasonally, particularly within more permeable soil underlain by less permeable soil and within existing fill, granular pavement subbase layers, and utility backfill.

### 3.3 PRESSUREMETER TESTS

ECS performed nine (9) in-situ pressuremeter tests utilizing pressuremeter equipment at boring B-15. The tests were performed at approximate depths ranging from 10 to 50 feet below existing surface grades, which corresponds to approximate elevations of EL. 664 to 624 feet MSL. The pressuremeter tests were generally performed in the firm to very stiff lean clay. The main purpose of performing pressuremeter testing is to obtain a better measure of in-situ soil properties than can be obtained from correlations derived from conventional methods such as SPT testing and laboratory testing. This allows for a better estimate of the bearing and settlement characteristics of the soils. The results will be included in a subsequent report.

### 3.4 LABORATORY TESTING

The laboratory testing consisted of selected tests performed on samples obtained during the field exploration operations. Classification and index property tests were performed on representative soil samples. The following tests were performed on soil samples:

- Moisture content determination on fine-grained soil samples in accordance with ASTM D2166.
- Calibrated hand penetrometer ($Q_p$) tests on cohesive soil samples.

Each sample was visually classified on the basis of texture and plasticity using ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) as a guide. After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposal.

## 4.0 DESIGN RECOMMENDATIONS

### 4.1 GEOTECHNICAL DISCUSSION

Given the magnitude of the structural loads, settlement criteria and the subsurface conditions for the proposed data center building, shallow spread footings are not a practical design option. In the event sections of the new building complex have lighter loads and are separated structurally from the main building, consideration may be given to shallow spread footings. If CloudHQ provides this information to ECS, we will analyze these areas upon request.

A deep foundation system is a more feasible option in terms of constructability and cost from a geotechnical standpoint. ECS presents two options for consideration, namely straight drilled shafts or driven steel H-piles.

Drilled shafts should also extend into the very dense sand/gravel/weathered rock (Stratum V or VI) at a depth of 65 feet or greater or on the limestone bedrock at depths of 91 feet to 106 feet. High end bearing capacities can be achieved. Additional discussion for these options is provided in the following sections.

The steel H-piles can be driven through the undocumented fills, natural lean clay and medium dense granular soils into the very dense sand/gravel/weathered rock (Stratum V or VI) at an approximate depth of 65 feet below existing grades. The piles can be driven to achieve “full” capacity.

### 4.2 DRILLED SHAFT FOUNDATIONS

Drilled shaft foundations may be considered for support of the proposed data center building. Straight-sided drilled shaft foundations bearing within the very dense granular soils/weathered rock or on the limestone bedrock may be considered. Capacities for different drilled shaft sizes and depths are provided in the table below. Variations in the elevations of the weathered bedrock across the site should be anticipated.

| DRILLED SHAFT CAPACITIES | | | | |
|---|---|---|---|---|
| Drilled Shaft Diameter (in.) | Allowable Capacity @ 75 ft bgs (kips) | Allowable Capacity @ 85 ft bgs (kips) | Allowable Capacity @ 95 ft bgs (kips) | Allowable Capacity on Limestone Bedrock @ 91 to 106 ft bgs (kips) |
| 36 | 390 | 420 | 470 | 1400 |
| 42 | 490 | 540 | 590 | 1900 |
| 48 | 610 | 660 | 720 | 2500 |
| 54 | 740 | 800 | 860 | 3200 |
| 60 | 880 | 940 | 1010 | 3900 |
| 72 | 1200 | 1270 | 1360 | 5600 |
| 84 | 1560 | 1650 | 1750 | 7700 |

***In the event the drilled shafts are planned to bear on limestone bedrock, to check the competence of limestone bedrock and check that the drilled shaft is bearing on weathered bedrock (not on boulder,***

***cobble, and large gravel), the rock supported drilled shafts should be augered for at least 15 minutes using a rock auger prior to drilled shaft construction. Drilled shafts bearing on a boulder instead of bedrock could lead to unacceptable settlement. The bottom of the rock drilled shaft should be ground down flat and sediment and loose materials should be removed.***

**Drilled Shaft Installation:** ***During drilled shaft excavations due to the presence of groundwater and granular soils/weathered rock, the contractor should be prepared to utilize full length temporary steel casing. The temporary steel casing should be advanced to bearing depth (oversized temporary steel casing if telescoping method is used) and drilled under slurry to help stabilize the shaft excavation.*** We believe incorporating full length temporary steel casing to top of very dense granular soils / weathered rock along with slurry drilling should better help prevent sloughing and blowing-in of granular soils and resist seepage pressure on the excavation bottom compared to drilling in an open hole with slurry alone.

An appropriate head of slurry must be maintained to reduce the potential for heave or blow-in. The contractor should consider maintaining the slurry head at a depth appropriate to maintain excavation stability with an estimated water level of approximately 6 to 10 feet below the existing ground surface or shallower near the top of the shaft. ***Drilled shafts installed under slurry are expected to require tremie placement of concrete.***

The temporary steel casing should be extended a minimum of 3½ feet above the ground surface to reduce the potential risk of accidental fall-in of foreign materials and/or personnel into the excavation hole. The foundation contractor should be prepared for slurry drilling, have available suitable pump, tremie pipes and suitable lengths of appropriate diameter temporary casing at the site during drilled shaft excavation to prevent construction delay.

We recommend ECS observe drilled shaft excavation/construction. Reinforcing steel and concrete strength requirements for the drilled shafts should be determined by the Structural Engineer.

One critical aspect of installation of drilled shafts is removal of the casing. The temporary steel casing can be extracted as the concreting operation progresses. Specifically, concrete will have a tendency to "arch" within the casing lining, creating the possibility of voids or discontinuities within the drilled shaft. During concreting operations, we recommend that special attention be paid to the pour and pull operations, to help ascertain that discontinuities are not created within the shaft. The drilled shaft concrete should be placed in intimate contact with undisturbed natural soil. A positive head of concrete should be maintained prior to pulling out the temporary steel casing to prevent water, drilling slurry and soil outside the steel casing from contaminating the concrete. For tremie placement, we recommend the drilled shaft concrete mix be designed for a slump of 7 to 9 inches.

Prior to start of drilled shaft construction, we recommend the drilled shaft foundation contractor should submit shaft excavation procedures for review by the design team. The procedures should include the management of water seepage, installation of temporary steel casing, slurry drilling, necessary steps to prevent sloughing of granular or non-cohesive soils and placement of concrete using tremie method.

**Drilled Shaft Settlement:** Maximum settlement of drilled shaft foundations is estimated to be approximately ¾ inch or less, plus elastic compression of the drilled shaft concrete. Differential settlement between rock bearing shafts is estimated to be ¼ to ½ inch.

**Drilled Shaft Lateral Loading:** For analysis of the lateral response of the drilled shafts, the parameters (soil modulus, average undrained shear strength, estimated angle of internal friction and strain values) listed in the Table below may be utilized. The soil modulus values are cyclic modulus and determined based upon the soil conditions encountered in the soil borings at the site and guidelines in the program documentation for LPile and RSPile, industry standard lateral pile analysis applications.

| LATERAL PILE CAPACITY PARAMETERS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Depth Below Existing Grade (feet) | | Soil Type | Static Soil Modulus (pci) | Average Undrained Shear Strength (psf) | Estimated Angle Of Internal Friction (degrees) | Effective (Submerged) Unit Weight (pcf) | $\varepsilon_{50}$ |
| From | To | | | | | | |
| 0 | 5 | Fill/Frost Depth | Neglect | Neglect | Neglect | Neglect | Neglect |
| 5 | 72 | Stiff Lean Clay | 250 | 1,500 | 0 | 60 | 0.007 |
| 72 | 106 | Dense Sand (Weathered Rock) | 125 | 0 | 40° | 65 | --- |

Higher lateral resistance is expected to be available for shafts socketed into bedrock. Rock cores and additional lab testing is recommended to better estimate bedrock resistance.

**Drilled Shaft Uplift Capacity**: The following Table lists the allowable uplift resistance (factor of safety = 2 was applied) for the straight sided drilled shafts bearing on weathered bedrock.

| DRILLED SHAFT UPLIFT UNIT RESISTANCE | | | |
|---|---|---|---|
| Depth Below Existing Grade (feet) | | Soil Type | Allowable Uplift Unit Resistance (psf) |
| From | To | | |
| 0 | 5 | Fill/Frost Depth | Neglect |
| 5 | 72 | Stiff Lean Clay | 250 |
| 72 | 106 | Dense Sand (Weathered Rock) | 400 |

ECS' recommendations for allowable uplift capacity per drilled shaft considered the following:

- A factor of safety 1.25 for weight of concrete
- The uplift resistance within the upper 5 feet of the shaft was neglected.

Higher uplift resistance is expected to be available for shafts socketed into bedrock. Additional lab testing is recommended to better estimate bedrock resistance.

The bottom of all exterior grade beams must be a minimum of 3.5 feet below the adjacent finished exterior grade for frost protection.

We recommend that drilled shafts be subjected to field loading tests in accordance with ASTM D1143. These tests should be conducted in areas to be receiving the highest loading. Such test results should be reviewed by ECS for comparison with expected parameters.

### 4.3 DRIVEN PILE FOUNDATIONS

Based on the findings in the borings, proposed loads and evaluation of the subsurface conditions, it is recommended that end bearing steel "H" piles bear within the very dense granular soils/weathered rock at approximately 65 feet below existing grades to support the proposed data center building. The piles should be driven to "refusal" to achieve the capacities listed below. During driving, refusal is defined as 20 blows per inch for three (3) consecutive 1-inch penetrations. The following table presents the allowable capacities for various pile sizes.

| DRIVEN PILE CAPACITIES<br>Grade 60 Steel H-Piles Driven to Refusal @ 65± ft. bgs. | | |
|---|---|---|
| **H-Pile Size** | **Steel End Area ($in^2$)** | **Allowable Capacity (kips)** |
| HP 10 X 42 | 12.4 | 185 |
| HP 12 X 53 | 15.5 | 230 |
| HP 14 X 73 | 21.4 | 320 |

Due to the apparent cobbles/boulders in the subsurface strata, the H-piles must be provided with tip protection using a pile point or driving shoe. If left unprotected, the H-pile tips may deform upon encountering obstructions resulting in pile damage or unacceptable deflection. Installation of a cast steel pile point may allow the pile to be driven through obstructions without damage or deflection. If an obstruction cannot be penetrated by the driven H-pile point, additional piles, relocated piles, and possibly modified grade beams will have to be installed to support the proposed data center building.

Driven piles frequently "freeze" in place where the pile driving operations are halted. Therefore, each pile should be driven to the desired tip elevation and driving resistance without interruption in the driving operation. Driving the center piles of a cluster first will facilitate the driving operations. Accurate records of the final tip elevations and driving resistance should be obtained during the pile driving operations. These records should be provided to the geotechnical engineer for review prior to acceptance of the piles.

Steel pile units may be subject to corrosion due to the chemical composition of the soil profile or groundwater. The possibility of excessive corrosion taking place should be reviewed with an engineer specializing in evaluation and control of corrosion. In general, use a two (2) to three (3) mil reduction per year for corrosion of the steel piles. The structural capacity of the piles should be checked for downward axial loads, tension forces and lateral forces.

The bottom of all exterior grade beams must be a minimum of 3.5 feet below the adjacent finished exterior grade for frost protection.

We recommend that several test piles be subjected to field loading tests in accordance with ASTM D1143. These tests should be conducted in areas to be receiving the highest loading. Such test results should be reviewed by ECS for comparison with expected parameters.

### 4.4 SEISMIC DESIGN CONSIDERATIONS

**Seismic Site Classification:** The International Building Code (IBC) 2018 requires site classification for seismic design based on the upper 100 feet of a soil profile. At least two methods are utilized in classifying sites, namely the shear wave velocity ($v_s$) method and the Standard Penetration Resistance (N-value) method. The Standard Penetration Method was used in classifying this site.

| SEISMIC SITE CLASSIFICATION | | | | |
|---|---|---|---|---|
| **Site Class** | **Soil Profile Name** | **Shear Wave Velocity, Vs, (ft./s)** | **N value (bpf)** | **Undrained Shear Strength, Su, (psf)** |
| A | Hard Rock | Vs > 5,000 fps | N/A | NA |
| B | Rock | 2,500 < Vs ≤ 5,000 fps | N/A | NA |
| C | Very dense soil and soft rock | 1,200 < Vs ≤ 2,500 fps | >50 | > 2,000 |
| **D** | **Stiff Soil Profile** | **600 ≤ Vs ≤ 1,200 fps** | **15 to 50** | **1,000 to 2,000** |
| E | Soft Soil Profile | Vs < 600 fps | <15 | < 1,000 |

Based upon our interpretation of the subsurface conditions, the appropriate Seismic Site Classification is "**D**" as shown in the preceding Table.

The Site Class definition should not be confused with the Seismic Design Category designation which the Structural Engineer typically assesses. If a higher site classification is beneficial to the project, we can provide additional testing methods that may yield more favorable results.

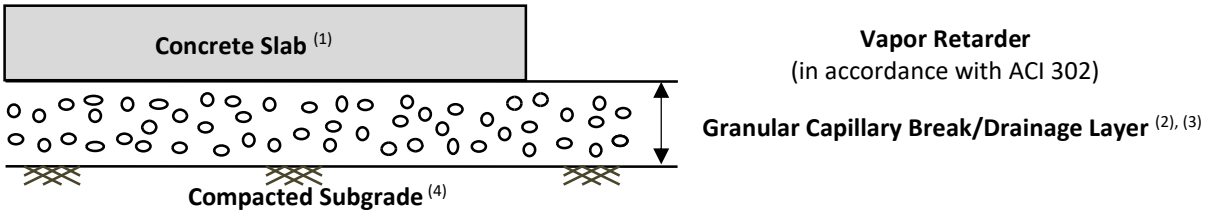
### 4.5 SLABS ON GRADE

Provided subgrades and Engineered Fills are prepared as discussed herein, the proposed floor slab can be constructed as Ground Supported Slabs (or Slab-On-Grade). Based on a main finished floor elevation of EL. 672.5 feet, it appears that the slabs will bear on Stratum IA, IB or IC - Undocumented Fill, Stratum II – Natural Lean Clay or newly placed Engineered Fill. **The Undocumented Fill – Stratum ID encountered borings P-1 and D-3 from the previous exploration should be completely removed (2½ to 3± feet below existing grades) and replaced with engineered fill.** This area is discussed in the **Site Preparation** section below.

**In addition, ECS recommends that the construction of the floor slab be delayed a minimum 90 days after engineered fill has been placed in the existing detention ponds. The settlement of the fill should be monitored. This procedure and settlement criteria are discussed in the Earthwork Operations** section of this report.

Given that the finished floor elevation of several pits may be as low as EL. 666.5 feet, it appears that the pit slabs will likely bear on native lean clay. Support of the floor on undocumented existing fill is not risk

free. Therefore, recommendations for subgrade preparation are described in the **Site Preparation** section of this report. The following graphic depicts our soil-supported slab recommendations:




1. **Concrete Slab:** Minimum 6 inches thick
2. **Drainage Layer:** Minimum 6 inches thick
3. **Drainage Layer Material:** GRAVEL (GP, GW) having a maximum aggregate size of 1½ inches and no more than 5 percent passing the No. 200 sieve. Crushed/recycled concrete should not be used drainage layer.
4. **Compacted Subgrade:** Compacted to at least 95 percent of the maximum dry density per ASTM D1557.

Soft or yielding soils may be encountered in some areas. Those soils should be removed and replaced with compacted Engineered Fill in accordance with the recommendations included in this report.

A thicker slab may be needed depending on the actual floor loads. The structural engineer should determine the actual slab thickness and steel reinforcing requirements. Provide adequate construction joints, contraction joints and isolation joints in the slab to reduce the impacts of cracking and shrinkage. Refer to ACI 302.1R04 *Guide for Concrete Floor and Slab Construction* for additional information regarding concrete slab joint design. Reinforce the slab with welded wire fabric or include an appropriate fiber mesh admixture to help control shrinkage cracking.

**Subgrade Modulus:** Provided the subgrade is prepared, and engineered fill and the granular drainage layer are placed as recommended in this report, design the slabs assuming an un-factored modulus of subgrade reaction, $k_{v1}$, of 100 psi/in. This estimated subgrade modulus value is based on the recommended minimum drainage base thickness and correlation of index properties and soil type to historical 1 foot by 1 foot plate load tests.

**Vapor Retarder:** Inclusion of a vapor retarder should be considered if the building will contain moisture-sensitive floor coverings, equipment or materials. The vapor retarder will help reduce the potential of upward migration of water vapor from the soil into and through the concrete slab, which can contribute to excess humidity and microbial growth in the building. Where a vapor retarder is considered, special attention should be given to the surface curing of the slabs to reduce uneven drying of the slabs and associated cracking and/or slab curling. The designer should consider the moisture sensitivity of floor coverings and finishes, and the potential effects of slab curling and cracking when determining if the vapor retarder will be in direct contact with the slab or beneath a layer of granular fill. The use of a blotter or cushion layer above the vapor retarder may be considered for project specific reasons. Refer to ACI 302.1R04 Guide for Concrete Floor and Slab Construction and ASTM E1643 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs for additional guidance on these issues.

Positive drainage around the perimeter of the proposed structures should be used to reduce the potential for water accumulation under the structure elements. Slope exterior grades such that runoff is directed

away from the structure. Direct downspouts away from the structure. Direct surface runoff to appropriate stormwater infrastructure.

**Slab Isolation:** Soil-supported slabs should be isolated from the foundations and foundation-supported elements of the structure so that differential movement between the foundations and slab will not induce excessive shear and bending stresses in the floor slab. Where the structural configuration prevents the use of a free-floating slab such as in a drop down footing/monolithic slab configuration, the slab should be designed with suitable reinforcement and load transfer devices to preclude overstressing of the slab.

**Frost Susceptible Areas:** Frost susceptible soils were encountered. Exterior slabs and slabs in poorly or unheated areas may be subject to frost heave. To help reduce frost heave potential, consider additional insulation, installation of subgrade drainage, and/or replacement to the frost depth with non-frost-susceptible backfill. Slope pavement and ground surface grades away from the building and flatwork, to help reduce water infiltration and potential frost heave problems.

### 4.6 BELOW-GRADE WALLS

Below-grade walls for the proposed elevator pits, HVR pits and loading dock walls should be designed to withstand lateral earth pressures and surcharge loads. Groundwater table located as shallow as approximately 6 feet below existing grades should be considered in the design of below-grade pits/walls.

**Lateral Earth Pressures:** We recommend that the below-grade walls be designed for a linearly increasing at-rest earth pressure of 66 psf per vertical foot of wall. This at-rest earth pressure value is based on below-grade walls that are designed to be drained (drainage of the backfill must be provided). Below-grade walls designed to be undrained should be designed to withstand the increased hydrostatic pressure. We recommend that undrained below-grade walls be designed for a linearly increasing at-rest earth pressure of 95 psf per vertical foot of wall, and should be fully waterproofed. The design should also account for any surcharge loads within a 45-degree slope from the base of the pits. For the at-rest earth pressure condition, an estimated lateral earth pressure coefficient of 0.53 can be applied to surcharge loads.

If the active earth pressure condition develops, we recommend below grade walls be designed for a linearly increasing lateral earth pressure of 45 psf per vertical foot of wall above the long-term groundwater level and 85 psf/ft below the long-term groundwater level for the design of below-grade wall with level backfill. These active lateral earth pressures assume that granular materials are used for wall backfill. The wall design should also account for surcharge loads within a 45-degree slope from the base of the wall. For the active earth pressure condition, an estimated lateral earth pressure coefficient of 0.36 can be applied to surcharge loads.

Rotation or translation of the wall into the retained soil can develop the **"passive"** earth pressure condition. The displacement required to mobilize the passive earth pressure condition is much greater than that needed to mobilize the active condition. If the passive condition develops, a passive lateral earth pressure of 260 psf per vertical foot of wall above the long-term groundwater level and 185 psf per vertical foot below the long-term groundwater level can be used to design the walls where annulus between walls and excavation are backfilled with at least 2-foot wide of granular drainage fill material. We recommend the passive resistance within the zone of seasonal volume change (i.e., approximately 3½ feet from the final ground surface) be neglected.

**Backfilling:** Special attention should be employed during placement of new fill against below-grade walls to prevent damage to walls. A jumping jack, walk-behind vibratory plate or similar equipment should be used in areas that are not feasible with a heavy-duty pneumatic tire or smooth drum roller. To achieve a desirable balance between reducing excessive pressures against the below-grade walls and reducing the settlement of the wall backfill, we recommend that the wall granular backfill be compacted to at least 90 percent of the maximum dry density obtained in accordance with ASTM D1557, Modified Proctor Method. Backfill materials should consist of inorganic materials, free of debris, be free draining, and containing no frost susceptible soil. The fill placed adjacent to the below-grade walls should not be over-compacted. Heavy earthwork equipment should maintain a minimum horizontal distance away from the below grade walls of 1 foot per foot of vertical wall height. Lighter compaction equipment should be used close to the below grade walls. Where light (e.g., hand) compaction equipment is employed, the maximum lift thickness should be reduced to 6 inches.

We recommend at least a two-foot annular space between the outside of the walls and excavation be backfilled with an inorganic, free draining granular material, free of debris. Outside this zone, the below-grade walls may be backfilled with low plasticity soils with maximum Liquid Limit and Plasticity Index less than or equal to 40 and 15, respectively. Suitable manmade drainage materials may be used in lieu of the free draining granular backfill, adjacent to the below-grade walls, but higher lateral pressures may result. The ground surface adjacent to the below-grade walls should be kept properly graded to direct water away from below grade walls and to help prevent ponding of water adjacent to below-grade walls.

**Drainage:** We recommend that below-grade pits be provided with perimeter and underslab drainage system to reduce the risk of development of hydrostatic pressures against the walls and uplift pressures on the below-grade slab. The perimeter drainage system may consist of perforated or porous wall, closed joint drain tiles located around the perimeter of the walls, at the footing level. These drain lines should be surrounded by a minimum of 6 inches of free draining granular filter material having a gradation compatible with the size of the openings utilized in the drain lines and surrounding soils to be retained. The free draining material is recommended to be wrapped with an approved non-woven filter fabric, such as Mirafi 140-N or equivalent. Note recycled concrete often has cement dust and other fines content that will be higher than typical crushed limestone or other natural aggregates, which could clog drains, therefore recycled concrete materials are not recommended as backfill in drainage layer/media applications.

An underslab drainage blanket with some lateral drain tiles leading to a sump should be provided. The drainage blanket should be a minimum of 6 inches in thickness and consist of free-draining crushed aggregate (no more than 2 percent passing the No. 200 sieve). The free draining granular fill placed against the below-grade walls should be hydraulically connected to the drain lines, which are connected to suitable outlet or a sump pit and pump to remove water that can accumulate.

### 4.7 NEW PAVEMENT CONSTRUCTION

The pavement design recommendations are based on the subgrade consists of suitable materials evaluated by ECS or a geotechnical testing firm and the subgrade is prepared as recommended in the **Subgrade Preparation** and **Earthwork Operations** sections of this report.

**Subgrade Characteristics:** Based on the results of soil test borings, it appears the pavement subgrade soils will primarily consist of existing undocumented fill/natural lean clay.

Extensive laboratory and field testing were not part of ECS scope for the pavement section design and recommendations. Considering that the subgrade of the proposed pavements is prepared as recommended in this report, the rigid pavements may be designed for an estimated modulus of subgrade reaction, $k_{v1}$ of 100 psi/in (pounds per square inch per inch) and flexible pavements may be designed using an estimated Illinois Bearing Ratio (IBR) of 3.

The estimated traffic loads listed in the **Proposed Construction** section of this report, an IBR value of 3 and the following parameters were utilized in our analysis to estimate preliminary flexible pavement sections:

| FLEXIBLE PAVEMENT DESIGN PARAMETERS | |
|---|---|
| **PARAMETER** | **VALUE** |
| Reliability | 85% |
| Standard Deviation | 0.45 |
| Initial Serviceability Index | 4.2 |
| Terminal Serviceability Index | 2.0 |
| Hot Mix Asphalt Structural Coefficient | 0.40 |
| Aggregate Base Course Structural Coefficient | 0.13 |

If the actual design traffic loads will exceed those estimated below, ECS should be contacted for revised pavement design recommendations; otherwise, increased pavement maintenance and a shortened pavement life should be expected.

| ESTIMATED PARKING LOT PAVEMENT DESIGN INFORMATION | |
|---|---|
| **TRAFFIC TYPE** | **MAXIMUM ESALS** |
| Light-Duty | 30,000 ESALs |
| Heavy-Duty | 100,000 ESALs |

The recommended minimum pavement sections listed in the table below are based on the reported usage at the project site with a design life of 20-years. The new flexible pavement materials and construction should be in accordance with the Guidelines for AASHTO Pavement Design and applicable Illinois Department of Transportation (IDOT) Standards.

| RECOMMENDED MINIMUM PAVEMENT SECTIONS | | | | |
|---|---|---|---|---|
| MATERIAL | COMPACTED MATERIAL THICKNESSES (INCHES) | | | |
| | FLEXIBLE PAVEMENT | | RIGID PAVEMENT | |
| | LIGHT-DUTY | HEAVY-DUTY | LIGHT-DUTY | HEAVY-DUTY |
| Portland Cement Concrete ($f'_c$ = 4000 psi) | - | - | 5 | 6 |
| Bituminous Surface Course[1] | 1½ | 1½ | - | - |
| Bituminous Binder Course[2] | 2½ | 3 | - | - |
| Crushed Aggregate Base[3] | 6 | 8 | 4 | 6 |
| **Total Pavement Thickness** | **10** | **12½** | **9** | **12** |

(1) Accordance to Section 420 of IDOT Standard Specification for Road and Bridge Construction.
(2) Accordance to Section 406 of IDOT Standard Specification for Road and Bridge Construction
(3) Accordance to Section 351 of IDOT Standard Specification for Road and Bridge Construction. If crushed gravel or some other material is used in lieu of crushed stone, the material may have a lower structural coefficient, and a thicker base may be required.

The minimum light-duty flexible/rigid pavement section is recommended for automobile parking stalls or non-truck pavement area**.** The minimum heavy-duty flexible/rigid pavement section is recommended in frequent and higher stress traffic areas, such as main drive, drive-thru lane, and points of ingress or egress.

**Crushed Aggregate Base Course and Hot Mix Asphalt Compaction:** The crushed aggregate base course should be compacted to at least 95 percent of the maximum dry density obtained in accordance with ASTM D1557, Modified Proctor Method or at least 98 percent of the maximum dry density obtained in accordance with ASTM D698, Standard Proctor Method. The hot mix asphalt should be compacted to a minimum of 93 percent of the maximum theoretical density value.

**Rigid Pavements:** An air-entrained concrete mix (compressive strength of at least 4,000 pounds per square inch at 28 days) fiber-reinforced concrete is recommended for rigid pavements. Adequate construction joints, contraction joints and isolation joints should be provided in the areas of rigid pavement to reduce the impacts of cracking and shrinkage. Please refer to ACI 330R-92 *Guide for Design of Concrete Parking Lots*. The Guide recommends an appropriate spacing strategy for the anticipated loads and pavement thickness. It has been our experience that joint spacing closer to the minimum values results in a pavement with less cracking and better long-term performance. Control joint spacing should be determined in accordance with the current ACI code. Expansion joints should be provided where pavement abuts fixed objects, such as the buildings and light poles.

**Pavement Drainage:** An important consideration with the design and construction of pavements is surface and subsurface drainage. Where standing water develops, either on the pavement surface or within the base course layer, softening of the subgrade and other problems related to the deterioration of the pavement can be expected. Based on our estimated groundwater level, ECS considers surface water infiltration to be the main source of water to be considered for pavement design on this project.

Shape or crown the final pavement surface to properly direct surface water to suitable on or off-site stormwater drainage infrastructure. *ECS strongly recommends properly slope the clay pavement subgrade to avoid dips or pockets where water may become trapped. Dips in the clay subgrade could result in a "bathtub" effect, which may trap water and potentially soften the subgrade. Please note that trapped water beneath the existing pavement was observed in some pavement areas.*

The subgrade in areas requiring undercut and backfill with granular soils are recommended to be graded to drain toward a drain tile. The drain tile should be sloped a minimum of ½ to 1 percent to discharge to nearby storm sewers, drainage ditches or other appropriate drainage facilities. Install edge drains where site grades slope toward the pavement edge to reduce the potential for water to enter the base course layer. Slope edge drains to the nearest appropriate drainage structure/outlet/facility. Water that ponds on the subgrade surface can lead to deterioration of the subgrade soils, reduction of the base course support characteristics and result in pavement heave. Good drainage should help reduce the possibility of the subgrade materials being wet over a long period of time.

To help reduce the potential for shallow perched water to develop in areas of the site, install "stub" or "finger" drains around catch basins and in other low-lying areas of the parking lot to reduce the accumulation of water above and within the subgrade soils and aggregate base. Consider installation of pavement edge drains or trench drains to reduce the accumulation of water within the base course and on the subgrade soils.

**Pavement Maintenance Considerations:** A sound maintenance program should be implemented to help maintain and enhance the performance of pavements and help attain the design service life. A preventative maintenance program should be started early in the pavement life to be effective. The "standard in the industry" supported by research indicates that preventative maintenance should typically begin within 2 to 5 years of the placement of pavement.

Failure to perform preventative maintenance will reduce the service life of the pavement and increase the costs for corrective maintenance and full pavement rehabilitation. Seal joints and cracks with elastomeric caulk in a timely manner to help reduce water infiltration thru the pavement section into the base course layer, which may result in softening of the subgrade and deterioration of the pavement. Observe pavements for distresses, such as cracks, depressions and poor drainage, at least twice a year, typically once in the spring and once in the fall.

**Pavement Construction Weather Restrictions:** Daily temperatures from mid-November to April can often stay below 40°F, limiting the days that bituminous placement can occur. In this region, bituminous plants may close during the months of December, January, and/or February if particularly cold weather conditions prevail. However, this can change based on year-to-year temperature fluctuations.

# 5.0 SITE CONSTRUCTION RECOMMENDATIONS

## 5.1 SUBGRADE PREPARATION

### 5.1.1 Stripping and Grubbing

The subgrade preparation for the floor slab and equipment yard areas should consist of stripping all vegetation, root mat, topsoil and any soft or unsuitable materials from the 10-foot expanded building, 5-foot expanded pavement limits, and 5 feet beyond the toe of Engineered Fills. Borings performed in "undisturbed" areas of the site contained up to 16 inches of topsoil. Deeper topsoil or organic laden soils may be present in wet, low-lying, and poorly drained areas. ECS should be retained to verify that topsoil and unsuitable surficial materials have been removed prior to the placement of Engineered Fill or construction of structures.

**In borings P-1 and D-3, the undocumented fill had an organic content over 16 percent. This presents a significant level of risk for settlement and distress in the new floor slab and pavement areas. Therefore, it is recommended that this material be delineated by performing a series of test pits. Subsequently, this unsuitable material should be completely removed. The depth of removal is estimated as 2½ to 3 feet below existing grades (possible deeper in unexplored areas).**

Existing Detention Basins: The existing detention basins lie within the existing building plan. Therefore, it is recommended that the basins be completely dewatered. Then all debris, soft/saturated soils should be completely removed. The sides of the basins should be benched to facilitate engineered fill placement. The basins should be backfilled with Engineered Fill to achieve final grades.

### 5.1.2 Proofrolling

Prior to fill placement or other construction on subgrades, the subgrades should be evaluated by ECS. The exposed subgrade is recommended to be thoroughly proofrolled with construction equipment having a minimum axle load of 10 tons (e.g., fully loaded tandem-axle dump truck for clayey soils or a large vibratory smooth drum roller for sandy soils). The subgrade should be traversed with the proofroll equipment in two perpendicular (orthogonal) directions with overlapping passes of the vehicle. This procedure is intended to assist identification of yielding subgrade materials.

Unstable or pumping subgrade areas identified during the proofroll should be repaired prior to the placement of subsequent engineered fill or other construction materials. Unstable subgrade repair methods, such as undercutting, or moisture conditioning and recompaction, or chemical stabilization, should be discussed with ECS to evaluate appropriate procedures to repair the existing conditions causing the instability. Test pits may be excavated in unstable areas to explore the shallow subsurface materials and to help determine the appropriate remedial action to stabilize the subgrade.

Some slab areas, such as the pits, may be inaccessible to appropriate proofroll equipment. Evaluate areas inaccessible to proofroll with hand-operated testing equipment to check the subgrade support characteristics.

Seasonal reduction of the near surface soil strength can occur during wet times of the year (such as during the spring and fall months) or immediately following extended periods of rain. This may result in additional

unstable or pumping subgrade areas. ***The high moisture content of some clay materials present near surface may not pass a proofroll, and may need to be undercut or repaired.*** Some undercutting or repair of unstable subgrade soils should be anticipated during subgrade preparation. Dependent on the results of proofroll observations, undercuts of as much as 2 feet may be necessary to help develop a stable subgrade. The method of subgrade repair or improvement chosen may be influenced by several factors such as weather and schedule, area, depth, and nature of the unstable subgrade soils. Depending on these and other factors the actual depth of subgrade undercut and/or stabilization method should be determined at the time of construction. Some common subgrade repair methods include the following or a combination of the following:

- Scarification, aeration, and recompaction;
- Undercut and replacement with engineered fill;
- Placement of a geogrid on the subgrade along with granular engineered fill; or,
- Chemical stabilization/modification techniques. Alterations to the pavement sections to include additional drainage, such as an open-graded aggregate subdrainage layer, may be needed if a chemically modified subgrade is used.

### 5.1.3 Site Temporary Dewatering

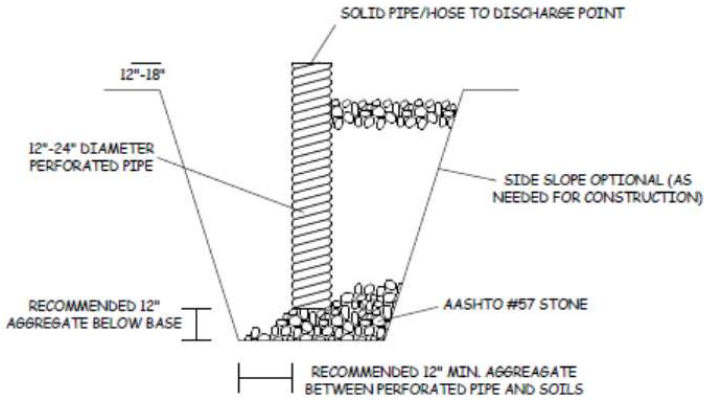
**Subsurface Water:** Groundwater observations are described in the **Groundwater Observations** section of this report. It appears the hydrostatic groundwater level at this site is located at a depth of approximately 6 to 10 feet below ground surface (EL. 660 feet to EL. 668 feet MSL) within the proposed building area. Based upon groundwater observations during prior construction activities, the results of this subsurface exploration, and details regarding the proposed construction, we believe construction dewatering consisting of a sump and pump system will be required to remove accumulated runoff water and perched water in shallow (less than 6 feet) excavations, while more extensive dewatering will be required for deeper (greater than 10 feet) excavations. The excavations for drilled shaft foundations will encounter significant groundwater that may best be controlled using full length temporary steel casing and/or through the use of drilling slurry.

The contractor shall make their own assessment of temporary dewatering needs based upon the limited subsurface groundwater information presented in this report. Soil sampling is not continuous, and thus soil and groundwater conditions may vary between sampling intervals (typically 5 feet). If the contractor believes additional subsurface information is needed to assess dewatering needs, they should obtain such information at their own expense. ECS makes no warranties or guarantees regarding the adequacy of the provided information to determine dewatering requirements; such recommendations are beyond our scope of services.

Dewatering systems are a critical component of many construction projects. Dewatering systems must be selected, designed, and maintained by a qualified and experienced (specialty or other) contractor familiar with the geotechnical and other aspects of the project. The failure to properly design and maintain a dewatering system for a given project can result in delayed construction, unnecessary undercuts, detrimental phenomena such as ‘running sand’ conditions, heaved subgrades, internal erosion (i.e., ‘piping’), the migration of ‘fines’ down-gradient towards the dewatering system, localized settlement of nearby infrastructure, foundations, slabs-on-grade, and pavements, etc. Water discharged from site dewatering systems is recommended to be discharged in accordance with all local, state, and federal requirements.

**Surface Water:** The surface of the site should be kept properly graded to enhance drainage of the surface water to appropriate discharge or storage areas during construction. We recommend that an attempt be made to enhance the natural drainage without interrupting its pattern.

**Strategies for Addressing Perched Groundwater:** The typical strategy for addressing perched groundwater seepage into shallow excavations is pumping from trench (or French) drains and sump pits with sump pumps. A typical sump pump drain (found in a sump pit or along a French drain) is depicted below. The inlet of the sump pump is placed at the bottom of the corrugated pipe and the discharge end of the sump is directed to an appropriate stormwater drain.




**Sump Pit/Pump Diagram**

A typical French drain consists of an 18- to 24-inch wide by 18- to 24-inch-deep bed of AASHTO No. 57 aggregate (or similar open graded aggregate) wrapped in a medium duty, non-woven geotextile and (sometimes) containing a 6-inch diameter, Schedule 40 PVC perforated or slotted pipe. Actual dimensions should be determined during construction. After installation, the geotextile should be wrapped over the top of the aggregate and pipe followed by placement of backfill. The top of the drain should be positioned at least 3½ feet below the design subgrade elevations.

### 5.2 EARTHWORK OPERATIONS

The following sections describe existing fill, soil reusability, and recommendations for engineered fill.

#### 5.2.1 Existing Undocumented Man-Placed Fill

Existing undocumented fill was encountered at the boring locations to approximate depths of 3 to 12½ feet. Information regarding the placement and compaction of the existing fill is not known. **In borings P-1 and D-3, the undocumented fill had an organic content over 16 percent. This presents a significant level of risk for settlement and distress in the new floor slab and pavement areas. Therefore, it is recommended that this material be unsuitable material should be completely removed.** The excavations can be backfilled with engineered fill as described in this report.

Regarding the undocumented fills at the remainder of the site, there is an inherent risk for the owner that generally stems from the potential for variable density of the material, and for unsuitable material to exist

within the fill or to be buried by the fill that was not found by the boring exploration. This risk of unforeseen conditions cannot be eliminated without complete removal of the existing fill but can be reduced by performing the recommended observation and testing during construction and use of a lower bearing pressure. Using undocumented material for support would require acceptance of risk by the owner. It is not the geotechnical engineer's responsibility to accept the risk, but rather to inform others of the risk so that they may make a judgment as to what level of cost versus performance risk is acceptable to them.

If available, documentation regarding the existing fill placement and compaction should be provided to ECS for review to better evaluate the potential risks.

### 5.2.2 Engineered Fill Materials

Prior to placement of Engineered Fill, representative bulk samples (about 50 pounds) of on-site and/or off-site borrow should be submitted to ECS for laboratory testing, which will typically include Atterberg limits, natural moisture content, grain-size distribution, and moisture-density relationships (i.e., Proctors) for compaction. Imported materials should be tested prior to being hauled to the site to determine if they meet project specifications. Alternatively, Proctor data from other accredited laboratories can be submitted if the test results are within the last 90 days.

**Satisfactory Engineered Fill Materials:** Materials satisfactory for use as Engineered Fill must be free of frozen matter, deleterious materials, over-sized material (maximum 3-inch particle diameter), or chemicals that may result in the material being classified as "contaminated." Materials satisfactory for use as Engineered Fill should consist of inorganic soils with the following engineering properties and compaction requirements.

| ENGINEERED FILL INDEX PROPERTIES | | |
|---|---|---|
| **Subject** | | **Property** |
| Plasticity | Upper 4 feet in Building Areas and Upper 2 feet in Pavement Areas | LL ≤ 40, PI ≤ 15 |
| | Below 4 feet in Building Areas and Below 2 feet in Pavement Areas | LL ≤ 50, PI ≤ 20 |
| Maximum Particle Size | | 3 inches |
| Maximum Organic Content | | 5 percent |

Open-graded materials, such as coarser sands, and gravels (SP and GP), which contain increased void space in their mass may need to be encapsulated within a filter geotextile. If the fill is to provide low-frost susceptible characteristics, it must be classified as a clean GP or GW (or clean coarser SW or SP) per Unified Soil Classification System (ASTM D2487) and must be properly drained.

**Unsatisfactory Materials:** Unsatisfactory engineered fill materials, which do not satisfy the requirements for suitable materials, include topsoil and organic materials (PT, OH, OL), silt (ML) within the frost zone, and high plasticity soils, elastic silt (MH) and fat clay (CH). Fat clay (CH) materials may be used as fill in landscape areas.

Pea gravel is not recommended to be used as engineered fill. Pea gravel has round/smooth characteristics, no fines and does not interlock when compacted, which makes it more susceptible to future movement and instability resulting in excessive and variable settlement.

**On-Site Borrow Suitability:** Deposits of soils that meet the definition of Satisfactory Engineered Fill Materials are expected to be present at the site. Site soil used as engineered fill must not contain more than 5 percent organic matter as determined by ASTM D2974, and must be free of frozen matter, deleterious materials, over-sized material (maximum 3-inch particle diameter), or chemicals that may result in the material being classified as "contaminated." The on-site soil may be feasible to use as engineered fill with proper moisture conditioning during favorable conditions. Site soil considered for use as engineered fill should be further evaluated by ECS prior to its use.

Some of the soil samples had relatively high moisture contents so some drying of site soil prior to reuse as engineered fill is expected to be needed. This may involve spreading and discing to aerate, chemical modification or other methods to reduce the soil moisture to within a narrow range of the soil's optimum moisture content to facilitate placement and compaction. Reuse of soils having elevated moisture content is often a point of contention and a source of delays and change orders. From a technical standpoint, soils with moisture contents wet of optimum can be reused provided the moisture is properly adjusted to within a workable range of the material optimum moisture content. From a practical standpoint, wet soils can be difficult to dry, particularly within small or congested areas or during unfavorable weather, and such difficulties should be considered during planning and budgeting. A clear understanding by the general contractor and grading subcontractor regarding the reuse of excavated soils will be important to reduce delays and unexpected cost overruns. It is important to establish as part of the contract whether soils having elevated moisture content will be considered suitable for reuse. Some conditions at the time of construction, such as wet or freezing weather, may preclude the use of on-site soil, and use of an imported less moisture sensitive and/or less frost susceptible granular material may be needed.

Onsite soil is not recommended to be reused as engineered fill for foundation support because of the high recommended bearing pressure. A high quality imported well-graded aggregate material or lean concrete is recommended to be used as engineered fill for foundation support.

### 5.2.3 Compaction

**Subgrade Benching**: Place fill material in horizontal lifts. Where fill materials will be placed up against sloping ground, the soil subgrade should be scarified, and the new fill benched and keyed into the existing material. Place and compact fill on a 3 (H):1 (V) or flatter slope, or step or bench as required to flatten.

**Engineered Fill Compaction:** Place and compact engineered fill in appropriate thickness loose lifts as recommended below. Give as much importance to the moisture content requirements of the material as the density requirements during placement and compaction considering the moisture sensitivity of the soil.

| ENGINEERED FILL COMPACTION RECOMMENDATIONS | | |
|---|---|---|
| **Subject** | | **Recommendation** |
| Compaction Standard | | Modified Proctor, ASTM D1557 |
| Recommended Compaction | | ≥ 95 percent of Maximum Dry Density |
| Moisture Content | Fine-grained | -1 to +3 % points of the material's optimum value |
| | Coarse-grained | -3 to +3 % points of the material's optimum value |

**Fill Compaction Control:** The expanded limits of the proposed construction areas should be well defined, including the limits of the fill zones at the time of fill placement. Maintain grade control throughout the filling operations. Backfilling operations are recommended to be observed on a full-time basis by ECS to check and document that the minimum compaction requirements are being achieved. The recommended minimum frequency for field density testing of fills is listed in the Table below but should not be less than 1 tests per lift.

| FREQUENCY OF COMPACTION TESTS IN ENGINEERED FILL AREAS | |
|---|---|
| **Location** | **Frequency of Tests** |
| Expanded Structure Limits | 1 test per 2,500 sq. ft. per lift |
| Pavement Areas | 1 test per 10,000 sq. ft. per lift |
| Utility Trenches | 1 test per 200 linear ft. per lift |
| Other Non-Critical Areas | 1 test per 10,000 sq. ft. per lift |

**Compaction Equipment:** Compaction equipment appropriate for the soil type being compacted should be used to compact the subgrades and fill materials. Sheepsfoot compaction equipment is typically used for the fine-grained soils (clays). A vibratory steel drum roller is typically used for compaction of coarse-grained soils (sands and gravels) as well as to help seal compacted surfaces. Vibratory compaction methods should be done with caution near the water table because an unstable subgrade condition could develop. Static compaction and thinner lifts may be needed near the water table.

The maximum loose lift thickness depends upon the type of compaction equipment used. For isolated excavations around footing locations or within utility excavations, a hand tamper will likely be required. Listed in the Table below are recommended maximum loose lift thicknesses for compaction based on the utilized compaction equipment.

| RECOMMENDED LOOSE LIFT THICKNESSES [(1)] | |
|---|---|
| **Equipment** | **Maximum Loose Lift Thickness (inches)** |
| Large/Heavy, Self-Propelled Equipment | 8 |
| Small, Self-Propelled or Remote Controlled (Rammax, etc.) | 6 to 8 |
| Hand Operated (Plate Tamps, Jumping Jacks, Wacker-Packers) | 4 to 6 |

Note 1: Density testing during fill placement is important to check and document that the specified compaction is being achieved. Thinner lifts and/or more compactive energy may be needed to achieve the required degree of compaction.

In confined areas such as utility trenches, portable compaction equipment and thin lifts of 4 inches or less may be required to achieve specified degrees of compaction.

**Existing Detention Basins:** The basins should be backfilled with Engineered Fill to achieve final grades. Given the depth of new fill (estimated at 8± feet), settlement is likely. **Therefore, settlement should be monitored. Floor slab construction should not begin until the measured settlement rate is no more than 0.1 inch per week, or 90 days after fill placement in the basins has been completed, whichever is later.**

### 5.3 UTILITY INSTALLATIONS

**Utility Subgrades:** The natural and fill soil encountered at the borings are expected to be generally adequate for support of utility pipes. The pipe subgrades should be observed and probed for stability by ECS. Any loose or unsuitable materials encountered should be removed and replaced with appropriate compacted Engineered Fill, or pipe stone bedding material.

**Utility Backfilling:** The granular bedding material should be at least 4 inches thick, but not less than that specified by the project drawings and specifications. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the recommendations for engineered fill given in this report. Compacted backfill should be free of topsoil, roots, ice, or any other material designated by ECS as unsuitable. The backfill should be moisture conditioned, placed, and compacted as recommended in this report.

### 5.4 GENERAL CONSTRUCTION CONSIDERATIONS

**Subgrade Protection:** Measures should also be taken to limit site disturbance, especially from rubber-tired heavy construction equipment, and to control and remove surface water from development areas, including structural and pavement areas. It would be advisable to designate a haul road and construction staging area to limit the areas of disturbance and to prevent construction traffic from excessively degrading sensitive subgrade soils and existing pavement areas. Haul roads and construction staging areas could be covered with excess depths of aggregate to protect those subgrades. The aggregate can later be removed and used in pavement areas.

**Fill Placement Considerations:** Fill materials should not be placed on frozen soils, on frost-heaved soils, on excessively wet soils, or soils that are otherwise unstable. Borrow fill materials should not contain frozen materials at the time of placement, and frozen or frost-heaved soils should be removed prior to placement of engineered fill or other fill soils and aggregates. Excessively wet soils or aggregates should be scarified, aerated, and moisture conditioned.

**Surface Drainage:** Surface drainage conditions should be properly maintained. Surface water should be directed away from the construction area, and the work area should be sloped away from the construction area at a gradient of 1 percent or greater to reduce the potential of ponding water and the subsequent saturation of the surface soils. At the end of each workday, the subgrade soils should be sealed by rolling the surface with a smooth drum roller to minimize infiltration of surface water.

**Existing Utilities:** Prior to construction, all utilities in the proposed construction areas be positively identified and marked. Active utilities to remain in the construction areas should be exposed and protected during construction to reduce the potential for damage or interruption of service. Abandoned

utilities should be removed and backfilled with compacted engineered fill or grouted full of lean concrete if left in-place.

**Excavation Safety:** All excavations and slopes should be constructed and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing, constructing, and maintaining stable temporary excavations and slopes. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

**Undocumented Fill Considerations:** Existing undocumented fill was encountered at the boring locations. Unsuitable materials may be buried beneath the site surface not identified by the borings. Questionable material encountered is recommended to be evaluated by ECS to determine if removal and replacement with engineered fill is necessary. Alteration to the recommendations of this report may be needed, if conditions different than those noted on the boring logs are revealed.

**Bidding/Estimating Considerations**: Contractors bidding or undertaking work at the site should examine the results of the subsurface exploration, satisfy themselves as to the adequacy of the information for bidding and construction, make their own interpretation of the data, and consider the effect it may have on their cost proposal, construction techniques, schedule, and equipment capabilities. Furthermore, it is recommended contractors complete additional fieldwork and exploration they deem necessary to properly prepare a cost proposal for the site work. Soil borings do not provide the same wide-scale view of the subsurface conditions that is obtained during site grading, excavation or other aspects of earthwork construction. Additional scope may be required to obtain more detailed subsurface information needed for earthwork bid preparation, which could include test pits to better understand the lateral and vertical extents of subsurface materials of concern, particularly topsoil and existing undocumented fill, which may not be as easily identifiable from disturbed auguring and/or with spilt-spoon samples. Even with this additional information, budget contingencies should be carried in construction to help cover potential variations in subsurface conditions.

## 6.0 CLOSING

ECS has prepared this report to guide geotechnical-related design and construction aspects of the project. We performed these services in accordance with the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at this time in the region. No other representation, express or implied, and no warranty or guarantee is included or intended in this report.

The description of the proposed project is based on information provided to ECS. If this information is inaccurate, either because of our interpretation of the documents provided, or site or design changes that may occur later, ECS should be contacted so that we can review our recommendations and provide additional or alternate recommendations as may be required to reflect the proposed construction.

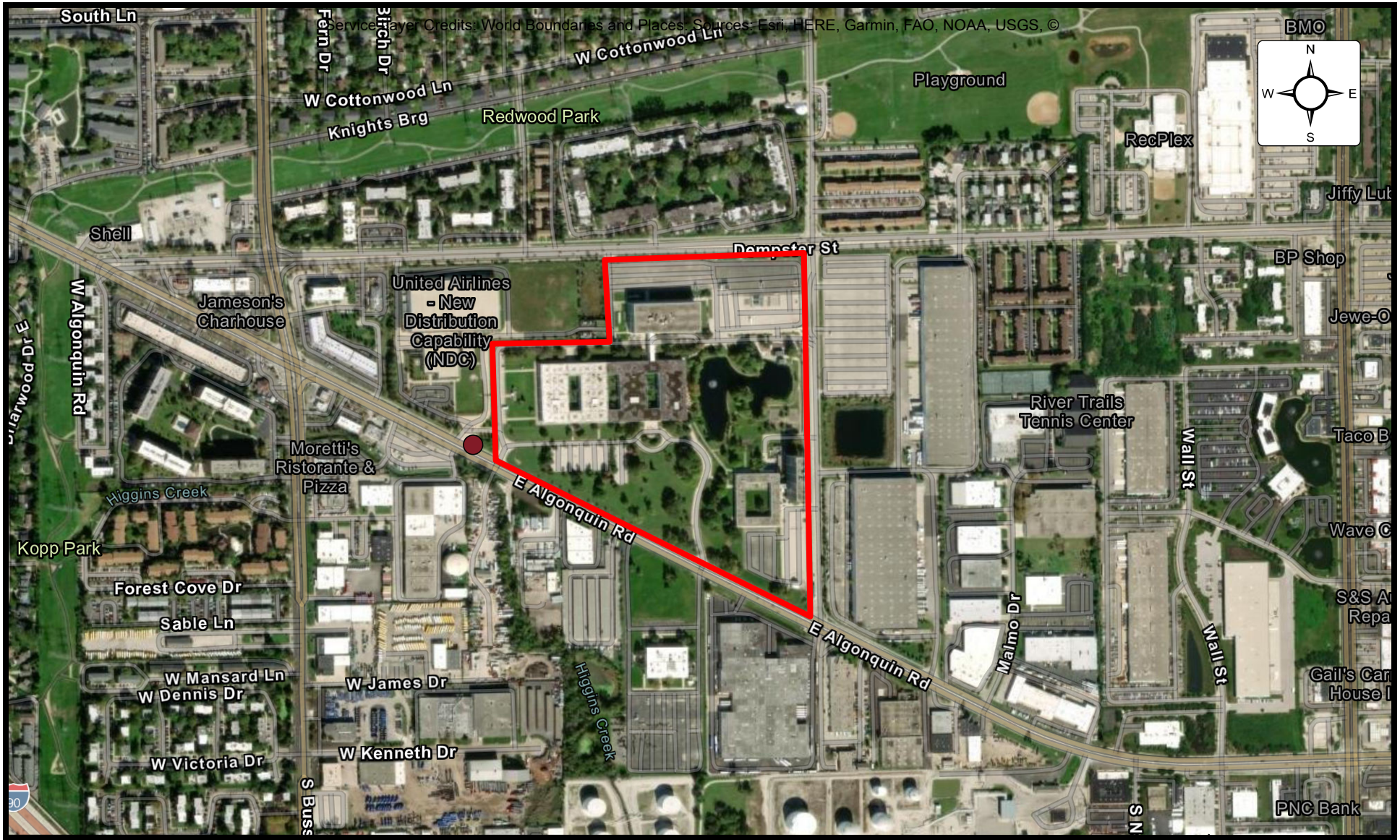
We recommend ECS review the project's plans and specifications so that we may evaluate consistency of those plans/specifications with the intent of the geotechnical report recommendations.

Field observations and quality assurance testing during earthwork and foundation installation are an extension of, and integral to, the geotechnical design recommendations. We recommend that ECS be retained to apply our expertise throughout the geotechnical phases of construction, and to provide consultation and recommendations should issues arise.

ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

## Appendix A - Drawings and Reports

Site Location Diagram
Boring Location Diagram(s)
Subsurface Cross-Section(s)

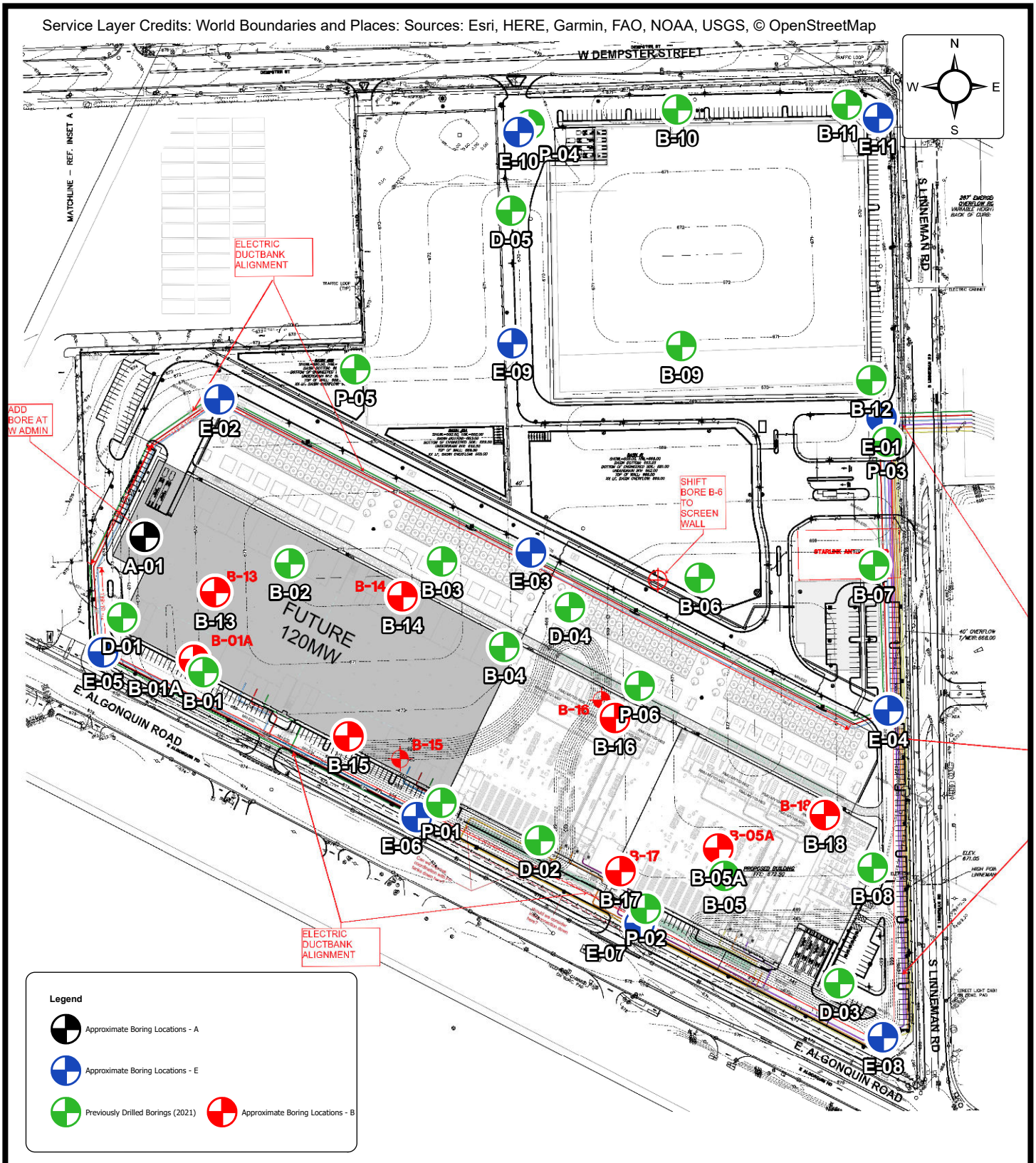



# SITE LOCATION DIAGRAM

## Proposed Cloud HQ Supplemental Testing

**1200 East Algonquin Road, Mount Prospect, Illinois**
**CloudHQ**

| | |
|---|---|
| ENGINEER | RB |
| SCALE | 1" = 700' |
| PROJECT NO. | 16:13881-D |
| SHEET | |
| DATE | 6/9/2025 |

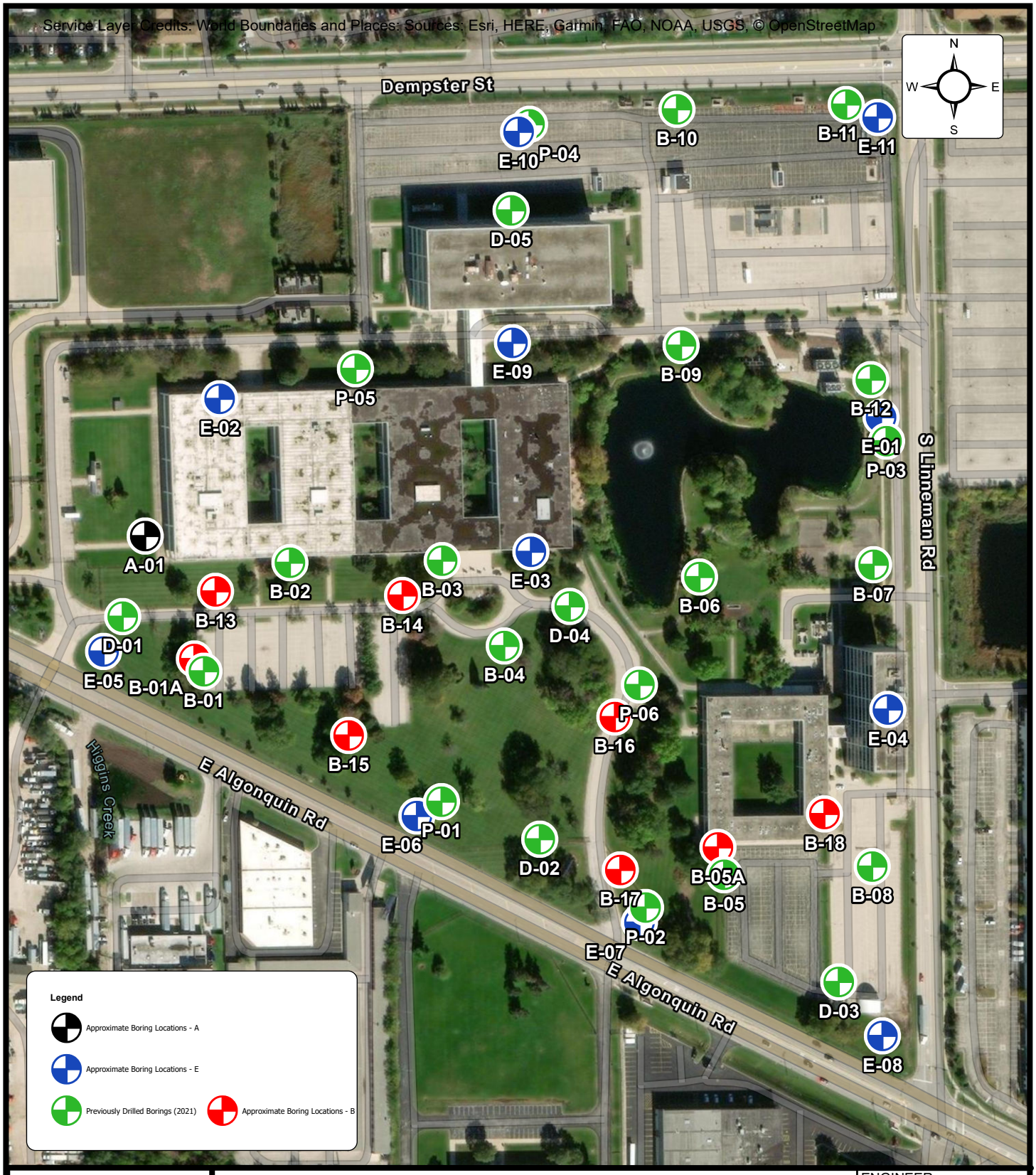



# BORING LOCATION DIAGRAM
## Proposed Cloud HQ Supplemental

**1200 East Algonquin Road, Mount Prospect, Illinois**

**CloudHQ**

| | |
|---|---|
| ENGINEER | AV4 |
| SCALE | 1" = 250' |
| PROJECT NO. | 16:13881-D |
| SHEET | 1 of 2 |
| DATE | 7/11/2025 |



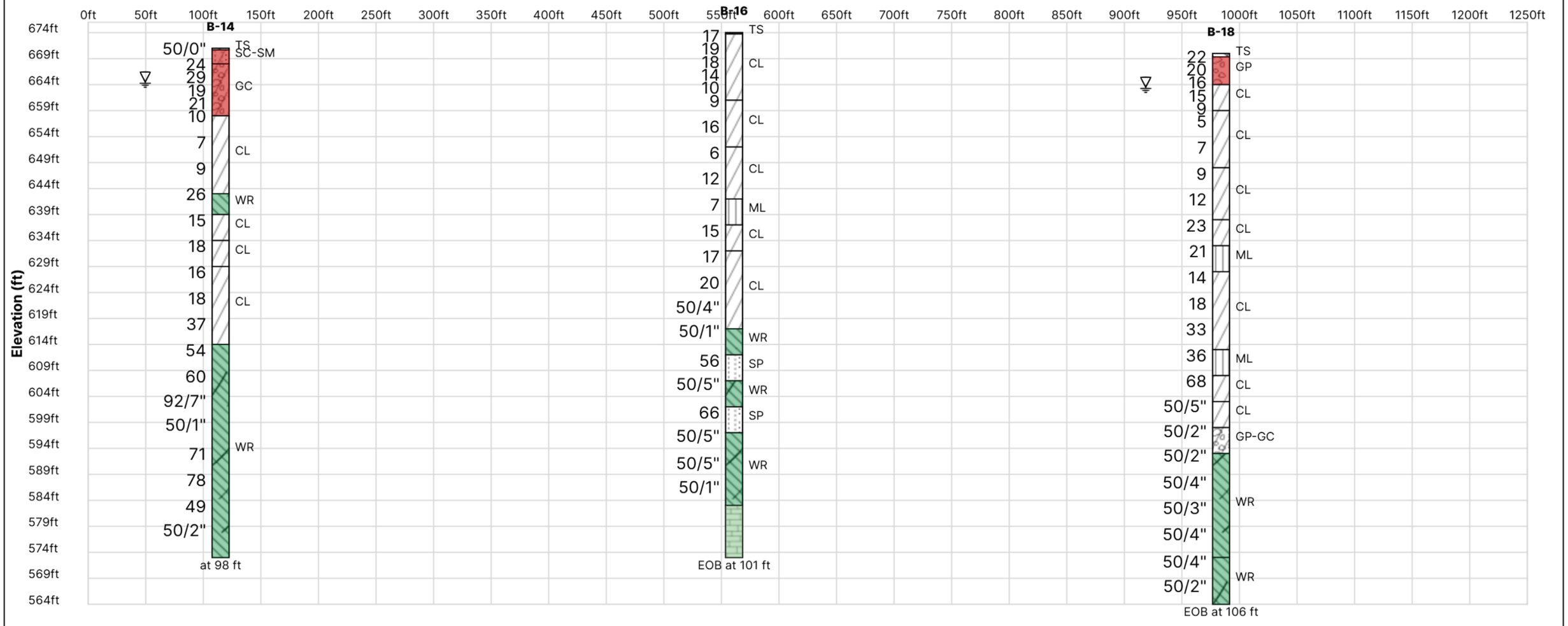

# BORING LOCATION DIAGRAM
## Proposed Cloud HQ Supplemental

**1200 East Algonquin Road, Mount Prospect, Illinois**

**CloudHQ**

| | |
|---|---|
| ENGINEER | AV4 |
| SCALE | 1" = 250' |
| PROJECT NO. | 16:13881-D |
| SHEET | 2 of 2 |
| DATE | 7/11/2025 |

## Generalized Subsurface Cross Section A-A'




| | | | |
|---|---|---|---|
| CLIENT: | CloudHQ | PROJECT: | Proposed Cloud HQ Supplemental Testing |
| DRAWN DATE: | 5/22/25 | PROJECT NO.: | 16:13881-D |
| CHECKED DATE: | 5/22/25 | SCALE: | NTS |

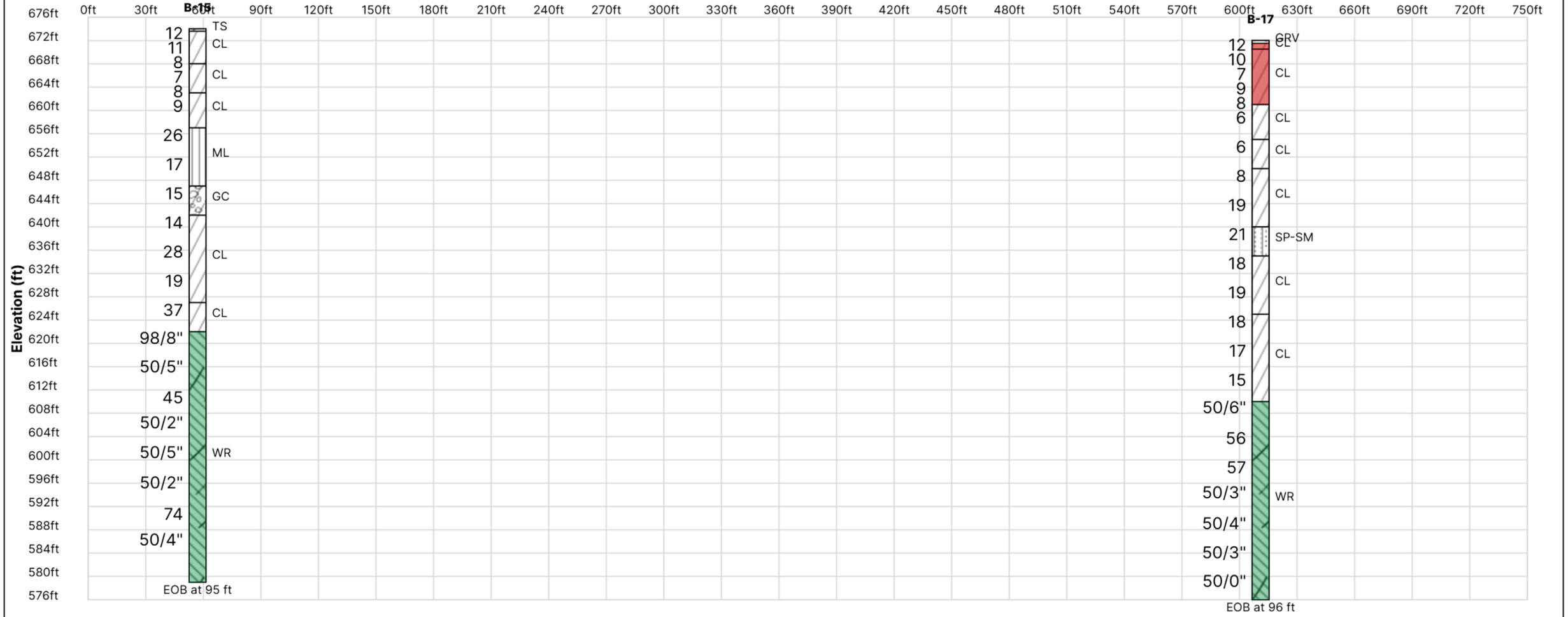
Notes:
1-EOB: END OF BORING AR: AUGER REFUSALSR: SAMPLER REFUSAL
2-SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
3-STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).
4- TOPOGRAPHIC INFORMATION IS BASED ON PUBLICLY AVAILABLE DATA (GOOGLE OR CESIUM).THE TOPOGRAPHIC LINE SHOWN BETWEEN BORINGS IS FOR VISUAL REFERENCE ONLY.PLEASE REFER TO THE REFERENCE NOTES FOR BORING LOGS FOR SYMBOLOGY MEANING AND ADDITIONAL INFORMATION.

Plastic Limit Water Content Liquid Limit
X———●———△
[FINES CONTENT %]
BOTTOM OF CASING
100% LOSS OF CIRCULATION
CALIBRATED PENETROMETER

WL (First Encountered)
WL (Completion)
WL (Estimated Seasonal High Water)
WL (Stabilized)

Fill
Possible Fill
Probable Fill
WR/Rock

## Generalized Subsurface Cross Section B-B'




| | | | |
|---|---|---|---|
| CLIENT: | CloudHQ | PROJECT: | Proposed Cloud HQ Supplemental Testing |
| DRAWN DATE: | 5/22/25 | PROJECT NO.: | 16:13881-D |
| CHECKED DATE: | 5/22/25 | SCALE: | NTS |

Notes:
1-EOB: END OF BORING AR: AUGER REFUSALSR: SAMPLER REFUSAL
2-SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
3-STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).
4- TOPOGRAPHIC INFORMATION IS BASED ON PUBLICLY AVAILABLE DATA (GOOGLE OR CESIUM).THE TOPOGRAPHIC LINE SHOWN BETWEEN BORINGS IS FOR VISUAL REFERENCE ONLY.PLEASE REFER TO THE REFERENCE NOTES FOR BORING LOGS FOR SYMBOLOGY MEANING AND ADDITIONAL INFORMATION.

| | | | | | |
|---|---|---|---|---|---|
| Plastic Limit Water Content Liquid Limit X—●—△ | | WL (First Encountered) | | Fill | |
| [FINES CONTENT %] | | WL (Completion) | | Possible Fill | |
| BOTTOM OF CASING | | WL (Estimated Seasonal High Water) | | Probable Fill | |
| LOSS OF CIRCULATION | | WL (Stabilized) | | WR/Rock | |
| CALIBRATED PENETROMETER | | | | | |

## Appendix B – Field Operations

Reference Notes
Exploration Procedures
Boring Logs
Photographs

# REFERENCE NOTES FOR BORING LOGS

## MATERIAL[1,2]

| | |
|---|---|
| | **ASPHALT** |
| | **CONCRETE** |
| | **GRAVEL** |
| | **TOPSOIL** |
| | **VOID** |
| | **BRICK** |
| | **AGGREGATE BASE COURSE** |
| | **GW** **WELL-GRADED GRAVEL** gravel-sand mixtures, little or no fines |
| | **GP** **POORLY-GRADED GRAVEL** gravel-sand mixtures, little or no fines |
| | **GM** **SILTY GRAVEL** gravel-sand-silt mixtures |
| | **GC** **CLAYEY GRAVEL** gravel-sand-clay mixtures |
| | **SW** **WELL-GRADED SAND** gravelly sand, little or no fines |
| | **SP** **POORLY-GRADED SAND** gravelly sand, little or no fines |
| | **SM** **SILTY SAND** sand-silt mixtures |
| | **SC** **CLAYEY SAND** sand-clay mixtures |
| | **ML** **SILT** non-plastic to medium plasticity |
| | **MH** **ELASTIC SILT** high plasticity |
| | **CL** **LEAN CLAY** low to medium plasticity |
| | **CH** **FAT CLAY** high plasticity |
| | **OL** **ORGANIC SILT or CLAY** non-plastic to low plasticity |
| | **OH** **ORGANIC SILT or CLAY** high plasticity |
| | **PT** **PEAT** highly organic soils |

## DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

| | | | |
|---|---|---|---|
| SS | Split Spoon Sampler | PM | Pressuremeter Test |
| ST | Shelby Tube Sampler | RD | Rock Bit Drilling |
| WS | Wash Sample | RC | Rock Core, NX, BX, AX |
| BS | Bulk Sample of Cuttings | REC | Rock Sample Recovery % |
| PA | Power Auger (no sample) | RQD | Rock Quality Designation % |
| HSA | Hollow Stem Auger | | |

## PARTICLE SIZE IDENTIFICATION

| DESIGNATION | | PARTICLE SIZES |
|---|---|---|
| Boulders | | 12 inches (300 mm) or larger |
| Cobbles | | 3 inches to 12 inches (75 mm to 300 mm) |
| Gravel: | Coarse | ¾ inch to 3 inches (19 mm to 75 mm) |
| | Fine | 4.75 mm to 19 mm (No. 4 sieve to ¾ inch) |
| Sand: | Coarse | 2.00 mm to 4.75 mm (No. 10 to No. 4 sieve) |
| | Medium | 0.425 mm to 2.00 mm (No. 40 to No. 10 sieve) |
| | Fine | 0.074 mm to 0.425 mm (No. 200 to No. 40 sieve) |
| Silt & Clay ("Fines") | | <0.074 mm (smaller than a No. 200 sieve) |

## COHESIVE SILTS & CLAYS

| UNCONFINED COMPRESSIVE STRENGTH, $Q_P$[4] | SPT[5] (BPF) | CONSISTENCY[7] (COHESIVE) |
|---|---|---|
| <0.25 | <2 | Very Soft |
| 0.25 - <0.50 | 2 - 4 | Soft |
| 0.50 - <1.00 | 5 - 8 | Firm |
| 1.00 - <2.00 | 9 - 15 | Stiff |
| 2.00 - <4.00 | 16 - 30 | Very Stiff |
| 4.00 - 8.00 | 31 - 50 | Hard |
| >8.00 | >50 | Very Hard |

## GRAVELS, SANDS & NON-COHESIVE SILTS

| SPT[5] | DENSITY |
|---|---|
| <5 | Very Loose |
| 5 - 10 | Loose |
| 11 - 30 | Medium Dense |
| 31 - 50 | Dense |
| >50 | Very Dense |

| RELATIVE AMOUNT[7] | COARSE GRAINED (%)[8] | FINE GRAINED (%)[8] |
|---|---|---|
| Trace | ≤5 | ≤5 |
| With | 10 - 20 | 10 - 25 |
| Adjective *(ex: "Silty")* | 25 - 45 | 30 - 45 |

## WATER LEVELS[6]

- WL (First Encountered)
- WL (Completion)
- WL (Seasonal High Water)
- WL (Stabilized)

## FILL AND ROCK

FILL | POSSIBLE FILL | PROBABLE FILL | ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.


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# SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

## SPT Procedure:

- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 18-24 inches (in 3 or 4 Increments of 6 inches each)



- Auger is advanced* and an additional SPT is performed
- One SPT typically performed for every two to five feet. An approximate 1.5 inch diameter soil sample is recovered.



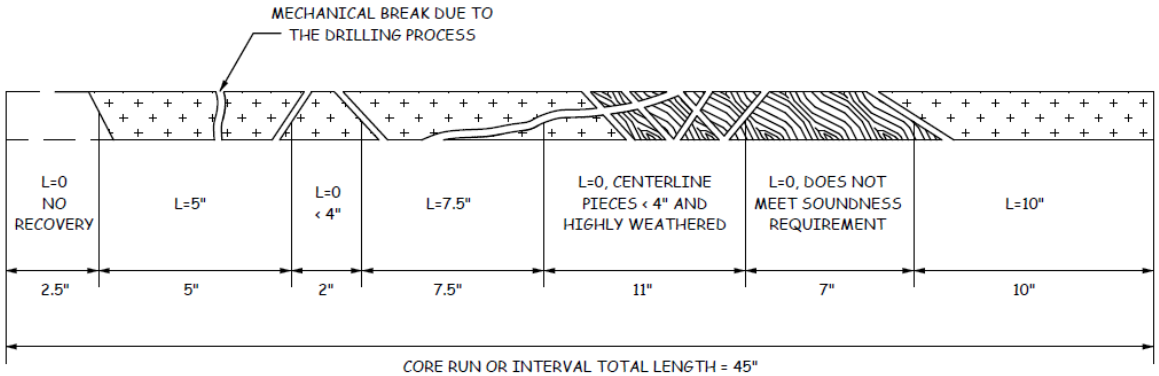
**Drilling Methods May Vary*— The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

# SUBSURFACE EXPLORATION PROCEDURE: ROCK CORE DRILLING AND SAMPLING ASTM D 2113

Rock core drilling is a method to obtain bedrock cores for geological data and to provide information about the engineering properties of rock formations at the drilled locations. Rock coring provides samples for characterization purposes, as well as a measure of the Recovery and Rock Quality Designation, or RQD, and various engineering laboratory tests. The geologic engineering properties determined from rock cores are advantageous in the design of geotechnical elements such as foundations.

## Rock Core Procedure:

- Soil test borings are advanced through the soil medium to auger refusal, which is generally considered the top of rock.
- Rock coring is accomplished with a diamond studded rock core barrel attached to a drill rig and utilized for sampling during the rotation and advancement of the hollow barrel.
- Rock recovery (REC) is the percentage of the total length of rock recovered divided by the length of the core run.
- The Rock Quality Designation (RQD) is generally the percentage of the total length of the rock pieces 4-inches in length or greater divided by the length of the rock core run.




$$REC\% = \frac{\text{TOTAL ROCK RECOVERED}}{\text{CORE RUN TOTAL LENGTH}} \times 100 = \frac{5"+2"+7.5"+11"+7"+10"}{45"} \times 100 = \frac{42.5"}{45"} \times 100 = 94\%$$

$$RQD\% = \frac{\text{TOTAL SOUND CORE PIECES >4"}}{\text{CORE RUN TOTAL LENGTH}} = \frac{5"+7.5"+10"}{45"} = \frac{22.5"}{45"} \times 100 = 50\%$$

| RQD (ROCK QUALITY DESIGNATION) | CLASSIFICATION OF ROCK QUALITY |
|---|---|
| 0 - 25% | VERY POOR |
| >25 - 50% | POOR |
| >50 - 75% | FAIR |
| >75 - 90% | GOOD |
| >90 - 100% | EXCELLENT |

LEGEND  SOUND ROCK  UNSOUND ROCK

NOTE: DIAGRAM ADAPTED FROM ASTM D6032/6032M-17

# SPECIALIZED IN-SITU TESTING PROCEDURES

# PRESSUREMETER TESTING (PMT)

# ASTM D 4719

PMT testing is a down-borehole stress-strain test intended to provide a more accurate (and typically less conservative) measurement of the strength and compressibility of in-place soil, weathered rock, and rock. The in-situ PMT testing generally allows for significantly higher allowable bearing pressures and also provides additional data for the efficient design of foundations (both shallow and deep). ECS is one of the few geotechnical engineering firms that can perform PMT testing and in-house analysis.

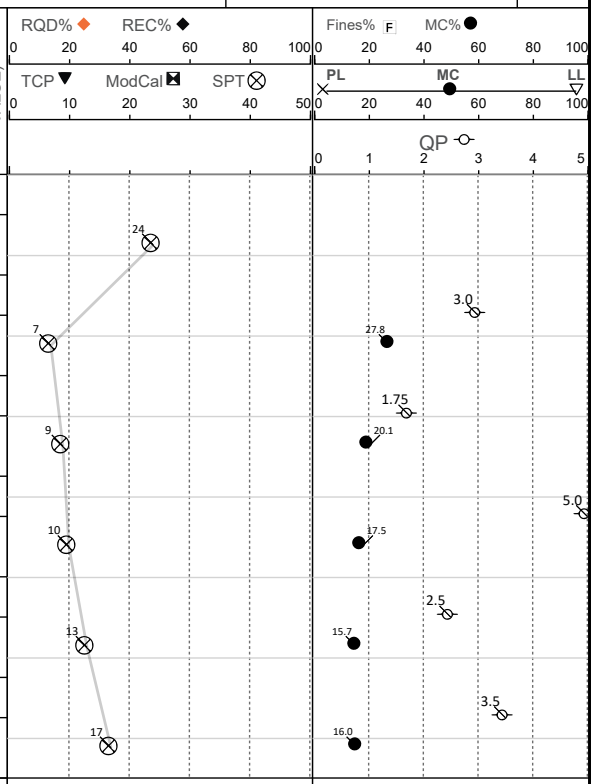
ECS has extensive experience performing pressuremeter testing on a variety of project types in numerous geologic conditions and has been able to provide cost-effective foundation solutions that have led to significant cost savings for foundations.

## PMT Procedure:

- After sampling via SPT at the target elevation, prepare the test cavity by means of a 2½-inch rock bit or inverted cone split spoon (Menard and TEXAM PMT). This step is skipped for the Pencel PMT.
- Once the cavity has been prepared, insert the PMT probe into the cavity. Alternatively, direct push the probe into the ground (Pencel PMT).
- After insertion, pressurize the probe against the ground with a combination of gas/liquid (Menard PMT) or liquid only (TEXAM and Pencel).
- Each pressure increment is maintained for a period of 1 minute with readings every 30 seconds. The data is plotted in real time to monitor the reaction of the soils in place. Continue increment pressure at regular intervals until failure (or system limits) is reached.
- Interpret the data to obtain soil parameters utilized in the evaluation of the soil strength and deformation characteristics for the design/optimization of foundations. More accurate settlement estimates can be made due to the soil parameters being determined in-situ rather than in the lab.

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-01** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.035326** | LONGITUDE: **-87.950785** | STATION: | SURFACE ELEVATION: **665** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=10"]. | | | | |
| | S-1 | SS | 18 | 6 | FILL - (SP) POORLY GRADED SAND - fine sand, light brown, (and crushed stone). | | | | 13-13-11 (24) |
| | S-2 | SS | 18 | 12 | (CL) LEAN CLAY - trace sand and gravel, brown, moist, stiff to hard. | | | | 3-3-4 (7) |
| 5 | S-3 | SS | 18 | 18 | | | | 660.0 | 4-4-5 (9) |
| | S-4 | SS | 18 | 18 | | | | | 3-4-6 (10) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace gravel and sand, gray, moist, very stiff. | | | 655.0 | 4-6-7 (13) |
| | S-6 | SS | 18 | 8 | | | | | 6-8-9 (17) |
| | | | | | **END OF BORING AT 15 Ft** | | | 650.0 | |



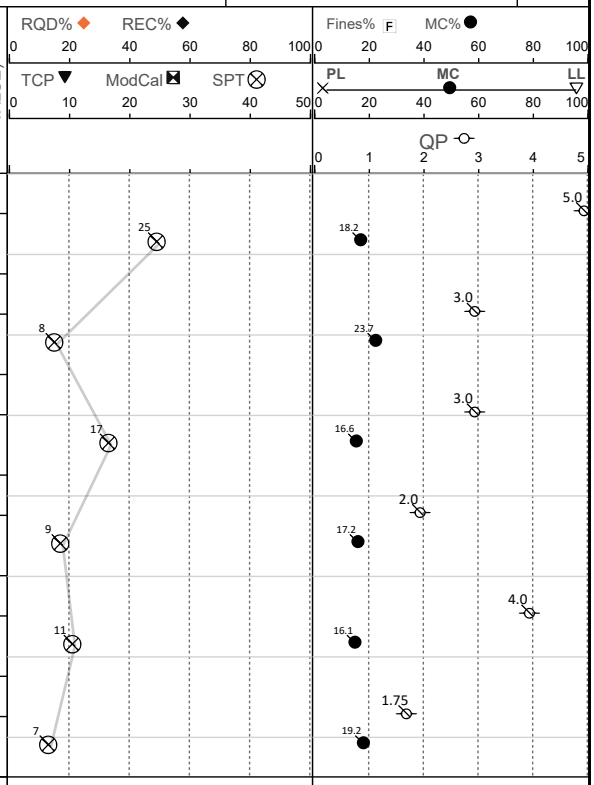

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-02** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.035554** | LONGITUDE: **-87.955278** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=5"]. | | | | |
| | S-1 | SS | 18 | 10 | FILL - (CL) LEAN CLAY WITH SAND - brown, (and gravel and crushed stone) (probable cobbles/boulders), moist, hard | | | | 7-12-13 (25) |
| 5 | S-2 | SS | 18 | 5 | FILL - (CL) LEAN CLAY WITH SAND - brown, black and dark gray, wet to moist, very stiff. | | | 665.0 | 4-4-4 (8) |
| | S-3 | SS | 18 | 6 | | | | | 4-7-10 (17) |
| 10 | S-4 | SS | 18 | 16 | | | ▽ | | 3-4-5 (9) |
| | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to hard. | | | 660.0 | 4-5-6 (11) |
| | S-6 | SS | 18 | 18 | | | | | 2-3-4 (7) |
| | | | | | **END OF BORING AT 15 Ft** | | | 655.0 | |



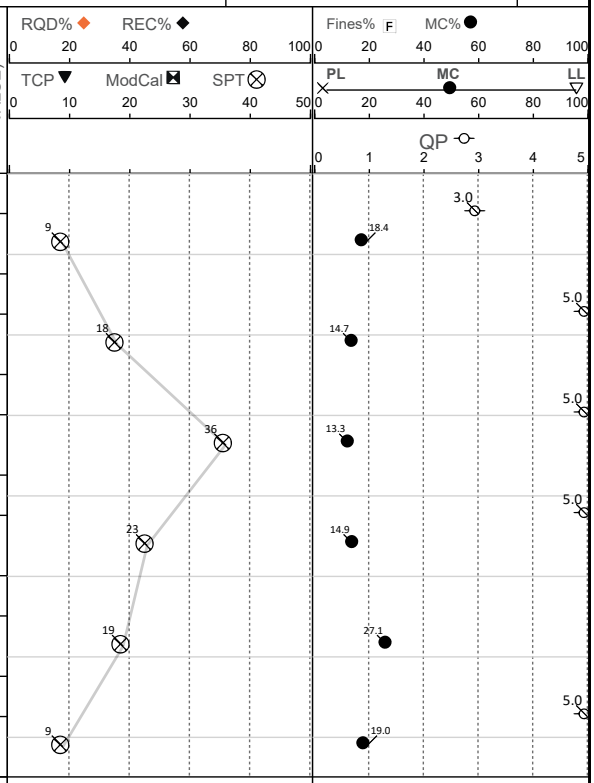

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 8.5 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-03** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034781** | LONGITUDE: **-87.953186** | STATION: | SURFACE ELEVATION: **675** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=4"]. | | | | |
| | S-1 | SS | 18 | 12 | FILL - (CL) LEAN CLAY - dark brown, dark gray and black, moist, very stiff to hard, (with crushed stone). | | | | 4-4-5 (9) |
| | S-2 | SS | 18 | 16 | | | | | 2-3-15 (18) |
| 5 | | | | | | | | 670.0 | |
| | S-3 | SS | 18 | 14 | | | | | 6-15-21 (36) |
| | S-4 | SS | 18 | 16 | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and dark brown, moist, hard. | | | | 10-10-13 (23) |
| 10 | | | | | | | | 665.0 | |
| | S-5 | SS | 18 | 10 | | | | | 6-7-12 (19) |
| | S-6 | SS | 18 | 5 | | | | | 7-4-5 (9) |
| | | | | | **END OF BORING AT 15 Ft** | | | 660.0 | |



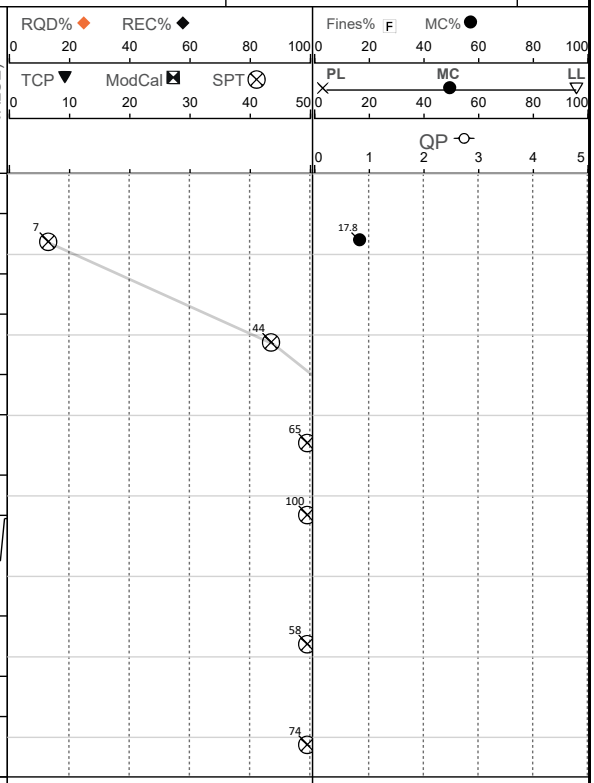

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-04** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033978** | LONGITUDE: **-87.950784** | STATION: | SURFACE ELEVATION: **673** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=2"]. | | | | |
| | S-1 | SS | 18 | 16 | FILL - (SP) POORLY GRADED SAND - brown, wet to moist, very dense to medium dense (and gravel) (probable cobbles/ boulders). | | ▽ | 670.0 | 2-3-4 (7) |
| | S-2 | SS | 18 | 4 | | | | | 15-21-23 (44) |
| 5 | S-3 | SS | 18 | 3 | | | | | 26-31-34 (65) |
| | S-4 | SS | 18 | 1 | | | | 665.0 | 50/1 (100) |
| 10 | S-5 | SS | 18 | 10 | | | | | 17-27-31 (58) |
| | S-6 | SS | 18 | 12 | | | | 660.0 | 28-33-41 (74) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



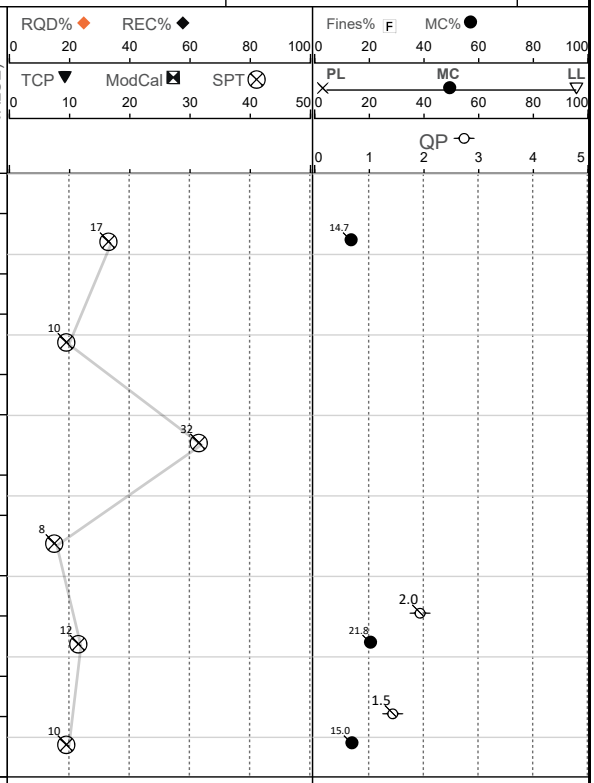

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 3.5 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-05** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034287** | LONGITUDE: **-87.956070** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=2"]. | | | | |
| | S-1 | SS | 18 | 18 | FILL - (CL-ML) SILTY CLAY WITH SAND - black, moist, (with gravel and crushed stone), (probable cobbles/ boulders). | | | 670.0 | 8-7-10 (17) |
| | S-2 | SS | 18 | 10 | | | | | 5-4-6 (10) |
| 5 | S-3 | SS | 18 | 12 | | | ▽ | 665.0 | 10-15-17 (32) |
| | S-4 | SS | 18 | 8 | FILL - (SP) POORLY GRADED SAND - medium to coarse sand, trace gravel, brown, moist, loose. | | ▽ | | 6-4-4 (8) |
| 10 | S-5 | SS | 18 | 14 | (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, very stiff. | | | 660.0 | 3-5-7 (12) |
| | S-6 | SS | 18 | 14 | (ML) CLAYEY SILT WITH SAND - gray, moist, stiff. | | | | 4-5-5 (10) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



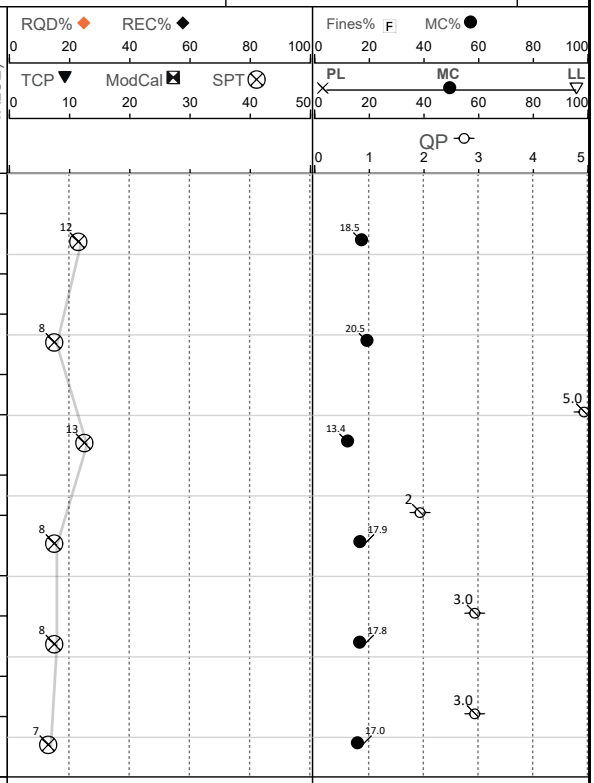

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 6 Ft | BORING STARTED: | 04/28/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/28/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | 8 Ft | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-06** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033456** | LONGITUDE: **-87.953960** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=8"]. | | | | |
| | S-1 | SS | 18 | 16 | (ML) SILT - brown and gray, moist, loose to medium dense. | | | 670.0 | 4-5-7 (12) |
| | S-2 | SS | 18 | 16 | | | | | 4-4-4 (8) |
| 5 | S-3 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, hard. | | | 665.0 | 5-5-8 (13) |
| | S-4 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | | 3-3-5 (8) |
| 10 | S-5 | SS | 18 | 18 | | | | 660.0 | 3-4-4 (8) |
| | S-6 | SS | 18 | 18 | | | | | 3-3-4 (7) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



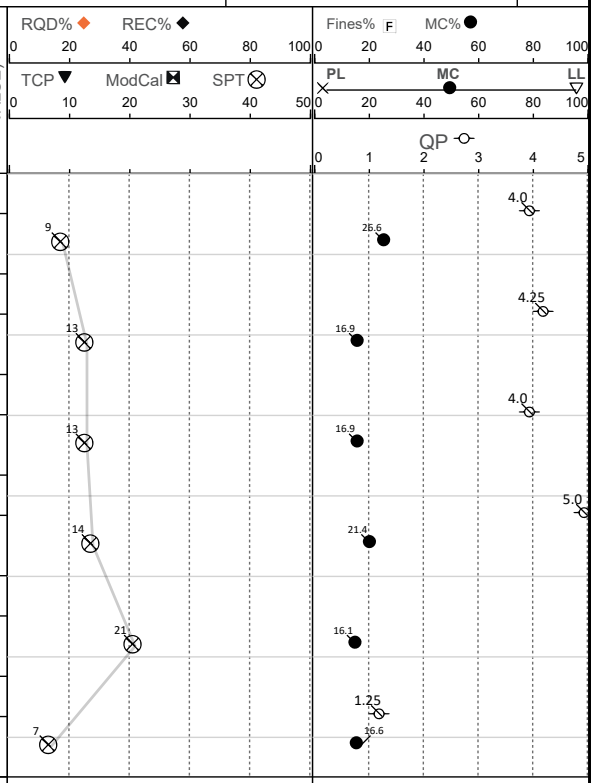

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-07** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.032913** | LONGITUDE: **-87.952467** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=4"]. | | | 670.0 | |
| | S-1 | SS | 18 | 16 | (CL) LEAN CLAY - brown and gray mottled, moist, hard. | | | | 4-4-5 (9) |
| | S-2 | SS | 18 | 3 | | | | | 6-6-7 (13) |
| 5 | S-3 | SS | 18 | 18 | | | | 665.0 | 4-5-8 (13) |
| | S-4 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, hard. | | | | 4-6-8 (14) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace gravel and sand, gray, moist, stiff. | | | 660.0 | 6-9-12 (21) |
| | S-6 | SS | 18 | 6 | | | ▼ | | 5-4-3 (7) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



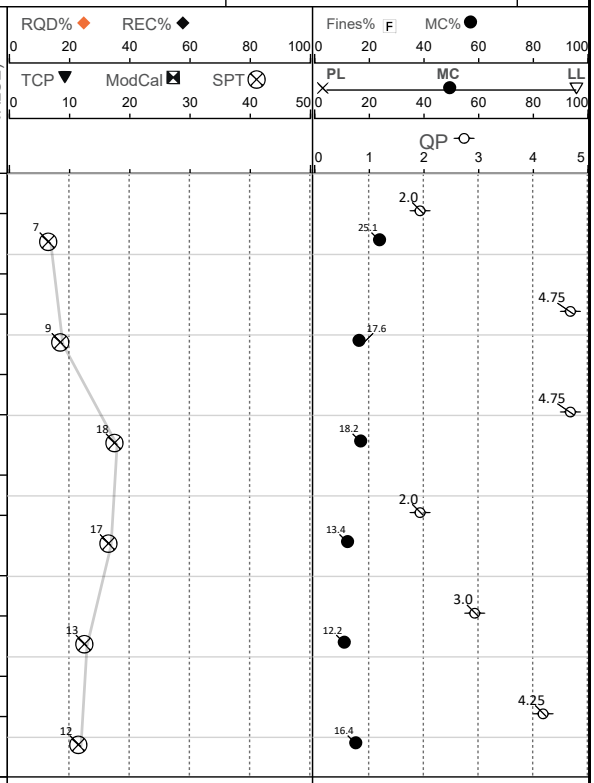

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 14 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | 14 Ft | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **CloudHQ** | **16:13881-D** | **E-08** | **1 OF 1** |
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.032340** | LONGITUDE: **-87.950829** | STATION: | SURFACE ELEVATION: **667** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=6"]. | | | | |
| | S-1 | SS | 18 | 14 | FILL - (CL) LEAN CLAY - brown and black, moist, very stiff. | | | 665.0 | 3-3-4 (7) |
| | S-2 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, brown and gray mottled, moist, hard. | | | | 3-4-5 (9) |
| 5 | S-3 | SS | 18 | 18 | | | | 660.0 | 5-7-11 (18) |
| | S-4 | SS | 18 | 18 | (CL) SANDY LEAN CLAY - trace gravel, brown, moist, very stiff. | | ▽ | | 6-9-8 (17) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff to hard. | | | 655.0 | 3-6-7 (13) |
| | S-6 | SS | 18 | 18 | | | | | 3-5-7 (12) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



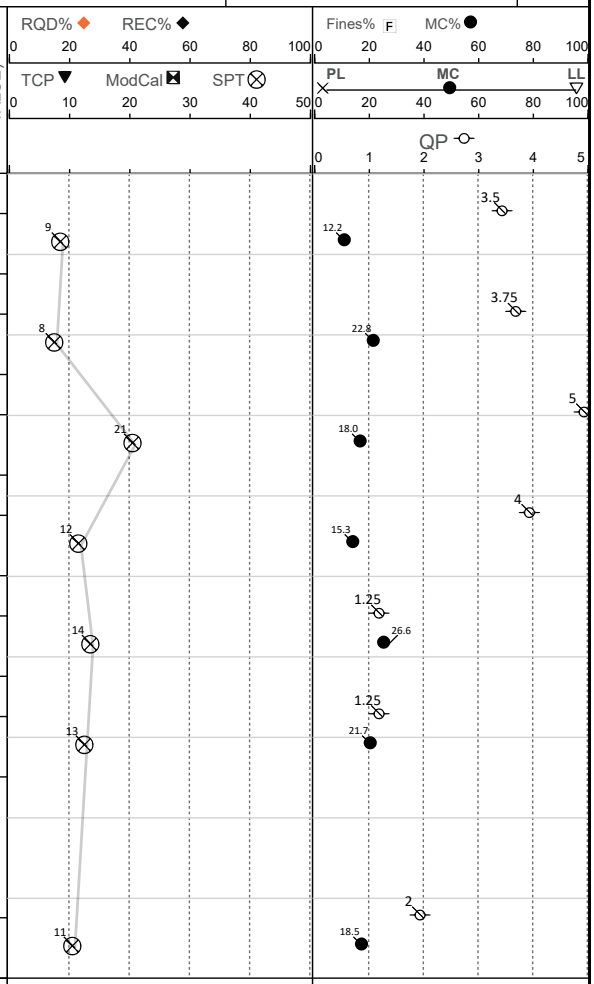

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 8.5 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **CloudHQ** | **16:13881-D** | **E-09** | **1 OF 1** |
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.035831** | LONGITUDE: **-87.953304** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | FILL - (CL) LEAN CLAY - dark brown and black, moist, very stiff, (with crushed stone). | | | 670.0 | |
| | S-1 | SS | 18 | 6 | | | | | 2-3-6 (9) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, brown and gray mottled, moist, very stiff to hard. | | | | |
| 5 | S-2 | SS | 18 | 10 | | | | | 4-4-4 (8) |
| | S-3 | SS | 18 | 18 | | | | 665.0 | 4-9-12 (21) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to hard. | | | | |
| | S-4 | SS | 18 | 18 | | | | | 4-5-7 (12) |
| 10 | | | | | | | ▽ | 660.0 | |
| | S-5 | SS | 18 | 18 | | | | | 4-6-8 (14) |
| | S-6 | SS | 18 | 16 | | | | | 6-6-7 (13) |
| 15 | | | | | | | | 655.0 | |
| | S-7 | SS | 18 | 9 | | | | | 4-5-6 (11) |
| | | | | | **END OF BORING AT 20 Ft** | | | | |



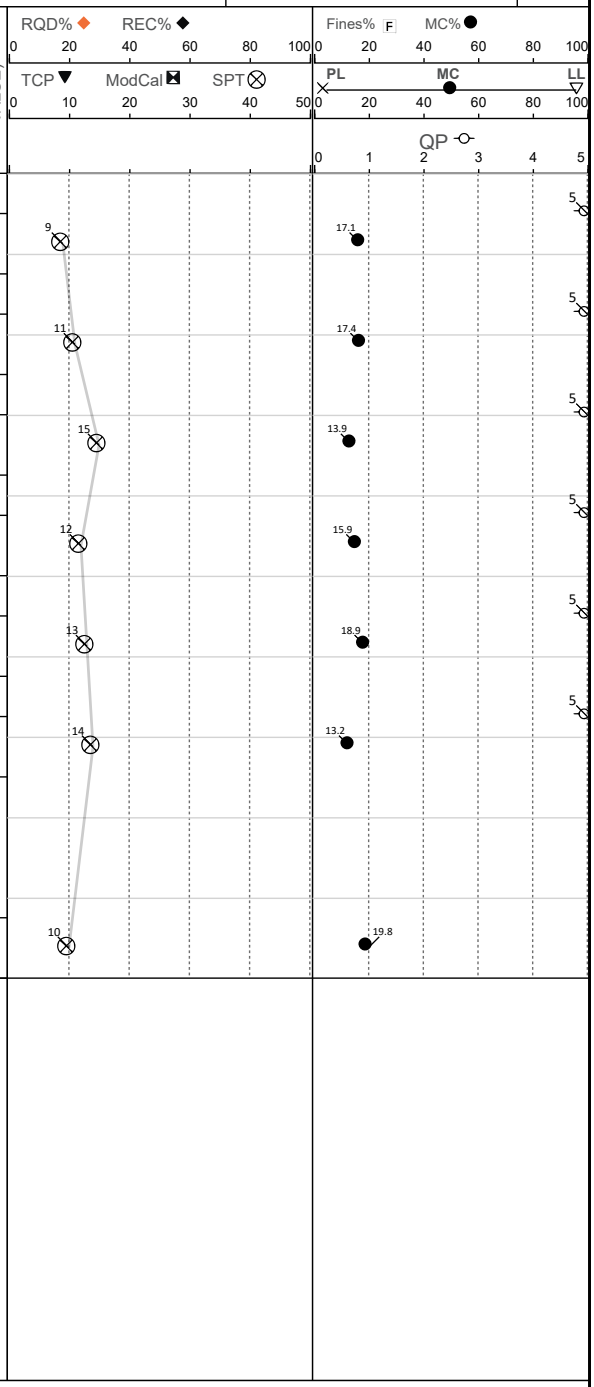

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 11 Ft | BORING STARTED: | 06/12/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | | BORING COMPLETED: | 06/12/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-10** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.036888** | LONGITUDE: **-87.953256** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Asphalt [thickness 7½" ±). | | | | |
| | S-1 | SS | 18 | 6 | FILL - (GP) POORLY GRADED GRAVEL. | | | 670.0 | 4-4-5 (9) |
| | | | | | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and gray, hard. | | | | |
| 5 | S-2 | SS | 18 | 9 | | | | | 4-4-7 (11) |
| | S-3 | SS | 18 | 12 | | | | 665.0 | 5-6-9 (15) |
| | S-4 | SS | 18 | 16 | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and black, moist, hard. | | | | 3-4-8 (12) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace gravel and sand, gray, moist, hard. | | | 660.0 | 5-5-8 (13) |
| | S-6 | SS | 18 | 11 | | | | | 4-7-7 (14) |
| 15 | | | | | | | | 655.0 | |
| | S-7 | SS | 18 | 16 | | | | | 3-4-6 (10) |
| | | | | | **END OF BORING AT 20 Ft** | | | | |



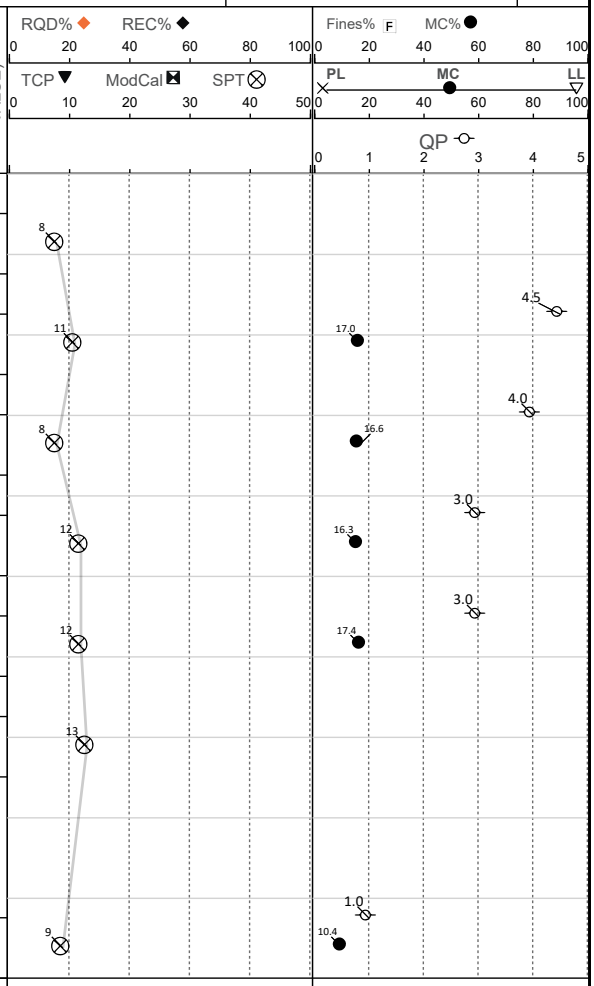

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | | BORING STARTED: | 06/12/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | 13.5 Ft | BORING COMPLETED: | 06/12/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-20') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-11** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.036954** | LONGITUDE: **-87.950837** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | FILL - (CL) LEAN CLAY - dark brown, brown and black, moist, very stiff to hard, (with crushed stone). | | | | |
| | S-1 | SS | 18 | 6 | | | | | 3-3-5 (8) |
| | S-2 | SS | 18 | 10 | | | | | 3-5-6 (11) |
| 5 | | | | | | | | 665.0 | |
| | S-3 | SS | 18 | 12 | | | | | 4-4-4 (8) |
| | S-4 | SS | 18 | 12 | | | ▼ | | 4-8-4 (12) |
| 10 | | | | | | | | 660.0 | |
| | S-5 | SS | 18 | 11 | | | | | 5-6-6 (12) |
| | S-6 | SS | 18 | 8 | (GP) POORLY GRADED GRAVEL WITH SAND - brown, moist to wet, medium dense. | | ▽ | | 4-6-7 (13) |
| 15 | | | | | | | | 655.0 | |
| | S-7 | SS | 18 | 4 | (CL) LEAN CLAY WITH GRAVEL - trace sand, gray, moist, stiff. | | | | 3-4-5 (9) |
| | | | | | **END OF BORING AT 20 Ft** | | | 650.0 | |



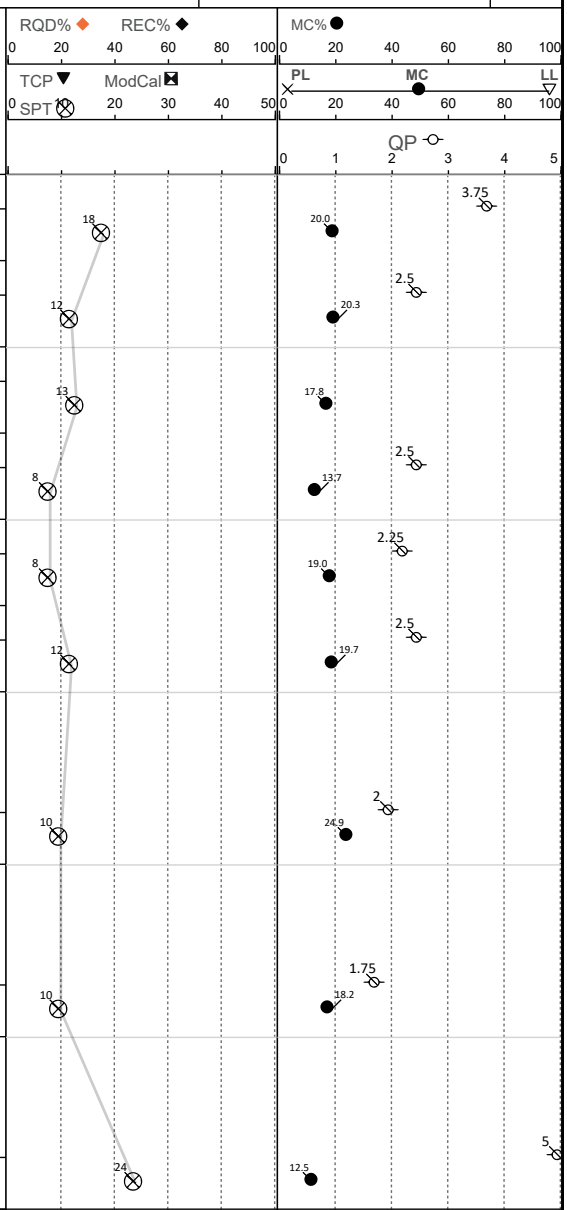

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 13.5 Ft | BORING STARTED: | 06/12/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | 9 Ft | BORING COMPLETED: | 06/12/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **CloudHQ** | **16:13881-D** | **A-01** | **1 OF 1** |
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034866** | LONGITUDE: **-87.955787** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=4"±]. | | | | |
| | S-1 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, brown, moist, very stiff. | | | 670 | 4-7-11 (18) |
| | S-2 | SS | 18 | 14 | | | | | 4-6-6 (12) |
| 5 | S-3 | SS | 18 | 3 | (CL) LEAN CLAY WITH GRAVEL - gray, moist, very stiff, (probable cobbles). | | | 665 | 4-6-7 (13) |
| | S-4 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to very stiff. | | | | 2-3-5 (8) |
| 10 | S-5 | SS | 18 | 18 | | | | 660 | 3-3-5 (8) |
| | S-6 | SS | 18 | 18 | | | | | 3-5-7 (12) |
| 15 | | | | | | | | 655 | |
| | S-7 | SS | 18 | 18 | | | | | 3-4-6 (10) |
| 20 | | | | | | | | 650 | |
| | S-8 | SS | 18 | 18 | | | | | 3-4-6 (10) |
| 25 | | | | | | | | 645 | |
| | S-9 | SS | 18 | 8 | (CL) LEAN CLAY - trace sand and gravel, gray, hard. | | | | 6-9-15 (24) |
| | | | | | **END OF BORING AT 30ft** | | | | |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 05/09/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 05/09/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-30') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-01A** | SHEET: **1 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034250** | LONGITUDE: **-87.955459** | STATION: | SURFACE ELEVATION: **675** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Blind-drill to 43½ feet (No Sampling). | | | 675 | |
| 5 | | | | | | | | 670 | |
| 10 | | | | | | | | 665 | |
| 15 | | | | | | | | 660 | |
| 20 | | | | | | | | 655 | |
| 25 | | | | | | | | 650 | |
| 30 | | | | | | | | 645 | |

RQD% ◆ REC% ◆ (0 20 40 60 80 100)
TCP ▼ ModCal ⊠ SPT ⊗ (0 20 30 40 50)
PL MC LL (0 20 40 60 80 100)

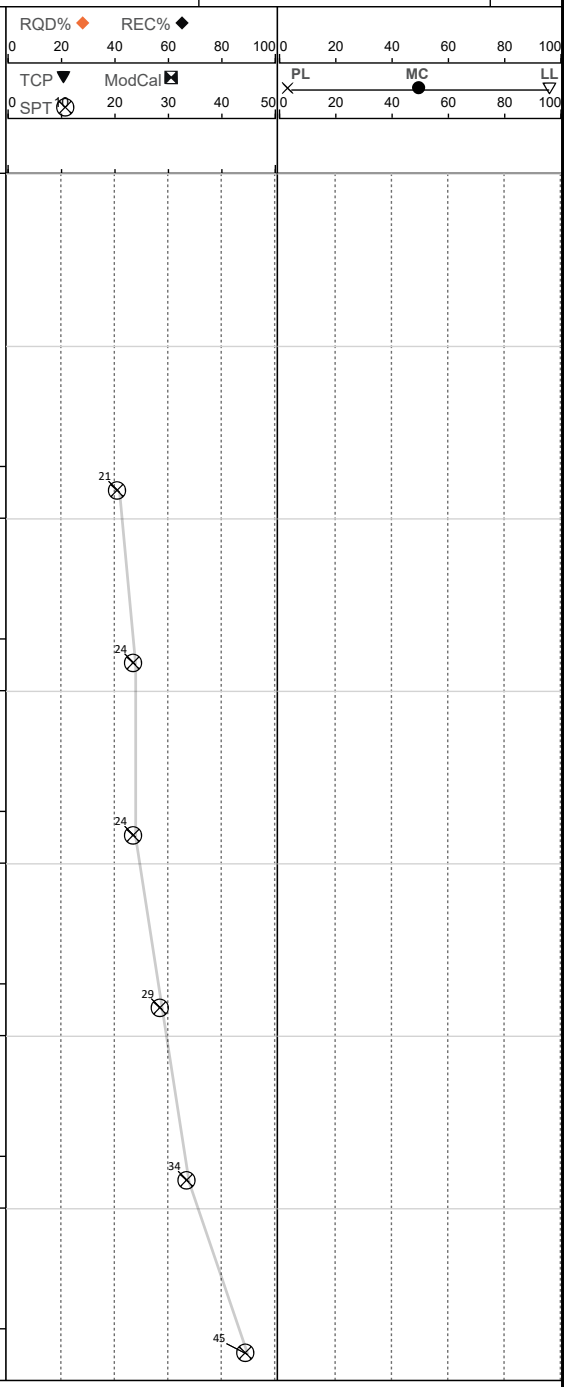
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered): | BORING STARTED: 05/21/2025 | | CAVE IN DEPTH: Not Observed |
| ▼ WL (Completion): | BORING COMPLETED: 05/23/2025 | | HAMMER TYPE: Automatic |
| ▼ WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| ▽ WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20'), Mud Rotary (20'-100'), Rock |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-01A** | SHEET: **2 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034250** | LONGITUDE: **-87.955459** | STATION: | SURFACE ELEVATION: **675** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Blind-drill to 43½ feet (No Sampling). | | | 640 | |
| 40 | | | | | | | | 635 | |
| | S-1 | SS | 18 | 8 | (SP-SC) POORLY GRADED SAND WITH CLAY AND GRAVEL - fine to coarse sand, gray, wet, medium dense (apparent cobbles/boulders). | | | | 9-10-11 (21) |
| 45 | | | | | | | | 630 | |
| | S-2 | SS | 18 | 6 | | | | | 10-13-11 (24) |
| 50 | | | | | | | | 625 | |
| | S-3 | SS | 18 | 6 | | | | | 10-12-12 (24) |
| 55 | | | | | | | | 620 | |
| | S-4 | SS | 18 | 8 | | | | | 12-13-16 (29) |
| 60 | | | | | | | | 615 | |
| | S-5 | SS | 18 | 5 | | | | | 13-15-19 (34) |
| 65 | | | | | | | | 610 | |
| | S-6 | SS | 18 | 6 | (GP) POORLY GRADED GRAVEL - gray, wet, dense (apparent cobbles/boulders). | | | | 16-21-24 (45) |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/21/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/23/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20'), Mud Rotary (20'-100'), Rock |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-01A** | SHEET: **3 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034250** | LONGITUDE: **-87.955459** | STATION: | SURFACE ELEVATION: **675** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (GP) POORLY GRADED GRAVEL - gray, wet, dense (apparent cobbles/boulders). | | | 605 | |
| 75 | S-7 | SS | 4 | 0 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | 600 | 50/4 (50/4") |
| 80 | S-8 | SS | 3 | 1 | | | | 595 | 50/3 (50/3") |
| 85 | S-9 | SS | 2 | 1 | | | | 590 | 50/2 (50/2") |
| 90 | S-11 | SS | 1 | 0 | | | | 585 | 50/1 (50/1") |
| 95 | S-12 | SS | 5 | 5 | | | | 580 | 50/5 (50/5") |
| | S-13 | SS | 0 | 0 | | | | | 50/0 (50/0") |
| 100 | | RC | 120 | | LIMESTONE, [REC=100%, RQD =71%], Moderately Weathered, Light gray, With vertical joints and solution cavities. | | | 575 | |

RQD% ◆ REC% ◆ | TCP ▼ ModCal ⊠ SPT ⊗ | PL MC LL

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered): | BORING STARTED: 05/21/2025 | | CAVE IN DEPTH: Not Observed |
| ▼ WL (Completion): | BORING COMPLETED: 05/23/2025 | | HAMMER TYPE: Automatic |
| ▼ WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| ▽ WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20'), Mud Rotary (20'-100'), Rock |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-01A** | SHEET: **4 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034250** | LONGITUDE: **-87.955459** | STATION: | SURFACE ELEVATION: **675** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | RC | 120 | | LIMESTONE, [REC=100%, RQD =71%], Moderately Weathered, Light gray, With vertical joints and solution cavities. | | | 570 | |
| | | | | | **END OF BORING AT 110ft (END OF ROCK CORE)** | | | 565 | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100

TCP ▼ ModCal ⊠ SPT ⊗ 0 20 30 40 50

PL MC LL 0 20 40 60 80 100

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ **WL (First Encountered):** | **BORING STARTED:** 05/21/2025 | | **CAVE IN DEPTH:** Not Observed |
| ▼ **WL (Completion):** | **BORING COMPLETED:** 05/23/2025 | | **HAMMER TYPE:** Automatic |
| ▼ **WL (Seasonal High Water):** | **EQUIPMENT:** | **LOGGED BY:** | **DRILLING METHOD:** |
| ▽ **WL (Stabilized):** | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20'), Mud Rotary (20'-100'), Rock |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-05A** | SHEET: **1 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033289** | LONGITUDE: **-87.951933** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Blind-drill to 43½ feet (No Sampling). | | | 670 | |
| 5 | | | | | | | | 665 | |
| 10 | | | | | | | | 660 | |
| 15 | | | | | | | | 655 | |
| 20 | | | | | | | | 650 | |
| 25 | | | | | | | | 645 | |
| 30 | | | | | | | | 640 | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100
TCP ▼ ModCal ⊠ SPT ⊗ 0 20 30 40 50
MC% ● 0 20 40 60 80 100
PL ✕ MC ● LL ▽ 0 20 40 60 80 100
QP ○ 0 1 2 3 4 5

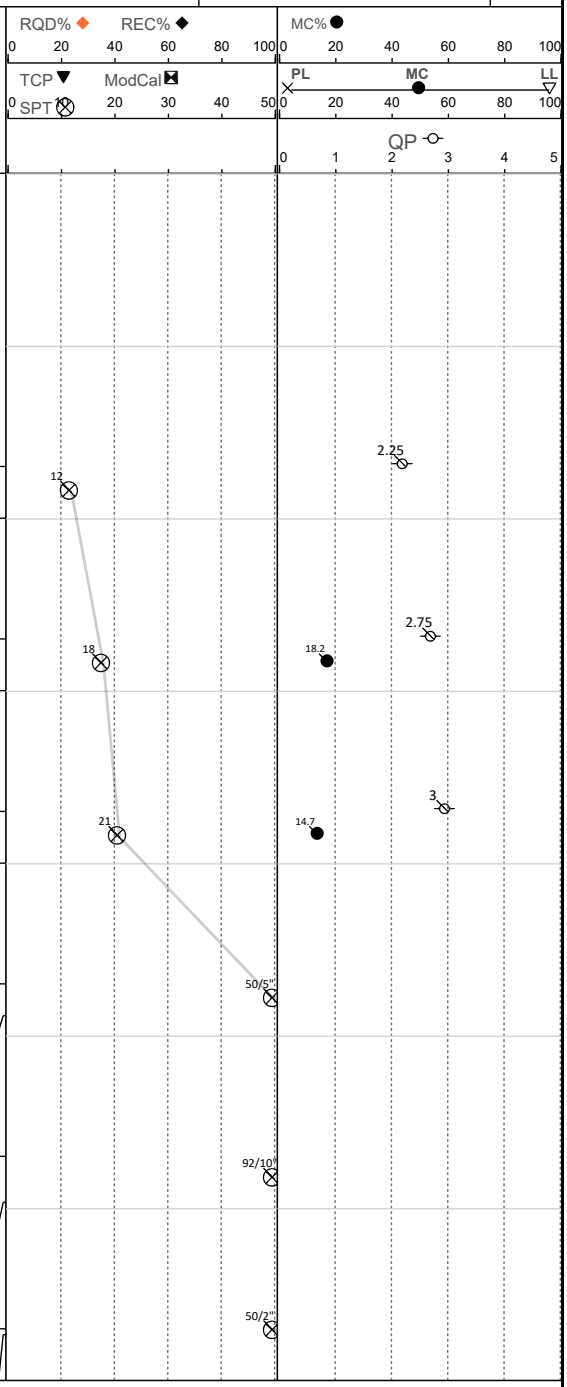
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered): | BORING STARTED: 04/29/2025 | | CAVE IN DEPTH: Not Observed |
| ▼ WL (Completion): | BORING COMPLETED: 05/04/2025 | | HAMMER TYPE: Automatic |
| ▼ WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| ▽ WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-80') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-05A** | SHEET: **2 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033289** | LONGITUDE: **-87.951933** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| 40 | | | | | Blind-drill to 43½ feet (No Sampling). | | | 635 | |
| 45 | S-1 | SS | 18 | 14 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | 630 | 4-6-6 (12) |
| 50 | S-2 | SS | 18 | 18 | | | | 625 | 5-7-11 (18) |
| 55 | S-3 | SS | 18 | 8 | | | | 620 | 7-9-12 (21) |
| 60 | S-4 | SS | 11 | 10 | (SP-SC) POORLY GRADED SAND WITH CLAY AND GRAVEL - fine to coarse sand, gray, wet, very dense (apparent cobbles/boulders). | | | 615 | 29-50/5 (50/5") |
| 65 | S-5 | SS | 16 | 10 | (GP) POORLY GRADED GRAVEL WITH SAND - gray, wet, very dense, interbedded with Weathered Limestone (apparent cobbles/boulders). | | | 610 | 28-42-50/4 (92/10") |
| | S-6 | SS | 2 | 1 | | | | 605 | 50/2 (50/2") |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 04/29/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/04/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-80') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-05A** | SHEET: **3 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033289** | LONGITUDE: **-87.951933** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (GP) POORLY GRADED GRAVEL WITH SAND - gray, wet, very dense, interbedded with Weathered Limestone (apparent cobbles/boulders). | | | 600 | |
| 75 | S-7 | SS | 9 | 4 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | 595 | 40-50/3 (50/3") |
| | S-8 | SS | 8 | 8 | (CL) LEAN CLAY WITH GRAVEL - trace sand, gray, moist, hard, (apparent cobbles/boulders). | | | | 26-50/2 (50/2") |
| | | | | | **END OF BORING AT 80ft** | | | | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100
TCP ▼ ModCal ☒ SPT ⊗ 0 20 30 40 50
MC% ● 0 20 40 60 80 100
PL MC LL 0 20 40 60 80 100
QP ○ 0 1 2 3 4 5
50/3" 9.3
50/2" 5

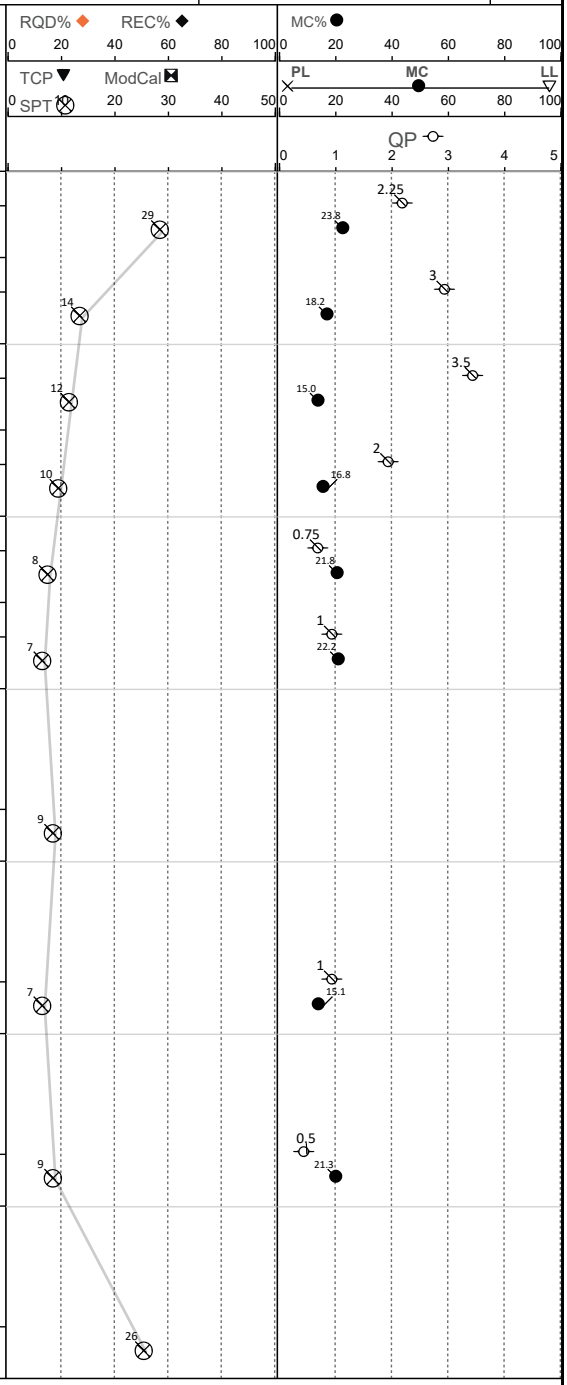
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ **WL (First Encountered):** | **BORING STARTED:** 04/29/2025 | | **CAVE IN DEPTH:** Not Observed |
| ▼ **WL (Completion):** | **BORING COMPLETED:** 05/04/2025 | | **HAMMER TYPE:** Automatic |
| ▼ **WL (Seasonal High Water):** | **EQUIPMENT:** | **LOGGED BY:** | **DRILLING METHOD:** |
| ▽ **WL (Stabilized):** | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-80') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-13** | SHEET: **1 OF 2** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034586** | LONGITUDE: **-87.955312** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=6"±]. | | | | |
| | S-1 | SS | 18 | 3 | FILL - (CL) LEAN CLAY WITH GRAVEL - brown, moist, very stiff. | | | 670 | 9-13-16 (29) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand, brown, moist, very stiff. | | | | 4-5-9 (14) |
| 5 | S-3 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | 665 | 4-5-7 (12) |
| | S-4 | SS | 18 | 12 | | | | | 3-5-5 (10) |
| 10 | S-5 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, firm to stiff. | | | 660 | 3-3-5 (8) |
| | S-6 | SS | 18 | 16 | | | | | 2-3-4 (7) |
| 15 | | | | | | | | 655 | |
| | S-7 | SS | 18 | 0 | | | | | 3-4-5 (9) |
| 20 | | | | | | | | 650 | |
| | S-8 | SS | 18 | 18 | | | | | 2-3-4 (7) |
| 25 | | | | | | | | 645 | |
| | S-9 | SS | 18 | 6 | | | | | 6-4-5 (9) |
| 30 | | | | | | | | 640 | |
| | S-10 | SS | 18 | 6 | (SC) CLAYEY SAND WITH GRAVEL - gray, wet, medium dense. | | | | 9-12-14 (26) |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/08/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/09/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-57') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-13** | SHEET: **2 OF 2** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034586** | LONGITUDE: **-87.955312** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (SC) CLAYEY SAND WITH GRAVEL - gray, wet, medium dense. | | | 635 | |
| | S-11 | SS | 18 | 6 | | | | | 15-18-12 (30) |
| 40 | | | | | | | | 630 | |
| | | | | | (SP-SC) POORLY GRADED SAND WITH CLAY AND GRAVEL - gray, wet, medium dense. | | | | |
| | S-12 | SS | 18 | 8 | | | | | 8-11-12 (23) |
| 45 | | | | | | | | 625 | |
| | S-13 | SS | 18 | 10 | | | | | 10-10-12 (22) |
| 50 | | | | | | | | 620 | |
| | | | | | (GP-GC) POORLY GRADED GRAVEL WITH CLAY AND SAND - gray, wet, medium dense. | | | | |
| | S-14 | SS | 18 | 4 | | | | | 12-15-15 (30) |
| 55 | | | | | | | | 615 | |
| | | | | | **END OF BORING AT 57ft** | | | | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100
TCP ▼ ModCal ☒ SPT ⊗ 0 20 30 40 50
MC% ● 0 20 40 60 80 100
PL MC LL 0 20 40 60 80 100
QP ○ 0 1 2 3 4 5

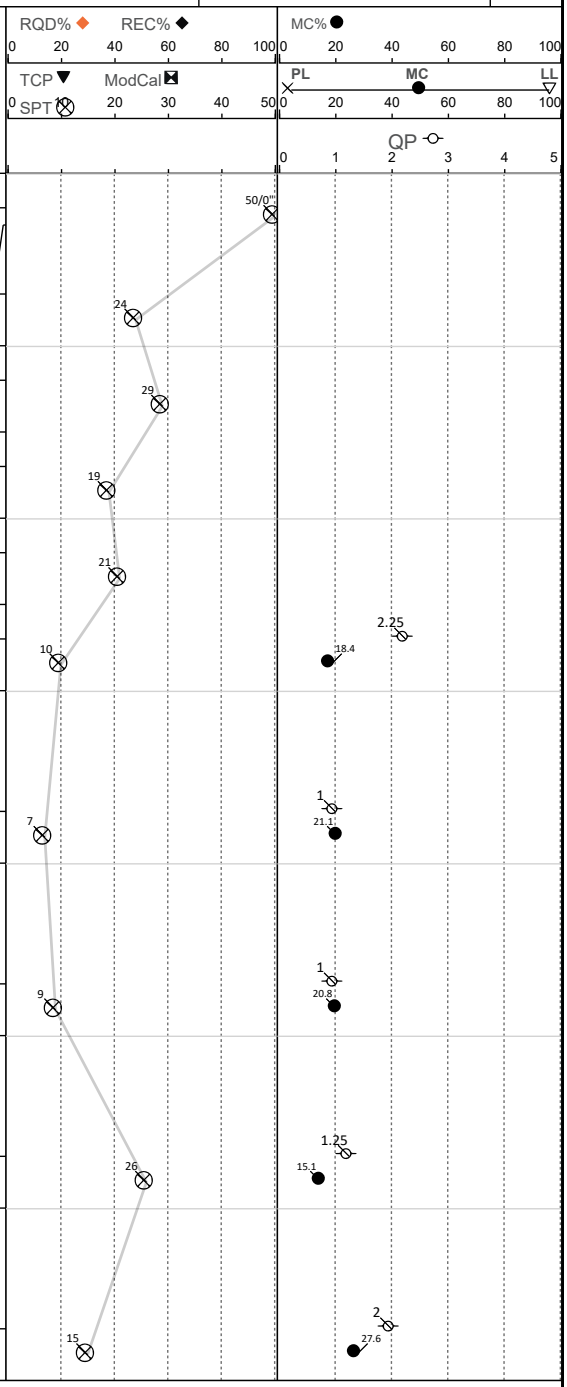
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ **WL (First Encountered):** | **BORING STARTED:** 05/08/2025 | | **CAVE IN DEPTH:** Not Observed |
| ▼ **WL (Completion):** | **BORING COMPLETED:** 05/09/2025 | | **HAMMER TYPE:** Automatic |
| ▼ **WL (Seasonal High Water):** | **EQUIPMENT:** | **LOGGED BY:** | **DRILLING METHOD:** |
| ▽ **WL (Stabilized):** | Deidrich D-50 | DTL | Hollow Stem Auger (0'-57') |

## GEOTECHNICAL BOREHOLE LOG

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-14** | SHEET: **1 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034562** | LONGITUDE: **-87.954053** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=4"±]. | | | 670 | |
| | S-1 | SS | 6 | 6 | FILL - (SC-SM) SILTY CLAYEY SAND WITH GRAVEL - brown, very dense to medium dense, moist, with concrete debris and fabric. | | | | 31-50/0 (50/0") |
| | S-2 | SS | 18 | 10 | FILL - (GC) CLAYEY GRAVEL WITH SAND - brown to gray, moist, medium dense, with concrete pieces. | | | | 10-11-13 (24) |
| 5 | S-3 | SS | 18 | 11 | | | ▽ | 665 | 11-13-16 (29) |
| | S-4 | SS | 18 | 9 | | | | | 11-12-7 (19) |
| 10 | S-5 | SS | 18 | 3 | | | | 660 | 8-10-11 (21) |
| | S-6 | SS | 18 | 10 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff. | | | | 4-5-5 (10) |
| 15 | | | | | | | | 655 | |
| | S-7 | SS | 18 | 8 | | | | | 2-3-4 (7) |
| 20 | | | | | | | | 650 | |
| | S-8 | SS | 18 | 4 | | | | | 3-4-5 (9) |
| 25 | | | | | | | | 645 | |
| | S-9 | SS | 18 | 8 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, medium dense (apparent cobbles/boulders). | | | | 6-18-8 (26) |
| 30 | | | | | | | | 640 | |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | | |
| | S-10 | SS | 18 | 12 | | | | | 6-7-8 (15) |



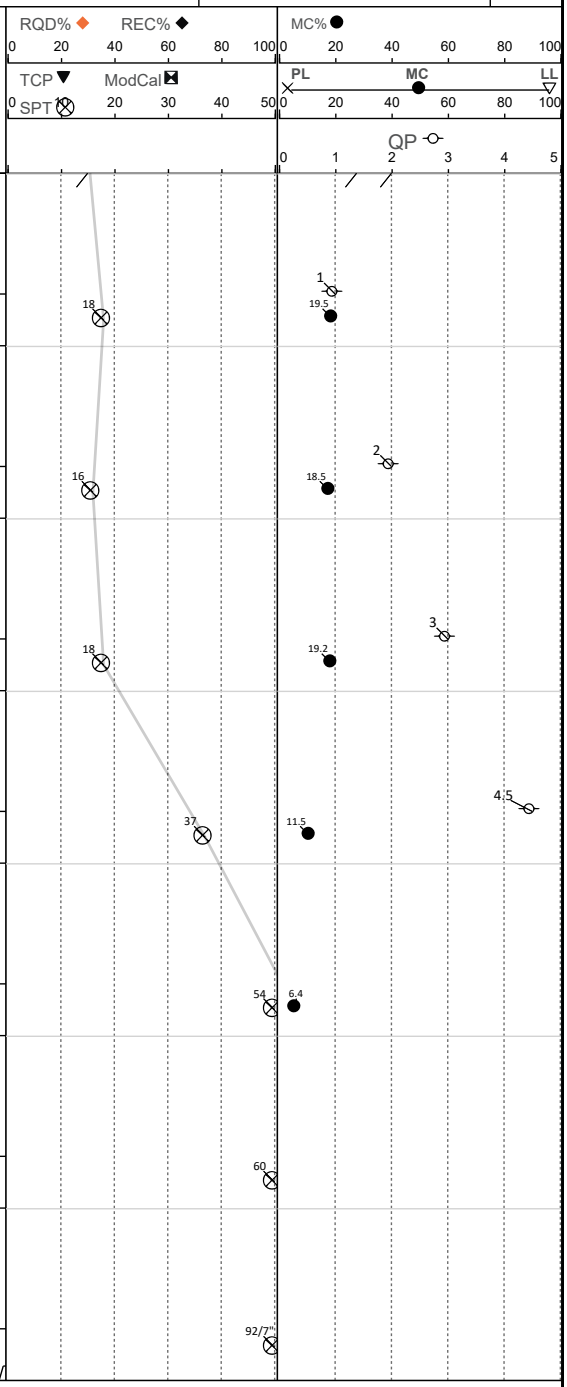

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 6 ft | BORING STARTED: | 05/29/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | | BORING COMPLETED: | 05/30/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-15'), Mud Rotary (15'-98') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-14** | SHEET: **2 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034562** | LONGITUDE: **-87.954053** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | 635 | |
| | | | | | (CL) GRAVELLY LEAN CLAY - trace sand, gray, moist, stiff. | | | | |
| 40 | S-11 | SS | 18 | 10 | | | | | 7-8-10 (18) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff to hard. | | | 630 | |
| | S-12 | SS | 18 | 18 | | | | | 3-6-10 (16) |
| 45 | | | | | | | | 625 | |
| | S-13 | SS | 18 | 18 | | | | | 4-8-10 (18) |
| 50 | | | | | | | | 620 | |
| | S-14 | SS | 18 | 18 | | | | | 11-16-21 (37) |
| 55 | | | | | | | | 615 | |
| | S-15 | SS | 18 | 16 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | | 31-31-23 (54) |
| 60 | | | | | | | | 610 | |
| | S-16 | SS | 18 | 5 | | | | | 24-28-32 (60) |
| 65 | | | | | | | | 605 | |
| | S-17 | SS | 13 | 12 | | | | | 38-42-50/1 |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): **6 ft** | BORING STARTED: **05/29/2025** | | CAVE IN DEPTH: **Not Observed** | |
| WL (Completion): | BORING COMPLETED: **05/30/2025** | | HAMMER TYPE: **Automatic** | |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | **Deidrich D-50** | **DTL** | **Hollow Stem Auger (0'-15'), Mud Rotary (15'-98')** | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-14** | SHEET: **3 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034562** | LONGITUDE: **-87.954053** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| 75 | S-18 | SS | 1 | 0 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | 600 | 50/1 (50/1") |
| 80 | S-19 | SS | 18 | 3 | | | | 595 | 27-32-39 (71) |
| 85 | S-20 | SS | 18 | 6 | | | | 590 | 29-34-44 (78) |
| 90 | S-21 | SS | 18 | 14 | | | | 585 | 22-26-23 (49) |
| 95 | S-22 | SS | 8 | 6 | | | | 580 | 33-50/2 (50/2") |
| | | | | | **Terminate AT 98ft** | | | 575 | |

RQD% ◆ REC% ◆ MC% ●
TCP ▼ ModCal ⊠ SPT ⊗ PL MC LL
QP ○

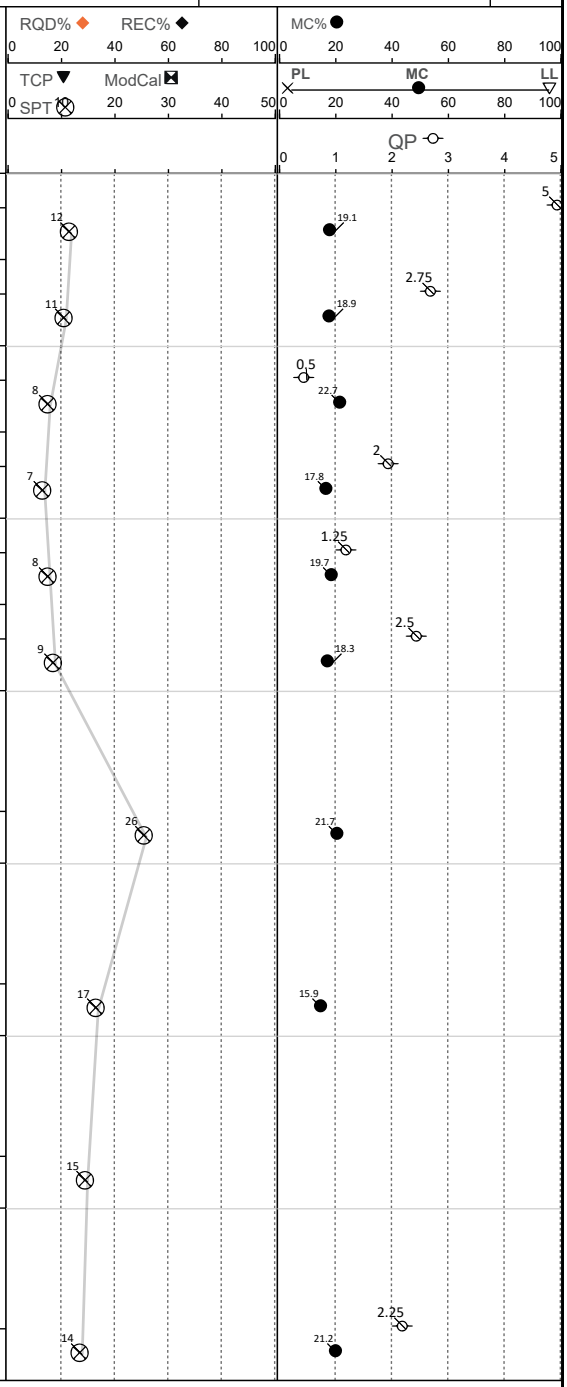
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 6 ft | BORING STARTED: | 05/29/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | | BORING COMPLETED: | 05/30/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-15'), Mud Rotary (15'-98') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **CloudHQ** | **16:13881-D** | **B-15** | **1 OF 3** |
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033861** | LONGITUDE: **-87.954420** | STATION: | SURFACE ELEVATION: **674** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=5"±]. | | | | |
| | S-1 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand, brown, moist, hard to very stiff. | | | | 4-5-7 (12) |
| | S-2 | SS | 18 | 18 | | | | 670 | 4-5-6 (11) |
| 5 | S-3 | SS | 18 | 3 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, firm to very stiff. | | | | 3-3-5 (8) |
| | S-4 | SS | 18 | 18 | | | | 665 | 3-3-4 (7) |
| 10 | S-5 | SS | 18 | 14 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to very stiff. | | | | 2-3-5 (8) |
| | S-6 | SS | 18 | 18 | | | | 660 | 3-4-5 (9) |
| 15 | | | | | (ML) SANDY SILT - trace gravel, gray, moist, medium dense. | | | | |
| | S-7 | SS | 18 | 6 | | | | 655 | 8-12-14 (26) |
| 20 | | | | | | | | | |
| | S-8 | SS | 18 | 12 | | | | 650 | 9-11-6 (17) |
| 25 | | | | | (GC) CLAYEY GRAVEL - gray, moist, medium dense. | | | | |
| | S-9 | SS | 18 | 1 | | | | 645 | 4-6-9 (15) |
| 30 | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | | |
| | S-10 | SS | 18 | 16 | | | | 640 | 4-6-8 (14) |



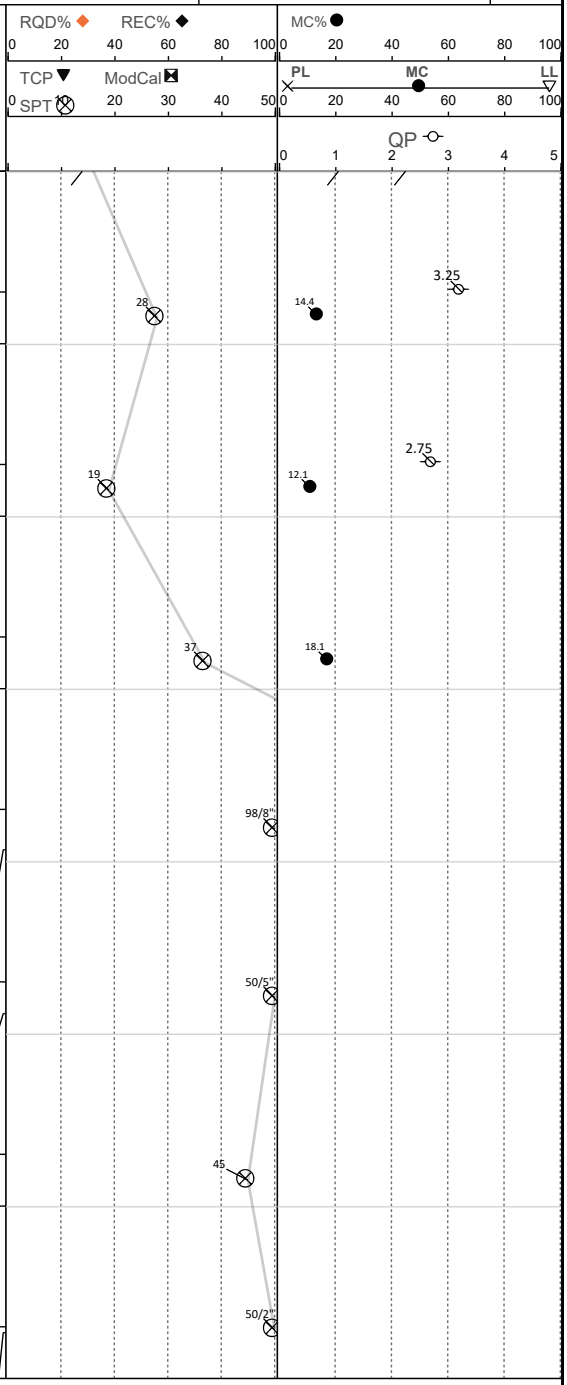

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 04/29/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/05/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-5'), Mud Rotary (5'-95') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-15** | SHEET: **2 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033861** | LONGITUDE: **-87.954420** | STATION: | SURFACE ELEVATION: **674** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| 40 | S-11 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | 635 | 5-17-11 (28) |
| 45 | S-12 | SS | 18 | 18 | | | | 630 | 5-7-12 (19) |
| 50 | S-13 | SS | 18 | 6 | (CL) LEAN CLAY WITH GRAVEL - trace sand, gray, moist, very stiff. | | | 625 | 8-13-24 (37) |
| 55 | S-14 | SS | 14 | 5 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, dense to very dense (apparent cobbles/boulders). | | | 620 | 20-48-50/2 (98/8") |
| 60 | S-15 | SS | 11 | 5 | | | | 615 | 31-50/5 (50/5") |
| 65 | S-16 | SS | 18 | 6 | | | | 610 | 26-26-19 (45) |
| | S-17 | SS | 2 | 2 | | | | 605 | 50/2 (50/2") |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 04/29/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/05/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-5'), Mud Rotary (5'-95') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-15** | SHEET: **3 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033861** | LONGITUDE: **-87.954420** | STATION: | SURFACE ELEVATION: **674** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| 75 | S-18 | SS | 5 | 4 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, dense to very dense (apparent cobbles/boulders). | | | 600 | 50/5 (50/5") |
| 80 | S-19 | SS | 8 | 6 | | | | 595 | 38-50/2 (50/2") |
| 85 | S-20 | SS | 18 | 10 | | | | 590 | 35-36-38 (74) |
| 90 | S-21 | SS | 4 | 1 | | | | 585 | 50/4 (50/4") |
| | | | | | | | | 580 | |
| | | | | | **END OF BORING AT 95ft** | | | | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100
TCP ▼ ModCal ⊠ 0 SPT ⊗ 20 30 40 50
MC% ● 0 20 40 60 80 100
PL MC LL 0 20 40 60 80 100
QP ○ 0 1 2 3 4 5

50/5" 50/2" 74 50/4"

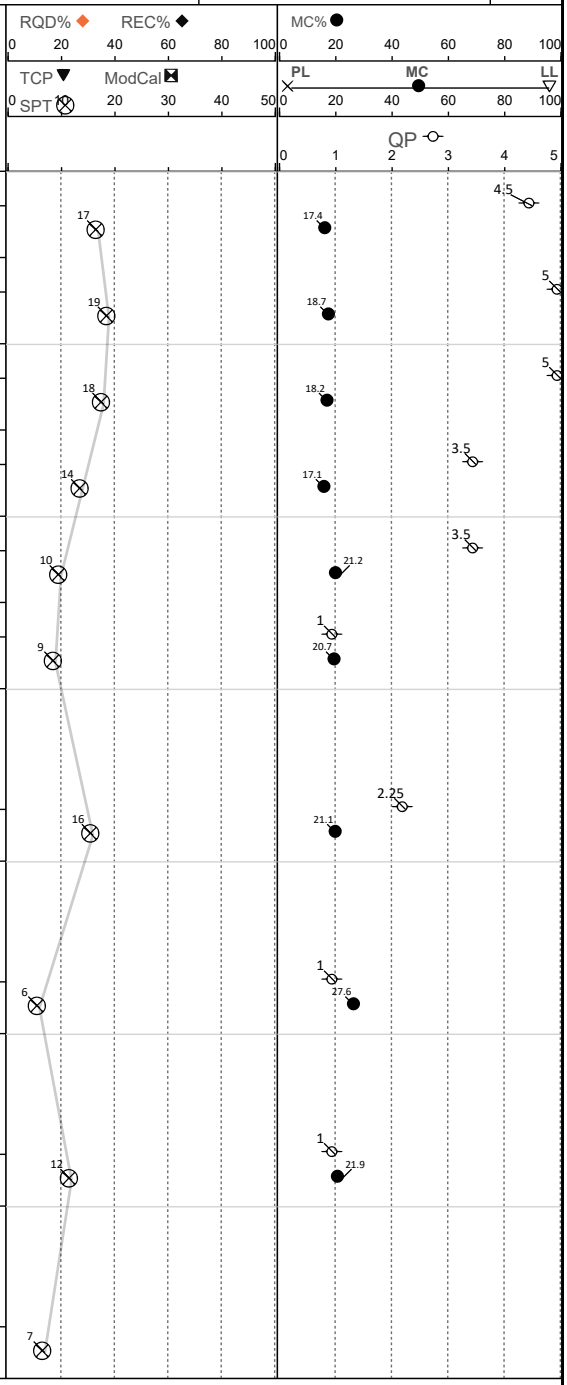
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered): | BORING STARTED: 04/29/2025 | | CAVE IN DEPTH: Not Observed |
| ▼ WL (Completion): | BORING COMPLETED: 05/05/2025 | | HAMMER TYPE: Automatic |
| ▼ WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| ▽ WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-5'), Mud Rotary (5'-95') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-16** | SHEET: **1 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033949** | LONGITUDE: **-87.952627** | STATION: | SURFACE ELEVATION: **674** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=3"±]. | | | | |
| | S-1 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, brown and gray mottled, moist, very stiff to hard. | | | | 5-7-10 (17) |
| | S-2 | SS | 18 | 12 | | | | 670 | 5-8-11 (19) |
| 5 | S-3 | SS | 18 | 16 | | | | | 5-7-11 (18) |
| | S-4 | SS | 18 | 12 | | | | 665 | 5-7-7 (14) |
| 10 | S-5 | SS | 18 | 16 | | | | | 4-5-5 (10) |
| | S-6 | SS | 18 | 12 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to very stiff, (apparent cobbles/boulders). | | | 660 | 4-4-5 (9) |
| 15 | | | | | | | | | |
| | S-7 | SS | 18 | 10 | | | | 655 | 3-8-8 (16) |
| 20 | | | | | | | | | |
| | S-8 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, firm to stiff. | | | 650 | 2-3-3 (6) |
| 25 | | | | | | | | | |
| | S-9 | SS | 18 | 18 | | | | 645 | 2-3-9 (12) |
| 30 | | | | | (ML) CLAYEY SILT - gray, moist, firm. | | | | |
| | S-10 | SS | 18 | 12 | | | | 640 | 3-3-4 (7) |



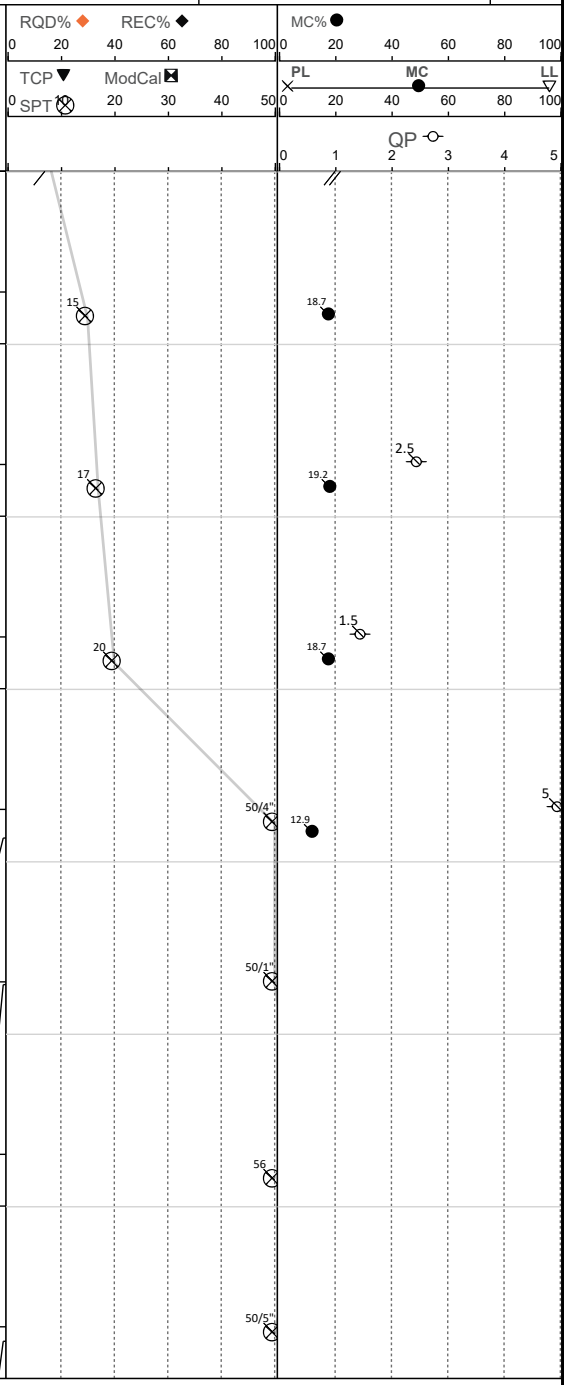

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/06/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/06/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-91'), Rock C |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-16** | SHEET: **2 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033949** | LONGITUDE: **-87.952627** | STATION: | SURFACE ELEVATION: **674** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (ML) CLAYEY SILT - gray, moist, firm. | | | | |
| | | | | | (CL) LEAN CLAY WITH GRAVEL - gray, moist, stiff. | | | | |
| 40 | S-11 | SS | 18 | 6 | | | | 635 | 5-7-8 (15) |
| | | | | | (CL) LEAN CLAY WITH SAND - trace gravel, gray, moist, stiff to very stiff. | | | | |
| 45 | S-12 | SS | 18 | 16 | | | | 630 | 4-7-10 (17) |
| | S-13 | SS | 18 | 18 | | | | 625 | 5-9-11 (20) |
| 50 | S-14 | SS | 10 | 6 | | | | 620 | 18-50/4 (50/4") |
| 55 | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | | |
| | S-15 | SS | 1 | 0 | | | | 615 | 50/1 (50/1") |
| 60 | | | | | (SP) POORLY GRADED SAND WITH WEATHERED LIMESTONE - fine to coarse sand, gray, wet, very dense (apparent cobbles/boulders). | | | | |
| | S-16 | SS | 18 | 6 | | | | 610 | 22-28-28 (56) |
| 65 | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | | |
| | S-17 | SS | 5 | 2 | | | | 605 | 50/5 (50/5") |



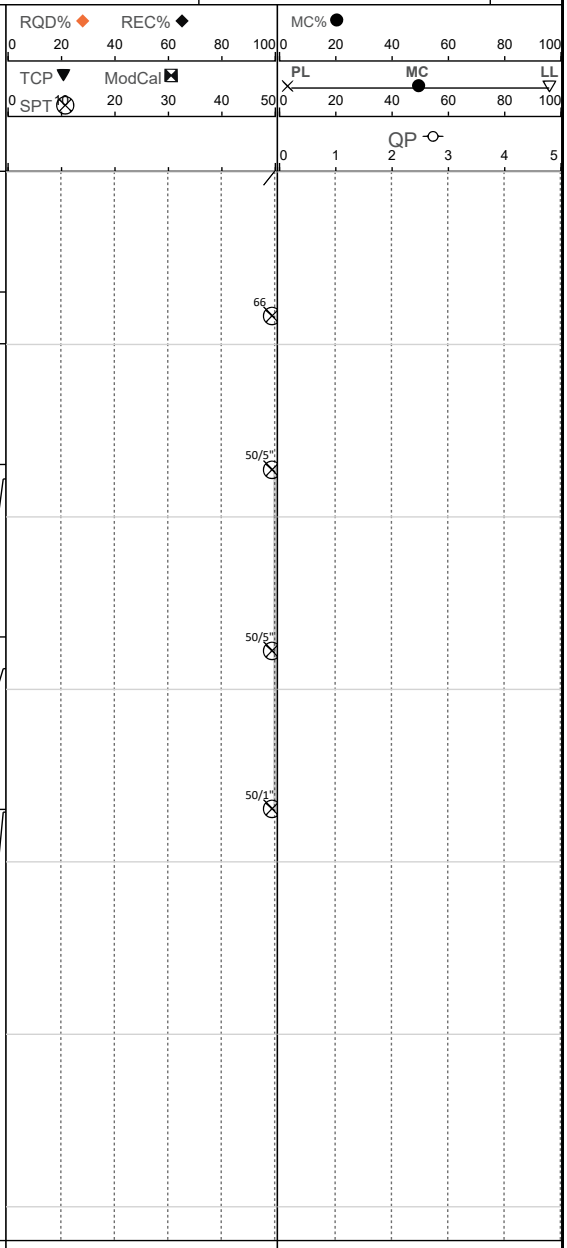

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/06/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/06/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-91'), Rock C |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-16** | SHEET: **3 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033949** | LONGITUDE: **-87.952627** | STATION: | SURFACE ELEVATION: **674** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | | |
| | S-18 | SS | 18 | 4 | (SP) POORLY GRADED SAND WITH GRAVEL - fine to coarse sand, gray, wet, very dense (apparent cobbles/boulders). | | | 600 | 20-30-36 (66) |
| 75 | | | | | | | | | |
| | S-19 | SS | 5 | 5 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulder). | | | 595 | 50/5 (50/5") |
| 80 | | | | | | | | | |
| | S-20 | SS | 11 | 6 | | | | 590 | 32-50/5 (50/5") |
| 85 | | | | | | | | | |
| | S-21 | SS | 1 | 0 | | | | 585 | 50/1 (50/1") |
| 90 | | | | | LIMESTONE, [REC=100%, RQD=26%], Moderately Weathered, with vertical joints and solution cavities. | | | | |
| 95 | | | | | | | | 580 | |
| | | | | | | | | 575 | |
| 100 | | | | | **END OF BORING AT 101ft (End of Rock Core)** | | | | |



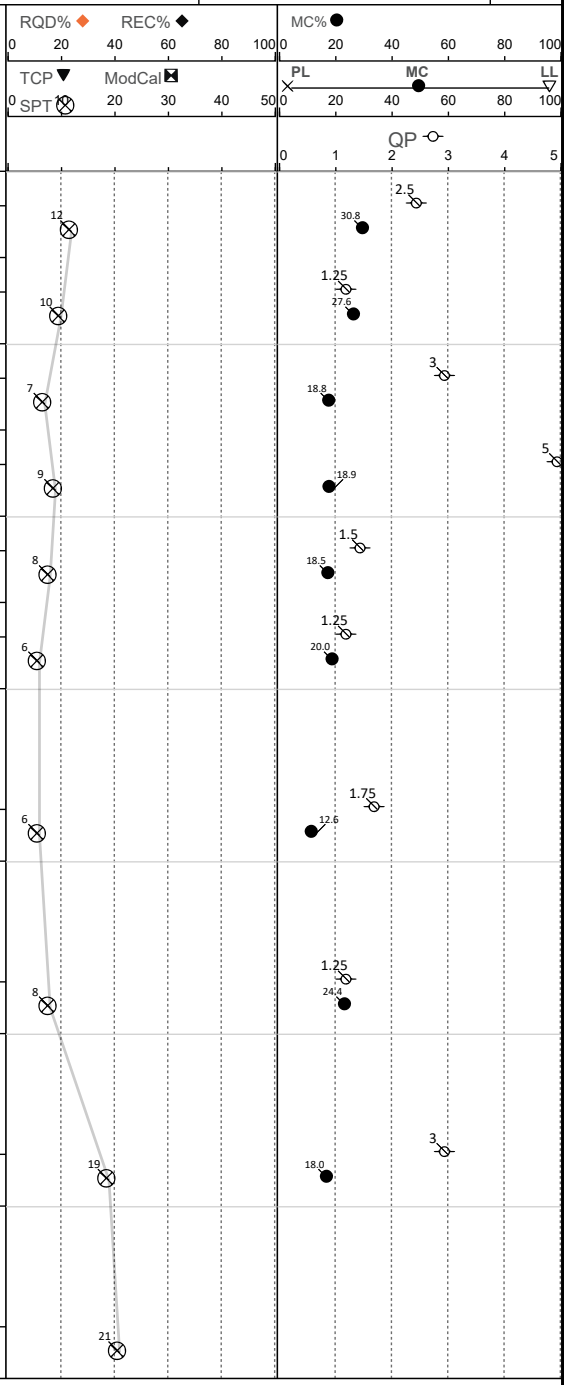

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/06/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/06/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-91'), Rock C |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-17** | SHEET: **1 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033180** | LONGITUDE: **-87.952593** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Gravel [Thickness=6"±]. | | | | |
| | S-1 | SS | 18 | 12 | FILL/TOPSOIL - (CL) LEAN CLAY - trace sand, black, moist, stiff. | | | 670 | 3-5-7 (12) |
| | S-2 | SS | 18 | 11 | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, stiff to hard. | | | | 3-4-6 (10) |
| 5 | S-3 | SS | 18 | 18 | | | | 665 | 3-3-4 (7) |
| | S-4 | SS | 18 | 18 | | | | | 3-4-5 (9) |
| 10 | S-5 | SS | 18 | 12 | (CL) LEAN CLAY - gray, moist, stiff, (apparent cobbles/boulders). | | | 660 | 20-4-4 (8) |
| | S-6 | SS | 18 | 12 | | | | | 1-3-3 (6) |
| 15 | | | | | (CL) SANDY LEAN CLAY - trace gravel, gray, moist, firm. | | | 655 | |
| 20 | S-7 | SS | 18 | 11 | | | | | 1-3-3 (6) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to very stiff. | | | 650 | |
| 25 | S-8 | SS | 18 | 11 | | | | | 2-3-5 (8) |
| | S-9 | SS | 18 | 16 | | | | 645 | 5-8-11 (19) |
| 30 | | | | | (SP-SM) POORLY GRADED SAND WITH SILT - gray, wet, medium dense. | | | 640 | |
| | S-10 | SS | 18 | 14 | | | | | 6-10-11 (21) |



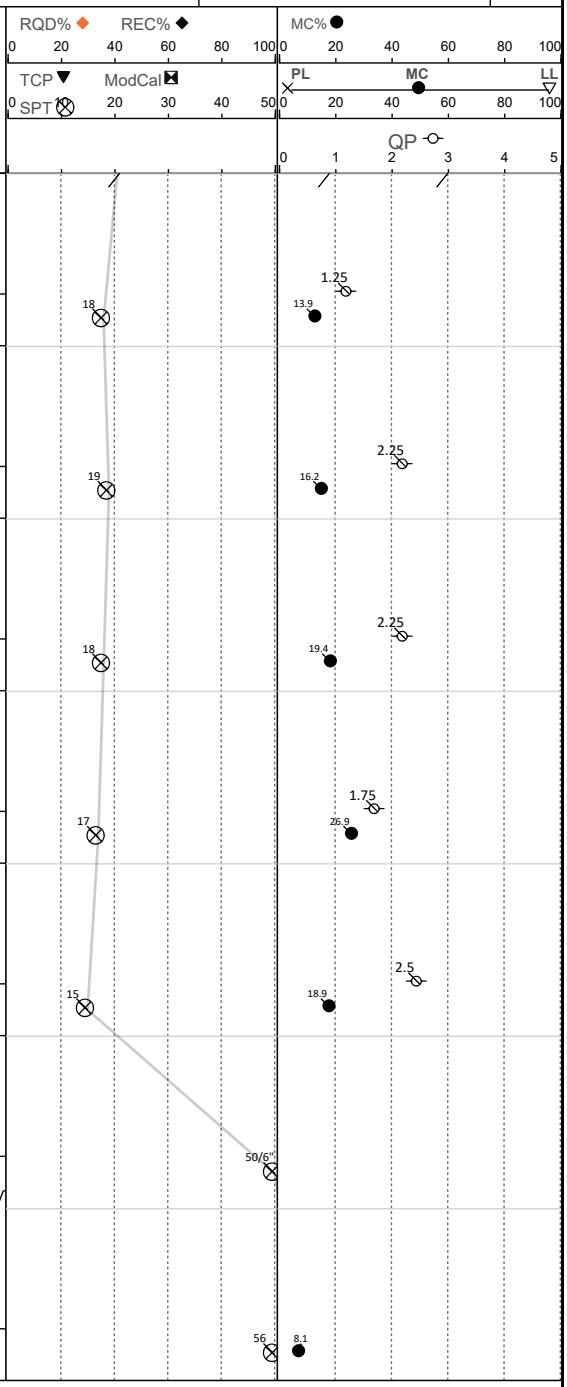

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/27/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/29/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-96') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-17** | SHEET: **2 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033180** | LONGITUDE: **-87.952593** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (SP-SM) POORLY GRADED SAND WITH SILT - gray, wet, medium dense. | | | 635 | |
| | | | | | (CL) LEAN CLAY WITH SAND - trace gravel, gray, stiff to very stiff. | | | | |
| 40 | S-11 | SS | 18 | 18 | | | | | 6-8-10 (18) |
| | S-12 | SS | 18 | 18 | | | | 630 | 6-9-10 (19) |
| 45 | | | | | | | | | |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | 625 | |
| 50 | S-13 | SS | 18 | 18 | | | | | 5-8-10 (18) |
| | S-14 | SS | 18 | 18 | | | | 620 | 3-6-11 (17) |
| 55 | | | | | | | | | |
| | S-15 | SS | 18 | 17 | | | | 615 | 4-5-10 (15) |
| 60 | | | | | | | | | |
| | S-16 | SS | 12 | 6 | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - trace sand, gray, wet, very dense (apparent cobbles/boulders). | | | 610 | 21-50/6 (50/6") |
| 65 | | | | | | | | | |
| | S-17 | SS | 18 | 8 | | | | 605 | 22-25-31 (56) |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered): | BORING STARTED: 05/27/2025 | | CAVE IN DEPTH: Not Observed |
| WL (Completion): | BORING COMPLETED: 05/29/2025 | | HAMMER TYPE: Automatic |
| WL (Seasonal High Water): | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: |
| WL (Stabilized): | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-96') |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-17** | SHEET: **3 OF 3** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033180** | LONGITUDE: **-87.952593** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - trace sand, gray, wet, very dense (apparent cobbles/boulders). | | | 600 | |
| 75 | S-18 | SS | 18 | 12 | | | | | 21-24-33 (57) |
| | | | | | | | | 595 | |
| | S-19 | SS | 3 | 2 | | | | | 50/3 (50/3") |
| 80 | | | | | | | | | |
| | | | | | | | | 590 | |
| | S-20 | SS | 10 | 2 | | | | | 22-50/4 (50/4") |
| 85 | | | | | | | | | |
| | | | | | | | | 585 | |
| | S-21 | SS | 9 | 6 | | | | | 37-50/3 (50/3") |
| 90 | | | | | | | | | |
| | | | | | | | | 580 | |
| | S-23 | SS | 6 | 0 | | | | | 33-50/0 (50/0") |
| 95 | | | | | **END OF BORING AT 96ft** | | | | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100
TCP ▼ ModCal ☒ 0 SPT ⊗ 20 30 40 50
MC% ● 0 20 40 60 80 100
PL × MC ● LL ▽ 0 20 40 60 80 100
QP ○ 0 1 2 3 4 5

57 50/3" 50/4" 50/3" 50/0" 14.2

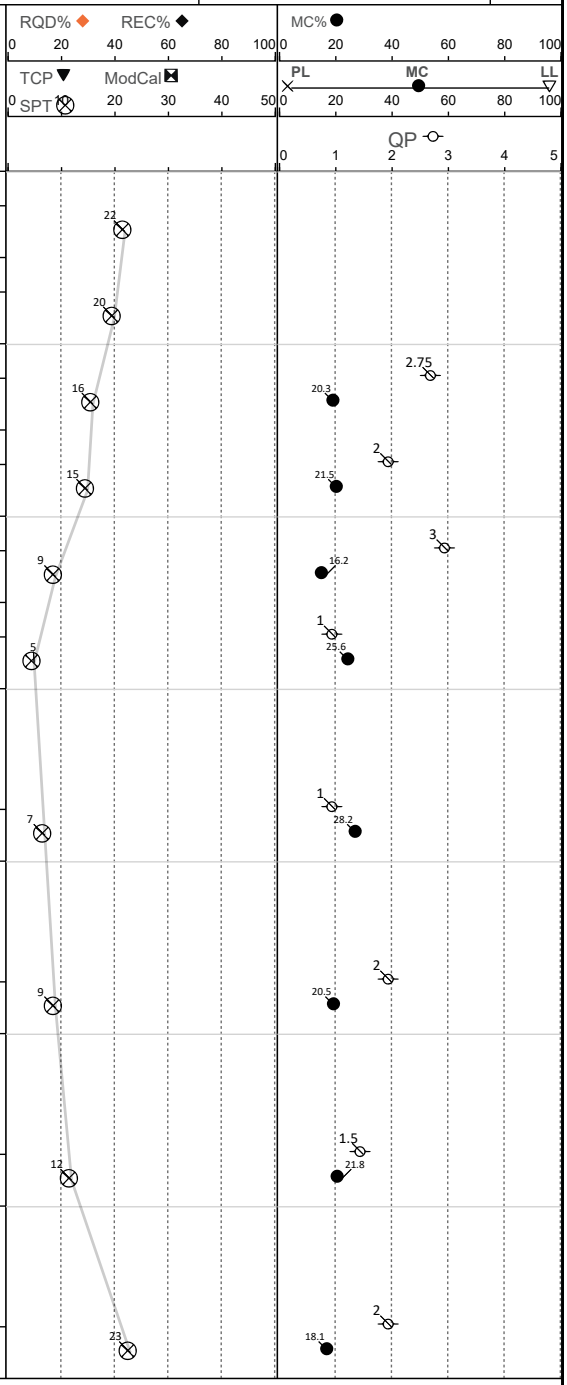
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ **WL (First Encountered):** | **BORING STARTED:** 05/27/2025 | | **CAVE IN DEPTH:** Not Observed |
| ▼ **WL (Completion):** | **BORING COMPLETED:** 05/29/2025 | | **HAMMER TYPE:** Automatic |
| ▼ **WL (Seasonal High Water):** | **EQUIPMENT:** | **LOGGED BY:** | **DRILLING METHOD:** |
| ▽ **WL (Stabilized):** | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-96') |

## GEOTECHNICAL BOREHOLE LOG

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **CloudHQ** | **16:13881-D** | **B-18** | **1 OF 4** |
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033455** | LONGITUDE: **-87.951213** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=8"±] | | | 670 | |
| | S-1 | SS | 18 | 14 | FILL - (GP) POORLY GRADED GRAVEL - brown and gray, moist, medium dense, with concrete debris. | | | | 8-12-10 (22) |
| | S-2 | SS | 18 | 12 | | | | | 7-10-10 (20) |
| 5 | | | | | | | | 665 | |
| | S-3 | SS | 18 | 10 | (CL) LEAN CLAY - trace sand and gravel, brown, moist, very stiff. | | ▽ | | 7-7-9 (16) |
| | S-4 | SS | 18 | 14 | | | | | 6-7-8 (15) |
| 10 | | | | | | | | 660 | |
| | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff to stiff. | | | | 4-4-5 (9) |
| | S-6 | SS | 18 | 18 | | | | | 2-2-3 (5) |
| 15 | | | | | | | | 655 | |
| | S-7 | SS | 18 | 18 | | | | | 2-3-4 (7) |
| 20 | | | | | | | | 650 | |
| | S-8 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff to stiff. | | | | 3-4-5 (9) |
| 25 | | | | | | | | 645 | |
| | S-9 | SS | 18 | 18 | | | | | 3-5-7 (12) |
| 30 | | | | | | | | 640 | |
| | S-10 | SS | 18 | 18 | (CL) SANDY LEAN CLAY - trace gravel, gray, moist, very stiff to stiff. | | | | 8-10-13 (23) |



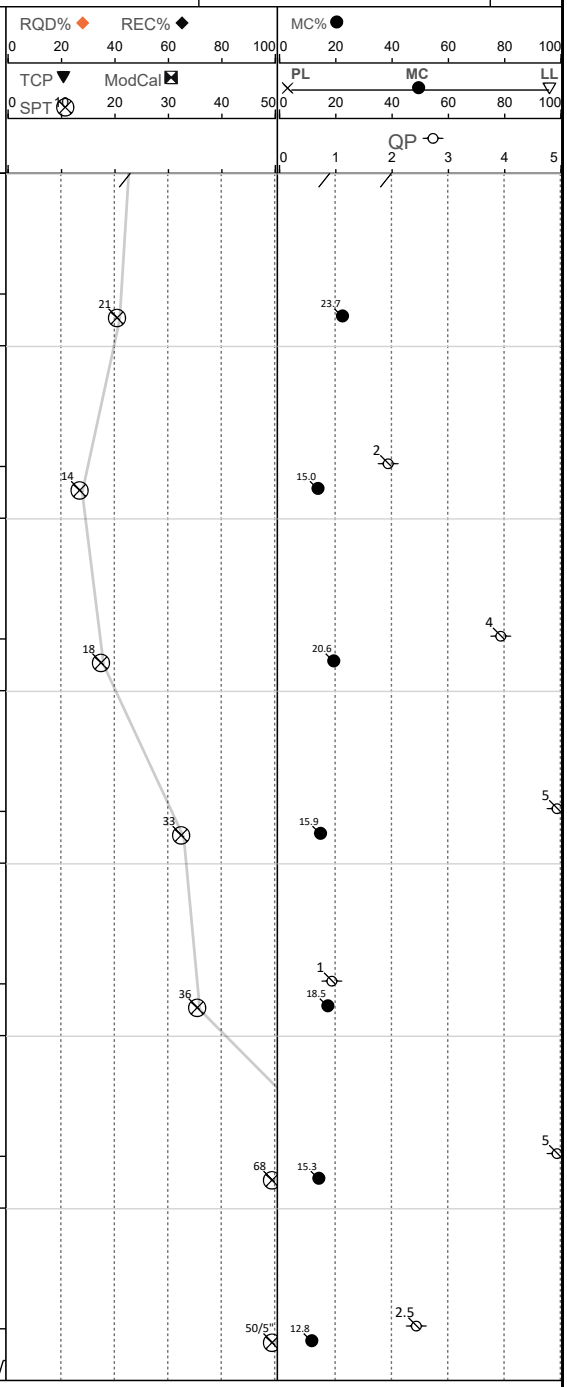

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 6 ft | BORING STARTED: | 05/23/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | | BORING COMPLETED: | 05/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-106') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-18** | SHEET: **2 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033455** | LONGITUDE: **-87.951213** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) SANDY LEAN CLAY - trace gravel, gray, moist, very stiff to stiff. | | | 635 | |
| | | | | | (ML) SANDY SILT - gray, moist, medium dense. | | | | |
| 40 | S-11 | SS | 18 | 18 | | | | 630 | 4-7-14 (21) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff to hard. | | | | |
| 45 | S-12 | SS | 18 | 18 | | | | 625 | 4-6-8 (14) |
| | S-13 | SS | 18 | 18 | | | | 620 | 4-7-11 (18) |
| 50 | | | | | | | | | |
| | S-14 | SS | 18 | 18 | | | | 615 | 7-12-21 (33) |
| 55 | | | | | | | | | |
| | | | | | (ML) SANDY SILT - gray, moist, dense. | | | | |
| | S-15 | SS | 18 | 18 | | | | 610 | 8-14-22 (36) |
| 60 | | | | | | | | | |
| | | | | | (CL) LEAN CLAY - gray, moist, hard. | | | | |
| | S-16 | SS | 18 | 18 | | | | 605 | 17-31-37 (68) |
| 65 | | | | | | | | | |
| | | | | | (CL) LEAN CLAY WITH GRAVEL - gray, moist, very stiff. | | | | |
| | S-17 | SS | 11 | 10 | | | | | 21-50/5 (50/5") |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | 6 ft | BORING STARTED: | 05/23/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | | BORING COMPLETED: | 05/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-106') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-18** | SHEET: **3 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033455** | LONGITUDE: **-87.951213** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) LEAN CLAY WITH GRAVEL - gray, moist, very stiff. | | | 600 | |
| | | | | | (GP-GC) POORLY GRADED GRAVEL WITH CLAY - gray, moist, very dense. | | | | |
| 75 | S-18 | SS | 8 | 4 | | | | 595 | 49-50/2 (50/2") |
| | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with gravel] - gray, wet, very dense (apparent cobbles/boulders). | | | | |
| 80 | S-19 | SS | 2 | 2 | | | | 590 | 50/2 (50/2") |
| | S-20 | SS | 4 | 2 | | | | | 50/4 (50/4") |
| 85 | | | | | | | | 585 | |
| | S-21 | SS | 3 | 3 | | | | | 50/3 (50/3") |
| 90 | | | | | | | | 580 | |
| | S-22 | SS | 4 | 4 | | | | | 50/4 (50/4") |
| 95 | | | | | | | | 575 | |
| | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with sandy silt] - gray, wet, very dense (apparent cobbles/boulders). | | | | |
| | S-23 | SS | 10 | 10 | | | | | 35-50/4 (50/4") |
| 100 | | | | | | | | 570 | |
| | S-24 | SS | 2 | 2 | | | | | 50/2 (50/2") |

RQD% ◆ REC% ◆ MC% ●
0 20 40 60 80 100
TCP ▼ ModCal ⊠
0 SPT ⊗ 20 30 40 50
PL MC LL
QP ○
0 1 2 3 4 5

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 6 ft | BORING STARTED: | 05/23/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | | BORING COMPLETED: | 05/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-10'), Mud Rotary (10'-106') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **B-18** | SHEET: **4 OF 4** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033455** | LONGITUDE: **-87.951213** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (WR) WEATHERED ROCK [Weathered LIMESTONE with sandy silt] - gray, wet, very dense (apparent cobbles/boulders). | | | 565 | |
| | | | | | **END OF BORING AT 106ft** | | | | |

RQD% ◆ REC% ◆ 0 20 40 60 80 100
TCP ▼ ModCal ☒ SPT ⊗ 0 20 30 40 50
MC% ● 0 20 40 60 80 100
PL MC LL 0 20 40 60 80 100
QP ○ 0 1 2 3 4 5

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ **WL (First Encountered):** 6 ft | **BORING STARTED:** 05/23/2025 | | **CAVE IN DEPTH:** Not Observed |
| ▼ **WL (Completion):** | **BORING COMPLETED:** 05/27/2025 | | **HAMMER TYPE:** Automatic |
| ▼ **WL (Seasonal High Water):** | **EQUIPMENT:** | **LOGGED BY:** | **DRILLING METHOD:** |
| ▽ **WL (Stabilized):** | **Deidrich D-50** | **DTL** | **Hollow Stem Auger (0'-10'), Mud Rotary (10'-106')** |

**GEOTECHNICAL BOREHOLE LOG**




**Rock Core B-01A**

From 100 ft to 101 ft Below Existing Grade

Recovery = 100%, RQD = 71%

| | | |
|---|---|---|
| Rock Cores Photos | ECS | Proposed Cloud HQ Supplemental Testing<br>1200 East Algonquin Road<br>Mt. Prospect, Illinois<br>ECS Project No. 16:13881-D |




Start of Run 91 ft

End of Run 101 ft

**Rock Core B-16**

From 91 ft to 101 ft Below Existing Grade

Recovery = 100%, RQD = 26%

| | | |
|---|---|---|
| Rock Cores Photos | ECS | Proposed Cloud HQ Supplemental Testing<br>1200 East Algonquin Road<br>Mt. Prospect, Illinois<br>ECS Project No. 16:13881-D |

## Appendix C – Laboratory Testing

Thermal Resistivity Test Results
Moisture-Density Test Results

# THERMAL RESISTIVITY TESTING

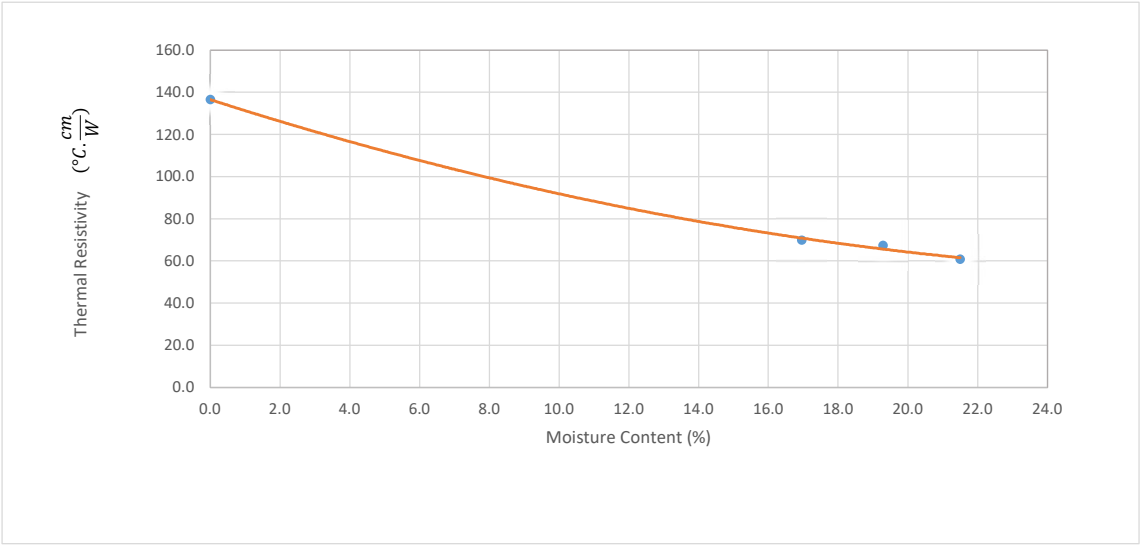
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-1/4 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 111.9 |
| Optimum moisture content (%) | 17% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 136.5 |
| 2 | 17.0 | 69.9 |
| 3 | 19.3 | 67.3 |
| 4 | 21.5 | 60.7 |



# THERMAL RESISTIVITY TESTING

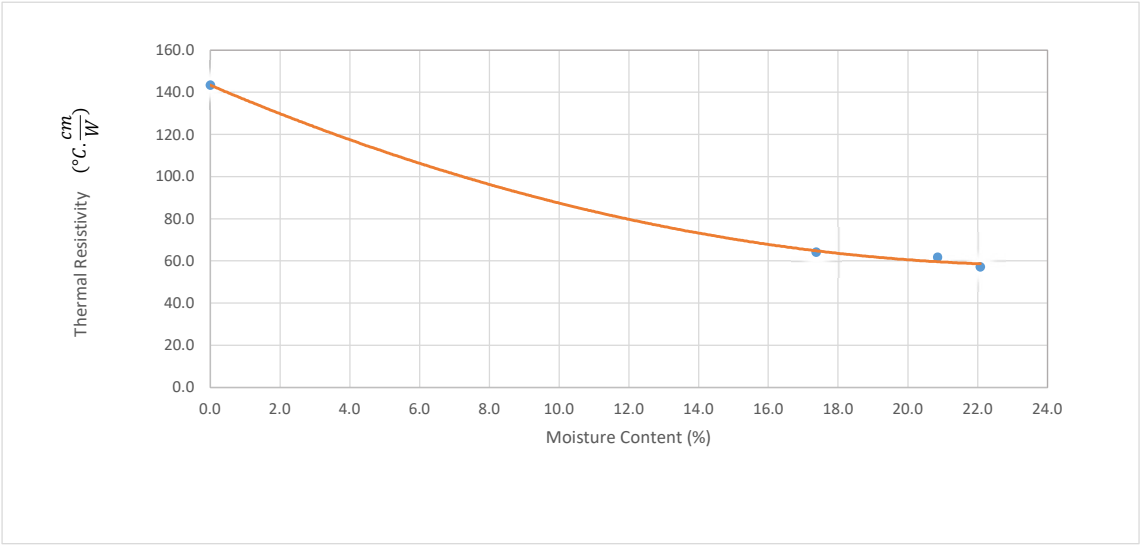
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-2/3 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 110.7 |
| Optimum moisture content (%) | 17% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 143.4 |
| 2 | 17.4 | 64.2 |
| 3 | 20.8 | 61.7 |
| 4 | 22.1 | 57.2 |



# THERMAL RESISTIVITY TESTING

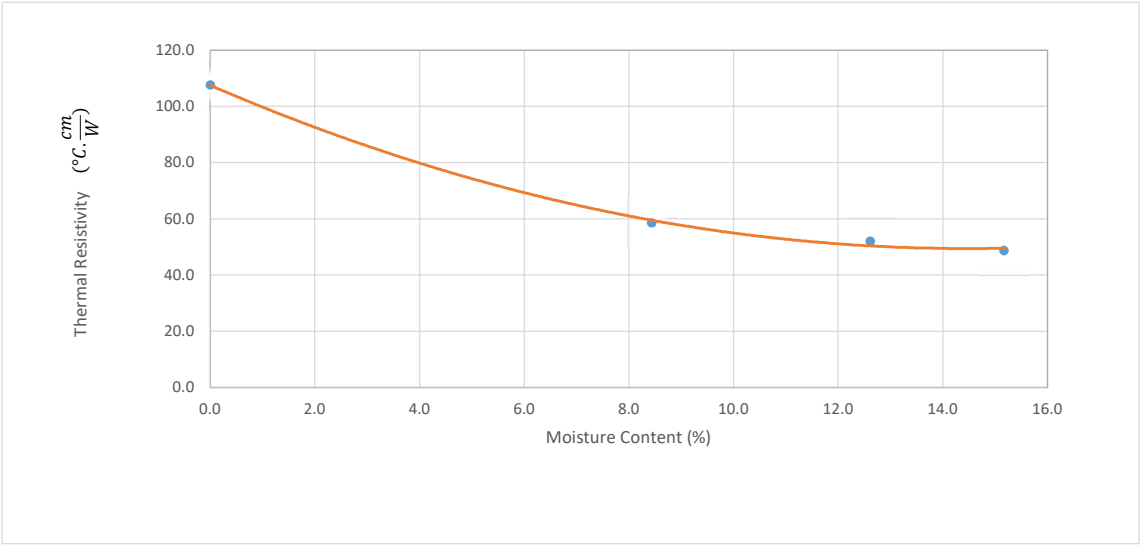
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-5/6 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 120.0 |
| Optimum moisture content (%) | 12% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 107.6 |
| 2 | 8.4 | 58.5 |
| 3 | 12.6 | 52.0 |
| 4 | 15.2 | 48.7 |



# THERMAL RESISTIVITY TESTING

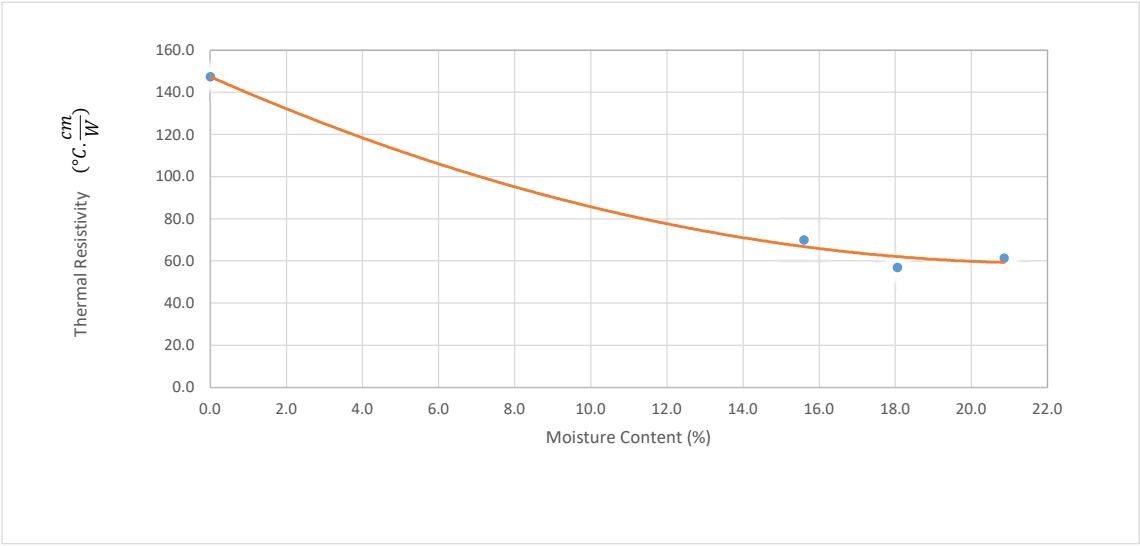
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-7/8 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 109.9 |
| Optimum moisture content (%) | 16% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 147.3 |
| 2 | 15.6 | 69.9 |
| 3 | 18.1 | 56.9 |
| 4 | 20.9 | 61.3 |



# THERMAL RESISTIVITY TESTING

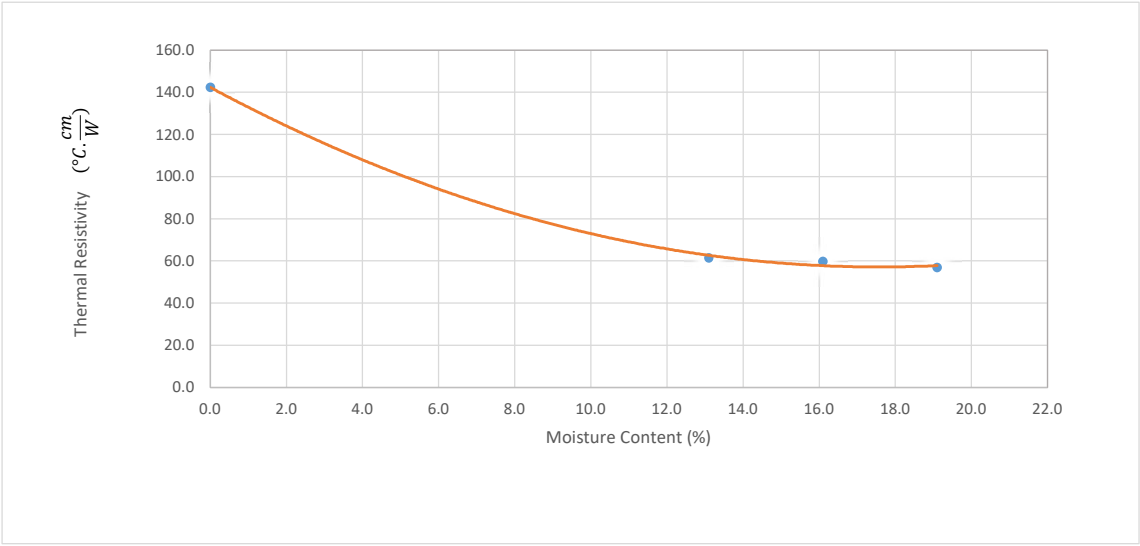
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|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-10/11 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

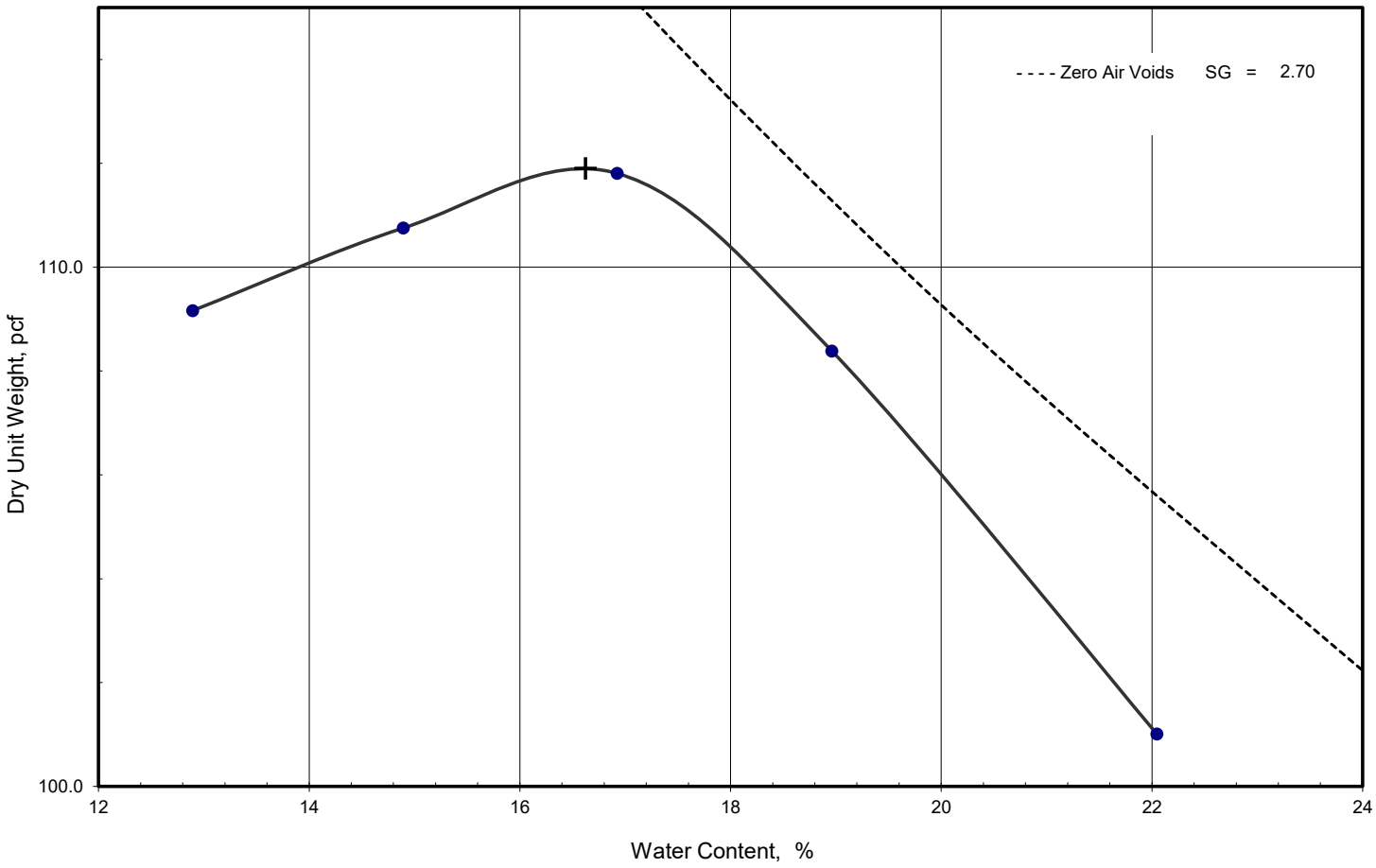
| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 109.2 |
| Optimum moisture content (%) | 16% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 142.4 |
| 2 | 13.1 | 61.4 |
| 3 | 16.1 | 59.7 |
| 4 | 19.1 | 56.9 |



# Laboratory Compaction Characteristics of Soil Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **16.6** | % |
| **Maximum Dry Unit Weight** | | **111.9** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

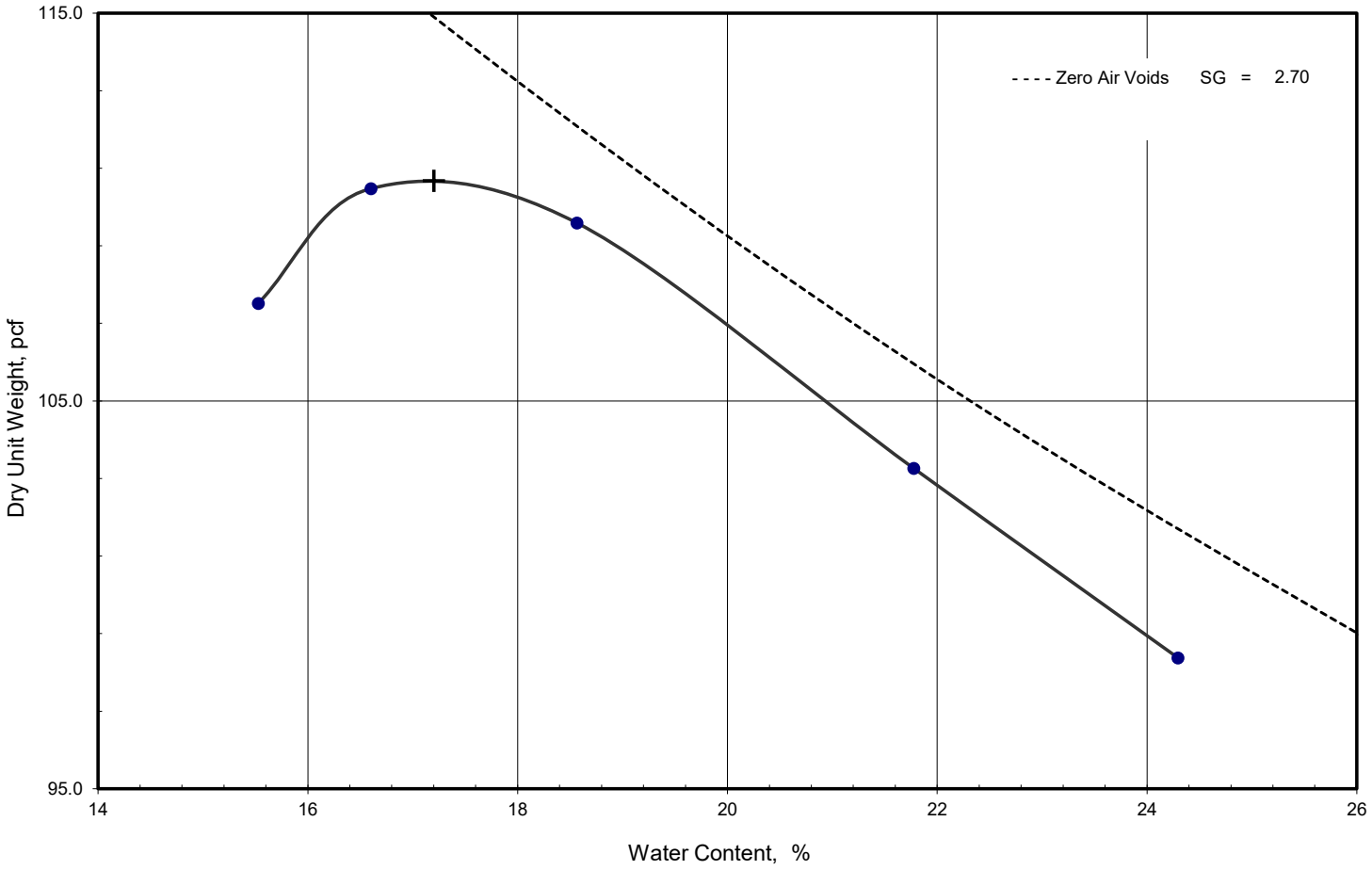
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-1/4
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-245
Date Reported: 7/23/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **17.2** | % |
| **Maximum Dry Unit Weight** | | **110.7** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | |
|---|---|
| Preparation | ASTM moist preparation |
| Type of rammer | Mechanical - circular face |
| Test Specfication / Method | ASTM D698-12e2-method A |
| Specific gravity - D854 water pycnometer | 2.70 Historical |
| Coarse Aggregate Specific Gravity - | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

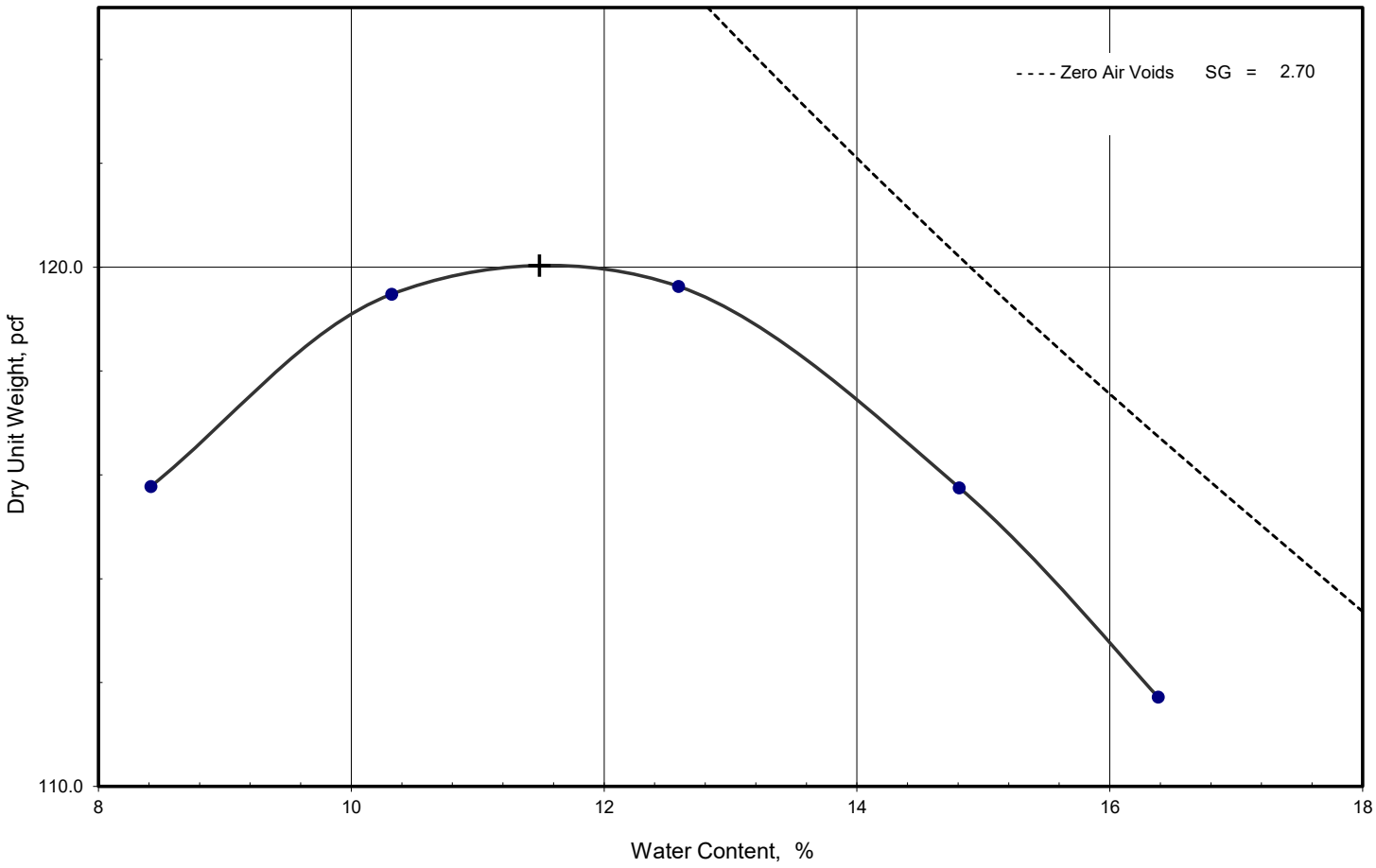
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-2/3
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-246
Date Reported: 7/23/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil
# Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **11.5** | % |
| **Maximum Dry Unit Weight** | | **120.0** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

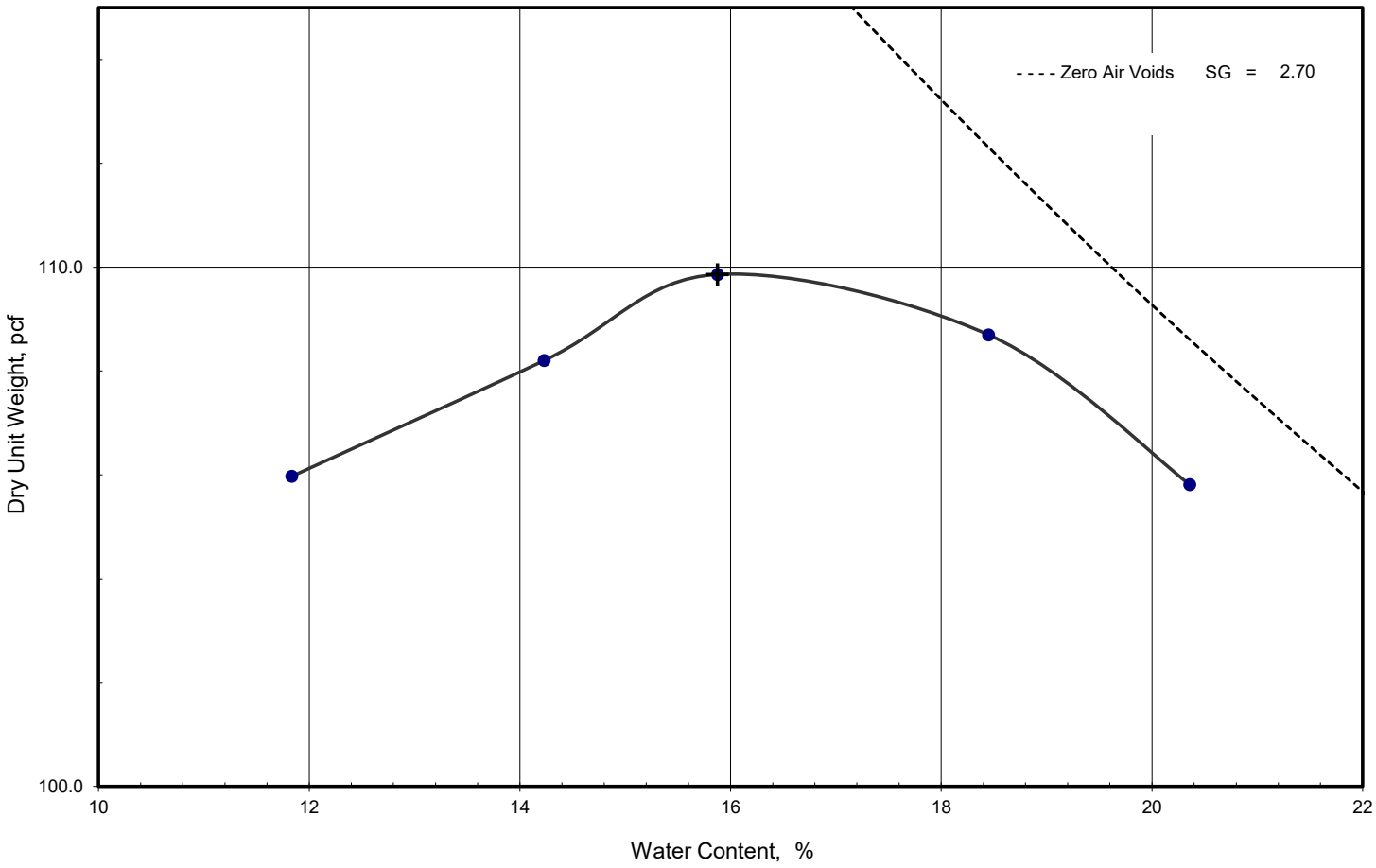
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-5/6
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-247
Date Reported: 7/23/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **15.9** | % |
| **Maximum Dry Unit Weight** | | **109.9** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

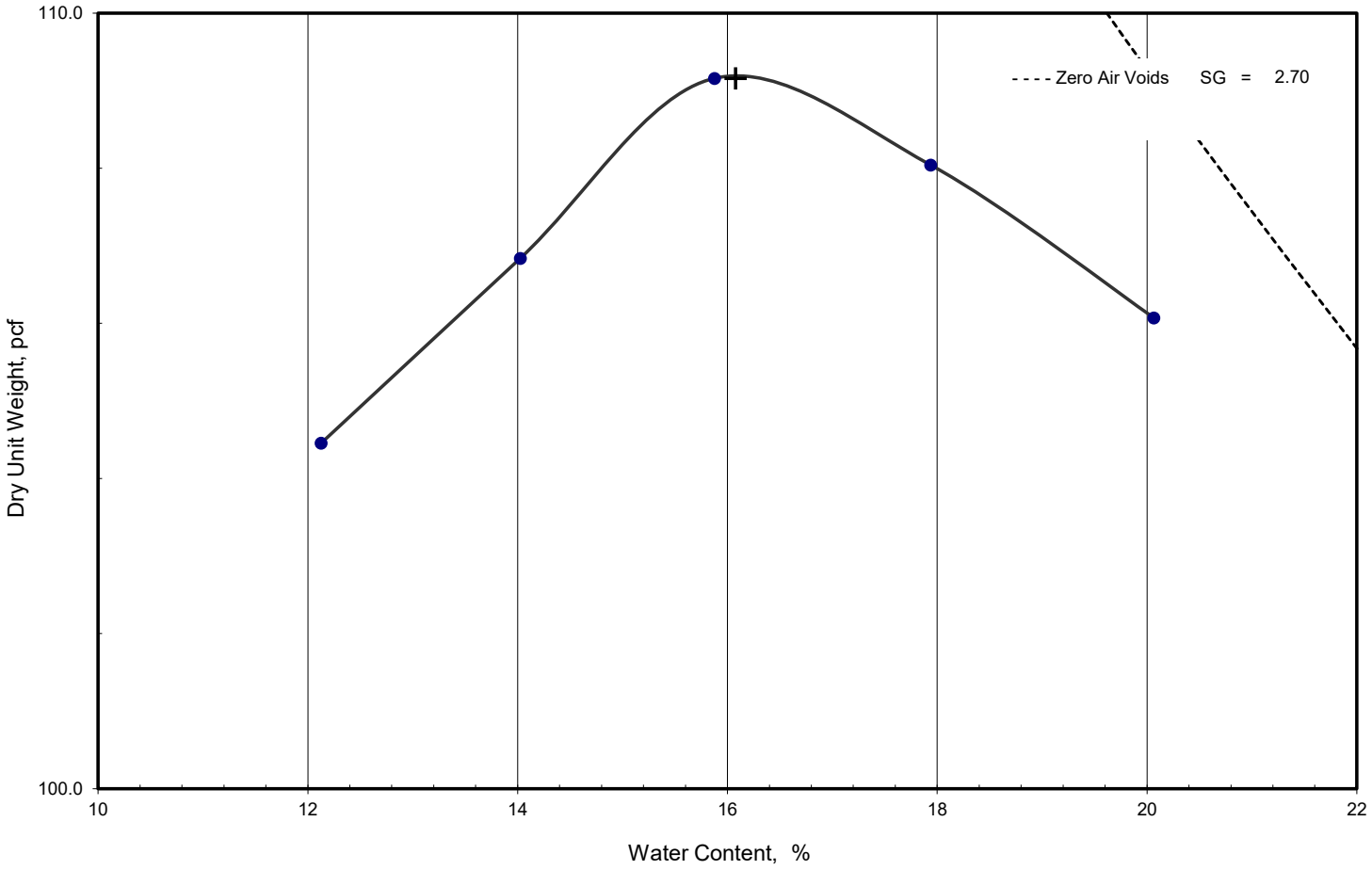
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-7/8
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-248
Date Reported: 7/23/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **16.1** | % |
| **Maximum Dry Unit Weight** | | **109.2** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | |
|---|---|
| Preparation | ASTM moist preparation |
| Type of rammer | Mechanical - circular face |
| Test Specfication / Method | ASTM D698-12e2-method A |
| Specific gravity - D854 water pycnometer | 2.70 Historical |
| Coarse Aggregate Specific Gravity - | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

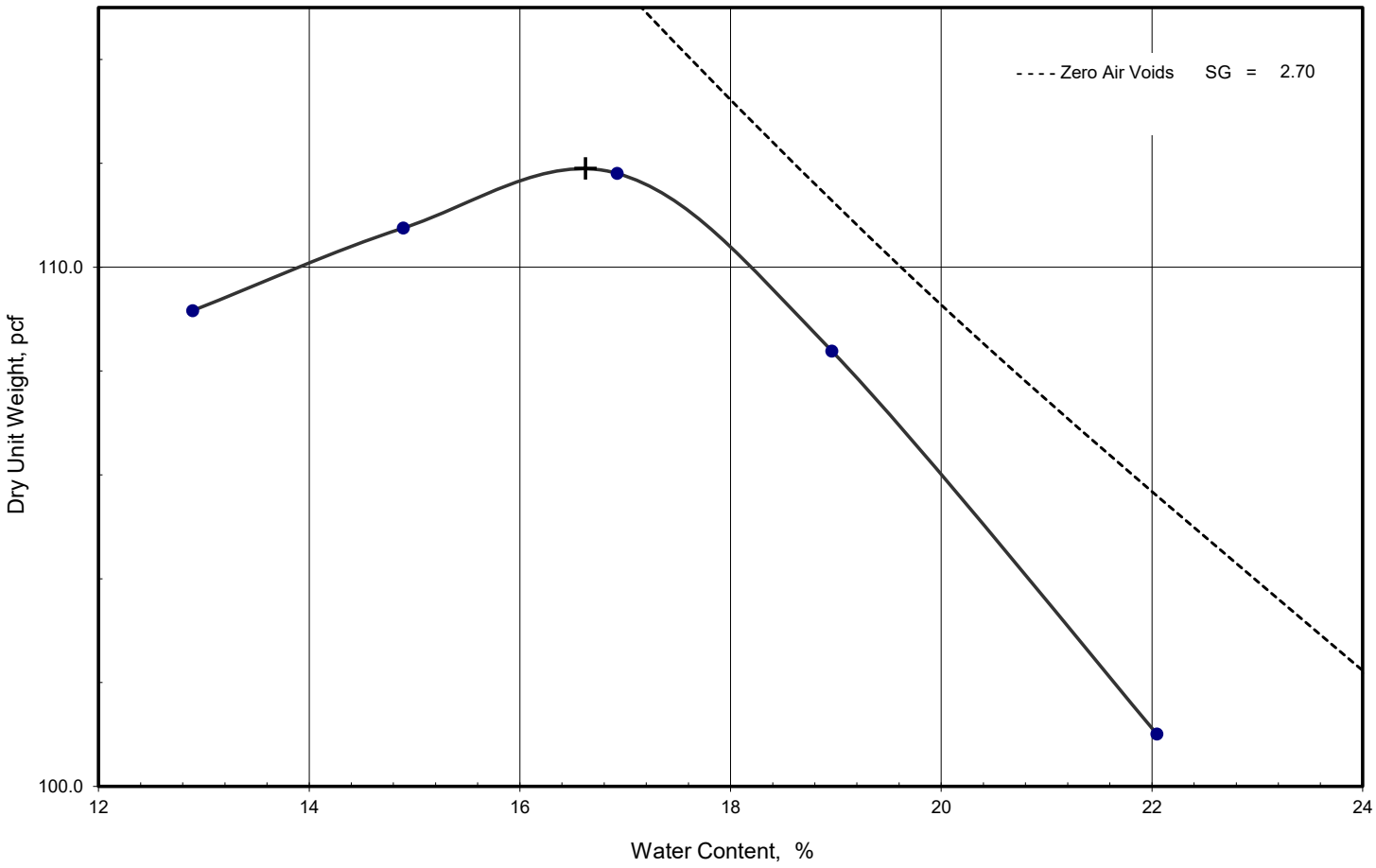
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-10/11
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 8
Sample No.: D3S-261
Date Reported: 7/23/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| OTorres | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil
# Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **16.6** | % |
| **Maximum Dry Unit Weight** | | **111.9** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

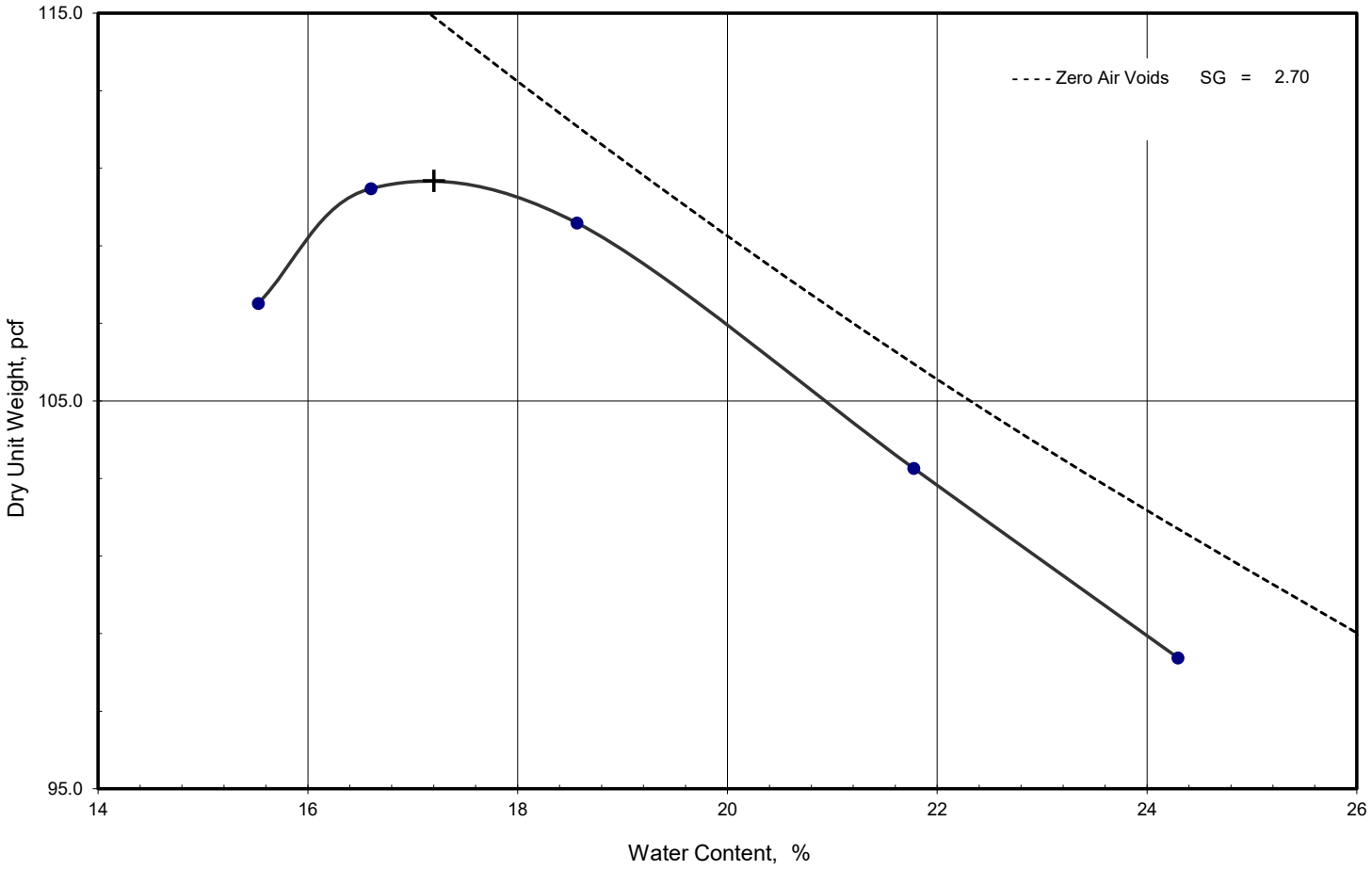
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-1/4
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-245
Date Reported: 7/22/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **17.2** | % |
| **Maximum Dry Unit Weight** | | **110.7** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

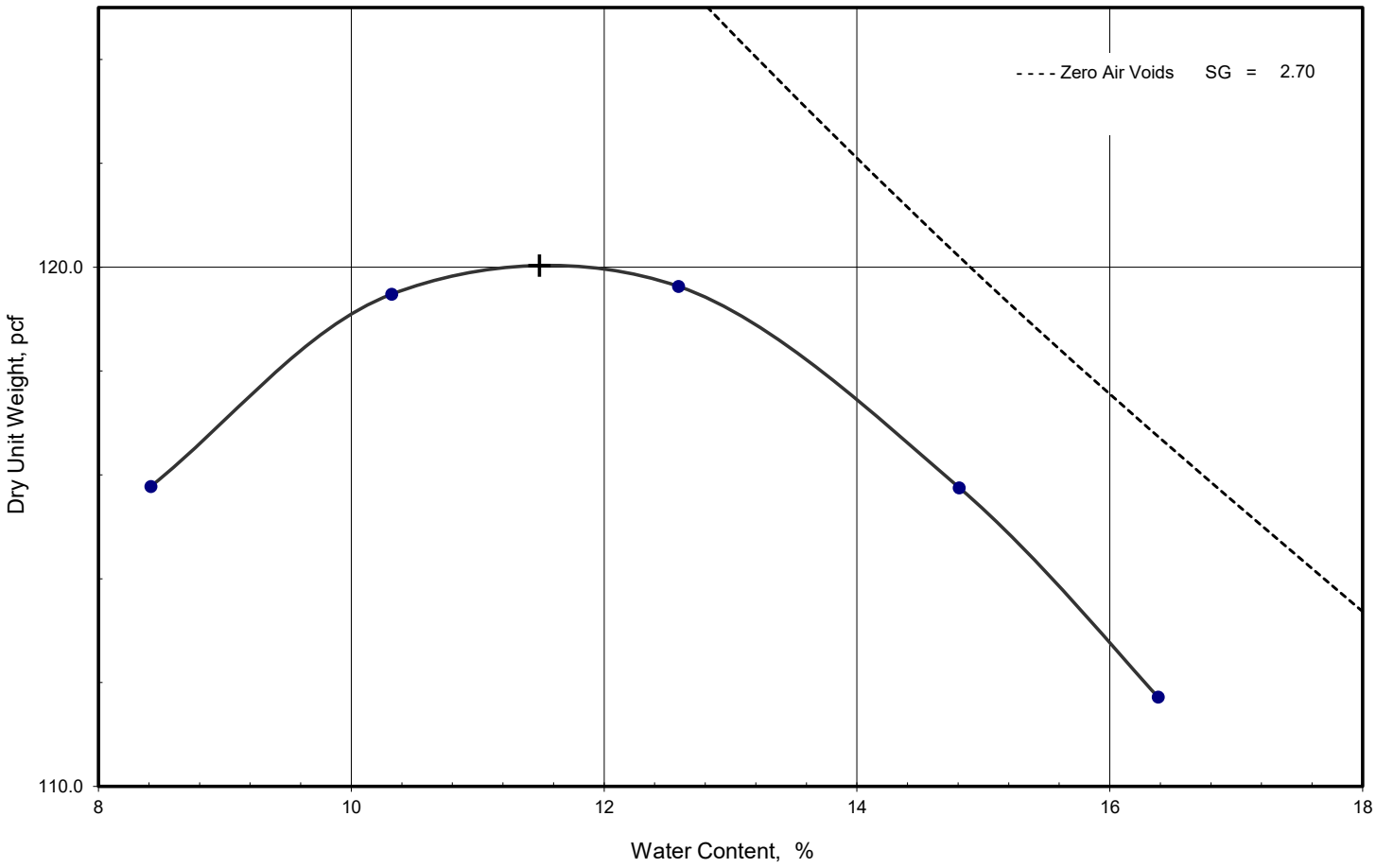
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-2/3
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-246
Date Reported: 7/22/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil
# Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **11.5** | % |
| **Maximum Dry Unit Weight** | | **120.0** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

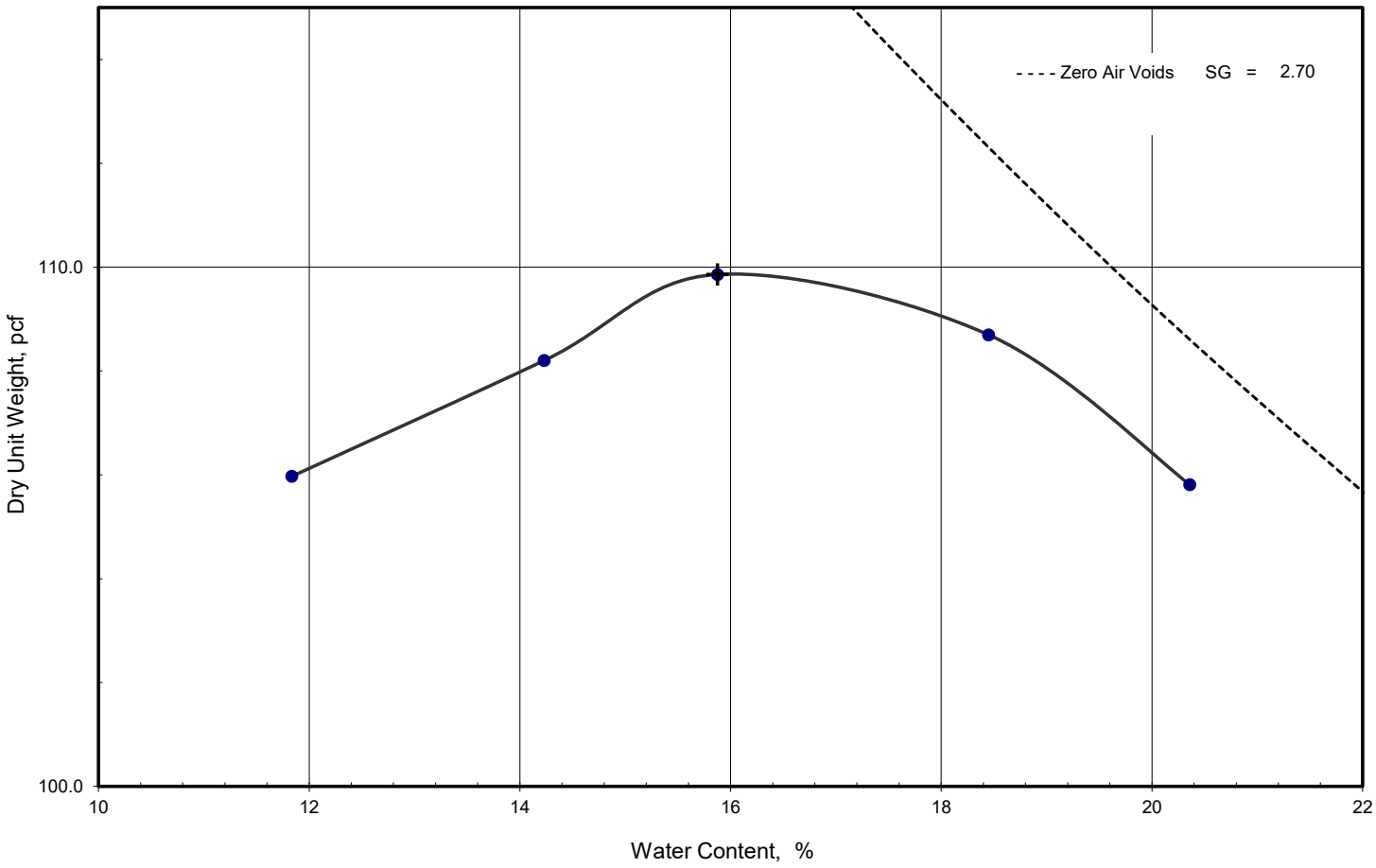
Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-5/6
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-247
Date Reported: 7/22/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

# Laboratory Compaction Characteristics of Soil Using Standard Effort




| | | | |
|---|---|---|---|
| **Optimum Moisture Content** | | **15.9** | % |
| **Maximum Dry Unit Weight** | | **109.9** | pcf |
| Cumulative material retained on: | 3/4 in. sieve | 0.0 | % |
| | 3/8 in. sieve | | % |
| | #4 sieve | | % |

| | | |
|---|---|---|
| Preparation | ASTM moist preparation | |
| Type of rammer | Mechanical - circular face | |
| Test Specfication / Method | ASTM D698-12e2-method A | |
| Specific gravity - D854 water pycnometer | 2.70 | Historical |
| Coarse Aggregate Specific Gravity - | | |

| Soil Description | Nat. Moist. % | Liquid Limit | Plasticity Index | %< #200 | USCS | AASHTO |
|---|---|---|---|---|---|---|
| CL | | | | | | |

Project: Proposed Cloud HQ Supplemental Testing
Client: CloudHQ
Sample / Source: E-7/8
Test Reference/No.:

Project No.: 16:13881-D
Depth (ft.): 1 - 5
Sample No.: D3S-248
Date Reported: 7/22/2025

| Office / Lab | Address | Office Number / Fax |
|---|---|---|
| ECS Midwest LLC - Chicago | 1575 Barclay Boulevard<br>Buffalo Grove, IL 60089 | (847)279-0366<br>(847)279-0369 |

| Tested by | Checked by | Approved by | Date Received | Remarks |
|---|---|---|---|---|
| NCocic | JSutton | JSutton | | |

## Appendix D – Supplemental Documents

Other Supplemental Documents

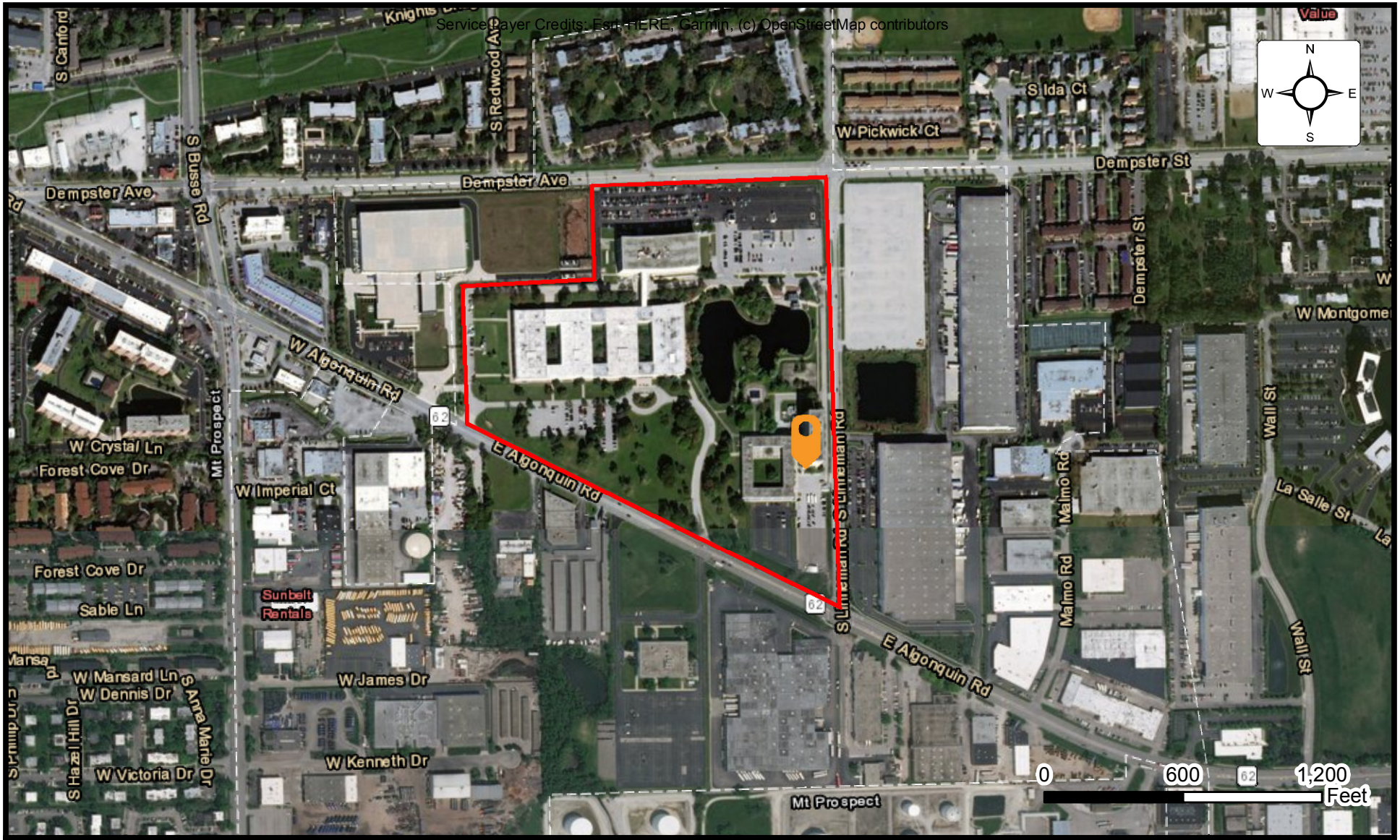
# APPENDIX D

## ECS Report No. 13881

## August 30, 2021

# APPENDIX A - Drawings & Reports

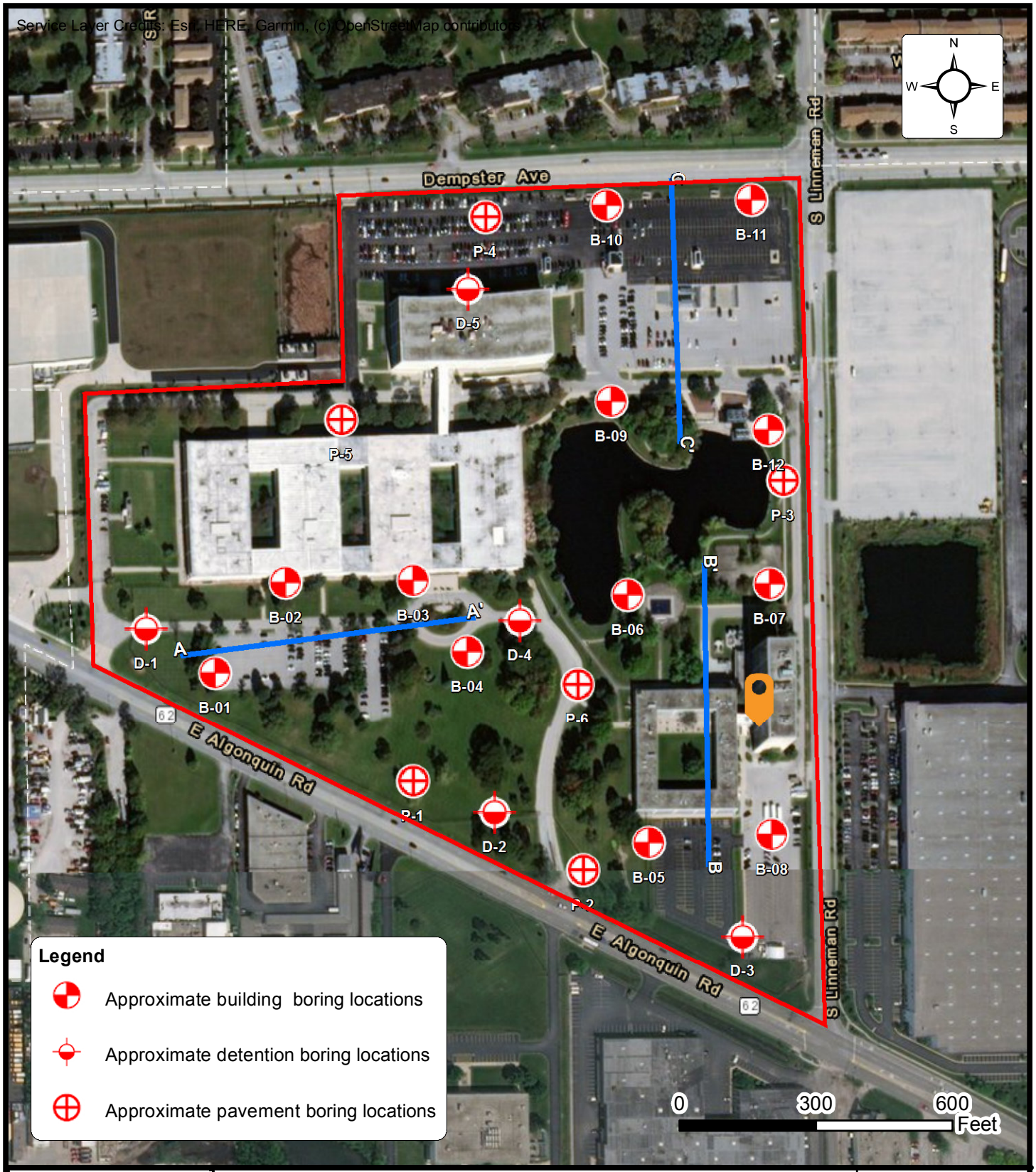
Site Location Diagram
Boring Location Diagram




# SITE LOCATION DIAGRAM
# CLOUD HQ - MOUNT PROSPECT, IL

**1200 EAST ALGONQUIN ROAD, MT PROSPECT, ILLINOIS**
**CLOUD HQ**

| | |
|---|---|
| ENGINEER | KSC |
| SCALE | AS NOTED |
| PROJECT NO. | 16:13881 |
| SHEET | 1 OF 1 |
| DATE | 8/9/2021 |




# BORING LOCATION DIAGRAM
# CLOUD HQ - MOUNT PROSPECT, IL

**1200 EAST ALGONQUIN ROAD, MT PROSPECT,**

**CLOUD HQ**

| | |
|---|---|
| ENGINEER | KSC |
| SCALE | AS NOTED |
| PROJECT NO. | 16:13881 |
| SHEET | 1 OF 1 |
| DATE | 8/17/2021 |

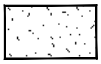
# APPENDIX B - Field & Laboratory Operations

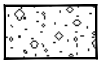
Reference Notes for Boring Logs
Boring Logs B-1 through B-12, D-1 through D-5 and P-1 through P-6
Generalized Subsurface Soil Profile
Subsurface Exploration Procedures:  SPT
Laboratory Testing Procedures: Index Testing

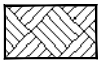
# REFERENCE NOTES FOR BORING LOGS

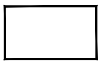
## MATERIAL[1,2]

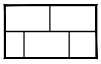

ASPHALT


CONCRETE


GRAVEL

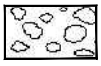

TOPSOIL

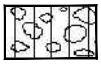

VOID


BRICK

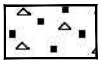

AGGREGATE BASE COURSE

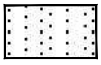

**GW** **WELL-GRADED GRAVEL**
gravel-sand mixtures, little or no fines

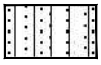

**GP** **POORLY-GRADED GRAVEL**
gravel-sand mixtures, little or no fines

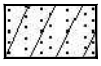

**GM** **SILTY GRAVEL**
gravel-sand-silt mixtures

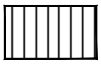

**GC** **CLAYEY GRAVEL**
gravel-sand-clay mixtures

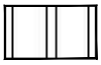

**SW** **WELL-GRADED SAND**
gravelly sand, little or no fines


**SP** **POORLY-GRADED SAND**
gravelly sand, little or no fines


**SM** **SILTY SAND**
sand-silt mixtures

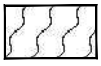

**SC** **CLAYEY SAND**
sand-clay mixtures

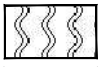

**ML** **SILT**
non-plastic to medium plasticity

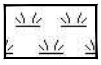

**MH** **ELASTIC SILT**
high plasticity


**CL** **LEAN CLAY**
low to medium plasticity


**CH** **FAT CLAY**
high plasticity


**OL** **ORGANIC SILT or CLAY**
non-plastic to low plasticity


**OH** **ORGANIC SILT or CLAY**
high plasticity


**PT** **PEAT**
highly organic soils

## DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

| | | | |
|---|---|---|---|
| SS | Split Spoon Sampler | PM | Pressuremeter Test |
| ST | Shelby Tube Sampler | RD | Rock Bit Drilling |
| WS | Wash Sample | RC | Rock Core, NX, BX, AX |
| BS | Bulk Sample of Cuttings | REC | Rock Sample Recovery % |
| PA | Power Auger (no sample) | RQD | Rock Quality Designation % |
| HSA | Hollow Stem Auger | | |

## PARTICLE SIZE IDENTIFICATION

| DESIGNATION | | PARTICLE SIZES |
|---|---|---|
| Boulders | | 12 inches (300 mm) or larger |
| Cobbles | | 3 inches to 12 inches (75 mm to 300 mm) |
| Gravel: | Coarse | ¾ inch to 3 inches (19 mm to 75 mm) |
| | Fine | 4.75 mm to 19 mm (No. 4 sieve to ¾ inch) |
| Sand: | Coarse | 2.00 mm to 4.75 mm (No. 10 to No. 4 sieve) |
| | Medium | 0.425 mm to 2.00 mm (No. 40 to No. 10 sieve) |
| | Fine | 0.074 mm to 0.425 mm (No. 200 to No. 40 sieve) |
| Silt & Clay ("Fines") | | <0.074 mm (smaller than a No. 200 sieve) |

## COHESIVE SILTS & CLAYS

| UNCONFINED COMPRESSIVE STRENGTH, $Q_P$[4] | SPT[5] (BPF) | CONSISTENCY[7] (COHESIVE) |
|---|---|---|
| <0.25 | <3 | Very Soft |
| 0.25 - <0.50 | 3 - 4 | Soft |
| 0.50 - <1.00 | 5 - 8 | Firm |
| 1.00 - <2.00 | 9 - 15 | Stiff |
| 2.00 - <4.00 | 16 - 30 | Very Stiff |
| 4.00 - 8.00 | 31 - 50 | Hard |
| >8.00 | >50 | Very Hard |

## GRAVELS, SANDS & NON-COHESIVE SILTS

| SPT[5] | DENSITY |
|---|---|
| <5 | Very Loose |
| 5 - 10 | Loose |
| 11 - 30 | Medium Dense |
| 31 - 50 | Dense |
| >50 | Very Dense |

| RELATIVE AMOUNT[7] | COARSE GRAINED (%)[8] | FINE GRAINED (%)[8] |
|---|---|---|
| Trace | ≤5 | ≤5 |
| With | 10 - 20 | 10 - 25 |
| Adjective *(ex: "Silty")* | 25 - 45 | 30 - 45 |

## WATER LEVELS[6]

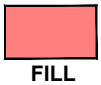

WL (First Encountered)


WL (Completion)


WL (Seasonal High Water)


WL (Stabilized)

## FILL AND ROCK


FILL


POSSIBLE FILL


PROBABLE FILL


ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.


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| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-01** | **1 of 2** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | LOSS OF CIRCULATION |
| NORTHING: **1955273.2** | EASTING: **1086923.3** | STATION: | SURFACE ELEVATION: **674.5** |
| | | | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[5"] | | | |
| | | | | | Concrete Thickness[10"] | | | |
| | S-1 | SS | 18 | 14 | (CL FILL) FILL, LEAN CLAY, trace gravel, trace sand, dark brown, moist, very stiff | | | 1-2-3 (5) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, brown, moist, very stiff to hard | | 670 | 5-6-7 (13) |
| 5 | S-3 | SS | 18 | 14 | | | | 5-7-7 (14) |
| | S-4 | SS | 18 | 18 | | | 665 | 4-5-8 (13) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, stiff | | | 2-3-4 (7) |
| | S-6 | SS | 18 | 18 | (ML) SILT, gray, moist, medium dense | | 660 | 5-6-6 (12) |
| 15 | | | | | | | | |
| | S-7 | SS | 18 | 16 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, stiff to very stiff, Sand seams | | 655 | 3-4-4 (8) |
| 20 | | | | | | | | |
| | S-8 | SS | 18 | 18 | | | 650 | 3-3-4 (7) |
| 25 | | | | | | | | |
| | S-9 | SS | 18 | 18 | | | 645 | 4-5-6 (11) |
| 30 | | | | | | | | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

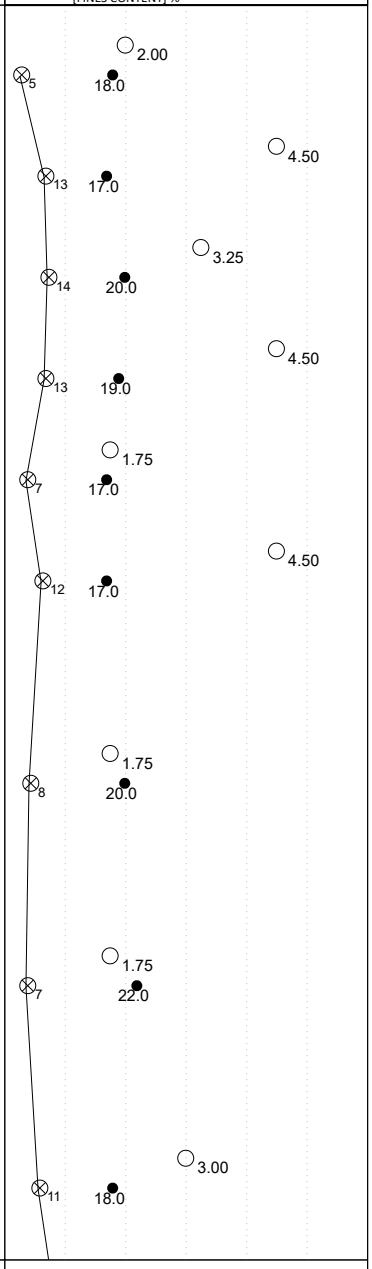
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered) **DRY** | BORING STARTED: **Jul 20 2021** | | CAVE IN DEPTH: |
| WL (Completion) **DRY** | BORING COMPLETED: **Jul 20 2021** | | HAMMER TYPE: **Auto** |
| WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-01** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955273.2** | **1086923.3** | | **674.5** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, stiff to very stiff, Sand seams | | | |
| 35 | S-10 | SS | 18 | 18 | (CL) SANDY LEAN CLAY, gray, moist, medium dense<br><br>Occasional sand seams. | | 640 | 8-10-11 (21) |
| 40 | S-11 | SS | 18 | 18 | (SP-SM) FINE TO MEDIUM SAND with SILT, trace gravel, brownish gray, moist, medium dense | | 635 | 10-6-8 (14) |
| | | | | | **END OF DRILLING AT 40.0 FT** | | | |
| 45 | | | | | | | 630 | |
| 50 | | | | | | | 625 | |
| 55 | | | | | | | 620 | |
| 60 | | | | | | | 615 | |

Plastic Limit Water Content Liquid Limit

**STANDARD PENETRATION BLOWS/FT**

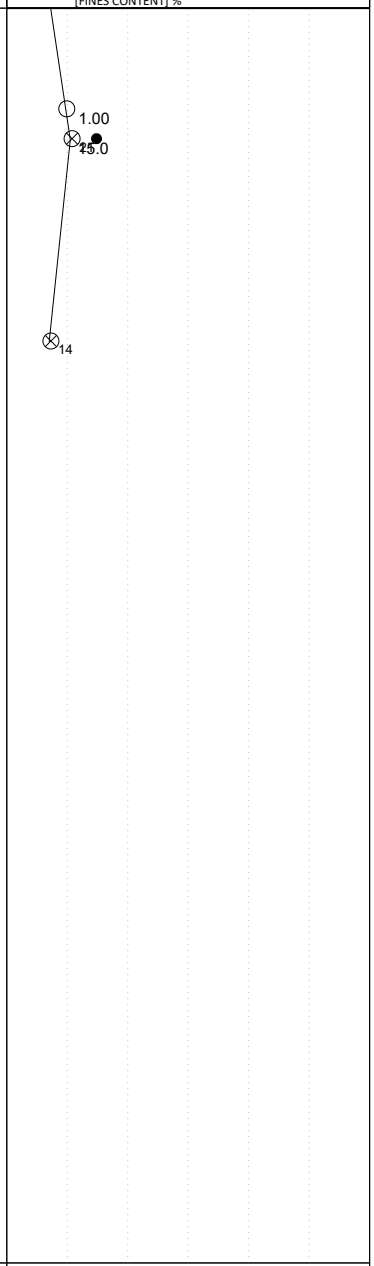
**ROCK QUALITY DESIGNATION & RECOVERY**

**RQD**

**REC**

**CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) **DRY** | BORING STARTED: **Jul 20 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) **DRY** | BORING COMPLETED: **Jul 20 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-02** | **1 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955471.4** | **1087078.6** | | **673.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Topsoil Thickness[12"] | | 673 | |
| | S-1 | SS | 18 | 16 | (CL) LEAN CLAY with SAND, trace gravel, brown, moist, hard | | | 4-5-5 (10) |
| | S-2 | SS | 18 | 18 | | | | 4-5-6 (11) |
| 5 | S-3 | SS | 18 | 18 | | | 668 | 4-6-8 (14) |
| | S-4 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, hard to very stiff | | | 4-5-5 (10) |
| 10 | S-5 | SS | 18 | 18 | Sand lenses from 28 to 30 ft. | | 663 | 3-4-5 (9) |
| | S-6 | SS | 18 | 18 | | | | 3-4-4 (8) |
| 15 | | | | | | | 658 | |
| | S-7 | SS | 18 | 18 | | | | 3-4-5 (9) |
| 20 | | | | | | | 653 | |
| | S-8 | SS | 18 | 18 | | | | 3-5-5 (10) |
| 25 | | | | | | | 648 | |
| | S-9 | SS | 18 | 18 | | | | 3-4-5 (9) |
| 30 | | | | | | | 643 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

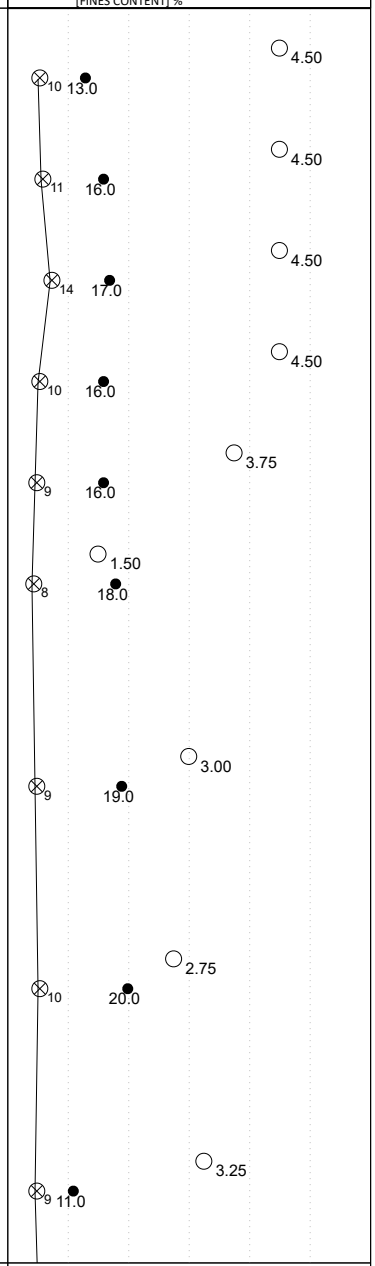
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered) **38.00** | BORING STARTED: **Jul 20 2021** | CAVE IN DEPTH: **53.10** | |
| WL (Completion) **48.50** | BORING COMPLETED: **Jul 20 2021** | HAMMER TYPE: **Auto** | |
| WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-02** | **2 of 3** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | LOSS OF CIRCULATION |
| NORTHING: **1955471.4** | EASTING: **1087078.6** | STATION: | SURFACE ELEVATION: **673.0** |
| | | | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, hard to very stiff<br>Sand lenses from 28 to 30 ft. | | 638 | 4-5-6 (11) |
| 40 | S-11 | SS | 18 | 18 | (SP-SM) FINE TO MEDIUM SAND with SILT, gray, moist, medium dense | ▽ | 633 | 5-6-7 (13) |
| 45 | S-12 | SS | 18 | 16 | | | 628 | 6-11-15 (26) |
| 50 | S-13 | SS | 18 | 18 | (ML) SILT WITH GRAVEL, gray, wet, dense | ▼ | 623 | 12-18-29 (47) |
| 55 | S-14 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, stiff | | 618 | 5-7-11 (18) |
| 60 | S-15 | SS | 18 | 16 | (SM) SILTY FINE SAND, gray, moist, medium dense<br>(WR) WEATHERED LIMESTONE SAMPLED AS [Weathered LIMESTONE] | | 613 | 8-11-14 (25) |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

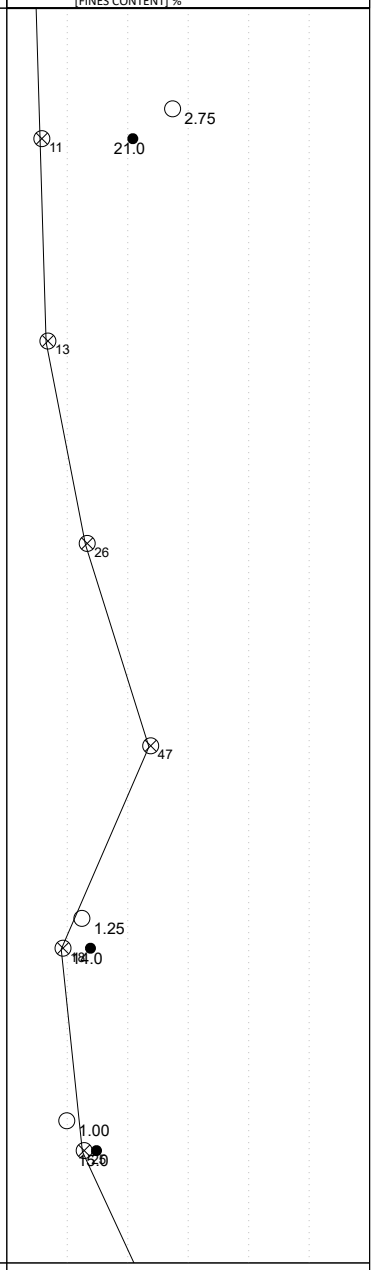
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **38.00** | BORING STARTED: **Jul 20 2021** | | CAVE IN DEPTH: **53.10** |
| ▼ WL (Completion) | **48.50** | BORING COMPLETED: **Jul 20 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-02** | **3 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955471.4** | **1087078.6** | | **673.0** |

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

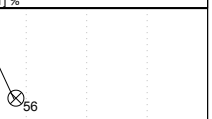
RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 65 | S-16 | SS | 18 | 12 | (WR) WEATHERED LIMESTONE SAMPLED AS [Weathered LIMESTONE] | | 608 | 16-28-28 (56) |
| | | | | | **END OF DRILLING AT 65.0 FT** | | | |
| 70 | | | | | | | 603 | |
| 75 | | | | | | | 598 | |
| 80 | | | | | | | 593 | |
| 85 | | | | | | | 588 | |
| 90 | | | | | | | 583 | |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **38.00** | BORING STARTED: | **Jul 20 2021** | CAVE IN DEPTH: | **53.10** |
| ▼ WL (Completion) | **48.50** | BORING COMPLETED: | **Jul 20 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-03** | **1 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955475.5** | **1087359.2** | | **673.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil Thickness[14"] | | | |
| | S-1 | SS | 18 | 12 | (CL FILL) FILL, SANDY CLAY, trace gravel, trace sand, dark brown, moist, hard | | | 5-6-8 (14) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY with SAND, trace gravel, brown, moist, hard | | 668 | 5-7-6 (13) |
| 5 | S-3 | SS | 18 | 18 | | | | 5-6-9 (15) |
| | S-4 | SS | 18 | 18 | | | | 5-6-8 (14) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY with SAND, trace gravel, gray, moist, very stiff | | 663 | 4-5-6 (11) |
| | S-6 | SS | 18 | 18 | | | | 3-3-4 (7) |
| 15 | | | | | | | 658 | |
| | S-7 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, stiff to firm | | | 2-2-3 (5) |
| 20 | | | | | | | 653 | |
| | S-8 | SS | 18 | 18 | | | | WOH-1-1 (2) |
| 25 | | | | | | | 648 | |
| | S-9 | SS | 18 | 18 | | | | WOH-WOH-WOH (0) |
| 30 | | | | | | | 643 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

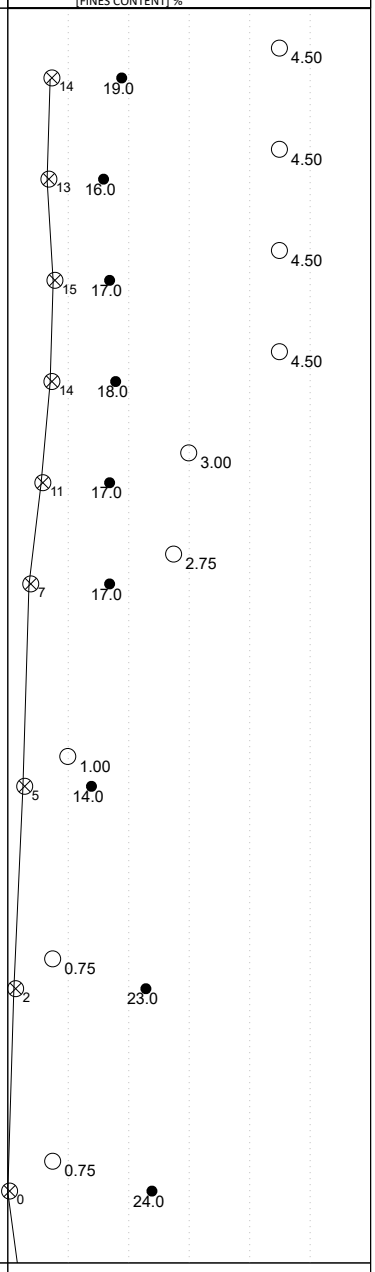
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| WL (First Encountered) | **38.50** | BORING STARTED: **Jul 21 2021** | | CAVE IN DEPTH: |
| WL (Completion) | **38.70** | BORING COMPLETED: **Jul 21 2021** | | HAMMER TYPE: **Auto** |
| WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-03** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955475.5** | **1087359.2** | | **673.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, firm | | | |
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, very stiff | | 638 | 3-4-5 (9) |
| 40 | S-11 | SS | 18 | 18 | (SM) SILTY FINE SAND, trace gravel, gray, moist, medium dense | ▼ | 633 | 5-7-9 (16) |
| | | | | | **END OF DRILLING AT 40.0 FT** | | | |
| 45 | | | | | | | 628 | |
| 50 | | | | | | | 623 | |
| 55 | | | | | | | 618 | |
| 60 | | | | | | | 613 | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

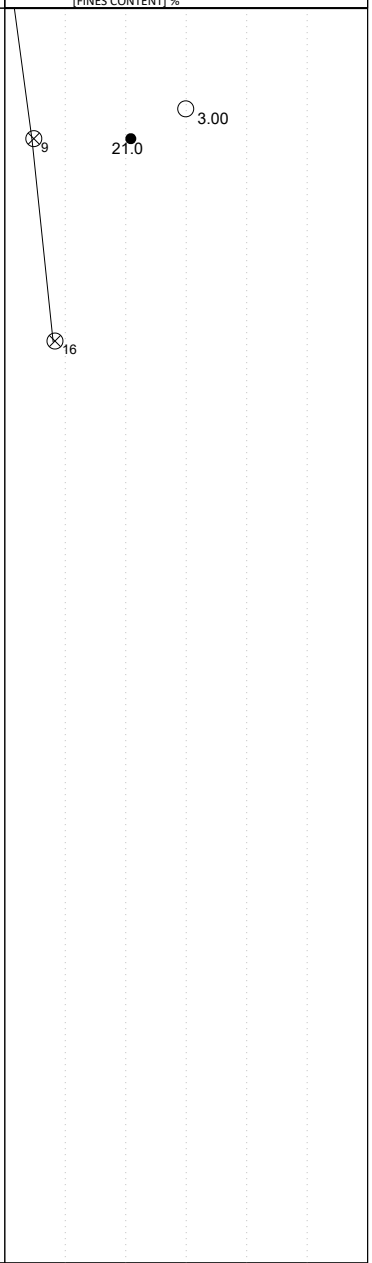
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **38.50** | BORING STARTED: **Jul 21 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **38.70** | BORING COMPLETED: **Jul 21 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-04** | **1 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955320.1** | **1087477.3** | | **672.5** |

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

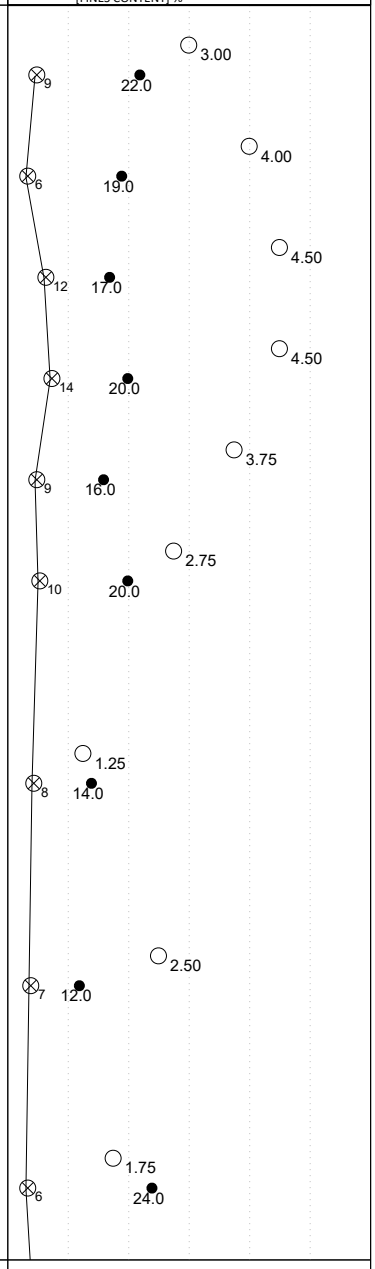
RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil Thickness[16"] | | | |
| | S-1 | SS | 18 | 8 | (CL FILL) FILL, LEAN CLAY, trace gravel, trace sand, dark brown, moist, very stiff | | | 3-4-5 (9) |
| | S-2 | SS | 18 | 14 | (CL) LEAN CLAY, trace gravel, trace sand, brown, moist, hard | | 668 | 2-3-3 (6) |
| 5 | S-3 | SS | 18 | 18 | | | | 5-5-7 (12) |
| | S-4 | SS | 18 | 18 | | | 663 | 6-7-7 (14) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, stiff to very stiff | | | 3-4-5 (9) |
| | S-6 | SS | 18 | 18 | | | 658 | 4-5-5 (10) |
| 15 | S-7 | SS | 18 | 18 | | | 653 | 2-3-5 (8) |
| 20 | S-8 | SS | 18 | 18 | | | 648 | 2-3-4 (7) |
| 25 | S-9 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, firm to very stiff | | 643 | 3-3-3 (6) |
| 30 | | | | | | | | |




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered) **38.00** | BORING STARTED: **Jul 21 2021** | CAVE IN DEPTH: **51.60** | |
| WL (Completion) **31.50** | BORING COMPLETED: **Jul 21 2021** | HAMMER TYPE: **Auto** | |
| WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-04** | **2 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

BOTTOM OF CASING

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955320.1** | **1087477.3** | | **672.5** |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, firm to very stiff | ▼ | 638 | 3-5-5 (10) |
| 40 | S-11 | SS | 18 | 18 | | ▽ | 633 | 4-6-7 (13) |
| 45 | S-12 | SS | 18 | 18 | | | 628 | 4-5-5 (10) |
| 50 | S-13 | SS | 18 | 14 | | | 623 | 4-5-9 (14) |
| 55 | S-14 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, dense | | 618 | 11-16-18 (34) |
| 60 | S-15 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, hard | | 613 | 19-28-32 (60) |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

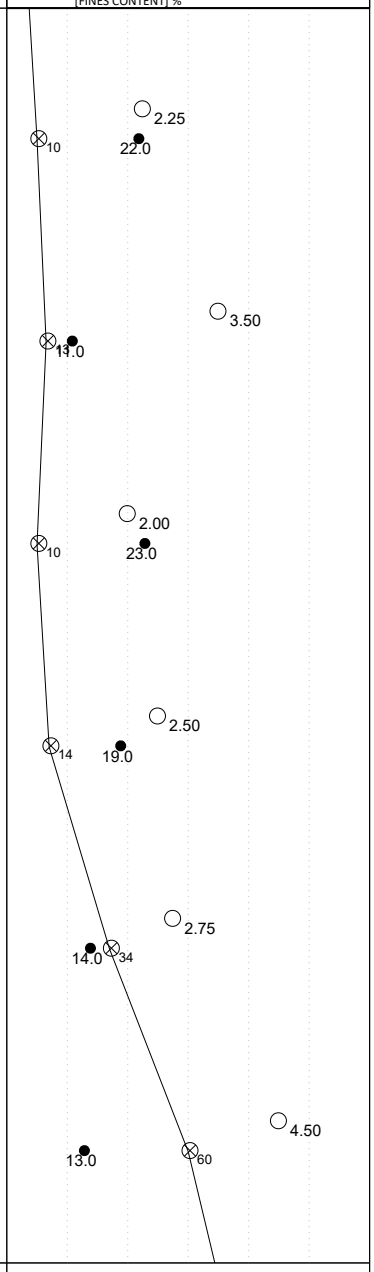
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **38.00** | BORING STARTED: **Jul 21 2021** | | CAVE IN DEPTH: **51.60** |
| ▼ WL (Completion) | **31.50** | BORING COMPLETED: **Jul 21 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-04** | **3 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955320.1** | **1087477.3** | | **672.5** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 65 | S-16 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, hard<br>(CL) SANDY CLAY, trace gravel, gray, moist, hard<br>**END OF DRILLING AT 65.0 FT** | | 608 | 18-30-46 (76) |
| 70 | | | | | | | 603 | |
| 75 | | | | | | | 598 | |
| 80 | | | | | | | 593 | |
| 85 | | | | | | | 588 | |
| 90 | | | | | | | 583 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ **STANDARD PENETRATION BLOWS/FT**

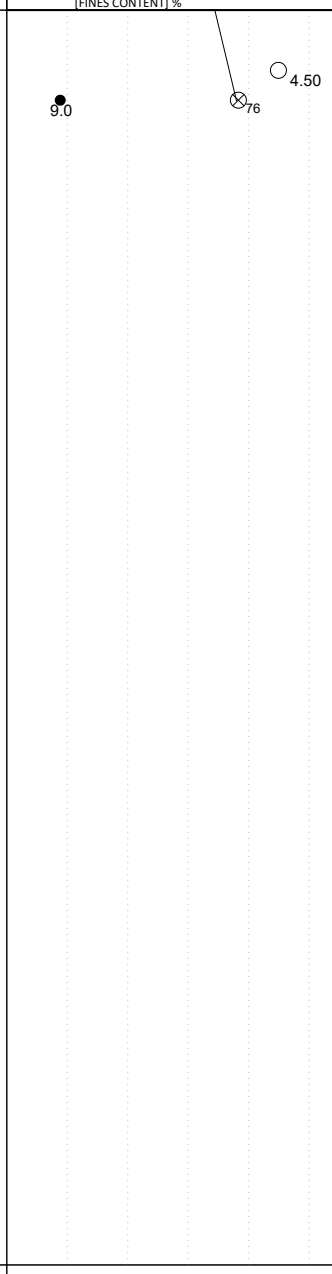
**ROCK QUALITY DESIGNATION & RECOVERY**

**RQD**

**REC**

○ **CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **38.00** | BORING STARTED: | **Jul 21 2021** | CAVE IN DEPTH: | **51.60** |
| ▼ WL (Completion) | **31.50** | BORING COMPLETED: | **Jul 21 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-05** | **1 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954899.5** | **1087875.8** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[5"] | | | |
| | | | | | Gravel Thickness[12"] | | | |
| | S-1 | SS | 18 | 18 | (CL FILL) FILL, LEAN CLAY, dark brown, moist, very stiff | | | 2-2-3 (5) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, brown, moist, very stiff to hard | | 667 | 2-3-3 (6) |
| 5 | S-3 | SS | 18 | 16 | | | | 4-4-4 (8) |
| | S-4 | SS | 18 | 18 | | | | 4-5-6 (11) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY with SAND, trace gravel, gray, moist, very stiff | | 662 | 5-5-6 (11) |
| | S-6 | SS | 18 | 14 | | | | 4-4-5 (9) |
| 15 | | | | | | ▼ | 657 | |
| | S-7 | SS | 18 | 18 | | | | 2-3-4 (7) |
| 20 | | | | | | | 652 | |
| | S-8 | SS | 18 | 16 | | | | 2-3-4 (7) |
| 25 | | | | | | ▽ | 647 | |
| | S-9 | SS | 18 | 14 | (SM) SILTY FINE TO MEDIUM SAND, dark gray, wet, loose | | | 2-3-3 (6) |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

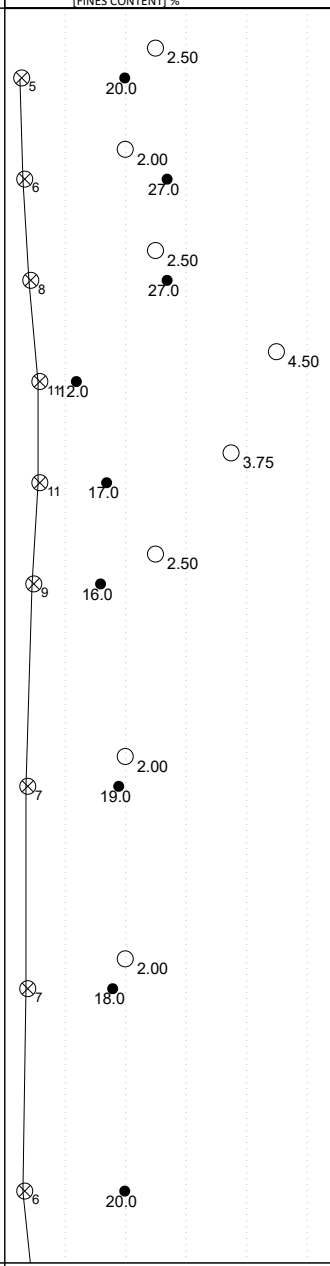
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) | **27.00** | BORING STARTED: **Jul 22 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **17.30** | BORING COMPLETED: **Jul 22 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** / LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-05** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

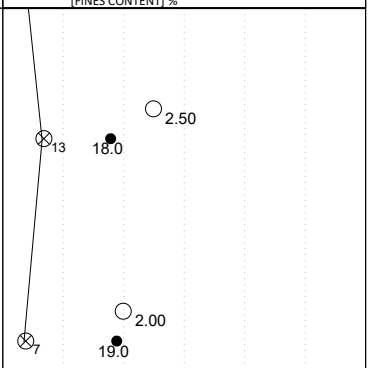
SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954899.5** | **1087875.8** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (SM) SILTY FINE TO MEDIUM SAND, dark gray, wet, loose | | | |
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff | | 637 | 5-6-7 (13) |
| 40 | S-11 | SS | 18 | 16 | **END OF DRILLING AT 40.0 FT** | | 632 | 3-3-4 (7) |
| 45 | | | | | | | 627 | |
| 50 | | | | | | | 622 | |
| 55 | | | | | | | 617 | |
| 60 | | | | | | | 612 | |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **27.00** | BORING STARTED: | **Jul 22 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **17.30** | BORING COMPLETED: | **Jul 22 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-06** | **1 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955444.1** | **1087830.4** | | **668.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 12 | (SM FILL) FILL, SILTY SAND, trace gravel, brown, moist, loose | | | 3-4-2 (6) |
| | S-2 | SS | 18 | 14 | | | | 3-3-3 (6) |
| 5 | S-3 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, brown, moist, very stiff | | 663 | 3-4-5 (9) |
| | S-4 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, stiff | | | 2-3-3 (6) |
| 10 | S-5 | SS | 18 | 16 | (SM/SC) SILTY/CLAYEY SAND WITH GRAVEL, brown and gray, moist, medium dense | ▽ | 658 | 4-5-6 (11) |
| | S-6 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, stiff to very stiff | | | 3-3-4 (7) |
| 15 | | | | | | | 653 | |
| 20 | S-7 | SS | 18 | 18 | | | 648 | 3-5-7 (12) |
| | S-8 | SS | 18 | 18 | | ▼ | | 3-4-5 (9) |
| 25 | | | | | | | 643 | |
| 30 | S-9 | SS | 18 | 12 | | | 638 | 4-5-5 (10) |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

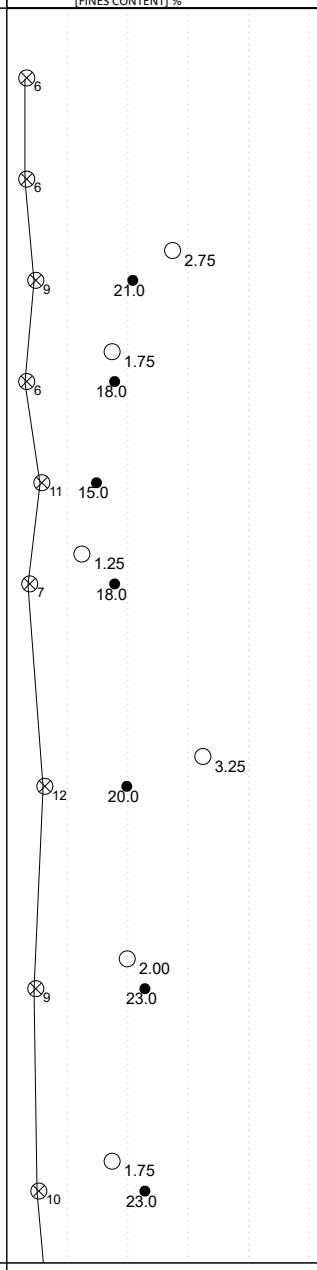
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **12.00** | BORING STARTED: | **Jul 22 2021** | CAVE IN DEPTH: | **34.50** |
| ▼ WL (Completion) | **23.50** | BORING COMPLETED: | **Jul 22 2021** | HAMMER TYPE: | **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-06** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955444.1** | **1087830.4** | | **668.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) LEAN CLAY, trace gravel, gray, moist, stiff to very stiff | | | |
| 35 | S-10 | SS | 18 | 16 | (SP-SM) FINE TO MEDIUM SAND with SILT, trace gravel, gray, moist, medium dense | | 633 | 5-7-9 (16) |
| | | | | | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, very stiff, | | | |
| 40 | S-11 | SS | 18 | 18 | Possible limestone cobbles at 49 feet | | 628 | 5-7-8 (15) |
| 45 | S-12 | SS | 18 | 18 | | | 623 | 5-7-9 (16) |
| 50 | S-13 | SS | 18 | 12 | | | 618 | 6-40-21 (61) |
| | S-14 | SS | 6 | 0 | | | | 50 |
| 55 | | | | | Refusal encountered at 54.0 feet. **END OF DRILLING AT 54.0 FT** | | 613 | |
| 60 | | | | | | | 608 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

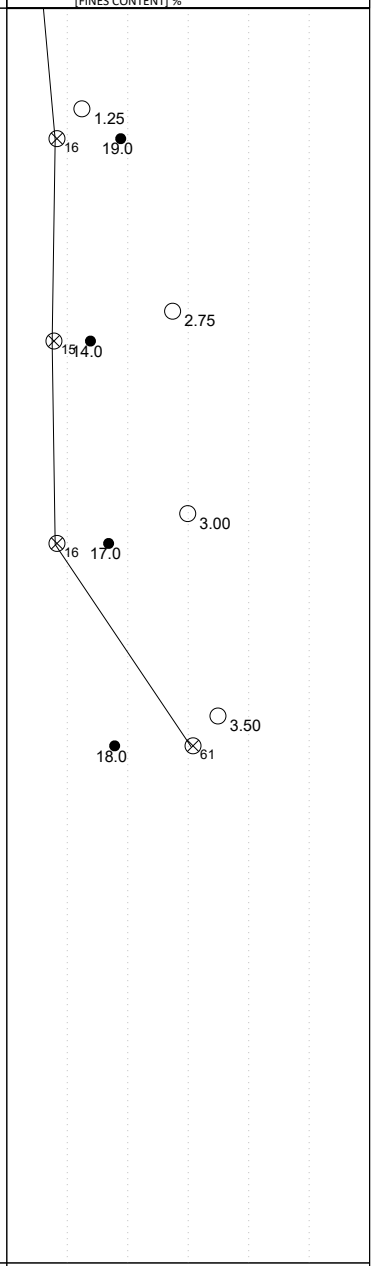
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

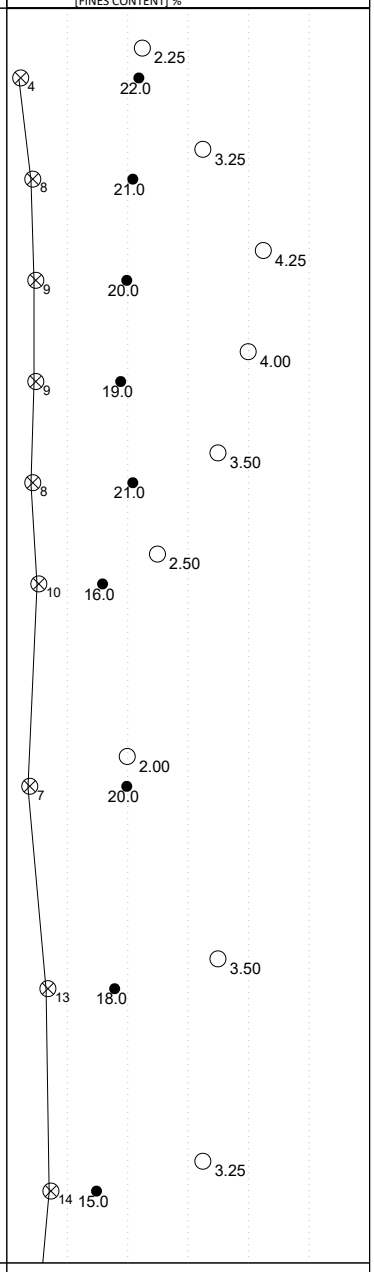
| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **12.00** | BORING STARTED: | **Jul 22 2021** | CAVE IN DEPTH: | **34.50** |
| ▼ WL (Completion) | **23.50** | BORING COMPLETED: | **Jul 22 2021** | HAMMER TYPE: | **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-07** | **1 of 2** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: | | | LOSS OF CIRCULATION |
| **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | |
| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
| **1955468.1** | **1088141.9** | | **667.0** |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | Concrete Thickness[4"] | | | |
| | S-1 | SS | 18 | 14 | (CL FILL) FILL, SANDY CLAY, trace silt, brown, moist, very stiff | | | 2-2-2 (4) |
| | S-2 | SS | 18 | 18 | (CL FILL) FILL, LEAN CLAY, trace gravel, brown and black, moist, very stiff | | | 2-3-5 (8) |
| 5 | | | | | (CL) LEAN CLAY, trace gravel, brown, moist, very stiff to hard | | 662 | |
| | S-3 | SS | 18 | 18 | | | | 3-4-5 (9) |
| | S-4 | SS | 18 | 18 | | | | 4-4-5 (9) |
| 10 | | | | | | | 657 | |
| | S-5 | SS | 18 | 18 | | | | 4-4-4 (8) |
| | S-6 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, very stiff, Occasional sand seams from 18 to 20 ft. | ▽ | | 4-5-5 (10) |
| 15 | | | | | | | 652 | |
| | S-7 | SS | 18 | 18 | | | | 3-3-4 (7) |
| 20 | | | | | | ▼ | 647 | |
| | S-8 | SS | 18 | 18 | | | | 4-6-7 (13) |
| 25 | | | | | | | 642 | |
| | S-9 | SS | 18 | 18 | | | | 5-6-8 (14) |
| 30 | | | | | | | 637 | |

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **15.00** | BORING STARTED: | **Jul 27 2021** | CAVE IN DEPTH: | **36.50** |
| ▼ WL (Completion) | **21.50** | BORING COMPLETED: | **Jul 27 2021** | HAMMER TYPE: | **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-07** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955468.1** | **1088141.9** | | **667.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (CL) LEAN CLAY, trace gravel, trace sand, gray, moist, very stiff, | | | |
| | | | | | Occasional sand seams from 18 to 20 ft. | | | |
| 35 | S-10 | SS | 18 | 18 | (ML) SILT with SAND, gray, moist, loose | | 632 | 4-4-4 (8) |
| | S-11 | SS | 18 | 16 | | | | 10-18-20 (38) |
| 40 | | | | | (SM) SILTY MEDIUM TO COARSE SAND, trace gravel, gray, moist, dense | | 627 | |
| | | | | | **END OF DRILLING AT 40.0 FT** | | | |
| 45 | | | | | | | 622 | |
| 50 | | | | | | | 617 | |
| 55 | | | | | | | 612 | |
| 60 | | | | | | | 607 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

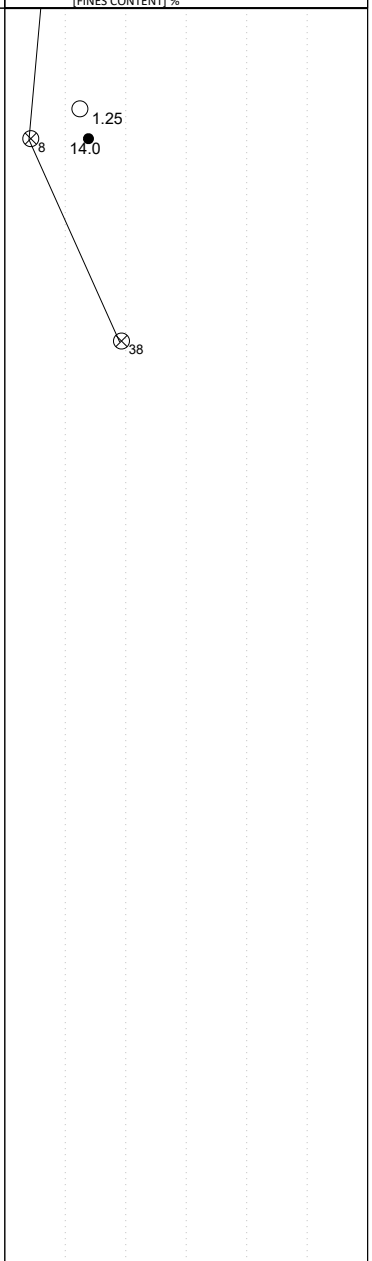
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

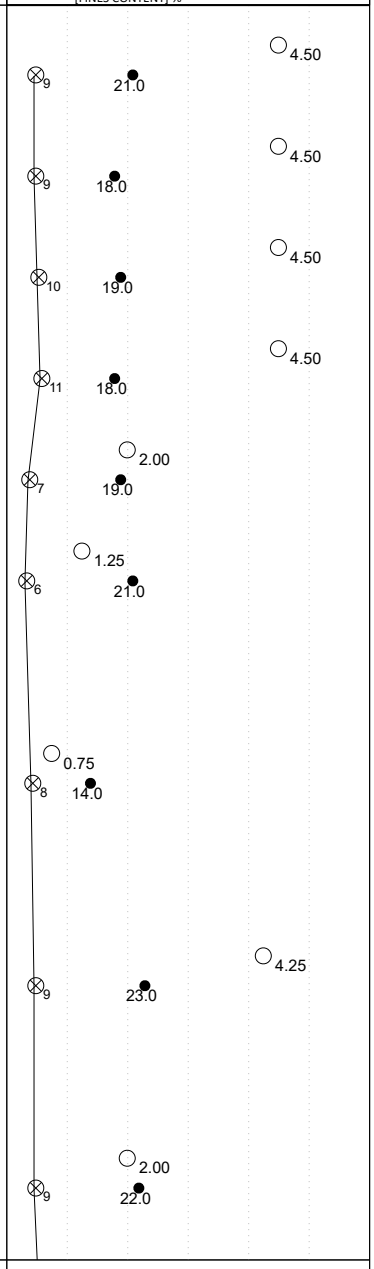
| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **15.00** | BORING STARTED: | **Jul 27 2021** | CAVE IN DEPTH: | **36.50** |
| ▼ WL (Completion) | **21.50** | BORING COMPLETED: | **Jul 27 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-08** | **1 of 3** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: | | | LOSS OF CIRCULATION |
| **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | |
| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
| **1954917.5** | **1088147.1** | | **671.0** |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|
| | | | | | Asphalt Thickness[4.5"] | | |
| | | | | | Gravel Thickness[8"] | | |
| | S-1 | SS | 18 | 16 | (CL POSSIBLE FILL) POSSIBLE FILL, LEAN CLAY with SAND, trace gravel, dark gray to dark brown, moist, hard | | 4-4-5 (9) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY with SAND, trace gravel, brown, moist, hard | 666 | 3-4-5 (9) |
| 5 | S-3 | SS | 18 | 14 | | | 3-4-6 (10) |
| | S-4 | SS | 18 | 18 | | | 4-5-6 (11) |
| 10 | S-5 | SS | 18 | 14 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff to firm | 661 | 2-3-4 (7) |
| | S-6 | SS | 18 | 18 | | | 2-3-3 (6) |
| 15 | | | | | | 656 | |
| | S-7 | SS | 18 | 18 | | | 3-4-4 (8) |
| 20 | | | | | | 651 | |
| | S-8 | SS | 18 | 18 | (CL) LEAN CLAY with SAND, trace gravel, gray, moist, hard to stiff<br><br>Occasional wet sand seams. | | 4-4-5 (9) |
| 25 | | | | | | 646 | |
| | S-9 | SS | 18 | 18 | | | 4-4-5 (9) |
| 30 | | | | | | 641 | |

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **18.50** | BORING STARTED: | **Jul 23 2021** | CAVE IN DEPTH: | **53.50** |
| ▼ WL (Completion) | **30.50** | BORING COMPLETED: | **Jul 23 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-08** | **2 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954917.5** | **1088147.1** | | **671.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY with SAND, trace gravel, gray, moist, hard to stiff<br><br>Occasional wet sand seams. | | 636 | 4-5-7 (12) |
| 40 | S-11 | SS | 18 | 14 | (ML) SANDY SILT, trace gravel, gray, moist, very stiff | | 631 | 5-7-8 (15) |
| 45 | S-12 | SS | 18 | 10 | | | 626 | 7-9-8 (17) |
| 50 | S-13 | SS | 18 | 16 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff | | 621 | 9-10-10 (20) |
| 55 | S-14 | SS | 18 | 18 | | | 616 | 19-15-15 (30) |
| 60 | S-15 | SS | 18 | 18 | (ML) SILT, gray, moist, medium dense | | 611 | 27-46-67 (113) |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

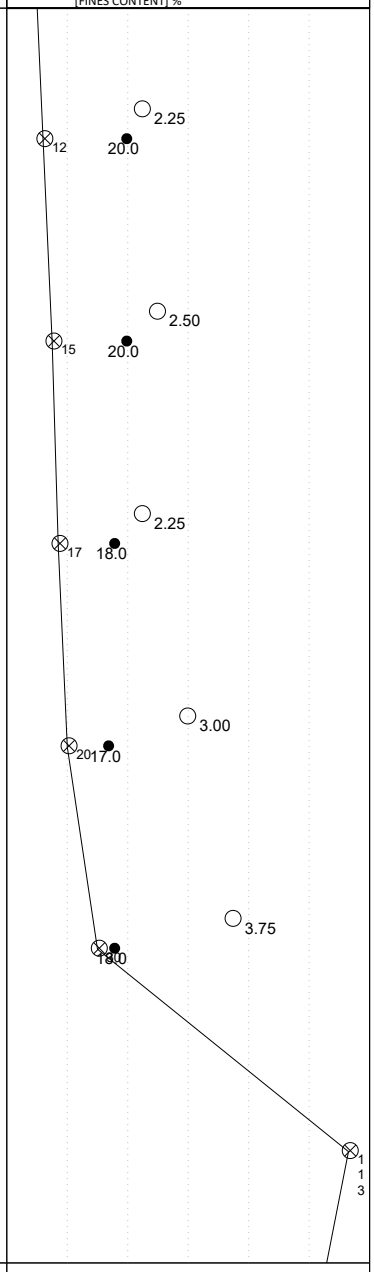
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) **18.50** | BORING STARTED: **Jul 23 2021** | | CAVE IN DEPTH: **53.50** |
| ▼ WL (Completion) **30.50** | BORING COMPLETED: **Jul 23 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-08** | **3 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954917.5** | **1088147.1** | | **671.0** |

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (ML) SILT, gray, moist, medium dense | | | |
| 65 | S-16 | SS | 17 | 17 | Refusal encountered at 64.0 feet. **END OF DRILLING AT 64.0 FT** | | 606 | 90/11" (90/11") |
| 70 | | | | | | | 601 | |
| 75 | | | | | | | 596 | |
| 80 | | | | | | | 591 | |
| 85 | | | | | | | 586 | |
| 90 | | | | | | | 581 | |

90/11"

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) **18.50** | BORING STARTED: **Jul 23 2021** | | CAVE IN DEPTH: **53.50** |
| ▼ WL (Completion) **30.50** | BORING COMPLETED: **Jul 23 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-09** | **1 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955868.8** | **1087794.3** | | **671.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[5.5"] | | | |
| | | | | | Concrete Thickness[8.5"] | | | |
| | S-1 | SS | 18 | 14 | (CL POSSIBLE FILL) POSSIBLE FILL, SANDY CLAY, trace gravel, brown, moist, hard | | | 3-3-3 (6) |
| | S-2 | SS | 18 | 16 | (CL) LEAN CLAY, trace gravel, brown, moist, hard to very stiff | | 666 | 3-4-4 (8) |
| 5 | S-3 | SS | 18 | 18 | | | | 3-4-4 (8) |
| | S-4 | SS | 18 | 18 | | | 661 | 3-4-5 (9) |
| 10 | S-5 | SS | 18 | 6 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff<br><br>Occasional silt seams from 18 to 20 ft. | ▽ | | 7-5-4 (9) |
| | S-6 | SS | 18 | 18 | | | 656 | 3-4-5 (9) |
| 15 | | | | | | | | |
| | S-7 | SS | 18 | 18 | | | 651 | 4-5-5 (10) |
| 20 | | | | | | | | |
| | S-8 | SS | 18 | 18 | | | 646 | 2-3-4 (7) |
| 25 | | | | | | | | |
| | S-9 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, hard to firm to very stiff<br><br>Occasional sand seams | | 641 | 4-5-6 (11) |
| 30 | | | | | | | | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

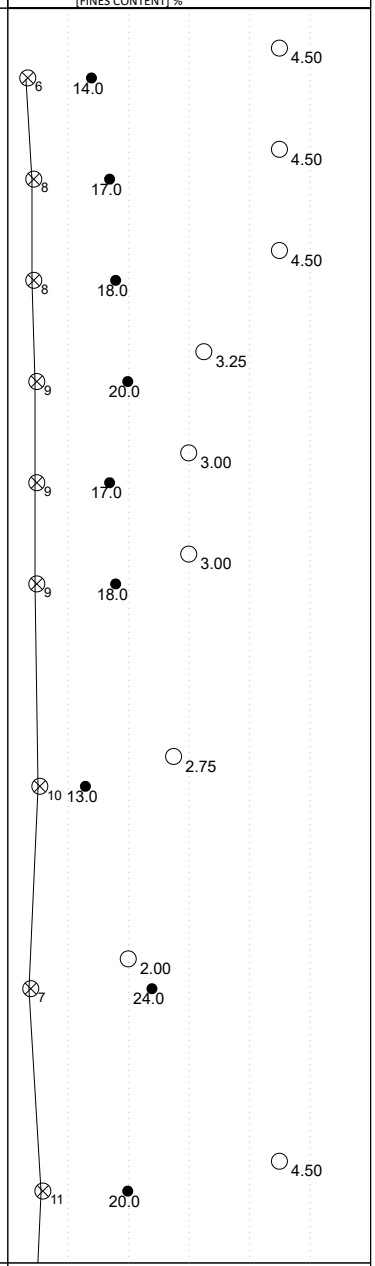
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **11.00** | BORING STARTED: **Jul 26 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **33.10** | BORING COMPLETED: **Jul 26 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-09** | **2 of 2** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955868.8** | **1087794.3** | | **671.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, hard to firm to very stiff<br><br>Occasional sand seams | ▼ | 636 | 4-4-4 (8) |
| 40 | S-11 | SS | 18 | 16 | **END OF DRILLING AT 40.0 FT** | | 631 | 5-6-10 (16) |
| 45 | | | | | | | 626 | |
| 50 | | | | | | | 621 | |
| 55 | | | | | | | 616 | |
| 60 | | | | | | | 611 | |

Plastic Limit Water Content Liquid Limit

**STANDARD PENETRATION BLOWS/FT**

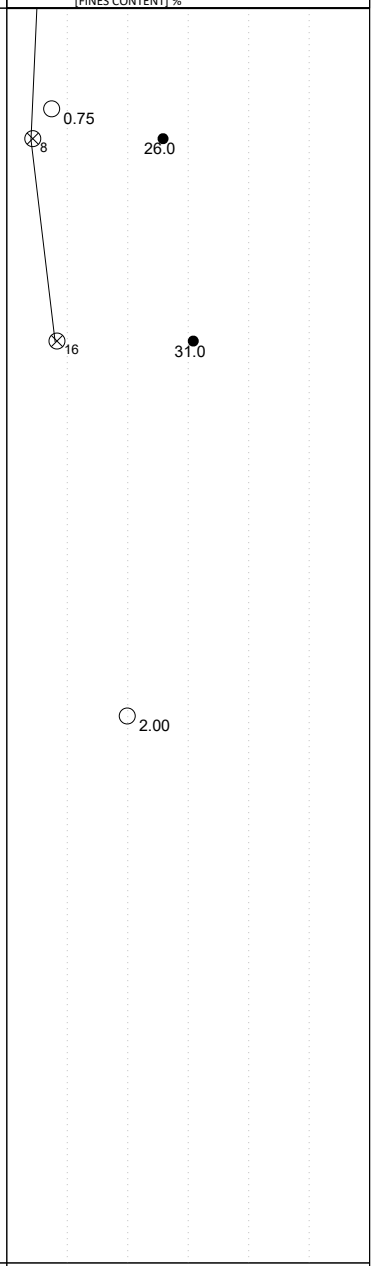
**ROCK QUALITY DESIGNATION & RECOVERY**

**RQD**

**REC**

**CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **11.00** | BORING STARTED: | **Jul 26 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **33.10** | BORING COMPLETED: | **Jul 26 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-10** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1956300.3** | **1087783.7** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 10 | Topsoil Thickness[8"]<br>(CL FILL) FILL, LEAN CLAY with SAND, trace gravel, brown and gray, moist, hard | | | 3-3-2 (5) |
| 5 | S-2 | SS | 18 | 5 | (GP-GM FILL) FILL, GRAVEL WITH SILT, gray, moist, very loose | | 667 | 2-1-2 (3) |
| | S-3 | SS | 18 | 14 | | | | 2-2-2 (4) |
| 10 | S-4 | SS | 18 | 12 | | | 662 | 3-2-2 (4) |
| | S-5 | SS | 18 | 10 | | | | 1-1-2 (3) |
| 15 | S-6 | SS | 18 | 8 | | | 657 | 2-2-1 (3) |
| 20 | S-7 | SS | 18 | 4 | Auger refusal on existing concrete foundations. | | 652 | WOH-WOH-1 (1) |
| 25 | S-8 | SS | 18 | 18 | Refusal encountered at 23.8 feet.<br>**END OF DRILLING AT 23.8 FT** | | 647 | 2-3-WOR (3) |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

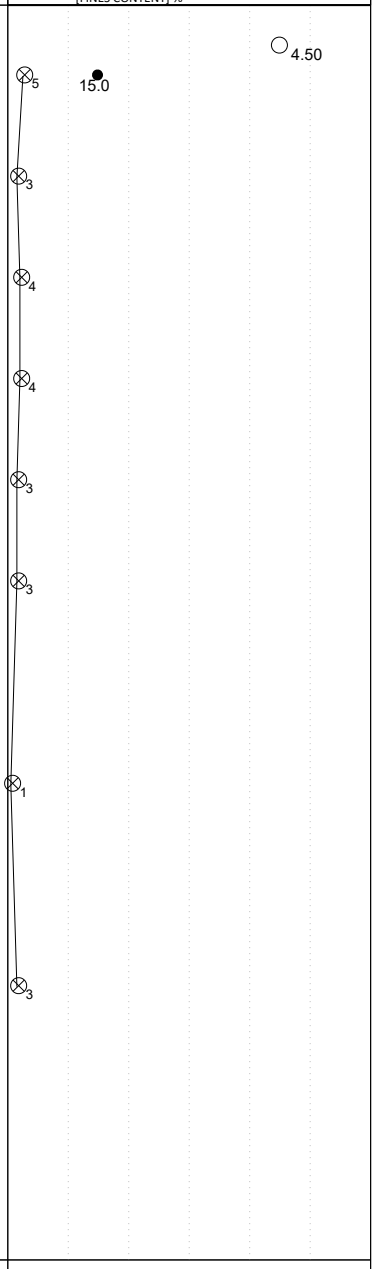
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| WL (First Encountered) | **23.50** | BORING STARTED: **Jul 28 2021** | | CAVE IN DEPTH: |
| WL (Completion) | **23.20** | BORING COMPLETED: **Jul 28 2021** | | HAMMER TYPE: **Auto** |
| WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-11** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1956311.2** | **1088101.5** | | **670.5** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Topsoil Thickness[10"] | | | |
| | S-1 | SS | 18 | 18 | (CL FILL) FILL, LEAN CLAY with SAND, trace gravel, dark brown, moist, hard | | | 6-4-3 (7) |
| | S-2 | SS | 18 | 14 | (GP-GM FILL) FILL, GRAVEL WITH SILT, gray, moist, loose to very loose | | 666 | 2-3-6 (9) |
| 5 | S-3 | SS | 18 | 10 | | | | 4-3-3 (6) |
| | S-4 | SS | 18 | 10 | | | 661 | 3-4-3 (7) |
| 10 | S-5 | SS | 18 | 8 | | | | 2-2-2 (4) |
| | S-6 | SS | 18 | 6 | | | 656 | 2-2-2 (4) |
| 15 | | | | | | | | |
| | S-7 | SS | 18 | 4 | | | 651 | 1-1-1 (2) |
| 20 | | | | | | | | |
| | S-8 | SS | 18 | 0 | Auger refusal on existing concrete foundations. Refusal encountered at 24.0 feet. **END OF DRILLING AT 24.0 FT** | ▼ | 646 | 3-WOR-WOR (0) |
| 25 | | | | | | | | |
| 30 | | | | | | | 641 | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

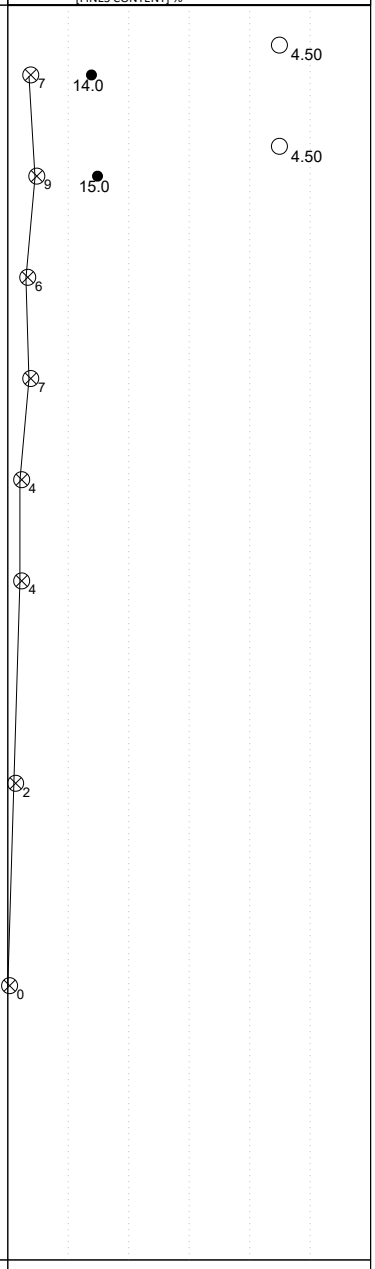
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **23.50** | BORING STARTED: **Jul 28 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **23.70** | BORING COMPLETED: **Jul 28 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-12** | **1 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955805.5** | **1088139.6** | | **667.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 16 | (CL FILL) FILL, LEAN CLAY with SAND, trace gravel, dark brown, moist, hard | | | 4-4-5 (9) |
| | S-2 | SS | 18 | 16 | (CL) SANDY CLAY, trace gravel, brown, moist, hard | | 662 | 5-7-7 (14) |
| 5 | S-3 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff<br><br>Occasional sand seams below 28 ft. | | | 3-4-6 (10) |
| | S-4 | SS | 18 | 18 | | | 657 | 4-5-6 (11) |
| 10 | S-5 | SS | 18 | 10 | | | | 3-5-5 (10) |
| | S-6 | SS | 18 | 18 | | | 652 | 3-4-5 (9) |
| 15 | | | | | | | | |
| | S-7 | SS | 18 | 14 | | | 647 | 3-4-4 (8) |
| 20 | | | | | | | | |
| | S-8 | SS | 18 | 18 | | ▼ | 642 | 2-3-4 (7) |
| 25 | | | | | | | | |
| | S-9 | SS | 18 | 18 | | | 637 | 3-4-6 (10) |
| 30 | | | | | | | | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

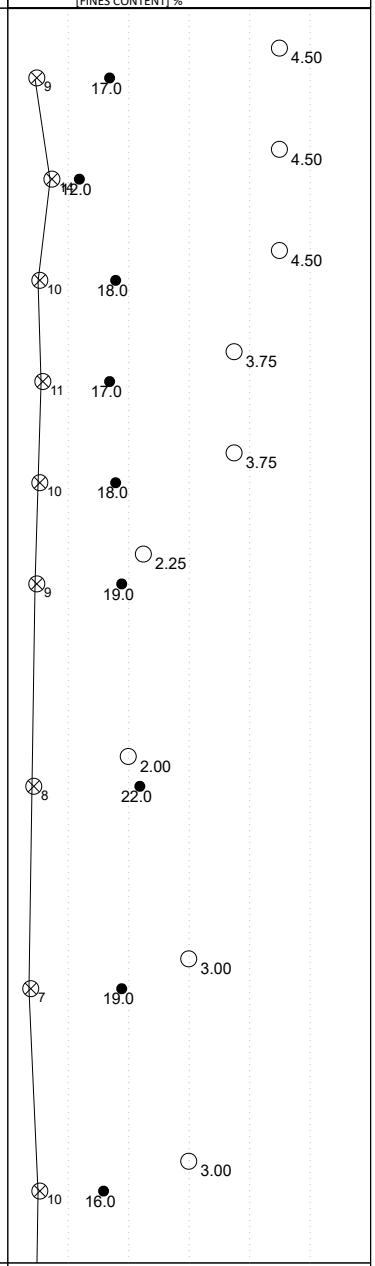
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **34.00** | BORING STARTED: | **Jul 26 2021** | CAVE IN DEPTH: | **39.90** |
| ▼ WL (Completion) | **25.50** | BORING COMPLETED: | **Jul 26 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-12** | **2 of 3** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

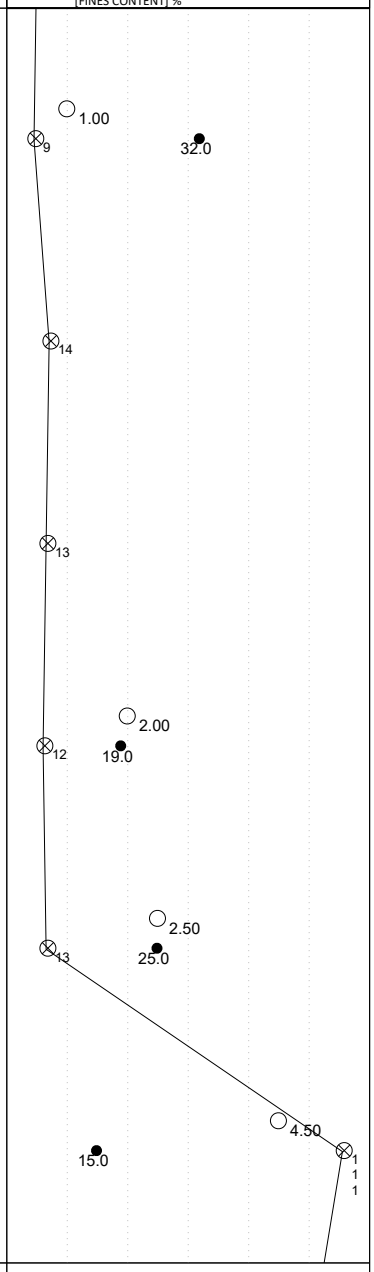
SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955805.5** | **1088139.6** | | **667.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 35 | S-10 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff<br><br>Occasional sand seams below 28 ft. | ▽ | 632 | 3-5-4 (9) |
| 40 | S-11 | SS | 18 | 14 | (SP-SM) MEDIUM TO COARSE SAND WITH SILT AND GRAVEL, gray, moist to wet, medium dense | | 627 | 8-8-6 (14) |
| 45 | S-12 | SS | 18 | 16 | | | 622 | 4-6-7 (13) |
| 50 | S-13 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff | | 617 | 5-6-6 (12) |
| 55 | S-14 | SS | 18 | 18 | | | 612 | 5-6-7 (13) |
| 60 | S-15 | SS | 18 | 16 | (SP-SM) FINE SAND with SILT, gray, moist, very dense | | 607 | 18-42-69 (111) |




**CONTINUED ON NEXT PAGE**

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **34.00** | BORING STARTED: **Jul 26 2021** | | CAVE IN DEPTH: **39.90** |
| ▼ WL (Completion) | **25.50** | BORING COMPLETED: **Jul 26 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **B-12** | **3 of 3** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955805.5** | **1088139.6** | | **667.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (SP-SM) FINE SAND with SILT, gray, moist, very dense | | | |
| 65 | S-16 | SS | 18 | 18 | (ML) SILT, gray, moist, very dense | | 602 | 37-48-52 (100/12") |
| | | | | | **END OF DRILLING AT 65.0 FT** | | | |
| 70 | | | | | | | 597 | |
| 75 | | | | | | | 592 | |
| 80 | | | | | | | 587 | |
| 85 | | | | | | | 582 | |
| 90 | | | | | | | 577 | |

Plastic Limit Water Content Liquid Limit

**STANDARD PENETRATION BLOWS/FT**

**ROCK QUALITY DESIGNATION & RECOVERY**

**RQD**

**REC**

**CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %

100/12"

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered) | **34.00** | BORING STARTED: | **Jul 26 2021** | CAVE IN DEPTH: | **39.90** |
| WL (Completion) | **25.50** | BORING COMPLETED: | **Jul 26 2021** | HAMMER TYPE: | **Auto** |
| WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **D-1** | **1 of 1** |
| PROJECT NAME: | DRILLER/CONTRACTOR: | | |
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** | | |
| SITE LOCATION: | | | LOSS OF CIRCULATION |
| **1200 East Algonquin Road, Mt Prospect, Illinois 60056** | | | |
| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
| **1955372.7** | **1086774.0** | | **674.0** |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | Asphalt Thickness[5.5"] | | | |
| | | | | | Gravel Thickness[7"] | | | |
| | S-1 | SS | 18 | 16 | (CL) LEAN CLAY with SAND, trace gravel, brown and gray, moist, hard | | | 2-4-4 (8) |
| | S-2 | SS | 18 | 16 | | | | 2-3-4 (7) |
| 5 | S-3 | SS | 18 | 18 | | | 669 | 4-6-6 (12) |
| | S-4 | SS | 18 | 18 | | | | 5-6-8 (14) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY, trace sand, gray, moist, hard to very stiff<br><br>Occasional sand lenses. | | 664 | 4-5-5 (10) |
| | S-6 | SS | 18 | 18 | | | | 3-4-5 (9) |
| 15 | | | | | **END OF DRILLING AT 15.0 FT** | | 659 | |
| 20 | | | | | | | 654 | |
| 25 | | | | | | | 649 | |
| 30 | | | | | | | 644 | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

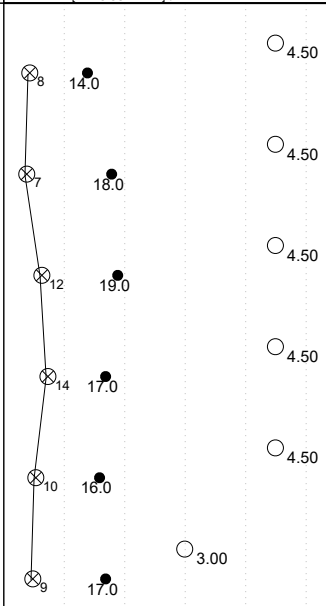
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 27 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 27 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** / LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **D-2** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954965.0** | **1087536.2** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil Thickness[14"] | | | |
| | S-1 | SS | 18 | 12 | (CL) LEAN CLAY, trace gravel, trace sand, brown, moist, hard | | | 2-4-4 (8) |
| | S-2 | SS | 18 | 16 | Sand seams from1 to 5 ft | | | 4-4-5 (9) |
| 5 | S-3 | SS | 18 | 18 | | | 667 | 4-5-5 (10) |
| | S-4 | SS | 18 | 18 | | | | 4-5-5 (10) |
| 10 | S-5 | SS | 18 | 18 | | | 662 | 4-6-6 (12) |
| | S-6 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, stiff | | | 3-4-4 (8) |
| 15 | | | | | **END OF DRILLING AT 15.0 FT** | | 657 | |
| 20 | | | | | | | 652 | |
| 25 | | | | | | | 647 | |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

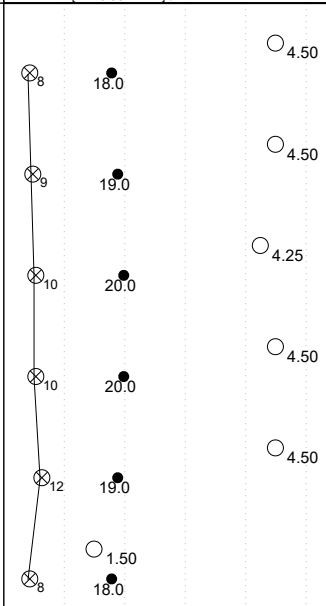
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered) **DRY** | BORING STARTED: **Jul 27 2021** | CAVE IN DEPTH: | |
| WL (Completion) **DRY** | BORING COMPLETED: **Jul 27 2021** | HAMMER TYPE: **Auto** | |
| WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **D-3** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954703.3** | **1088085.0** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[4.5"] | | 672 | |
| | | | | | Gravel Thickness[8"] | | | |
| | S-1 | SS | 18 | 10 | (CL FILL) FILL, SANDY CLAY with organics, black, moist, stiff, earthy odor | | | 1-2-2 (4) |
| | S-2 | SS | 18 | 16 | LOI = 16.5% | | | 2-2-3 (5) |
| 5 | | | | | (CL/ML FILL) FILL, SILTY CLAY, trace gravel, trace sand, contains brick, dark brown, moist, very stiff | | 667 | |
| | S-3 | SS | 18 | 16 | (CL) LEAN CLAY, trace gravel, yellowish brown and gray, moist, very stiff to hard | ▼ | | 2-2-4 (6) |
| | S-4 | SS | 18 | 18 | | | | 3-4-7 (11) |
| 10 | | | | | | | 662 | |
| | S-5 | SS | 18 | 18 | | | | 5-6-7 (13) |
| | S-6 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff | ▽ | | 3-4-5 (9) |
| 15 | | | | | **END OF DRILLING AT 15.0 FT** | | 657 | |
| 20 | | | | | | | 652 | |
| 25 | | | | | | | 647 | |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit
X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

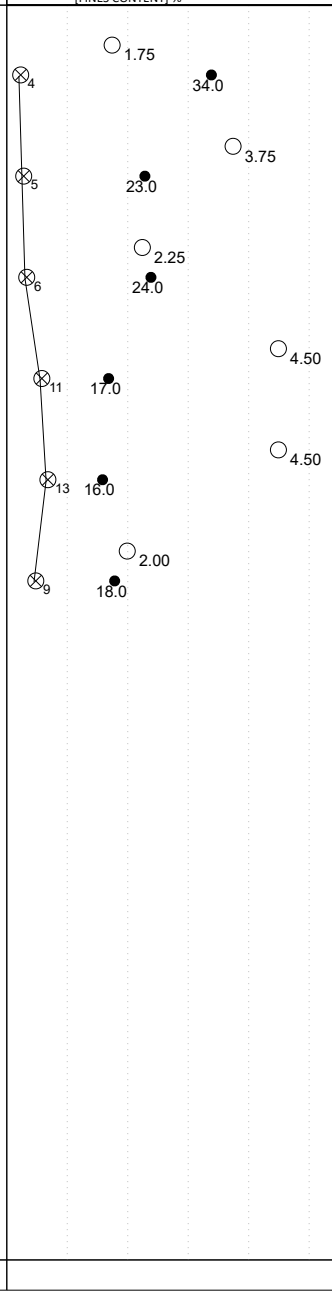
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **13.00** | BORING STARTED: **Jul 23 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **7.30** | BORING COMPLETED: **Jul 23 2021** | | HAMMER TYPE: **Auto** |
| ▽ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **D-4** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955389.8** | **1087592.7** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[6"] | | | |
| | | | | | Gravel Thickness[9"] | | | |
| | S-1 | SS | 18 | 16 | (CL FILL) FILL, SANDY CLAY, trace gravel, brown and gray, moist, hard | | | 2-3-3 (6) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, brown, moist, very stiff to hard | | 667 | 3-3-4 (7) |
| 5 | S-3 | SS | 18 | 16 | | | | 3-3-5 (8) |
| | S-4 | SS | 18 | 18 | | | | 4-5-6 (11) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, hard to very stiff | | 662 | 5-5-6 (11) |
| | S-6 | SS | 18 | 18 | | | | 3-4-5 (9) |
| 15 | | | | | **END OF DRILLING AT 15.0 FT** | | 657 | |
| 20 | | | | | | | 652 | |
| 25 | | | | | | | 647 | |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

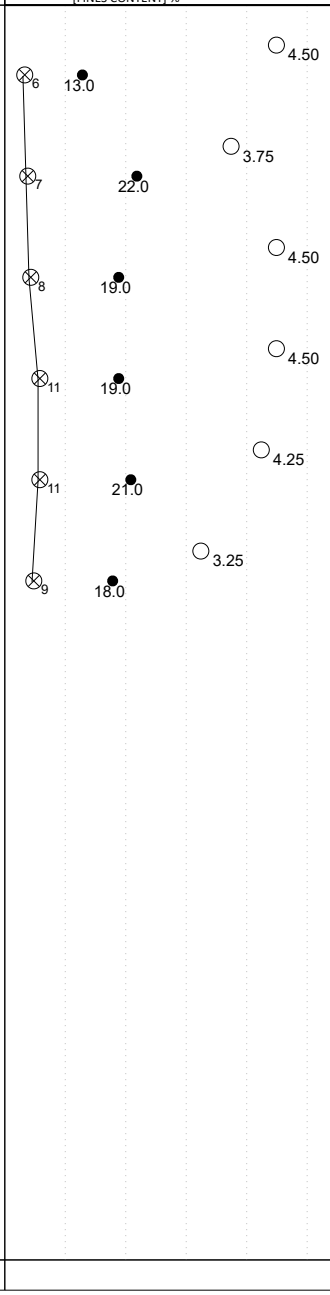
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 27 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 27 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** / LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **D-5** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1956117.4** | **1087484.6** | | **673.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[6"] | | | |
| | | | | | Gravel Thickness[13"] | | | |
| | S-1 | SS | 18 | 16 | (CL/ML FILL) FILL, SANDY CLAY, trace gravel, brown and gray, moist, hard | | | 2-2-3 (5) |
| | S-2 | SS | 18 | 18 | (CL) SANDY CLAY, black, moist, very stiff | | | 3-4-4 (8) |
| 5 | | | | | (CL) LEAN CLAY, trace gravel, yellowish brown and gray, moist, stiff to very stiff | | 668 | |
| | S-3 | SS | 18 | 18 | | | | 2-3-3 (6) |
| | S-4 | SS | 18 | 18 | | | | 2-2-2 (4) |
| 10 | | | | | | | 663 | |
| | S-5 | SS | 18 | 18 | | | | 3-4-5 (9) |
| | S-6 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, gray, moist, very stiff to stiff | | | 2-3-3 (6) |
| 15 | | | | | **END OF DRILLING AT 15.0 FT** | | 658 | |
| 20 | | | | | | | 653 | |
| 25 | | | | | | | 648 | |
| 30 | | | | | | | 643 | |

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

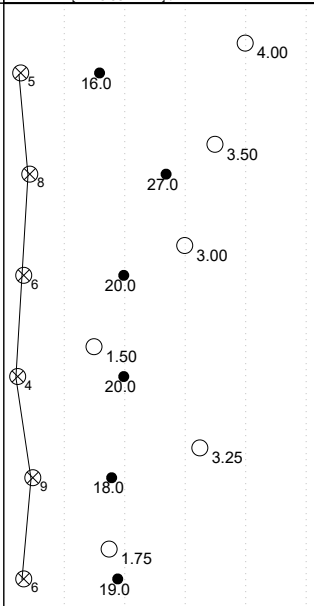
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 26 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 26 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** / LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-1** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955034.6** | **1087357.9** | | **671.5** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Topsoil Thickness[12"] | | 671.5 | |
| | S-1 | SS | 18 | 6 | (OL) ORGANIC LEAN CLAY with organics, black, moist, very stiff, strong earthy odor<br>LOI = 16.4% | | | 2-4-5 (9) |
| | S-2 | SS | 18 | 16 | (CL) LEAN CLAY with SAND, dark brown, moist, very stiff to hard | | 667 | 2-2-2 (4) |
| 5 | S-3 | SS | 18 | 16 | | | | 2-2-3 (5) |
| | | | | | **END OF DRILLING AT 7.5 FT** | | 662 | |
| 10 | | | | | | | | |
| 15 | | | | | | | 657 | |
| 20 | | | | | | | 652 | |
| 25 | | | | | | | 647 | |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

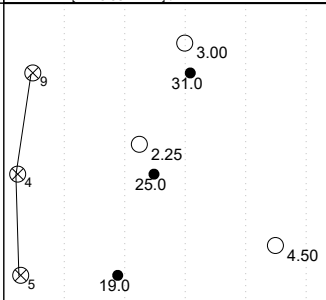
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 27 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 27 2021** | HAMMER TYPE: **Auto** |
| ⧩ WL (Seasonal High Water) | | EQUIPMENT: **Truck** / LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ⧩ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-2** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

BOTTOM OF CASING

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1954841.6** | **1087732.6** | | **673.0** |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Topsoil Thickness[12"] | | 673 | |
| | S-1 | SS | 18 | 14 | (CL FILL) FILL, SANDY CLAY, dark brown and gray, moist, hard to very stiff | | | 5-5-5 (10) |
| | S-2 | SS | 18 | 18 | (CL) LEAN CLAY, trace organics , black, moist, very stiff, strong earthy odor | | | 4-6-6 (12) |
| 5 | | | | | LOI = 3.1% | | 668 | |
| | S-3 | SS | 18 | 18 | (CL) LEAN CLAY, trace gravel, yellowish brown and gray, moist, very stiff | | | 4-5-5 (10) |
| | | | | | **END OF DRILLING AT 7.5 FT** | | | |
| 10 | | | | | | | 663 | |
| 15 | | | | | | | 658 | |
| 20 | | | | | | | 653 | |
| 25 | | | | | | | 648 | |
| 30 | | | | | | | 643 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

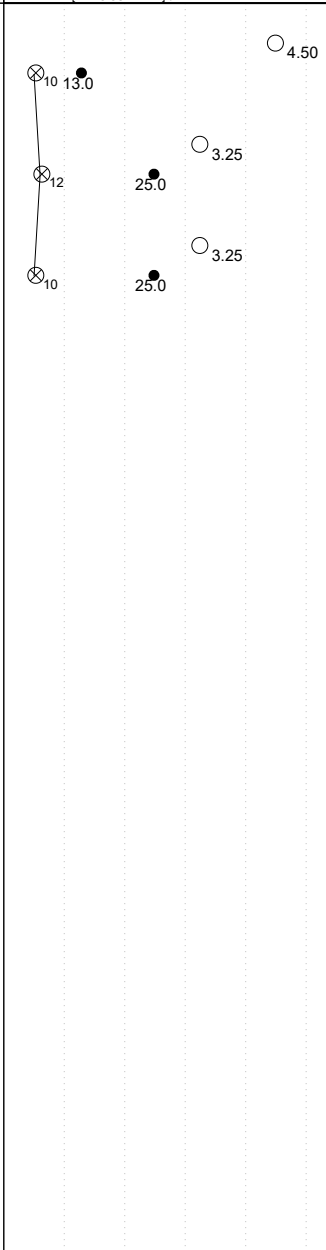
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 23 2021** | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 23 2021** | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: **Truck** / LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-3** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955695.2** | **1088174.1** | | **666.5** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 14 | Topsoil Thickness[8"]<br>(CL FILL) FILL, SANDY CLAY with organics, black, moist, very stiff, earthy odor<br><br>LOI = 11.8% | | 666 | 3-3-4 (7) |
| 5 | S-2 | SS | 18 | 16 | (CL) LEAN CLAY with SAND , trace gravel, yellowish brown and gray, moist, very stiff | | 662 | 2-2-3 (5) |
| | S-3 | SS | 18 | 18 | | | | 3-3-3 (6) |
| | | | | | **END OF DRILLING AT 7.5 FT** | | | |
| 10 | | | | | | | 657 | |
| 15 | | | | | | | 652 | |
| 20 | | | | | | | 647 | |
| 25 | | | | | | | 642 | |
| 30 | | | | | | | 637 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

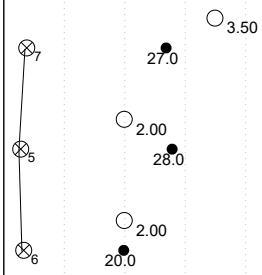
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: | **Jul 27 2021** | CAVE IN DEPTH: | |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: | **Jul 27 2021** | HAMMER TYPE: | **Auto** |
| ▼ WL (Seasonal High Water) | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | **HSA** |
| ▽ WL (Stabilized) | | **Truck** | **SS15** | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-4** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1956275.0** | **1087520.0** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| | | | | | (DEBRIS FILL) | | | |
| | S-1 | SS | 18 | 16 | (CL FILL) FILL, SANDY CLAY, brown and gray, moist, hard | | | 3-4-4 (8) |
| | S-2 | SS | 18 | 18 | | | | 2-3-4 (7) |
| 5 | | | | | (CL) LEAN CLAY, trace organics, black,moist very stiff, earthy odor | | 667 | |
| | S-3 | SS | 18 | 18 | LOI = 16.8% | | | 3-3-4 (7) |
| | | | | | (CL) LEAN CLAY, trace gravel, brown and gray, moist, hard | | | |
| 10 | | | | | **END OF DRILLING AT 7.5 FT** | | 662 | |
| 15 | | | | | | | 657 | |
| 20 | | | | | | | 652 | |
| 25 | | | | | | | 647 | |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

**STANDARD PENETRATION BLOWS/FT**

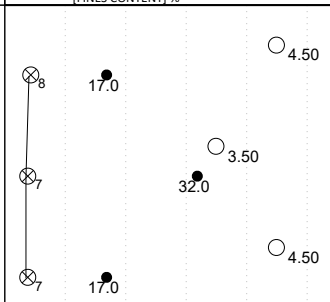
**ROCK QUALITY DESIGNATION & RECOVERY**

**RQD**

**REC**

**CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| WL (First Encountered) **DRY** | BORING STARTED: **Jul 26 2021** | | CAVE IN DEPTH: |
| WL (Completion) **DRY** | BORING COMPLETED: **Jul 26 2021** | | HAMMER TYPE: **Auto** |
| WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-5** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955828.7** | **1087200.9** | | **673.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | SS | 18 | 14 | (OL POSSIBLE FILL) POSSIBLE FILL, ORGANIC LEAN CLAY, black, moist, hard, earthy odor<br><br>LOI = 6.4% | | 673 | 5-6-5 (11) |
| 5 | S-2 | SS | 18 | 6 | (CL) SANDY CLAY, trace gravel, brown, moist, very stiff to hard | | 668 | 4-6-4 (10) |
| | S-3 | SS | 18 | 16 | | | | 4-4-4 (8) |
| | | | | | **END OF DRILLING AT 7.5 FT** | | | |
| 10 | | | | | | | 663 | |
| 15 | | | | | | | 658 | |
| 20 | | | | | | | 653 | |
| 25 | | | | | | | 648 | |
| 30 | | | | | | | 643 | |

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

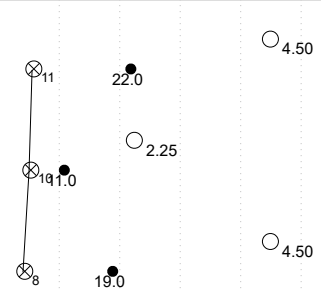
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | |
|---|---|---|---|
| ▽ WL (First Encountered) **DRY** | BORING STARTED: **Jul 27 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) **DRY** | BORING COMPLETED: **Jul 27 2021** | | HAMMER TYPE: **Auto** |
| ▼ WL (Seasonal High Water) | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ▽ WL (Stabilized) | | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **Cloud HQ** | **16:13881** | **P-6** | **1 of 1** |

| PROJECT NAME: | DRILLER/CONTRACTOR: |
|---|---|
| **Cloud HQ - Mount Prospect, IL** | **I.E. Xploration** |

SITE LOCATION: **1200 East Algonquin Road, Mt Prospect, Illinois 60056**

LOSS OF CIRCULATION

| NORTHING: | EASTING: | STATION: | SURFACE ELEVATION: |
|---|---|---|---|
| **1955248.6** | **1087719.9** | | **672.0** |

BOTTOM OF CASING

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DIST. (IN) | RECOVERY (IN) | DESCRIPTION OF MATERIAL | WATER LEVELS | ELEVATION (FT) | BLOWS/6" |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | Asphalt Thickness[5.5"] | | | |
| | | | | | Gravel Thickness[10"] | | | |
| | S-1 | SS | 18 | 12 | (CL FILL) FILL, LEAN CLAY with SAND, trace gravel, dark brown, moist, very stiff | | | 3-3-5 (8) |
| | S-2 | SS | 18 | 16 | | | | 4-5-5 (10) |
| 5 | | | | | | | 667 | |
| | S-3 | SS | 18 | 18 | (CL) LEAN CLAY with SAND , trace gravel, brown, moist, hard | | | 4-5-6 (11) |
| | | | | | **END OF DRILLING AT 7.5 FT** | | | |
| 10 | | | | | | | 662 | |
| 15 | | | | | | | 657 | |
| 20 | | | | | | | 652 | |
| 25 | | | | | | | 647 | |
| 30 | | | | | | | 642 | |

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

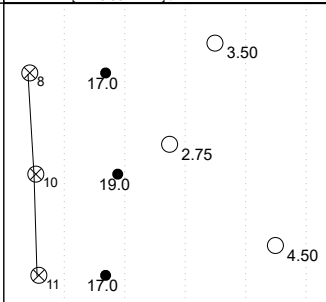
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

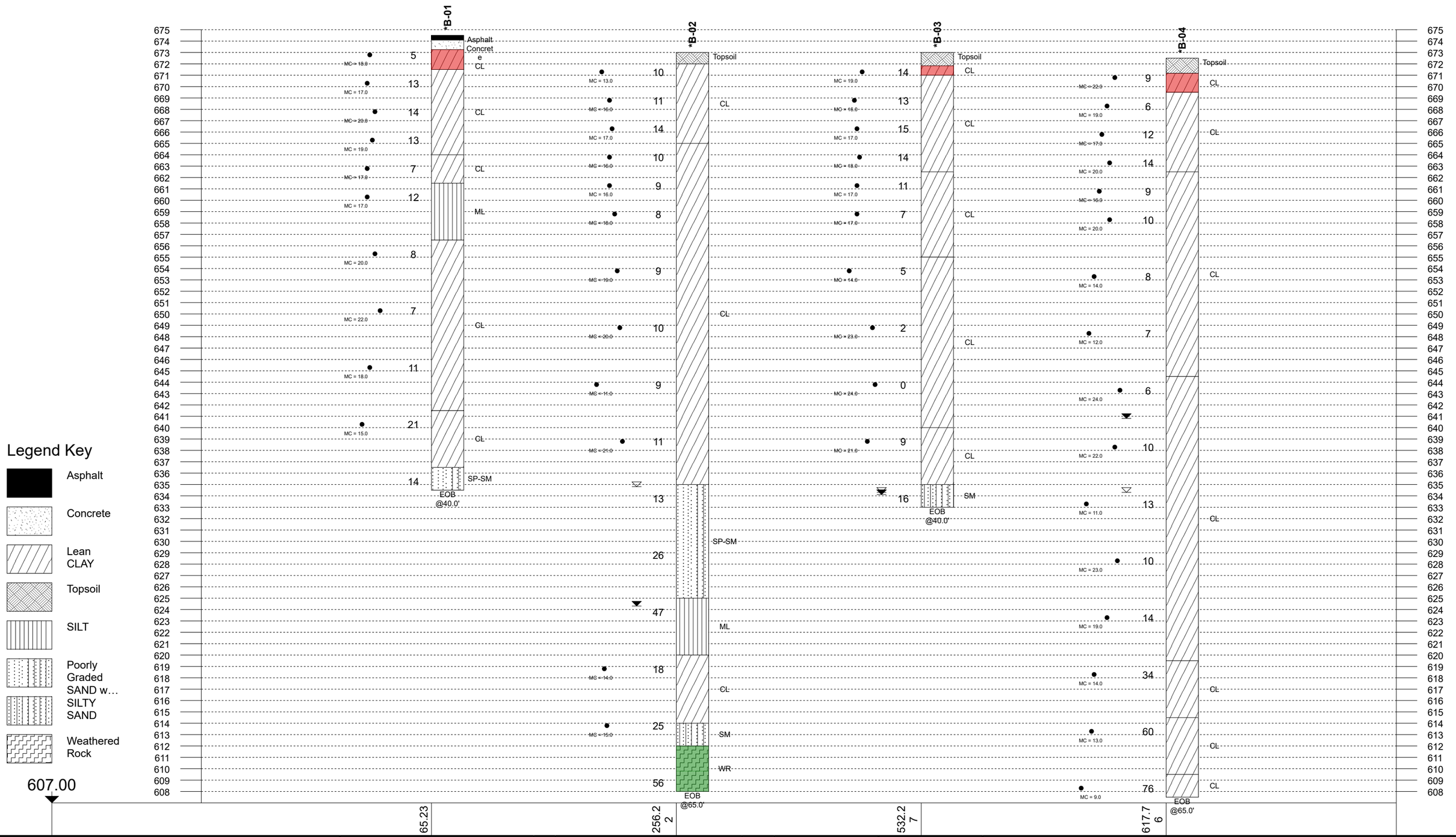
[FINES CONTENT] %




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | |
|---|---|---|---|---|
| ▽ WL (First Encountered) | **DRY** | BORING STARTED: **Jul 27 2021** | | CAVE IN DEPTH: |
| ▼ WL (Completion) | **DRY** | BORING COMPLETED: **Jul 27 2021** | | HAMMER TYPE: **Auto** |
| ⧩ WL (Seasonal High Water) | | EQUIPMENT: **Truck** | LOGGED BY: **SS15** | DRILLING METHOD: **HSA** |
| ⧩ WL (Stabilized) | | | | |

**GEOTECHNICAL BOREHOLE LOG**




**Notes:**

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

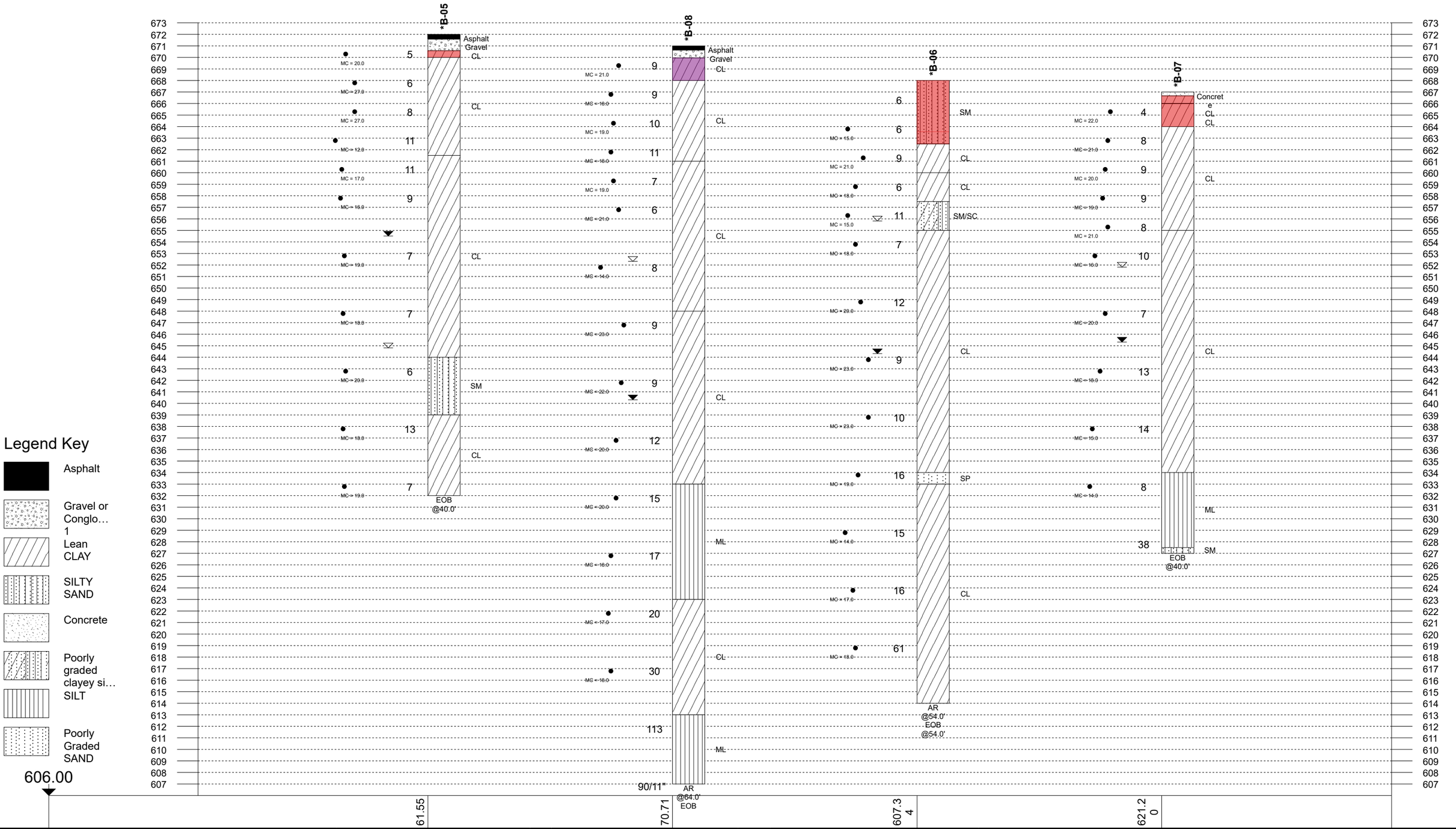
Plastic Limit Water Content Liquid Limit
X———●———△
[FINES CONTENT%]
BOTTOM OF CASING
100 LOSS OF CIRCULATION

| | |
|---|---|
| WL (First Encountered) | Fill |
| WL (Completion) | Possible Fill |
| WL (Seasonal High Water) | Probable Fill |
| WL (Stabilized) | Rock |

**GENERALIZED SUBSURFACE SOIL PROFILE** **Profile A-A'**

**Cloud HQ - Mount Prospect, IL**
**Cloud HQ**
**1200 East Algonquin Road, Mt Prospect, Illinois 60056**

Project No: 16:13881 Date: 08/17/2021




## Legend Key

- Asphalt
- Gravel or Conglo… 1
- Lean CLAY
- SILTY SAND
- Concrete
- Poorly graded clayey si… SILT
- Poorly Graded SAND

606.00

**Notes:**

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit
X———●———△

[FINES CONTENT%]

BOTTOM OF CASING

LOSS OF CIRCULATION

WL (First Encountered)

WL (Completion)

WL (Seasonal High Water)

WL (Stabilized)

Fill

Possible Fill

Probable Fill

Rock

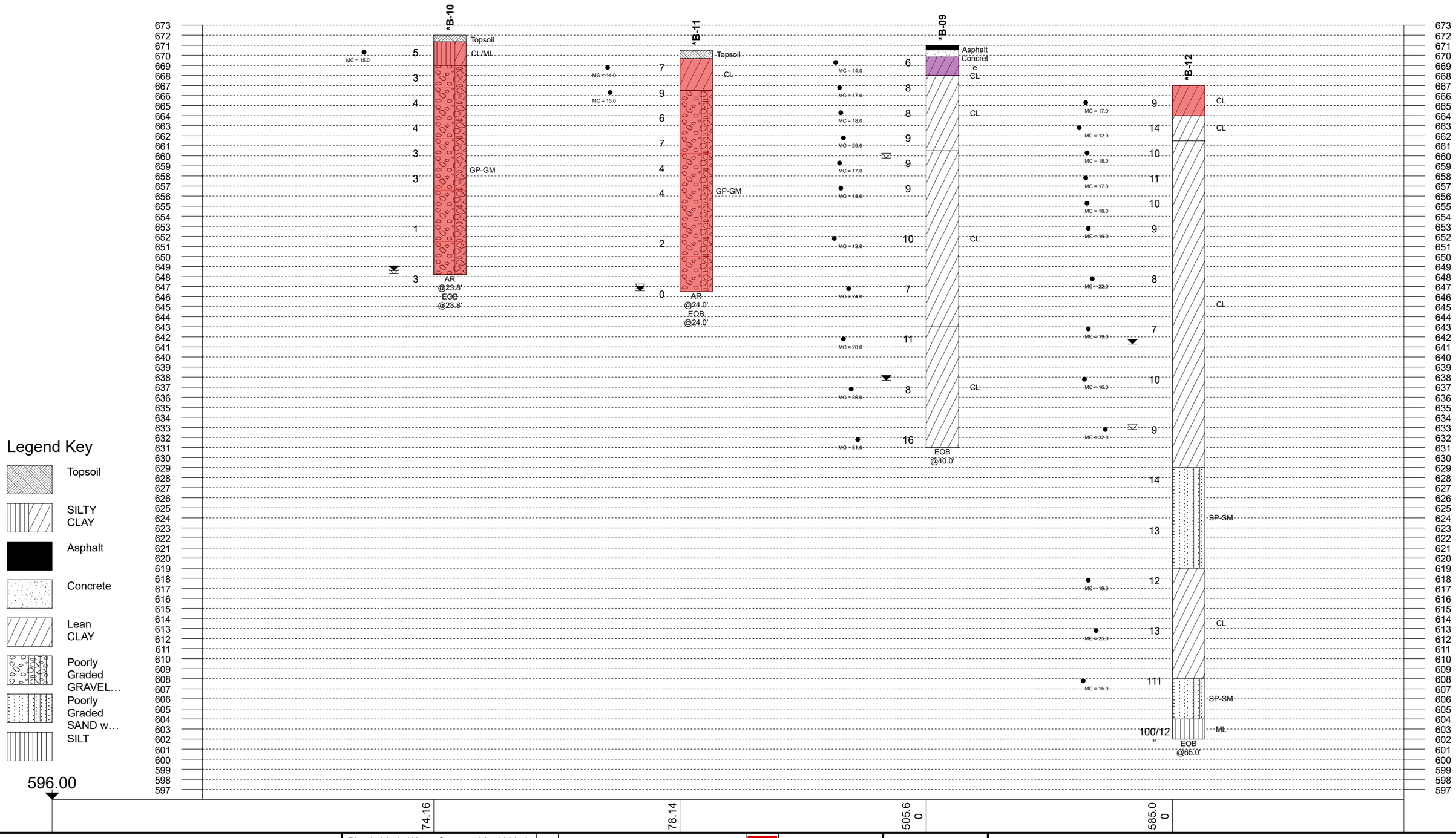
**GENERALIZED SUBSURFACE SOIL PROFILE Profile B-B'**

**Cloud HQ - Mount Prospect, IL**

**Cloud HQ**

**1200 East Algonquin Road, Mt Prospect, Illinois 60056**

Project No: 16:13881 Date: 08/17/2021




## Legend Key

- Topsoil
- SILTY CLAY
- Asphalt
- Concrete
- Lean CLAY
- Poorly Graded GRAVEL…
- Poorly Graded SAND w…
- SILT

**Notes:**

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit
X———●———△
[FINES CONTENT%]
BOTTOM OF CASING
100/X LOSS OF CIRCULATION

| | | | |
|---|---|---|---|
| WL (First Encountered) | | Fill | |
| WL (Completion) | | Possible Fill | |
| WL (Seasonal High Water) | | Probable Fill | |
| WL (Stabilized) | | Rock | |

**GENERALIZED SUBSURFACE SOIL PROFILE Profile C-C'**

**Cloud HQ - Mount Prospect, IL**
**Cloud HQ**
**1200 East Algonquin Road, Mt Prospect, Illinois 60056**

Project No: 16:13881 Date: 08/17/2021

**SUBSURFACE EXPLORATION PROCEDURE:**

**STANDARD PENETRATION TESTING (SPT)**

**ASTM D 1586**

**Split-Barrel (Split-Spoon) Sampling**

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes as well as a measure of penetration resistance, or N-Value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

## SPT Procedure:

- Involves driving a 2-inch outside diameter hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30 inches at desired depth
- Recording the number of hammer blows required to drive the split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)
- Auger is advanced* and an additional SPT is performed
- One SPT test is typically performed every 2½ to 5 feet.
- Obtain a 1⅜-inch diameter soil sample





**Drilling Methods May Vary – The predominate drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.*

# LABORATORY PROCEDURES:

## Index Testing

**Moisture content** determination was performed on select fine-grained soil samples in accordance with ASTM D 2216.

**Calibrated hand penetrometer tests (Qp)** were performed on select cohesive soil samples. In the hand penetrometer test, the unconfined compressive strength of a soil sample is estimated, to a maximum of 4.5 or 6 tons per square foot (tsf), depending on the penetrometer model, by measuring the resistance of a soil sample to penetration by a small, calibrated, spring-loaded cylinder.

**Atterberg limits** determination was performed on select fine-grained soil samples in accordance with ASTM D 4319. The Atterberg limits are a basic measure of the critical water contents of a fine-grained soil: its **liquid limit**, **plastic limit**, and s**hrinkage limit**. Depending on its water content, a soil may appear in one of four states: solid, semi-solid, plastic and liquid. In each state, the consistency and behavior of a soil is different and consequently so are its engineering properties. Atterberg limits can also be used to help distinguish between silt and clay, and to distinguish between different types of silts and clays.

**Particle size distribution**, also referred to as gradation or sieve analysis, refers to the proportions by dry mass of a soil particles distributed over specified particle-size ranges. The particle size distribution is used to help classify soils for engineering purposes. Particle size distribution determination was performed on select fine-grained soil samples in accordance with ASTM D 421, D 422 and/or D 1140.

A **loss on ignition (LOI)** test is used to estimate the organic content of the soil. In the LOI test a dry sample is heated to 440$^{o}$ C to burn off organic matter within the sample. The lost weight is compared to the initial dry weight to estimate the percentage of organics in the material. LOI determination was performed in accordance with ASTM D 2974.

# APPENDIX C - Supplemental Report Documents

Important Information about This Geotechnical-Engineering Report

# Important Information about This

# Geotechnical-Engineering Report

**Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.**

**While you cannot eliminate all such risks, you can manage them. The following information is provided to help.**

**The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.**

## Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

## Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

*Do not rely on this report* if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

## Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

## You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

*responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

## Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

## This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

## This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

## Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

## Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

## Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

## Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

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## Appendix E – Other Information

GBA - Geotechnical Engineering Report Information Sheet

# Important Information about This

# Geotechnical-Engineering Report

**Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.**

**While you cannot eliminate all such risks, you can manage them. The following information is provided to help.**

**The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.**

## Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

## Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

*Do not rely on this report* if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

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July 23, 2025

Mr. Chris Warnke
**Cloud HQ**
1212 New York Avenue NW
Suite 1000
Washington, District of Columbia 20005

ECS Project No. 16:13881-D

Reference: Addendum Report
Electric Duct Bank Borings / Thermal Resistivity Results
**Cloud HQ**
1200 East Algonquin Road
Mount Prospect, Cook County, Illinois

Dear Mr. Warnke:

ECS Midwest, LLC (ECS) has completed the requested borings for the proposed electric duct bank and the associated thermal resistivity testing at the above referenced project site. The results are included in the attachment.

The findings in the electric duct bank borings were relatively similar to the building borings. The recommendations for utility installation are included in the previous report submittal (ECS Report No. 13881-D dated June 18, 2025).

As requested, ECS has performed the thermal resistivity testing in general accordance with ASTM D5334. The soil bulk samples were collected from the following borings between 1 and 8 feet below existing grades:

- E-01 and E-04
- E-02 and E-03
- E-05 and E-06
- E-07 and E-08
- E-09 through E-11

The testing method includes performing a standard Proctor density test in general accordance with ASTM D 698. Once the standard Proctor test has been performed, three to five soil samples are prepared at varying densities and moisture contents, and each sample is tested. The testing method consists of installing a heating source in a prepared specimen with a specific height to diameter ratio such that the heating/temperature sensing element (Thermal needle) simulates the conditions for an infinitely long, infinitely thin heating source. A known current and voltage are applied to the probe heating element over a period of time and the temperature rise is recorded. The temperature decay with time after the cessation of heating can also be included in the analysis. Thermal conductivity is obtained from an analysis of the temperature time series data during the heating cycle and (optionally) the cooling cycle, by comparing it to a theoretical curve using non-linear least-squares inversion technique. Upon completion of the testing in all the specimens, the thermal resistivity testing results are plotted against the soil's dry density or moisture content. The results of the thermal resistivity testing performed can be found in Appendix of this letter. It is recommended the project Civil Engineer review the thermal resistivity test

results and determine if the results of the tested soils are suitable for the anticipated usage and requirements of the project site.

We appreciate the opportunity to be of service to CloudHQ during this phase of this project. If you have questions with regards to the information and recommendations contained in this report, please do not hesitate to contact the undersigned.

Respectfully submitted,

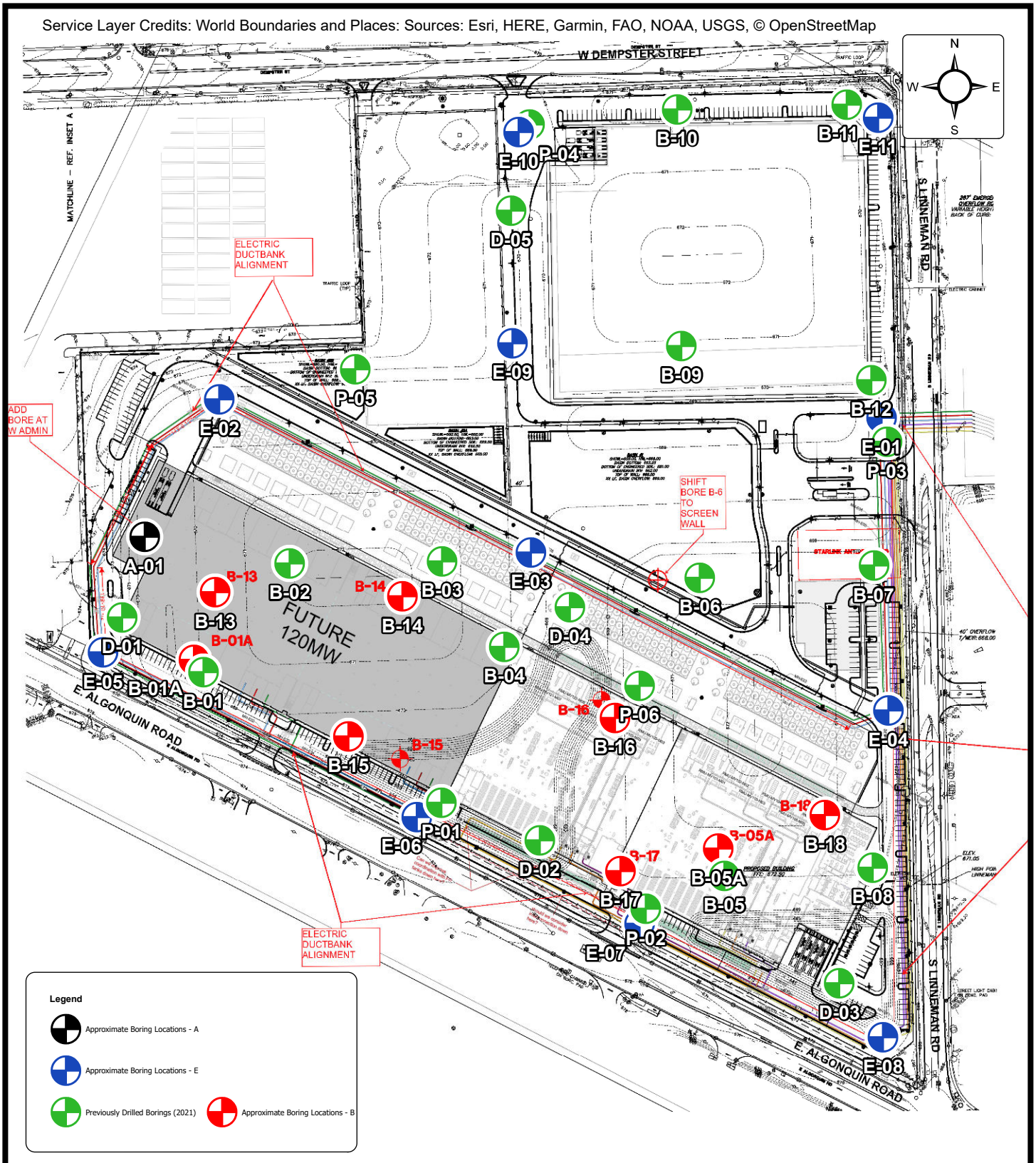
**ECS Midwest, LLC**



*David T. Lewandowski, P.E.*
*Geotechnical Associate Principal*
*DTLewandowski@ecslimited.com*
*Renews 11/30/2025*

Enclosures: - Location Diagrams (2)
- Boring logs (11)
- Thermal Resistivity Results

https://ecslimited365.sharepoint.com/sites/16Chicago/16 GEO Rept 100139/Job 15000 - 15999/15537-A1 Grayville Community Solar Additional Borings/15537-A1 Grayville Community Solar - Field ER Test Results.docx

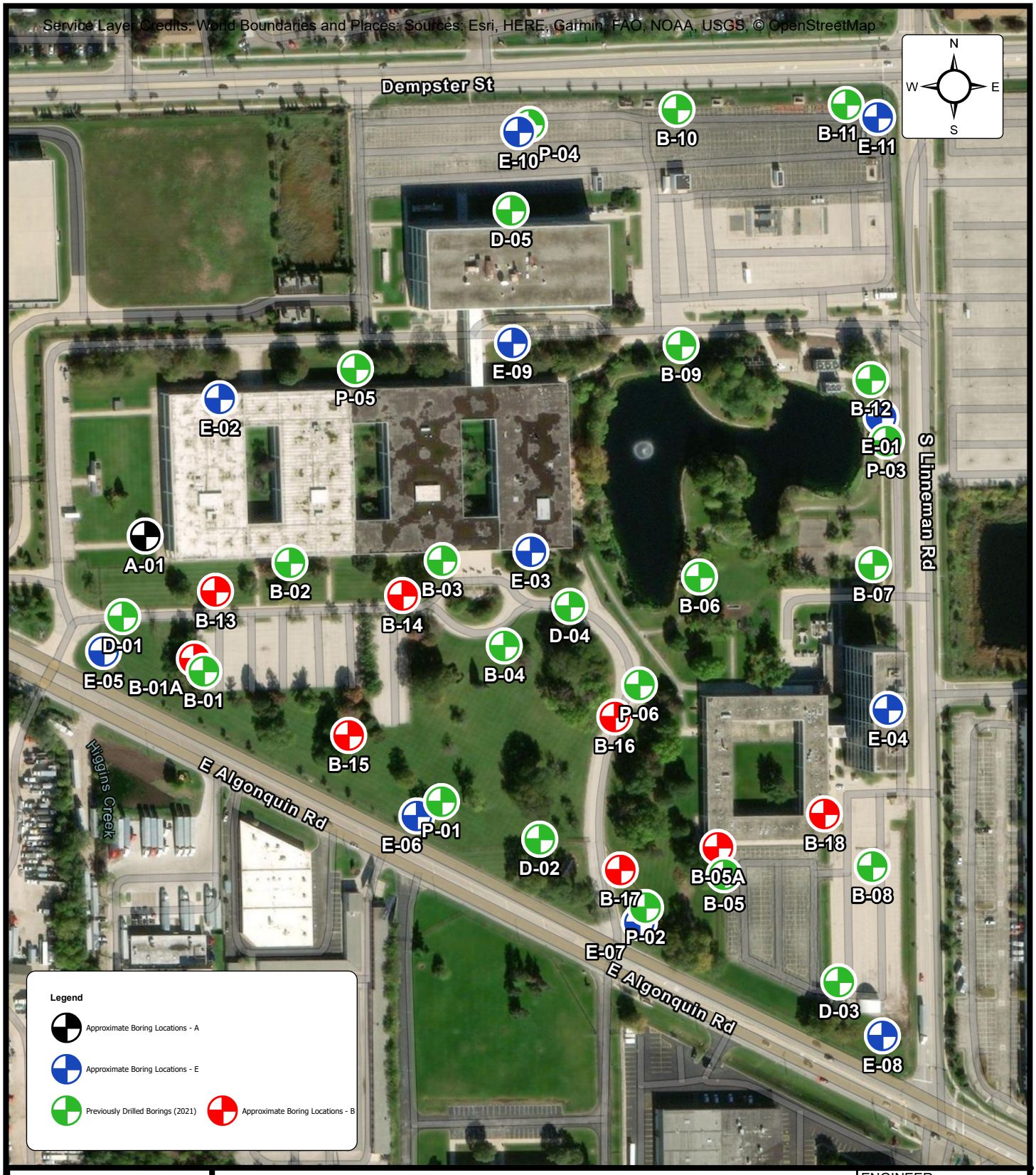



# BORING LOCATION DIAGRAM
## Proposed Cloud HQ Supplemental

**1200 East Algonquin Road, Mount Prospect, Illinois**

**CloudHQ**

| | |
|---|---|
| ENGINEER | AV4 |
| SCALE | 1" = 250' |
| PROJECT NO. | 16:13881-D |
| SHEET | 1 of 2 |
| DATE | 7/11/2025 |




# BORING LOCATION DIAGRAM
## Proposed Cloud HQ Supplemental

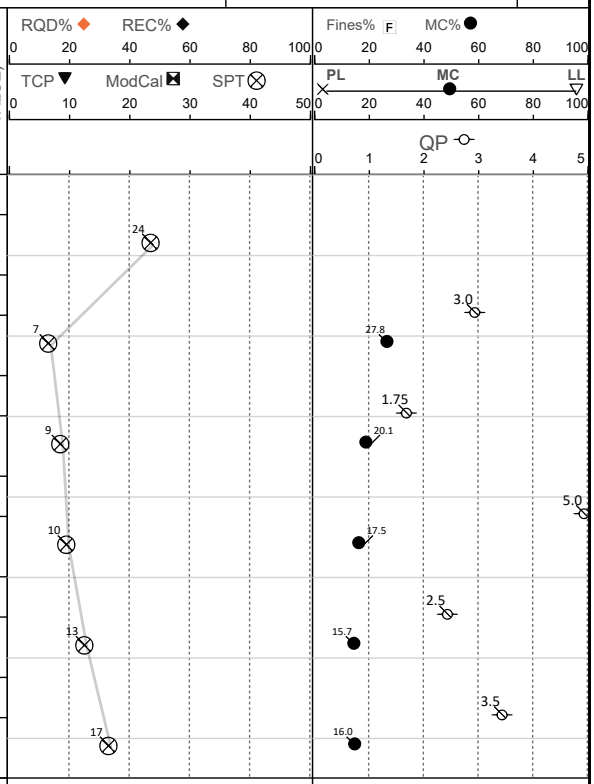
**1200 East Algonquin Road, Mount Prospect, Illinois**

**CloudHQ**

| | |
|---|---|
| ENGINEER | AV4 |
| SCALE | 1" = 250' |
| PROJECT NO. | 16:13881-D |
| SHEET | 2 of 2 |
| DATE | 7/11/2025 |

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-01** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.035326** | LONGITUDE: **-87.950785** | STATION: | SURFACE ELEVATION: **665** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=10"]. | | | | |
| | S-1 | SS | 18 | 6 | FILL - (SP) POORLY GRADED SAND - fine sand, light brown, (and crushed stone). | | | | 13-13-11 (24) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, brown, moist, stiff to hard. | | | | |
| | S-2 | SS | 18 | 12 | | | | | 3-3-4 (7) |
| 5 | | | | | | | | 660.0 | |
| | S-3 | SS | 18 | 18 | | | | | 4-4-5 (9) |
| | S-4 | SS | 18 | 18 | | | | | 3-4-6 (10) |
| 10 | | | | | | | | 655.0 | |
| | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace gravel and sand, gray, moist, very stiff. | | | | 4-6-7 (13) |
| | S-6 | SS | 18 | 8 | | | | | 6-8-9 (17) |
| | | | | | **END OF BORING AT 15 Ft** | | | 650.0 | |



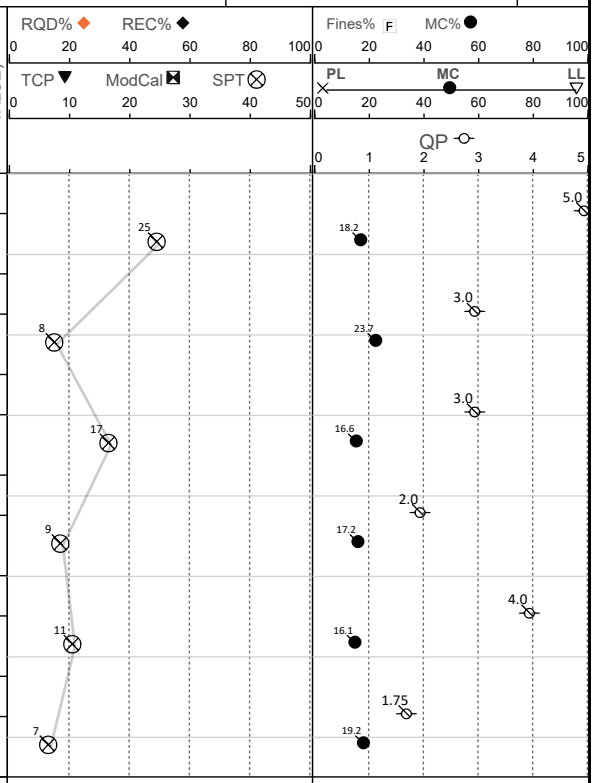

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-02** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.035554** | LONGITUDE: **-87.955278** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=5"]. | | | | |
| | S-1 | SS | 18 | 10 | FILL - (CL) LEAN CLAY WITH SAND - brown, (and gravel and crushed stone) (probable cobbles/boulders), moist, hard | | | | 7-12-13 (25) |
| 5 | S-2 | SS | 18 | 5 | FILL - (CL) LEAN CLAY WITH SAND - brown, black and dark gray, wet to moist, very stiff. | | | 665.0 | 4-4-4 (8) |
| | S-3 | SS | 18 | 6 | | | | | 4-7-10 (17) |
| 10 | S-4 | SS | 18 | 16 | | | ▽ | 660.0 | 3-4-5 (9) |
| | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to hard. | | | | 4-5-6 (11) |
| | S-6 | SS | 18 | 18 | | | | 655.0 | 2-3-4 (7) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



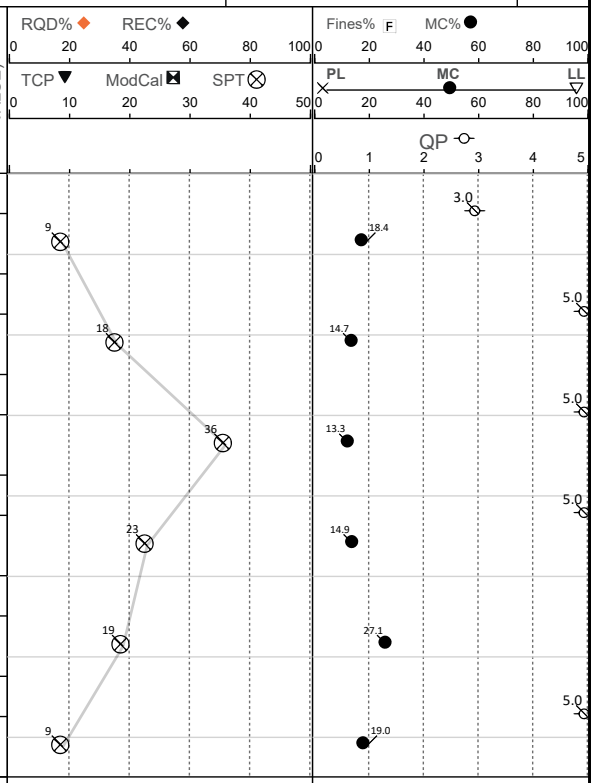

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 8.5 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-03** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034781** | LONGITUDE: **-87.953186** | STATION: | SURFACE ELEVATION: **675** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=4"]. | | | | |
| | S-1 | SS | 18 | 12 | FILL - (CL) LEAN CLAY - dark brown, dark gray and black, moist, very stiff to hard, (with crushed stone). | | | | 4-4-5 (9) |
| | S-2 | SS | 18 | 16 | | | | | 2-3-15 (18) |
| 5 | | | | | | | | 670.0 | |
| | S-3 | SS | 18 | 14 | | | | | 6-15-21 (36) |
| | S-4 | SS | 18 | 16 | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and dark brown, moist, hard. | | | | 10-10-13 (23) |
| 10 | | | | | | | | 665.0 | |
| | S-5 | SS | 18 | 10 | | | | | 6-7-12 (19) |
| | S-6 | SS | 18 | 5 | | | | | 7-4-5 (9) |
| | | | | | **END OF BORING AT 15 Ft** | | | 660.0 | |



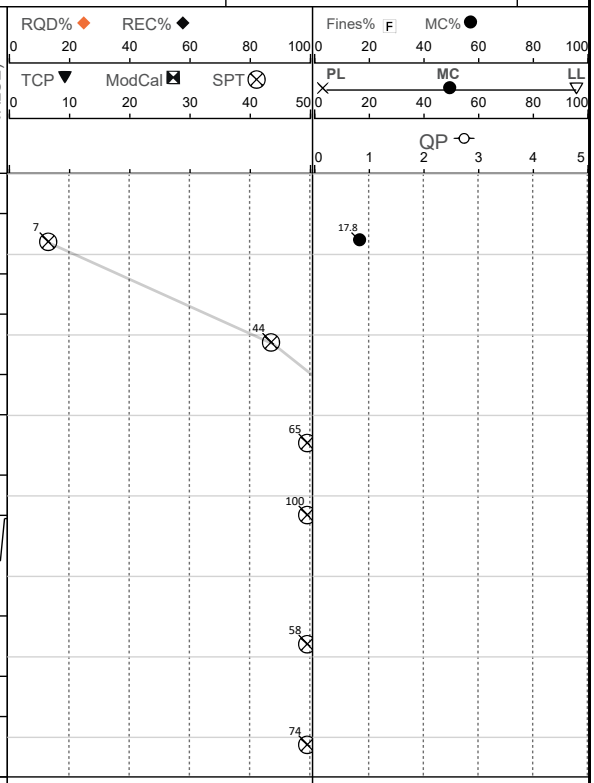

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-04** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033978** | LONGITUDE: **-87.950784** | STATION: | SURFACE ELEVATION: **673** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=2"]. | | | | |
| | S-1 | SS | 18 | 16 | FILL - (SP) POORLY GRADED SAND - brown, wet to moist, very dense to medium dense (and gravel) (probable cobbles/ boulders). | | ▽ | 670.0 | 2-3-4 (7) |
| | S-2 | SS | 18 | 4 | | | | | 15-21-23 (44) |
| 5 | S-3 | SS | 18 | 3 | | | | | 26-31-34 (65) |
| | S-4 | SS | 18 | 1 | | | | 665.0 | 50/1 (100) |
| 10 | S-5 | SS | 18 | 10 | | | | | 17-27-31 (58) |
| | S-6 | SS | 18 | 12 | | | | 660.0 | 28-33-41 (74) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



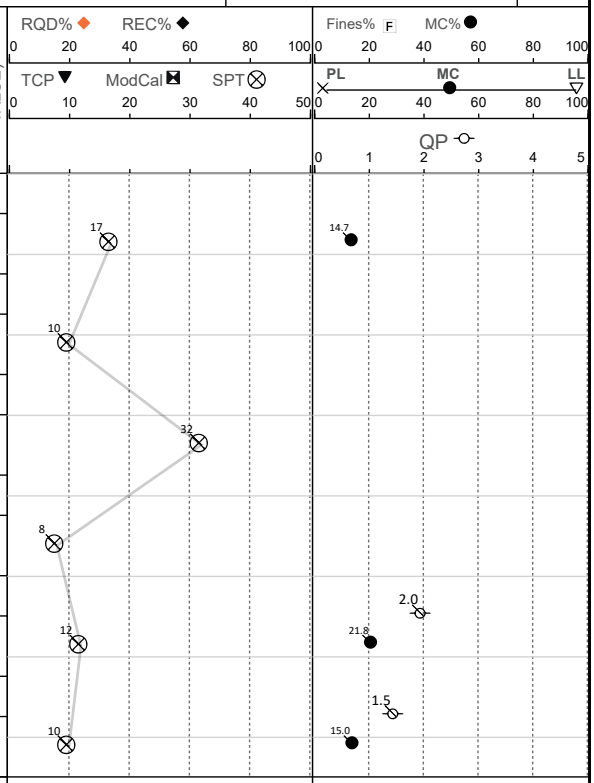

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 3.5 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-05** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.034287** | LONGITUDE: **-87.956070** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=2"]. | | | | |
| | S-1 | SS | 18 | 18 | FILL - (CL-ML) SILTY CLAY WITH SAND - black, moist, (with gravel and crushed stone), (probable cobbles/ boulders). | | | 670.0 | 8-7-10 (17) |
| | S-2 | SS | 18 | 10 | | | | | 5-4-6 (10) |
| 5 | S-3 | SS | 18 | 12 | | | ▽ | 665.0 | 10-15-17 (32) |
| | S-4 | SS | 18 | 8 | FILL - (SP) POORLY GRADED SAND - medium to coarse sand, trace gravel, brown, moist, loose. | | ▽ | | 6-4-4 (8) |
| 10 | S-5 | SS | 18 | 14 | (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, very stiff. | | | 660.0 | 3-5-7 (12) |
| | S-6 | SS | 18 | 14 | (ML) CLAYEY SILT WITH SAND - gray, moist, stiff. | | | | 4-5-5 (10) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



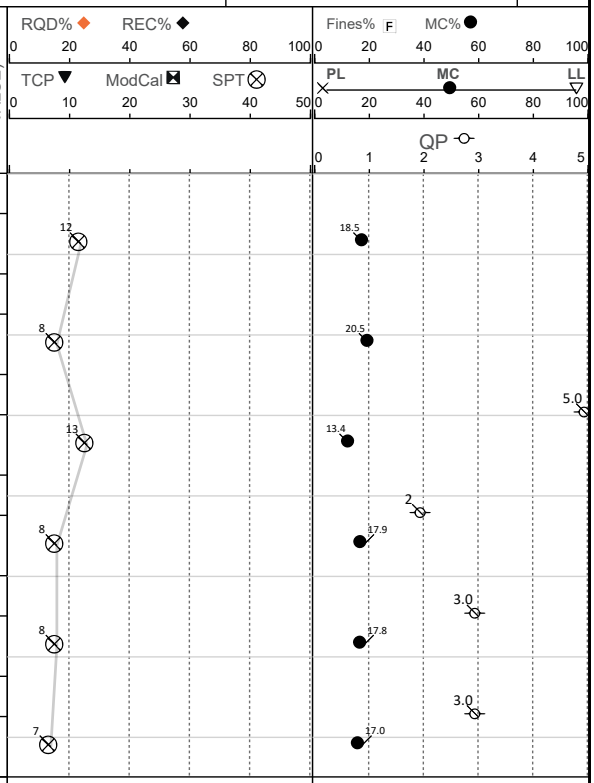

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 6 Ft | BORING STARTED: | 04/28/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/28/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | 8 Ft | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

## GEOTECHNICAL BOREHOLE LOG

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-06** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.033456** | LONGITUDE: **-87.953960** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=8"]. | | | | |
| | S-1 | SS | 18 | 16 | (ML) SILT - brown and gray, moist, loose to medium dense. | | | 670.0 | 4-5-7 (12) |
| | S-2 | SS | 18 | 16 | | | | | 4-4-4 (8) |
| 5 | S-3 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, hard. | | | 665.0 | 5-5-8 (13) |
| | S-4 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff. | | | | 3-3-5 (8) |
| 10 | S-5 | SS | 18 | 18 | | | | 660.0 | 3-4-4 (8) |
| | S-6 | SS | 18 | 18 | | | | | 3-3-4 (7) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



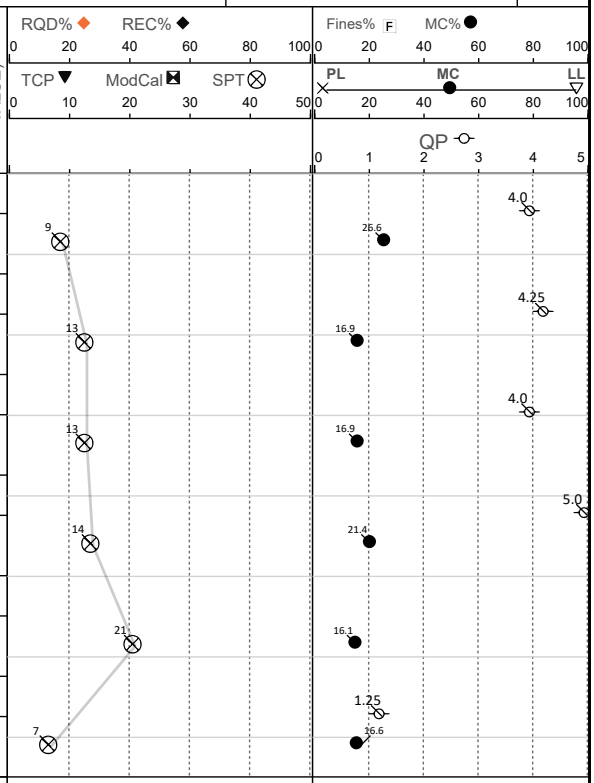

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | Not Observed | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-07** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.032913** | LONGITUDE: **-87.952467** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=4"]. | | | | |
| | S-1 | SS | 18 | 16 | (CL) LEAN CLAY - brown and gray mottled, moist, hard. | | | 670.0 | 4-4-5 (9) |
| | S-2 | SS | 18 | 3 | | | | | 6-6-7 (13) |
| 5 | S-3 | SS | 18 | 18 | | | | 665.0 | 4-5-8 (13) |
| | S-4 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, brown and gray, moist, hard. | | | | 4-6-8 (14) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace gravel and sand, gray, moist, stiff. | | | 660.0 | 6-9-12 (21) |
| | S-6 | SS | 18 | 6 | | | ▼ | | 5-4-3 (7) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



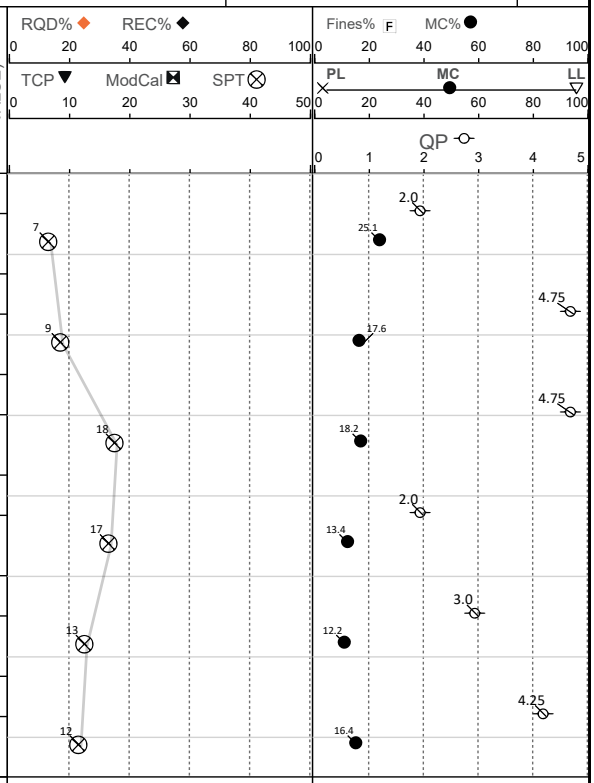

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 14 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | 14 Ft | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-08** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.032340** | LONGITUDE: **-87.950829** | STATION: | SURFACE ELEVATION: **667** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Topsoil [Thickness=6"]. | | | | |
| | S-1 | SS | 18 | 14 | FILL - (CL) LEAN CLAY - brown and black, moist, very stiff. | | | 665.0 | 3-3-4 (7) |
| | S-2 | SS | 18 | 16 | (CL) LEAN CLAY - trace sand and gravel, brown and gray mottled, moist, hard. | | | | 3-4-5 (9) |
| 5 | S-3 | SS | 18 | 18 | | | | 660.0 | 5-7-11 (18) |
| | S-4 | SS | 18 | 18 | (CL) SANDY LEAN CLAY - trace gravel, brown, moist, very stiff. | | ▽ | | 6-9-8 (17) |
| 10 | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace sand and gravel, gray, moist, very stiff to hard. | | | 655.0 | 3-6-7 (13) |
| | S-6 | SS | 18 | 18 | | | | | 3-5-7 (12) |
| | | | | | **END OF BORING AT 15 Ft** | | | | |



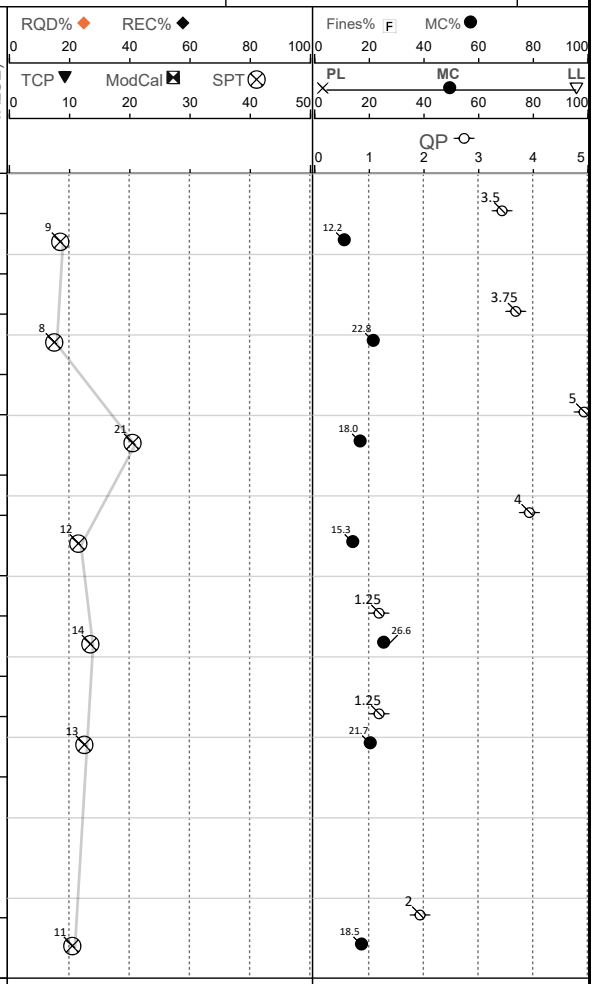

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 8.5 Ft | BORING STARTED: | 04/27/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | Not Observed | BORING COMPLETED: | 04/27/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-15') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: | PROJECT NO.: | BORING NO.: | SHEET: |
|---|---|---|---|
| **CloudHQ** | **16:13881-D** | **E-09** | **1 OF 1** |
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.035831** | LONGITUDE: **-87.953304** | STATION: | SURFACE ELEVATION: **671** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | FILL - (CL) LEAN CLAY - dark brown and black, moist, very stiff, (with crushed stone). | | | 670.0 | |
| | S-1 | SS | 18 | 6 | | | | | 2-3-6 (9) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, brown and gray mottled, moist, very stiff to hard. | | | | |
| 5 | S-2 | SS | 18 | 10 | | | | | 4-4-4 (8) |
| | S-3 | SS | 18 | 18 | | | | 665.0 | 4-9-12 (21) |
| | | | | | (CL) LEAN CLAY - trace sand and gravel, gray, moist, stiff to hard. | | | | |
| | S-4 | SS | 18 | 18 | | | | | 4-5-7 (12) |
| 10 | | | | | | | ▽ | 660.0 | |
| | S-5 | SS | 18 | 18 | | | | | 4-6-8 (14) |
| | S-6 | SS | 18 | 16 | | | | | 6-6-7 (13) |
| 15 | | | | | | | | 655.0 | |
| | S-7 | SS | 18 | 9 | | | | | 4-5-6 (11) |
| | | | | | **END OF BORING AT 20 Ft** | | | | |



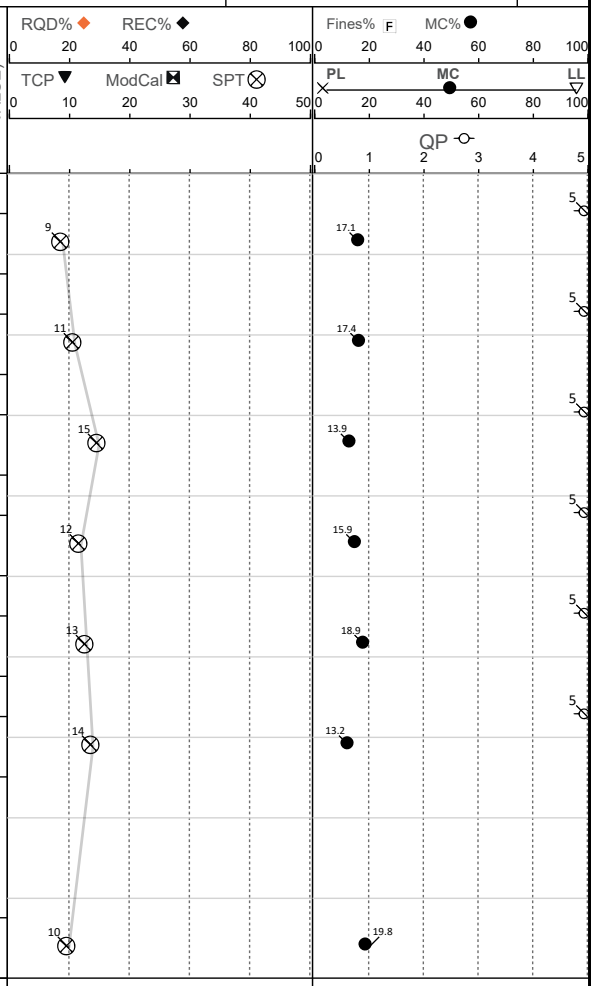

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 11 Ft | BORING STARTED: | 06/12/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | | BORING COMPLETED: | 06/12/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-10** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.036888** | LONGITUDE: **-87.953256** | STATION: | SURFACE ELEVATION: **672** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Asphalt [thickness 7½" ±). | | | | |
| | S-1 | SS | 18 | 6 | FILL - (GP) POORLY GRADED GRAVEL. | | | | 4-4-5 (9) |
| | | | | | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and gray, hard. | | | 670.0 | |
| | S-2 | SS | 18 | 9 | | | | | 4-4-7 (11) |
| 5 | | | | | | | | | |
| | S-3 | SS | 18 | 12 | | | | 665.0 | 5-6-9 (15) |
| | | | | | FILL - (CL) LEAN CLAY - trace sand and gravel, brown and black, moist, hard. | | | | |
| | S-4 | SS | 18 | 16 | | | | | 3-4-8 (12) |
| 10 | | | | | | | | | |
| | S-5 | SS | 18 | 18 | (CL) LEAN CLAY - trace gravel and sand, gray, moist, hard. | | | 660.0 | 5-5-8 (13) |
| | S-6 | SS | 18 | 11 | | | | | 4-7-7 (14) |
| 15 | | | | | | | | | |
| | | | | | | | | 655.0 | |
| | S-7 | SS | 18 | 16 | | | | | 3-4-6 (10) |
| | | | | | **END OF BORING AT 20 Ft** | | | | |



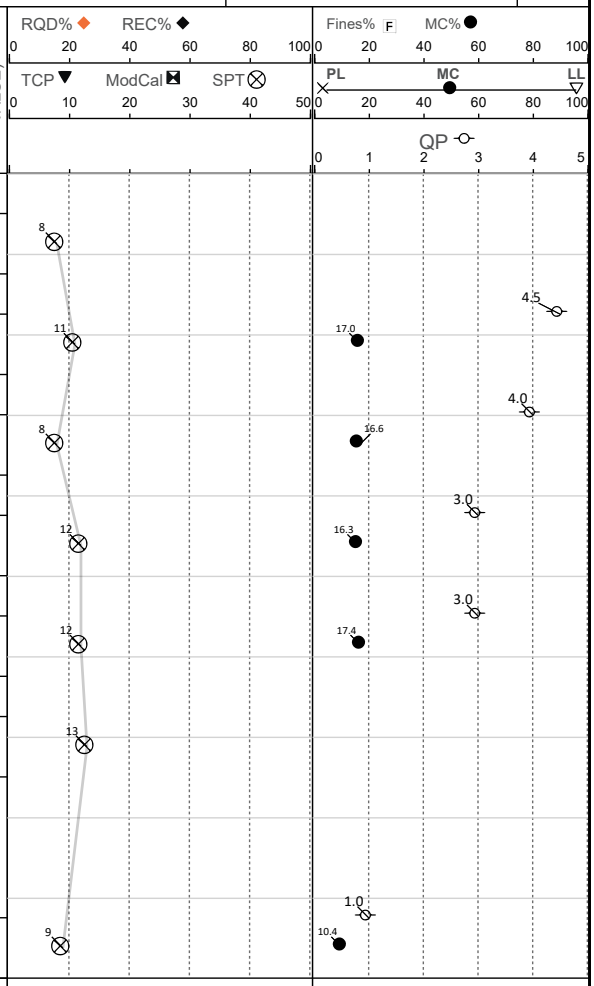

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| WL (First Encountered): | | BORING STARTED: | 06/12/2025 | CAVE IN DEPTH: | Not Observed |
| WL (Completion): | 13.5 Ft | BORING COMPLETED: | 06/12/2025 | HAMMER TYPE: | Automatic |
| WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| WL (Stabilized): | | Diedrich D-50 | DTL | Hollow Stem Auger (0'-20') | |

**GEOTECHNICAL BOREHOLE LOG**

| CLIENT: **CloudHQ** | PROJECT NO.: **16:13881-D** | BORING NO.: **E-11** | SHEET: **1 OF 1** |
|---|---|---|---|
| PROJECT NAME: **Proposed Cloud HQ Supplemental Testing** | DRILLER/CONTRACTOR: **GEO Services Inc.** | | |
| SITE LOCATION: **1200 East Algonquin Road, Mount Prospect, Illinois, 60016** | | | LOSS OF CIRCULATION |
| LATITUDE: **42.036954** | LONGITUDE: **-87.950837** | STATION: | SURFACE ELEVATION: **670** | BOTTOM OF CASING |

| DEPTH (FT) | SAMPLE NUMBER | SAMPLE TYPE | SAMPLE DISTANCE (IN) | SAMPLE RECOVERY (IN) | DESCRIPTION OF MATERIAL | STRATIGRAPHY | WATER LEVELS | ELEVATION (FT) | BLOWS/6" (TCP/MC/SPT-N VALUE)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | FILL - (CL) LEAN CLAY - dark brown, brown and black, moist, very stiff to hard, (with crushed stone). | | | | |
| | S-1 | SS | 18 | 6 | | | | | 3-3-5 (8) |
| | S-2 | SS | 18 | 10 | | | | | 3-5-6 (11) |
| 5 | | | | | | | | 665.0 | |
| | S-3 | SS | 18 | 12 | | | | | 4-4-4 (8) |
| | S-4 | SS | 18 | 12 | | | ▼ | | 4-8-4 (12) |
| 10 | | | | | | | | 660.0 | |
| | S-5 | SS | 18 | 11 | | | | | 5-6-6 (12) |
| | S-6 | SS | 18 | 8 | (GP) POORLY GRADED GRAVEL WITH SAND - brown, moist to wet, medium dense. | | ▽ | | 4-6-7 (13) |
| 15 | | | | | | | | 655.0 | |
| | S-7 | SS | 18 | 4 | (CL) LEAN CLAY WITH GRAVEL - trace sand, gray, moist, stiff. | | | | 3-4-5 (9) |
| | | | | | **END OF BORING AT 20 Ft** | | | 650.0 | |




THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

| | | | | | |
|---|---|---|---|---|---|
| ▽ WL (First Encountered): | 13.5 Ft | BORING STARTED: | 06/12/2025 | CAVE IN DEPTH: | Not Observed |
| ▼ WL (Completion): | 9 Ft | BORING COMPLETED: | 06/12/2025 | HAMMER TYPE: | Automatic |
| ▼ WL (Seasonal High Water): | | EQUIPMENT: | LOGGED BY: | DRILLING METHOD: | |
| ▽ WL (Stabilized): | | Deidrich D-50 | DTL | Hollow Stem Auger (0'-20') | |

**GEOTECHNICAL BOREHOLE LOG**

# THERMAL RESISTIVITY TESTING

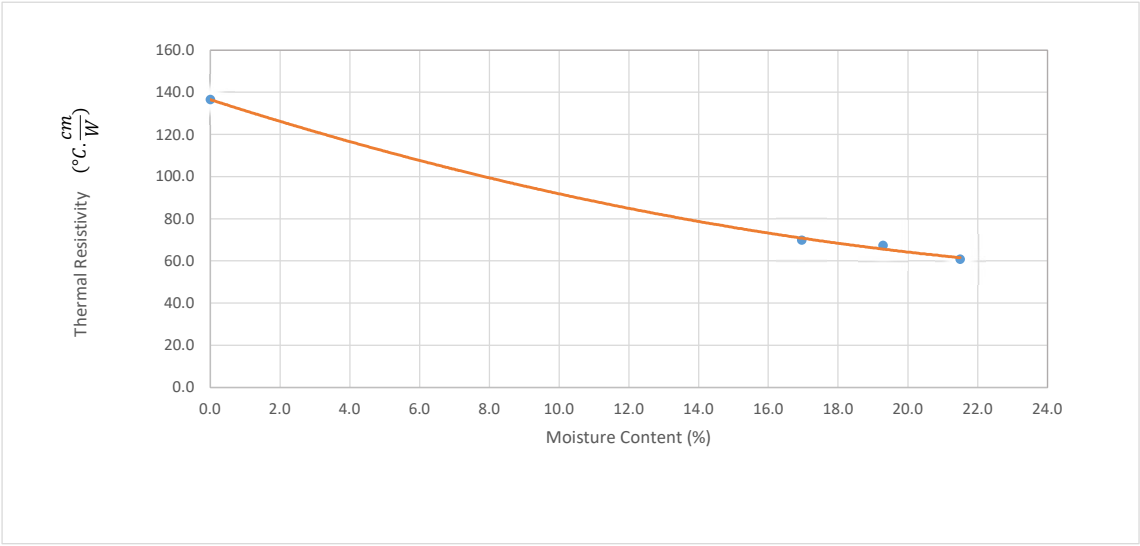
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-1/4 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 111.9 |
| Optimum moisture content (%) | 17% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 136.5 |
| 2 | 17.0 | 69.9 |
| 3 | 19.3 | 67.3 |
| 4 | 21.5 | 60.7 |



# THERMAL RESISTIVITY TESTING

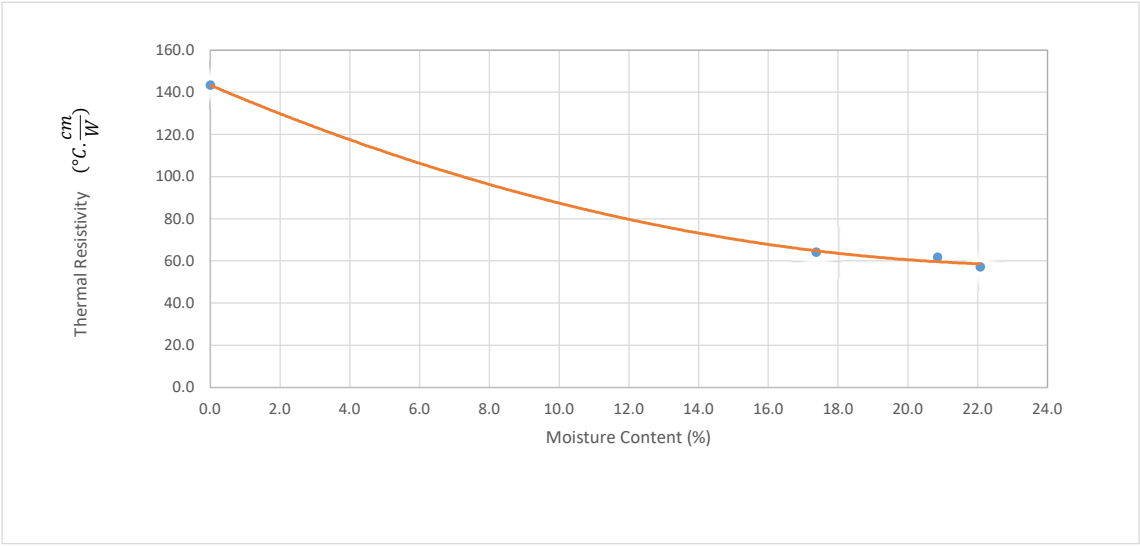
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-2/3 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 110.7 |
| Optimum moisture content (%) | 17% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 143.4 |
| 2 | 17.4 | 64.2 |
| 3 | 20.8 | 61.7 |
| 4 | 22.1 | 57.2 |



# THERMAL RESISTIVITY TESTING

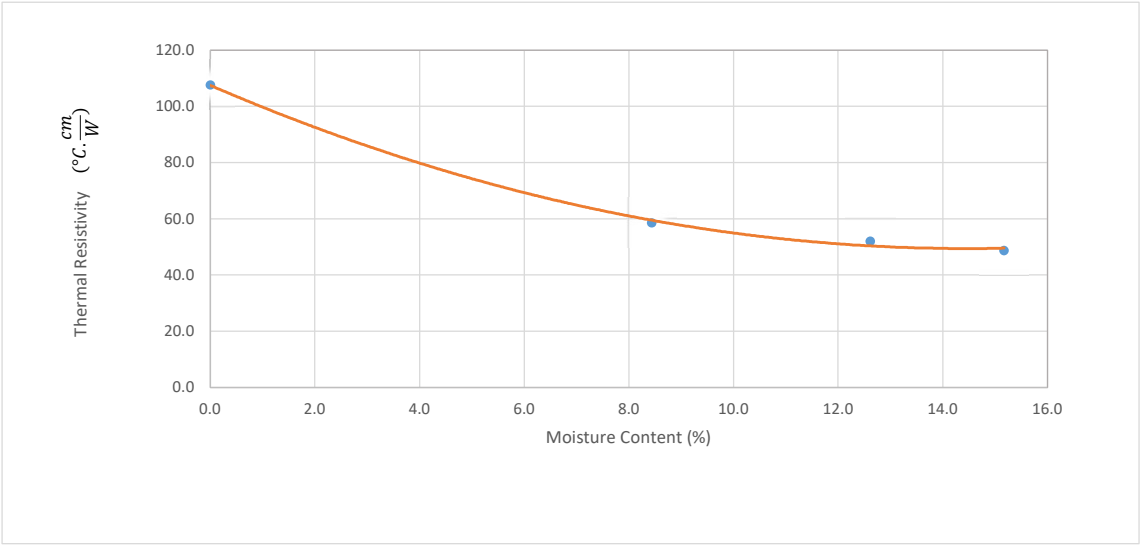
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-5/6 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 120.0 |
| Optimum moisture content (%) | 12% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 107.6 |
| 2 | 8.4 | 58.5 |
| 3 | 12.6 | 52.0 |
| 4 | 15.2 | 48.7 |



# THERMAL RESISTIVITY TESTING

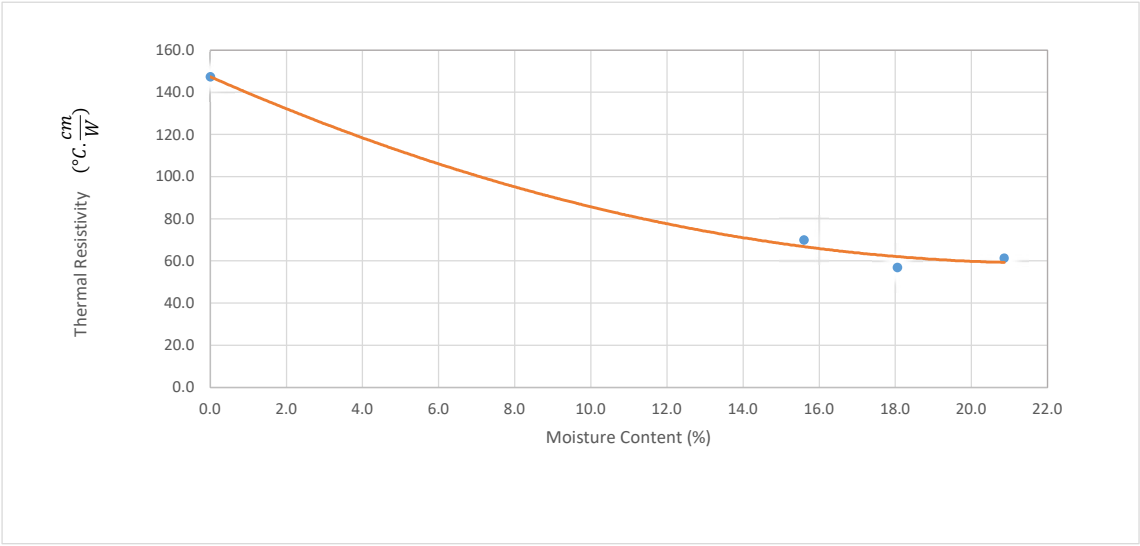
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-7/8 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 109.9 |
| Optimum moisture content (%) | 16% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 147.3 |
| 2 | 15.6 | 69.9 |
| 3 | 18.1 | 56.9 |
| 4 | 20.9 | 61.3 |



# THERMAL RESISTIVITY TESTING

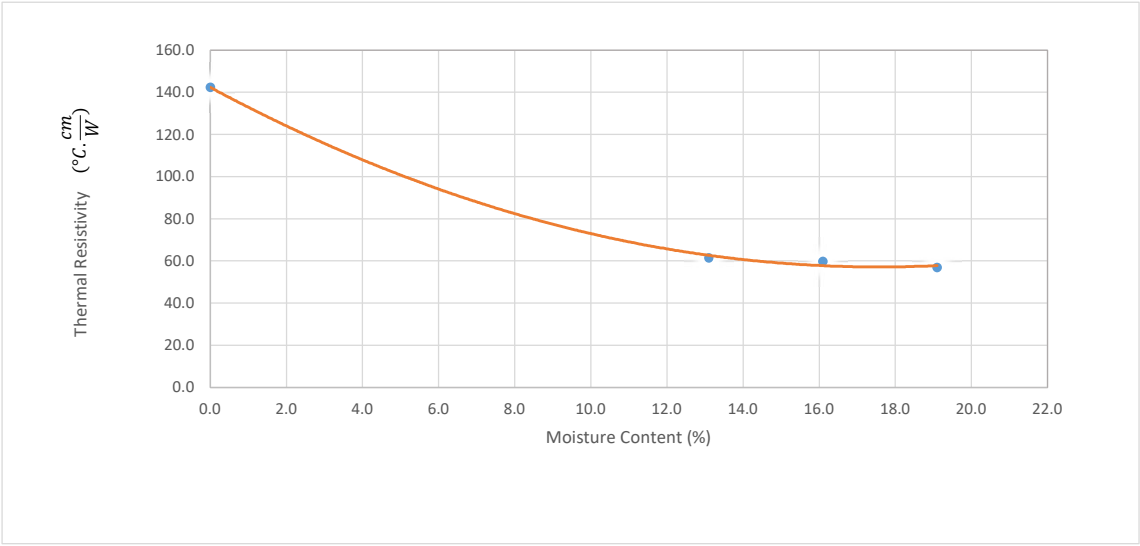
| | |
|---|---|
| ECS Midwest, LLC | Buffalo Grove, IL |
| Project Name: | Cloud HQ Supplemental Testing |
| Project Location: | Mount Prospect, IL |
| Project number | 13881-D |
| Sample Location: | E-10/11 |

| | |
|---|---|
| Date | 7/23/2025 |
| Lab test by: | JS |
| Report by: | JS |
| Review by: | |

| | |
|---|---|
| ASTM D5334 | Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure |

| Thermal resistivity tests performed on remolded samples to 95% compaction. | |
|---|---|
| Soil Visual Classification | CL |
| Maximum Dry Density, pcf | 109.2 |
| Optimum moisture content (%) | 16% |

| sample # | Moisture Content (%) | Thermal Resistivity $(°C.\frac{cm}{W})$ |
|---|---|---|
| 1 (oven dried) | 0.0 | 142.4 |
| 2 | 13.1 | 61.4 |
| 3 | 16.1 | 59.7 |
| 4 | 19.1 | 56.9 |



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## PUD RESPONSE

| | |
|---|---|
| CLIENT | CloudHQ |
| PROJECT | ORD1 – Building #1 C&S |
| ITEM # | Mechanical PUD Item #21 |
| DATE | August 22nd, 2025 |
| PREPARED BY | Brayden Chambers |
| PROJECT ROLE | kW MCE / Mechanical Engineer |

**LINE ITEM #21:**
Submit a narrative outlining the development's sustainability goals as they relate to resource consumption (such as water and electricity), as questions on this topic are anticipated from the Village Board.

**KWMCE Response:**
**Sustainability Narrative – Resource Consumption in the Data Center Development**
The proposed data center development is designed with a strong focus on reliability and efficiency. At the same time, sustainability and responsible resource consumption, particularly regarding water and electricity, are integral to the overall design. Recognizing the high energy demands of data centers, this approach prioritizes operational performance while promoting environmental stewardship in alignment with both industry best practices and the Village's long term sustainability goals.

---

**Electricity Consumption**
While it is understood that the data hall will have a significant demand on the electrical grid, the system has been designed with the versatility to prioritize energy savings wherever possible. Key design features that support this goal include:
**Hybrid Cooling System**
The facility employs a hybrid cooling system to achieve the required heat rejection with high efficiency. The primary system uses dry coolers, which reject heat to the atmosphere using closed loop condenser water (CCW), resulting in no water usage.
Cooling towers are also included and use adiabatic cooling (via evaporating water) to supplement cooling during peak IT load conditions. These towers are activated only when the system experiences peak ambient conditions.
**Thermal Energy Storage (TES) Tanks**
TES tanks are integrated into the design to buffer the thermal load between the IT equipment and the chillers. These tanks reduce temperature spikes reaching the chillers, enabling the chillers to operate more efficiently by avoiding rapid ramp up in response to sudden IT load fluctuations.

**Fluid Side Economizer**

A fluid side economizer is provided, using a heat exchanger to pre-treat the chilled water return (CHWR) whenever the closed loop condenser water supply (CCWS) temperature falls below the CHWR temperature. This setup allows for direct heat transfer from CHWR to CCWS, reducing chiller load and improving energy efficiency.

These system components allow the data center to operate in an optimized state, improving both energy performance and overall reliability, while offering greater efficiency than what is typically achievable with traditional data center designs.

---

**Water Consumption**

To support water sustainability, the design prioritizes low water or water free cooling strategies:

- The primary heat rejection system, as noted, consists of dry coolers that use a closed loop system, minimizing water use during standard operation.
- Adiabatic cooling towers are included for use during peak ambient conditions.

---

**Summary**

In summary, the proposed data center development reflects a thoughtful and forward-looking approach to sustainability, balancing high operational performance with responsible resource consumption. By integrating technologies such as thermal energy storage tanks and fluid side economizers, and by prioritizing dry coolers over adiabatic cooling towers, the facility is designed to reduce both energy and water use. This approach minimizes the environmental impact on surrounding communities and aligns with modern sustainability standards, offering a more responsible alternative compared to traditional data center designs.

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## PUD RESPONSE

| | |
|---|---|
| CLIENT | CloudHQ |
| PROJECT | ORD1 – Building #1 C&S |
| ITEM # | Mechanical PUD Item #47 |
| DATE | August 22nd, 2025 |
| PREPARED BY | Brayden Chambers |
| PROJECT ROLE | kW MCE / Mechanical Engineer |

**LINE ITEM #47:**
Updated noise, air quality, and traffic studies will be required.

**KWMCE Response:** Attached below are snippets from the current equipment selections highlighting the noise criteria.

Dry-Coolers at 100%:
Low noise fans

| A01 - Noise | Var0_Rev4 - 8R2P | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Octave (Hz) | 31.5 | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Global |
| PWL / bay (3 fans) | 100.7 | 102.7 | 100.7 | 95.7 | 92.7 | 89.7 | 81.7 | 77.7 | 73.7 | 94.7 |
| PWL / installation (54 fans ) | 113.3 | 115.2 | 113.2 | 108.2 | 105.2 | 102.2 | 94.2 | 90.2 | 86.2 | 107.3 |

Ultra low noise fans + Motor coverage+ additional 0.8m fan ring

| A01 - Noise | Var0_Rev4 - 8R2P - UltraLowNoise | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Octave (Hz) | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Global |
| PWL / bay (3 fans) | | 66.1 | 79.3 | 80.2 | 85.1 | 85.9 | 79.7 | 72.5 | 59.0 | 90.0 |
| PWL / installation (54 fans ) | | 78.6 | 91.8 | 92.7 | 97.6 | 98.4 | 92.2 | 85.0 | 71.5 | 102.5 |

Cooling Towers (6 Towers at 55 MW):

No Noise Modifications:

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 106,5 | 106,6 | 102,6 | 100,3 | 98,2 | 94,8 | 94,3 | 93,4 | 103,9 |
| Total inlet ($Lw_{inl,er}$) | 97,3 | 96,5 | 95,4 | 100,6 | 105,2 | 105,9 | 106,8 | 106,1 | 112,6 |
| Total ($Lw_{ct}$) | 107,0 | 107,0 | 103,4 | 103,4 | 106,0 | 106,2 | 107,0 | 106,4 | 113,2 |

Low Noise Fan (50F):

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 99,6 | 99,9 | 96,0 | 95,5 | 94,9 | 93,8 | 93,9 | 93,2 | 101,3 |
| Total inlet ($Lw_{inl,er}$) | 95,5 | 94,3 | 94,5 | 100,5 | 105,2 | 105,9 | 106,8 | 106,1 | 112,6 |
| Total ($Lw_{ct}$) | 101,1 | 100,9 | 98,3 | 101,6 | 105,5 | 106,2 | 107,0 | 106,4 | 112,9 |

Low Noise Fan + Outlet Attenuator:

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 98,3 | 95,6 | 87,5 | 83,7 | 85,8 | 87,5 | 88,1 | 87,5 | 94,2 |
| Total inlet ($Lw_{inl,er}$) | 95,5 | 94,3 | 94,5 | 100,5 | 105,2 | 105,9 | 106,8 | 106,1 | 112,6 |
| Total ($Lw_{ct}$) | 100,2 | 98,0 | 95,3 | 100,5 | 105,2 | 106,0 | 106,8 | 106,2 | 112,7 |

Low Noise Fan + Outlet Attenuator + SPA (Water Noise Reduction):

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 98,3 | 95,6 | 87,5 | 83,5 | 85,6 | 87,2 | 83,7 | 81,3 | 92,4 |
| Total inlet ($Lw_{inl,er}$) | 95,5 | 94,3 | 94,5 | 99,7 | 104,7 | 105,5 | 102,1 | 99,8 | 110,4 |
| Total ($Lw_{ct}$) | 100,2 | 98,0 | 95,3 | 99,8 | 104,8 | 105,6 | 102,1 | 99,9 | 110,5 |

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## PUD RESPONSE

| | |
|---|---|
| CLIENT | CloudHQ |
| PROJECT | ORD1 – Building #1 C&S |
| ITEM # | Mechanical PUD Item #49 |
| DATE | August 22nd, 2025 |
| PREPARED BY | Brayden Chambers |
| PROJECT ROLE | kW MCE / Mechanical Engineer |

**LINE ITEM #49:**
Under the section “Impacts on Adjacent Properties” then “Emissions” and “Noise”, the applicant shall provide information that will assist staff in updating these subsections.

**KWMCE Response:** Attached below are snippets from the current equipment selections highlighting the noise criteria.

Dry-Coolers at 100%:
Low noise fans

| A01 - Noise | Var0_Rev4 - 8R2P | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Octave (Hz) | 31.5 | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Global |
| PWL / bay (3 fans) | 100.7 | 102.7 | 100.7 | 95.7 | 92.7 | 89.7 | 81.7 | 77.7 | 73.7 | 94.7 |
| PWL / installation (54 fans ) | 113.3 | 115.2 | 113.2 | 108.2 | 105.2 | 102.2 | 94.2 | 90.2 | 86.2 | 107.3 |

Ultra low noise fans + Motor coverage+ additional 0.8m fan ring

| A01 - Noise | Var0_Rev4 - 8R2P - UltraLowNoise | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Octave (Hz) | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Global |
| PWL / bay (3 fans) | | 66.1 | 79.3 | 80.2 | 85.1 | 85.9 | 79.7 | 72.5 | 59.0 | 90.0 |
| PWL / installation (54 fans ) | | 78.6 | 91.8 | 92.7 | 97.6 | 98.4 | 92.2 | 85.0 | 71.5 | 102.5 |

Cooling Towers (6 Towers at 55 MW):

No Noise Modifications:

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 106,5 | 106,6 | 102,6 | 100,3 | 98,2 | 94,8 | 94,3 | 93,4 | 103,9 |
| Total inlet ($Lw_{inl,er}$) | 97,3 | 96,5 | 95,4 | 100,6 | 105,2 | 105,9 | 106,8 | 106,1 | 112,6 |
| Total ($Lw_{ct}$) | 107,0 | 107,0 | 103,4 | 103,4 | 106,0 | 106,2 | 107,0 | 106,4 | 113,2 |

Low Noise Fan (50F):

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 99,6 | 99,9 | 96,0 | 95,5 | 94,9 | 93,8 | 93,9 | 93,2 | 101,3 |
| Total inlet ($Lw_{inl,er}$) | 95,5 | 94,3 | 94,5 | 100,5 | 105,2 | 105,9 | 106,8 | 106,1 | 112,6 |
| Total ($Lw_{ct}$) | 101,1 | 100,9 | 98,3 | 101,6 | 105,5 | 106,2 | 107,0 | 106,4 | 112,9 |

Low Noise Fan + Outlet Attenuator:

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 98,3 | 95,6 | 87,5 | 83,7 | 85,8 | 87,5 | 88,1 | 87,5 | 94,2 |
| Total inlet ($Lw_{inl,er}$) | 95,5 | 94,3 | 94,5 | 100,5 | 105,2 | 105,9 | 106,8 | 106,1 | 112,6 |
| Total ($Lw_{ct}$) | 100,2 | 98,0 | 95,3 | 100,5 | 105,2 | 106,0 | 106,8 | 106,2 | 112,7 |

Low Noise Fan + Outlet Attenuator + SPA (Water Noise Reduction):

| | 63Hz (dB) | 125Hz (dB) | 250Hz (dB) | 500Hz (dB) | 1kHz (dB) | 2kHz (dB) | 4kHz (dB) | 8kHz (dB) | Total (dB(A)) |
|---|---|---|---|---|---|---|---|---|---|
| Total outlet ($Lw_{outl,er}$) | 98,3 | 95,6 | 87,5 | 83,5 | 85,6 | 87,2 | 83,7 | 81,3 | 92,4 |
| Total inlet ($Lw_{inl,er}$) | 95,5 | 94,3 | 94,5 | 99,7 | 104,7 | 105,5 | 102,1 | 99,8 | 110,4 |
| Total ($Lw_{ct}$) | 100,2 | 98,0 | 95,3 | 99,8 | 104,8 | 105,6 | 102,1 | 99,9 | 110,5 |

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## PUD RESPONSE

| | |
|---|---|
| CLIENT | CloudHQ |
| PROJECT | ORD1 – Building #1 C&S |
| ITEM # | Mechanical PUD Item #112 |
| DATE | August 22nd, 2025 |
| PREPARED BY | Brayden Chambers |
| PROJECT ROLE | kW MCE / Mechanical Engineer |

**LINE ITEM #112:**
Underground urea tanks are identified as Key Note #13. How many underground urea tanks are proposed?

**KWMCE Response:** Eight underground urea tanks are proposed in the design, with two tanks allocated to each of the four building sectors for ORD1.

Two underground urea tanks are proposed in the design, with one tank allocated to each of the building sectors for ORD2.

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## PUD RESPONSE

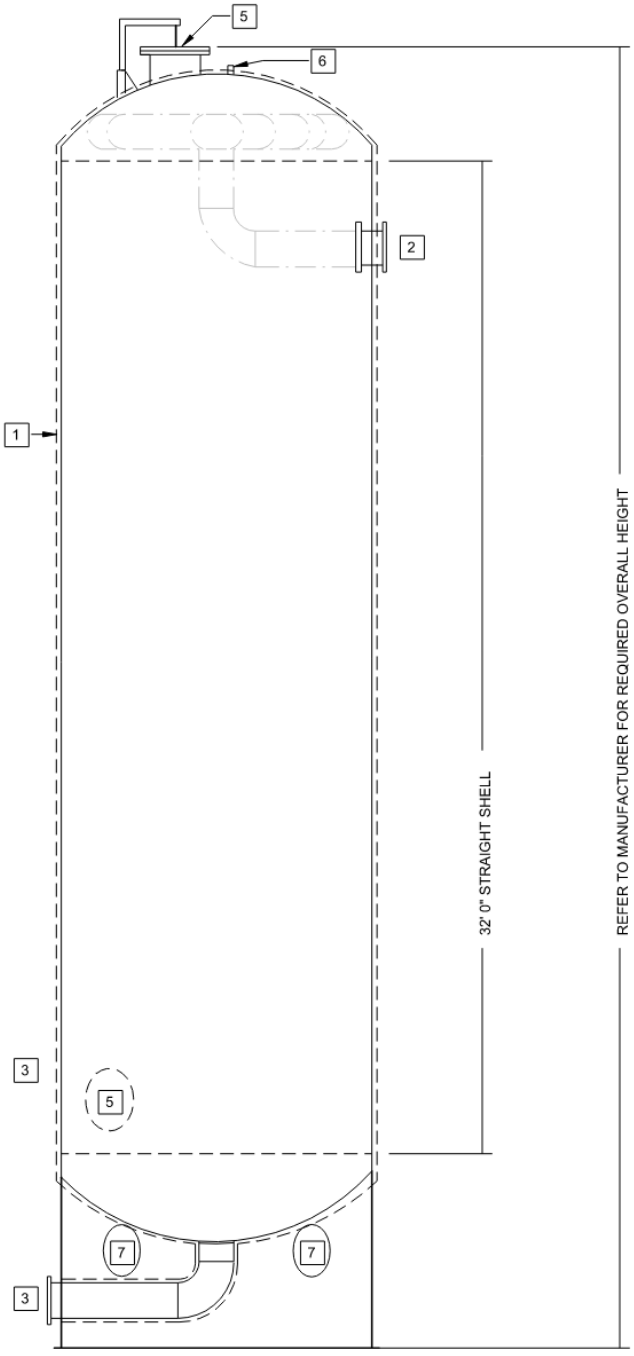
| | |
|---|---|
| CLIENT | CloudHQ |
| PROJECT | ORD1 – Building #1 C&S |
| ITEM # | Mechanical PUD Item #113 |
| DATE | August 22nd, 2025 |
| PREPARED BY | Brayden Chambers |
| PROJECT ROLE | kW MCE / Mechanical Engineer |

**LINE ITEM #113:**
TES tanks are identified as Key Note #14. What is the purpose of a TES tank? Is this an above-ground tank? How many TES tanks are proposed? What is the maximum height of the TES tanks? If the TES tanks are visible from Linneman Road, they must be screened. Provide specs/details of the TES tanks.

**KWMCE Response:** TES (Thermal Energy Storage) tanks are designed to mitigate chilled water (CHW) temperature fluctuations and spikes resulting from sudden increases in IT load. They also provide additional thermal capacity during power outages, helping to maintain rack conditions while the chillers are brought back online.

Each TES tank is 62 feet 10 inches tall and located above grade within the equipment yard. To preserve visual aesthetics, a screen wall is provided to conceal them.

ORD1: A total of twenty-four (24) TES tanks are proposed—six (6) per building sector.
ORD2: A total of four (4) TES tanks are proposed—two (2) per building sector.




ALL TANK FABRICATIONS TO BE IN ACCORDANCE WITH ASME SECTION VIII, DIVISION 1, 2017 EDITION.

| | |
|---|---|
| 1 | 2" THICK INSULATION WITH WEATHERPROOF JACKETING |
| 2 | 20" TANK INLET WITH DIFFUSER |
| 3 | 20" TANK OUTLET WITH DIFFUSER |
| 4 | DRAIN |
| 5 | 304 SS HARDWARE W/ BLIND FLANGE, DAVIT, AND NEOPRENE RUBBER GASKET |
| 6 | VENT |
| 7 | 24" PIPE ACCESS OPENING IN SKIRT |

(5) TES TANK DETAIL
N.T.S.

**MAYOR**
Paul Wm. Hoefert

**TRUSTEES**
Vincent J. Dante
Elizabeth B. DiPrima
Terri Gens
William A. Grossi
John J. Matuszak
Colleen E. Saccotelli

**VILLAGE MANAGER**
Michael J. Cassady

**VILLAGE CLERK**
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# Village of Mount Prospect

50 S. Emerson Street, Mount Prospect, Illinois 60056

October 17, 2025

TUR Ventures, LLC
1212 New York Avenue, NW, Suite 1000
Washington, DC 20005
Via e-mail: ddixon@gha-engineers.com

**Re: PZ-21-25 / CU- Major PUD Amendment / 1200 E. Algonquin Road, 1200 Dempster Street / Review Comments #3**

Dear Mr. Dixon,

The Village of Mount Prospect has reviewed the submittal for the Mount Prospect Technology Campus Planned Unit Development (Major PUD Amendment), located at 1200 E. Algonquin Road and 1200 Dempster Street (Subject Property), and below are the following review comments from applicable departments:

**Planning Division:**

COMMENTS TO BE ADDRESSED PRIOR TO GRANTING ZONING APPROVAL:

1. The Petitioner and the Village shall enter into a Memorandum of Understanding delineating the costs and installation responsibilities of the off-site and public improvements (including, but not limited to, the $2,000,000 contribution to the Mount Prospect Park District, multi-use path, sidewalks, streetlights, etc.) related to the proposed development prior to the issuance of a building permit. The MOU shall be approved at the same meeting of the PUD approval before the Village Board on October 28, 2025. **Provide a draft of the MOU for Village review.**

COMMENTS TO BE ADDRESSED PRIOR TO ISSUING A BUILDING PERMIT:

2. A photometric plan that complies with Section 14.314 and includes the substation #2 lighting levels shall be submitted with the building permit application. The calculation summary shows the following areas exceed a maximum illumination of 5 foot-candles:
    a. ORD1 Entrance East 2: 6.20 Fc

b. ORD1 Entrance North 2, 3, 4: 7.68 Fc
c. ORD1 Entrance North 5, 6, 7: 8.18 Fc
d. ORD1 Entrance North 8: 10.50 Fc
e. ORD1 Entrance South 1: 7.20 Fc
f. ORD1 Entrance South 2: 7.10 Fc
g. ORD1 Entrance South 3: 6.90 Fc
h. ORD1 Entrance South 4: 6.75 Fc
i. ORD1 Entrance South 5: 8.25 Fc
j. ORD1 Entrance South 6: 7.35 Fc

Provide an explanation as to why these areas exceed the 5 Fc requirement. Do these areas propose any industrial canopy lighting (which would allow a maximum illumination level of 30 Fc)? If not, please ensure these that areas meet the 5 Fc maximum illumination level requirement for industrial uses. A fully compliant photometric plan will be required at time of building permit submittal.

3. Full cutoff luminaries with a total cutoff angle of not more than ninety degrees (90°) shall be used. Provide fixture cut sheets of all exterior lighting fixtures, including emergency lighting and light poles. Light poles shall not exceed a height of 30 feet including the base.

**Public Works Department:**

Insufficient time was allowed for Public Works to perform a thorough review the plans and plats submitted on October 16, 2025. While we have no objections to the proposed concept, we offer the following comments:

<u>COMMENTS REGARDING THE PLAT OF SUBDIVISION AND PLATS OF DEDICATION TO BE ADDRESSED PRIOR TO GRANTING APPROVAL OF THE PUD AMENDMENTS</u>

4. Previous comments have been addressed; no further comments

<u>COMMENTS REGARDING THE SITE PLANS TO BE ADDRESSED PRIOR TO GRANTING APPROVAL OF THE PUD AMENDMENTS OR VIA THE MOU</u>

5. Confirmation & clarification: The Village shall install the shared use path and streetlights along Algonquin Road, as well as the traffic signal improvements at Algonquin Road and Linneman Road. CloudHQ shall fund these improvements, and shall install their driveways onto Algonquin Road. The sidewalk and streetlight improvements along Dempster Street, the sidewalk along Linneman Road, and the traffic signal improvements at Dempster Street and Linneman Road shall be installed by CloudHQ as part of their site development.

COMMENTS REGARDING THE SITE PLANS TO BE ADDRESSED PRIOR TO ISSUING A BUILDING PERMIT

6. The plat of subdivision shows the proposed right of way dedication along Linneman Road to be extended south to include the entire length of the new sidewalk to be installed. The new right of way limits should also be reflected on the site plans.

7. The applicant shall make every effort to remove the lift station located on the adjacent United Airlines property at 1540 West Algonquin Road. This lift station should be so noted on the plan.

8. An updated Stormwater Management Report will have to be provided supporting the changes made to the design high water level and StormTrap detention chambers as shown on the most current plans.

9. In addition to Village approval, permits must be obtained from the following agencies:

    a. From Metropolitan Water Reclamation District of Greater Chicago (MWRD) for the new sanitary and stormwater management improvements.

    b. From Illinois Department of Transportation (IDOT) for any work in the Algonquin Road right of way.

    c. From Cook County Department of Transportation and Highways (CCDTH) for any work in the Dempster Street right of way.

    d. From the Illinois Environmental Protection Agency for the new watermain, erosion control measures (NPDES, ILR10 permit), and for the underground storage tanks.

    (We understand that permitting thru these other agencies has begun and is ongoing.)

It should be noted that no Code exceptions or variations are indicated on the plans or are approved. It must be understood that a thorough review of the site plans will be performed as part of the Building Permit review. Any additional comments will be provided at that time.

**Building Department:**

10. It is the applicant's responsibility to review the applicable building code and provide an analysis to ensure it is compatible with applicable code use, height, area, and standards set forth in the building and fire codes.

    Permit drawings shall include but not limited to a full and complete code analysis including life safety analysis with egress and occupant loads based on the Village's adopted codes with local amendments. None was included in the zoning submittal. Code analysis and compliance shall include but is not limited to building uses, types of construction, heights, areas, penthouse definition, high-rise definition, mixed use, separated/non-separated, fire ratings including any structural elements. Additionally, indicate any fire ratings, separations, fire walls, fire partitions, smoke partitions, and necessary protection of openings. Additionally, include any electrical vault locations, loads, EV, solar, and electric rooms. Drawings required shall include but are not limited to; full architectural, structural, mechanical, electrical, plumbing, fuel gas supplies, containers, generators, electrical load calculations, solar, structural calculations, grounding and bonding diagram including Ufer (concrete encased electrode), and bonding/grounding diagrams for exterior structural, fuel, and mechanical screening or metallic objects on the exterior or rooftop. Include details adequate for soils, foundation, footings, pads, including any reinforcing, rebar, structural supports, bearing pads, anchorage, phases/stages, bridging access points and any information necessary to review and construct the foundation. Additionally, the special inspections and testing (supplied by ownership/contractor) section of the IBC shall apply including but not limited, concrete, slump, steel reinforcing, welding, bolting, special bonding, high-rise/limited aerial access areas, pressure tests, mechanical test and balances, stack/pressure tests as required in the codes. Additionally, all areas shall be fully accessible based on the Illinois Accessible Code and Barrier Free Act. Additionally, submittal required for lifts/elevators as necessary.

**Fire Department:**

Please advise the petitioner that the following items must be included in the building/site plans submittal:

11. All above and below-ground storage tanks containing flammable and combustible liquids will need a State of Illinois Fire Marshal permit. The State of Illinois Fire Marshal permit is in addition to the Mount Prospect requirements that will be reviewed during the building permitting process.

12. Additional fire hydrants may be required for this project. Hydrants shall be provided around the perimeter of the building at a maximum of three hundred feet (300') spacing measured along access roads. Such hydrants shall be installed not more than fifty feet (50') or less than twenty-five feet (25') from the building. Fire hydrants will be required within three hundred feet (300') (spacing) around the entire building. An additional fire water loop may be required depending on the configuration around the building. This will be reviewed during site plan approval and submittal. Final hydrant locations will be reviewed and approved once the final site plan has been submitted through the building permit process.
13. A fire sprinkler system in accordance with NFPA 13 will be required for this project for all buildings, including generator areas. Ensure fire sprinkler shop drawings, hydraulic calculations, and equipment cut sheets are submitted for review.

Village of Mount Prospect Fire Prevention Code, 24.202

14. A fire alarm system will be required for this project for all buildings. Ensure fire alarm shop drawings with point-to-point wiring diagrams, battery load calculations, and equipment cut sheets are submitted for review.

Village of Mount Prospect Fire Prevention Code, 24.204

15. All new sprinkler risers and associated equipment shall be located in a separate room with a minimum of two-hour construction.
16. A fire pump and standpipe system(s) will be required for all buildings. Please ensure drawings are submitted for these systems.
17. Fire hydrants are shown to be supplied from water mains throughout the new development. Water flow calculations will be required to verify that the new proposed water main sizes can meet the required fire flow GPM demand. The minimum fire flow for an industrial occupancy is 6000 gallons per minute at 20 PSI residual pressure. This documentation must be provided to the Village of Mount Prospect's Public Works Engineering Department for review and approval, along with a copy to the Mount Prospect Fire Department. This will be reviewed during site plan approval and submittal. Calculations will be required to be provided indicating that the site has water-flow requirements meeting the maximum allowable provided by the Village's water supply.

Village of Mount Prospect Fire Prevention Code, 16.403 C

18. A minimum of three feet (3') clear space shall be maintained around the circumference of any new or existing fire hydrant, fire department connection, fire protection control valve, or any other fire protection system component.

19. An egress plan must be provided for all buildings. This plan must include occupant loads, travel distances, egress widths, and common path of travel distances. An egress plan will be required when the building plans are submitted for review. Additional exits may be required.
20. All egress doors are to use keyless locksets on the egress side. No flush bolts, dead or draw bolts, etc. will be allowed.

Life Safety Code, 7.2.1.5.1

21. An emergency vehicle maneuvering plan will be required for the site. This must be provided before the final site plan is approved. This will be reviewed during site plan approval and submittal through the building permit process.
22. All UPS battery systems and Electrical Energy Storage Systems (ESS) must meet the International Fire Code Requirements. This includes all fire testing requirements for any lithium-ion battery storage.

**If any changes are requested, please make the changes as noted above and submit a point-by-point response letter and pdf files of the drawings.** Please upload revisions into the portal. Feel free to contact me at (847) 818-5314 / achoi@mountprospect.org if you have any questions.

Sincerely,



Ann Choi
Development Planner
Community Development

c: File

**MINUTES OF THE REGULAR MEETING OF THE PLANNING & ZONING COMMISSION**

| | |
|---|---|
| **CASE NO. PZ-21-25** | Hearing Date: October 23, 2025 |
| **PROPERTY ADDRESS:** | 1200 E. Algonquin Road, 1200 Dempster Street |
| **PETITIONER**: | TUR Ventures LLC |
| **PUBLICATION DATE:** | October 8, 2025 |
| **REQUEST:** | Conditional use to amend a final planned unit development as a major change, Final Plat of Subdivision |
| **MEMBERS PRESENT:** | Joseph Donnelly<br>Ewa Weir<br>Walter Szymczak<br>Donald Olsen |
| **MEMBERS ABSENT:** | Michael Fricano<br>Richard Rogers<br>William Beattie |
| **STAFF MEMBERS PRESENT:** | Antonia Lalagos – Development Planner<br>Ann Choi – Development Planner<br>Jason Shallcross – Director of Community & Economic Development |
| **INTERESTED PARTIES**: | Matthew Norton, Attorney, Burke, Warren, MacKay & Serritella; Brett Burnette, Development Manager, Cloud HQ LLC; Don Dixon, Gewalt Hamilton Associates |

Chairman Donnelly called the meeting to order at 7:03 PM. Commissioner Szymczak made a motion seconded by Commissioner Olsen to approve the minutes from the Planning and Zoning Commission meeting on August 14, 2025. The minutes were approved 4-0.

After suspending the first item of business and hearing the second item of new business, Chairman Donnelly introduced case number PZ-21-25, 1200 E. Algonquin Road and 1200 Dempster Street, a request for conditional use approval to amend an existing planned unit development (PUD) as a major change and a final plat of subdivision for the subject property.

Ms. Choi gave a detailed overview of the final PUD that was previously approved in 2022 and the changes that were proposed in the 2025 amended proposal. Ms. Choi explained that the petitioner, TUR Ventures LLC, received conditional use approval for a final planned unit development and final plat of subdivision approval on June 21, 2022 to construct three (3) data centers and an electrical

substation. Ms. Choi stated that the petitioner proposes an amendment to the approved PUD for the construction of a two-building data center campus, a second electrical substation, a mechanical yard, a satellite antenna yard, and related site modifications the subject property. Ms. Choi noted that the proposal requires Village Board approval for the final plat and conditional use approval for the final PUD as a major change. Ms. Choi stated that the proposal meets the requirements and standards related to the Village Code, and staff supports the requests.

Ms. Choi concluded that staff finds that the proposal meets the applicable standards contained in the Mount Prospect Zoning Ordinance. She requested that the Planning and Zoning Commission make a motion to adopt staff's findings as the findings of the Planning and Zoning Commission and recommend approval of the following motion:

1. A final plat of subdivision titled "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUPS NO. 2", including the plats of dedication conveying land to IDOT and CCDTH, subject to the conditions listed in the staff report; and
2. A conditional use to amend the planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five (365) parking spaces, two (2) electrical substations, mechanical yard, satellite antenna yard, and related site improvements, as identified on the petitioner's plans, subject to the conditions listed in the staff report.

Ms. Choi stated that the Village Board's decision is final for the case.

Commissioner Weir asked if there was a change in lot coverage between the previously approved PUD and the proposal. Ms. Choi responded that the lot coverage for the previously approved PUD was 68% and the 2025 amended plans propose 82%.

Commissioner Weir asked if there were any requirements, such as for lighting, due to the proximity to O'Hare Airport. Ms. Choi was not aware of any requirements related to the proposal, and Chairman Donnelly deferred this question to the petitioner.

Commissioner Weir asked if staff reviewed or addressed any lighting that was required on the building or around the building. Ms. Choi explained that a photometric plan was reviewed and there were areas identified that exceeded what code allows, but that a fully compliant photometric plan would be required at time of building permit.

Commissioner Weir asked if the generators would be for emergency use only or if they would be constantly active. Ms. Choi responded that these would be operational for emergency use only and that the number of generators that would run for testing purposes is still being discussed.

Commissioner Weir asked if the project would be going to the state EPA for review. Director Shallcross responded the project requires EPA permitting since it is an air-emitting project. Director Shallcross responded that the project has already received stormwater IEPA permit approval, and they have not yet received the air emission permit from the IEPA which would occur during the building permit process.

Commissioner Weir asked if the type of fence was defined for the solid substation fence and would the fence fully screen the substation equipment. Ms. Choi responded that staff did not have the final design of the substation fence but that it would be a fully opaque, solid wall and that staff would require a form-liner treatment subject to the approval of the community development director at time of building permit. Ms. Choi explained that the majority of the substation equipment in the first substation ranges from 30 feet and higher, and that the substation wall would screen about half the height of the equipment.

Commissioner Weir asked if the proposed noise levels were reduced from the prior PUD. Ms. Choi stated that some of the noise levels were slightly higher than the previous proposal but that all noise levels were meeting the noise limitations of the Village's code.

Commissioner Weir asked if the landscaping relief requests were needed. Ms. Choi stated that the proposed landscaping does not comply with the strict standards of the perimeter and foundation landscaping requirements, lot coverage, and for open space.

Commissioner Weir inquired about the type of screening proposed around the mechanical yard. Ms. Choi explained that a 55-foot-tall acoustical louver screen wall is proposed and suggested reviewing the elevations or wall section for additional detail.

Commissioner Weir asked if there was a reason for the overall height of the building to be approximately ten stories. Ms. Choi deferred to the petitioner but added that the data center buildings are three stories, and the type of equipment required for data centers would necessitate the height.

Chairman Donnelly asked if the property would be one lot of record since there was one building on two lots. Ms. Choi responded that the property would be subdivided into seven lots. Director Shallcross stated it is possible to have a PUD govern multiple zoning lots.

Chairman Donnelly stated that the lot coverage was proposed at 82% and asked how the development would deal with the stormwater. Director Shallcross stated that the petitioner has redesigned the stormwater basins on-site to accommodate the increase in lot coverage.

Chairman Donnelly asked for clarification on the generator use. Chairman Donnelly asked if the generators would be operating as needed for emergency purposes only or if they would be operational 24/7. Director Shallcross responded that the generators would be working for 80 hours out of the year, for regular testing and maintenance purposes. Director Shallcross stated that the petitioner and staff are working on what circumstances which generators can operate while still meeting the noise emissions requirements. Director Shallcross explained that the project would be conditioned to require that the project sit on a temporary TCO for 90 days and over the 90-day period, the petitioner would be authorized to operate the site in accordance with the PUD. During this period, third-party consultants would analyze the actual output of emissions and verify that the real world emissions meet code.

Chairman Donnelly noted that in some cases data centers have relied on generators as their primary power source when substations were not yet operational and asked if the Village could encounter a similar situation. Director Shallcross responded that Substation #1 will be operational

within the next month and that the PUD amendment includes a switchgear yard to provide power beneath Linneman Road to fully serve ORD1, the larger building along Algonquin Road. He further explained that ORD2 will have its own dedicated Substation #2, which must be completed before that facility becomes operational.

Chairman Donnelly asked whether the screening for the second substation would be similar to that of Substation #1. Director Shallcross explained that Substation #1 is existing and that valuable lessons were learned during its construction. The initial design relied heavily on landscaping for screening, but subsequent ComEd design revisions reduced available planting areas. For Substation #2, staff therefore required a fully screened wall to ensure the facility is not visible.

Chairman Donnelly asked whether Substation #1 would receive a similar solid wall. Director Shallcross stated it would not, noting that it has a decorative fence with barbed wire and substantial landscaping along Dempster Street, but limited landscaping along Linneman Road. Chairman Donnelly then asked about the treatment along the south and east sides of Substation #2. Director Shallcross responded that those sides face inward toward the site and will not be visible from public rights-of-way, so solid or opaque screening was not required.

Chairman Donnelly inquired how stormwater would be managed for the second substation site, noting that the area currently absorbs water but would not do so after development. Director Shallcross explained that the site is included within the overall engineered stormwater management system, which will be reviewed and approved in coordination with the MWRD during the permitting process. Director Shallcross added that no relief is being requested for stormwater management, as all runoff associated with the increased lot coverage will be accommodated within the project's stormwater design.

Commissioner Weir asked about the condition requiring the petitioner to submit testing data, including how frequently such reports would be submitted and what process would follow if the project was found to be out of conformance. Director Shallcross responded that it is the petitioner's responsibility to demonstrate full compliance with all Village emission requirements within the 90-day operational period. Director Shallcross explained that if the project fails to meet those requirements, the petitioner would remain on a temporary Certificate of Occupancy (TCO) and would not be granted a full occupancy permit until the issues are resolved. The petitioner would be required to submit a detailed corrective plan outlining how compliance would be achieved. If compliance cannot be demonstrated, a full occupancy permit would not be issued. Director Shallcross added that the petitioner's consultants have modeled the emissions to a highly detailed level, and staff is confident the project will meet the required standards; however, final confirmation cannot occur until testing data from the constructed facility is available.

Commissioner Weir asked what operational impact there would be if the facility were operating under a TCO rather than a full or final Certificate of Occupancy (FCO). Director Shallcross explained that the intent is for the petitioner to operate under the TCO as they would long-term, so that performance data accurately reflects typical daily operations. Director Shallcross explained that in practice, there should be no difference in day-to-day operations between temporary and full occupancy. Director Shallcross added that the Village has various enforcement mechanisms, including the ability to revoke or allow a TCO to expire, providing multiple layers of oversight for a project under temporary occupancy. Commissioner Weir then asked whether a time limit applies

to the TCO. Director Shallcross stated that the ordinance allows a 90-day period for the petitioner to demonstrate compliance with all applicable code requirements.

Chairman Donnelly invited the petitioners to the stand. Chairman Donnelly swore in the petitioners as a group. The first speaker was Brett Burnette, Director of Development for Cloud HQ, 3855 Inverness Road, Fairfax, VA.

Mr. Burnette stated that the data center industry has evolved significantly in beneficial ways and provided background on CloudHQ, noting that the company develops hyperscale data facilities and, since 2017, has constructed and leased over 5 million square feet of data center space with more than 800 megawatts of capacity. Mr. Burnette added that three data center facilities were developed between 2007 and 2017 in Elk Grove Village and expressed enthusiasm about returning to the Chicagoland area, which he noted is the third-largest data center market in the United States. Mr. Burnette concluded by thanking staff and the Commission for the opportunity to present and indicated that the full consultant team was available to answer any questions.

Chairman Donnelly asked whether the Commission could review a list of the variations or conditions of approval. Director Shallcross explained that this information is included as an appendix to the staff report but noted that, as a PUD, approval functions as a singular request rather than individual variations for each subsection of the code that does not conform. Chairman Donnelly acknowledged that no relief was requested for stormwater management but inquired whether relief was granted for landscaping. Director Shallcross responded that there may be minor nonconformities with the strict provisions of the code and clarified that lighting will be required to meet all code standards at the time of permit issuance.

Commissioner Weir asked for clarification on the potential noise and emissions generated by the diesel generators and how frequently they would operate. Mr. Burnette explained that the generators would serve as backup power only, with primary power supplied from the grid through Substation #1, nearing completion, and future Substation #2 currently under ComEd's review. Mr. Burnette stated that the generators would operate approximately 5–8 hours per year for maintenance testing, staggered so only a few run at a time, and during power outages when grid service is unavailable.

Mr. Burnette stated that ComEd and PJM are experienced in managing regional power demands associated with data centers and ensuring grid reliability. Regarding noise, Mr. Burnette noted that overall sound levels are comparable to those that were approved four years ago due to added spacing and enhanced attenuation measures. From an emissions standpoint, the project will be governed by state and federal EPA low-emission permits, which cap annual operating hours since the generators are intended solely for backup use.

Commissioner Weir asked whether the limit applies per day or per year. Mr. Burnette responded that the permit allows approximately 100 hours per year. When asked about daily limits or evening restrictions, Mr. Burnette stated that testing is limited to 7:00 a.m. – 7:00 p.m.

Commissioner Weir asked what types of sound attenuation were put in place.

Steve Thunder, 847 Randall Road, Elgin, IL, acoustic consultant for the project, was introduced and provided an overview of the proposed noise attenuation measures. Mr. Thunder explained that a 55-foot-tall acoustical louvered screen wall would enclose the mechanical yard, allowing air movement while incorporating acoustical materials to dampen sound. Rooftop noise barriers would consist of solid absorptive walls to block sound from escaping between the penthouses, which are open at the top. Solid panels are also proposed around the TITAN coolers on the rooftop of ORD2, elevated to allow airflow beneath while creating a chimney-like effect to contain sound.

Commissioner Weir asked if the panels would extend from 7 feet up to 66 feet in height. Mr. Thunder clarified that there is a 7-foot gap below the penthouse height to create a more complex acoustic path and improve sound reduction.

Mr. Thunder stated that all generators would be equipped with hospital-grade exhaust silencers reducing sound by 33–39 dB, as well as parallel baffle silencers to maintain airflow while minimizing emissions. Mr. Thunder added that absorption panels would be integrated within the enclosures. Mr. Thunder confirmed the project would comply with all Village daytime, nighttime, and emergency noise limits.

Commissioner Weir asked what the proposed materials would look like. Mr. Thunder responded that the panels would be metal, and can be painted in various colors, with one solid “hard” side and one perforated absorptive side designed to capture sound.

Chairman Donnelly asked whether any leases had been finalized. Mr. Burnette stated that a prospective tenant is well-positioned to occupy the entire ORD1 building. Chairman Donnelly then asked whether two lots of record would still be required if there were only one tenant. Mr. Burnette explained that this is still under consideration, as the lease has not yet been executed, and the petitioner wishes to retain flexibility to construct ORD1 in two phases should two tenants ultimately occupy the building.

Chairman Donnelly asked whether FAA approvals were required, such as rooftop lighting, given the site’s proximity to the airport, and whether any height restrictions applied. Mr. Burnette responded that no rooftop lighting is proposed and that similar requirements did not apply to their other projects. Mr. Burnette noted that FAA permits will be obtained for the buildings and construction cranes, but the site is located outside the airport’s cone of influence.

Commissioner Weir asked what was driving the three-story building height. Mr. Burnette explained that data center stories are typically taller—approximately 20 to 30 feet each—due to the additional space needed above the equipment for cooling systems. Commissioner Weir asked if each floor would serve a different function. Carlos Cutting, project architect, 1821 Prince John Drive, Grand Prairie, TX, stated that floor functionality depends on tenant needs; for this project, the first floor houses cooling equipment, while the second and third floors are programmed for data operations. Mr. Cutting added that as the industry has advanced, equipment has increased in size and capacity, requiring greater height and an additional floor to accommodate system density.

Chairman D invited the public to speak. Mr. Frank Margialardi, 726 W. Dempster Street, Mount Prospect, asked ComEd how the project would affect his electric bill and whether the existing power grid has sufficient capacity to serve the development. Chuck Creager, 361 Windsor Avenue,

Glen Ellyn, representing ComEd, responded that costs would be recovered through the business customer category serving large-load users and would not impact residential customers. Mr. Creager confirmed that ComEd has adequate capacity to accommodate the project.

Commissioner Weir asked if there would be more sustainable materials that will be used instead of sod. Andrea Crosset, 200 South Peyton Street, Alexandria, VA, landscape architect for the project, responded that the project will be using mostly native plantings and will meet all the sustainability requirements. Ms. Crosset reviewed the requirement for street trees and confirmed they will be meeting the number for trees, but not the spacing requirement.

Commissioner Weir asked whether more sustainable materials would be used in place of sod. Ms. Andrea Crosset, 200 South Peyton Street, Alexandria, VA, landscape architect for the project, stated that the landscape plan incorporates primarily native plantings and would meet all sustainability requirements. Ms. Crosset added that while the required number of street trees will be provided, spacing will vary from strict conformance of the landscape code.

Mr. Burnette wanted to clarify that the grassy land on the adjacent United Airlines property would not be used for the project.

Hearing no further comments or questions, Chairman Donnelly closed the hearing and asked for a motion to approve the conditional use and final plat, subject to the conditions listed in the staff report. Commissioner Szymczak made a motion and Commissioner Olsen seconded the motion.

UPON ROLL CALL AYES: Szymczak, Weir, Olsen, Donnelly
NAYS: None

The Planning and Zoning Commission gave a positive recommendation (4-0) to the Village Board for the October 28, 2025 meeting.

After hearing no more items of new business, Chairman Donnelly asked if there were any citizens to be heard.

Hearing no further discussion, Commissioner Weir made a motion seconded by Commissioner Szymczak and the meeting was adjourned at 8:27 PM.



Ann Choi, Development Planner

**ORDINANCE NO. _____**

**AN ORDINANCE AMENDING ORDINANCE NO. 6634 GRANTING A CONDITIONAL USE FOR A PLANNED UNIT DEVELOPMENT AND A FINAL PLAT OF SUBDIVISION FOR THE PROPERTY COMMONLY KNOWN AS THE MOUNT PROSPECT TECHNOLOGY CAMPUS LOCATED AT 1200 EAST ALGONQUIN ROAD AND 1200 DEMPSTER STREET, MOUNT PROSPECT, ILLINOIS**

**WHEREAS,** by Ordinance No. 6634, the Corporate Authorities of the Village of Mount Prospect approved a conditional use permit for a final planned unit development consisting of three (3) data center buildings, three hundred forty-five (345) parking stalls, one (1) electrical substation, and ancillary site improvements for property located at 1200 East Algonquin Road and 1200 Dempster Street ("Subject Property"); and

**WHEREAS,** by Ordinance No. 6634, the Corporate Authorities of the Village of Mount Prospect also approved a final plat of subdivision titled "Planned Unit Development Mount Prospect Technology Campus" that divided the Subject Property into five (5) lots including three (3) buildable lots, one (1) common area lot, and one (1) lot designated for the electrical substation, but the final plat of subdivision has not yet been recorded with the Cook County Recorder of Deeds, and the Subject Property has not yet been developed with data center buildings; and

**WHEREAS,** Tur Ventures LLC, ("Petitioner"), has determined that certain modifications should be made to the approved planned unit development and final plat of subdivision to better meet the evolving needs of the data center industry due to the rapid acceleration of artificial intelligence that has increased the demand for data; and

**WHEREAS,** the Petitioner seeks approval of a final plat of subdivision titled "Planned Unit Development Mount Prospect Technology Campus No. 2"and a conditional use permit to amend the planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five (365) parking spaces, two (2) electrical

substations, mechanical yard, satellite antenna yard, and related site improvements at the Subject Property legally described as follows:

PARCEL 1: (MAIN CAMPUS)
LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, (C)THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS 50 FEET SOUTH OF THE NORTHEAST CORNER OF SAID LOT 1; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 1 FOR 40.01 FEET; THENCE NORTH 46 DEGREES 15 MINUTES 15 SECONDS WEST FOR 56.10 FEET TO A LINE 50.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 1; THENCE NORTH 88 DEGREES 15 MINUTES 36 SECONDS EAST FOR 40.01 FEET TO THE POINT OF BEGINNING, (D)THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS ON THE NORTH LINE OF ALGONQUIN ROAD; THENCE NORTH 63 DEGREES 23 MINUTES 45 SECONDS WEST ALONG THE NORTH LINE OF SAID ALGONQUIN ROAD FOR 28.30 FEET; THENCE NORTH 71 DEGREES 35 MINUTES 52 SECONDS EAST FOR 26.37 FEET TO THE WEST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST FOR 21.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2: (SUBSTATION PARCEL)
THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, EXCEPT THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE NORTH 88 DEGREES 20 MINUTES 07 SECONDS EAST ALONG THE NORTH LINE OF SAID LOT 2 FOR 25.00: THENCE SOUTH 43 DEGREES 47 MINUTES 00 SECONDS WEST FOR 35.63 FEET TO THE WEST LINE OF SAID LOT 2; THENCE NORTH 00 DEGREES 46

MINUTES 07 SECONDS WEST FOR 25.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 3: (SUBSTATION PARCEL)
THE NORTH 120.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

PINs: 08-23-100-018-0000 (PARCEL 1 AND 2), 08-23-200-052-0000 (PARCEL 3) (collectively, the "Subject Property"); and

**WHEREAS,** a public hearing was held on the requests for a final plat of subdivision and a conditional use to amend the planned unit development as a major change for the Subject Property, being the subject of PZ-21-25 before the Planning and Zoning Commission of the Village of Mount Prospect on the 23rd day of October, 2025, pursuant to proper legal notice in the manner required by law, including by publication in the Daily Herald newspaper on the 8th day of October, 2025; and

**WHEREAS,** the Planning and Zoning Commission has submitted its findings and recommendations of approval, with specific conditions, to the President and Board of Trustees in support of the requests being the subject of PZ-21-25; and

**WHEREAS,** the President and Board of Trustees of the Village of Mount Prospect have given consideration to the requests herein and have determined that the same meets the standards of the Village and that the granting of the proposed conditional use to amend the planned unit development as a major change and to approve the amended final plat of subdivision would be in the best interest of the Village.

**NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS ACTING IN THE EXERCISE OF THEIR HOME RULE POWERS:**

**SECTION ONE:** That the recitals set forth hereinabove are incorporated herein as findings of fact by the President and Board of Trustees of the Village of Mount Prospect.

**SECTION TWO:** This Ordinance shall amend, replace, and supersede the conditional use for a planned unit development on the Subject Property approved by Ordinance No. 6634 and any other conditional uses previously approved for the Subject Property.

**SECTION THREE:** The President and Board of Trustees of the Village of Mount Prospect ("Village") do hereby grant approval of the following:

1. A final plat of subdivision titled "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2" prepared by Gewalt Hamilton Associates, Inc. and dated 10/09/2025, attached as **Exhibit A**;

2. A plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/07/2025, attached as **Exhibit A**, dedicating land to the Illinois Department of Transportation (IDOT) for public sidewalks; such plat shall be recorded with Cook County prior to issuance of the first certificate of occupancy for a data center building on the Subject Property;

3. A plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/09/2025, attached as **Exhibit A**, dedicating land to the Cook County Department of Transportation and Highways for public sidewalks; such plat shall be recorded with Cook County prior to issuance of the first certificate of occupancy for a data center building on the Subject Property;

4. A conditional use to amend the planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five (365) parking spaces, two (2) electrical substations, mechanical yard, satellite antenna yard, and related site improvements, as identified on the Petitioner's Approved Plans (as defined below), subject to the conditions of approval identified in subsection (6), below;

5. Deviations or exceptions from the Village's Zoning Code and Subdivision Code as necessary to permit development of the Subject Property as a planned unit development in accordance with this Ordinance and the Approved Plans (as defined below), including all specific zoning and subdivision deviations and exceptions set forth in the Petitioner's application materials.

6. The conditional use to amend the planned unit development as a major change as set forth in this Ordinance is subject to the following conditions of approval:

    a. Development in general conformance with the approved development plans which will consist of the following (collectively the "***Approved Plans***"):

        i. PUD Site Improvement Plans (66 sheets) containing civil plans, titled "Mount Prospect Technology Campus PUD Site Improvements" prepared by Gewalt Hamilton Associates, Inc., Corgan, kW Mission Critical Engineering, and PASE, bearing the latest revision date of 10/15/2025, excerpts of which are attached as **Exhibit B**;

        ii. Architectural drawings (8 sheets) containing elevations, sections and renderings, prepared by Gewalt Hamilton Associates, Inc., Corgan, kW Mission Critical Engineering, PASE, and Theseus Professional Services, bearing the latest revision date of 10/15/2025, attached as **Exhibit C**; and

        iii. Landscape plans (11 sheets), prepared by Land Design, bearing the latest revision date of 10/15/2025, attached as **Exhibit D**;

    b. The Petitioner shall address all comments included in the Village review letters dated October 17, 2025 (PZ-21-25) attached as **Exhibit E**. The Director of Community Development shall be authorized to approve minor modifications to the Approved Plans for compliance with such Village review comments and the conditions of this Ordinance. Other modifications to the Approved Plans shall be reviewed and approved in

accordance with the procedures for major or minor modifications, as applicable, to a planned unit development pursuant to Section 14.504.E of the Zoning Code;

c. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT:

i. The Petitioner shall submit permit drawings and documentation demonstrating compliance with all applicable Village-adopted building and fire codes, including local amendments. Such submittal shall include a complete code analysis and life safety analysis addressing use, height, area, and occupancy classifications in accordance with the adopted codes.

The required submittal shall, at a minimum, include the following, as applicable to the improvements for which such building permit is requested:

1. A full code analysis identifying building use, construction type, building height and area, penthouse and high-rise definitions, mixed-use classification (separated/non-separated), fire-resistance ratings of structural elements, fire separations, walls, partitions, smoke partitions, and protection of openings.
2. Identification of all electrical vaults, electrical loads, electric vehicle (EV) charging systems, solar systems, and electrical room locations.
3. Complete architectural, structural, mechanical, electrical, plumbing, and fuel gas drawings, including supporting documentation such as structural and electrical load calculations, solar design information, grounding and bonding diagrams (including concrete-encased electrodes), and bonding/grounding details for exterior or rooftop elements.
4. Foundation and structural details adequate to review and construct the building, including soils information,

foundations, footings, pads, reinforcing, rebar, supports, anchorage, phasing, and access/bridging details.

5. Documentation and performance of all special inspections and testing as required by the International Building Code shall be performed at the Petitioner's or contractor's expense, including, but not limited to, concrete testing (including slump), steel reinforcing, welding, bolting, bonding, high-rise/limited aerial access areas, pressure testing, mechanical testing and balancing, and stack or pressure tests as required by code.
6. Demonstration of compliance with the Illinois Accessibility Code and Illinois Barrier-Free Design Act.
7. Submittal of all required lift and elevator design documents.

No Certificate of Occupancy shall be issued until the Code Official verifies that all such analyses, drawings, and inspections have been reviewed and accepted as compliant with applicable Village codes and standards;

ii. The Petitioner shall obtain all necessary permits from other entities with jurisdiction including, but not limited to, IDOT, IEPA, Metropolitan Water Reclamation District (MWRD), Cook County, Army Corps of Engineers, and the Illinois Department of Natural Resources;

iii. The Petitioner and the Village shall enter into a Public Improvements Agreement delineating the costs and installation responsibilities of the off-site and public improvements (including, but not limited to, the $2,000,000 contribution to the Village toward construction of a splash pad and other improvements at the RecPlex and additional contributions for a multi-use path, signalization improvements, and streetlights on Algonquin Road between Linneman Road and the western boundary of the property) related to the proposed development prior to the issuance of a building permit;

1. The Petitioner shall make a contribution to the Village in the amount of $2,000,000 toward construction of a splash pad and other improvements at the RecPlex. The donation shall be made on a pro-rata basis, as and when detailed in the Public Improvements Agreement;

iv. All signs shall be submitted, reviewed, and approved during the permitting process. All signs shall conform to Village Code. Any future relief requested for signage shall require an application for a minor amendment to the PUD;

v. Submittal of irrigation and photometric plans that comply with Village codes and regulations; and

vi. Compliance with all applicable development, fire, and other Village Codes and regulations, subject to the approvals and other relief granted by this Ordinance.

d. PRIOR TO THE ISSUANCE OF A TEMPORARY CERTIFICATE OF OCCUPANCY:

i. The Petitioner shall submit a covenants/rights and easements agreement (REA) for staff review and approval prior to a temporary Certificate of Occupancy for each building. The covenants/REA shall provide for cross access and perpetual maintenance of common improvements, and otherwise ensure that the campus functions cohesively as necessary.

e. PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY:

i. The Petitioner shall record plats of dedication dedicating the sidewalks along Algonquin Road to the Illinois Department of Transportation (IDOT) and along Dempster Street to the Cook County Department of Transportation and Highways (CCDTH), consistent with the Approved Plans prior to issuance of the first temporary certificate of occupancy for a data center building on the Subject Property;

ii. The REA shall be recorded prior to a final Certificate of Occupancy for the data center building located on the northern portion of the Subject Property, fronting Dempster Street ("ORD2");

iii. The Village reserves the right to require testing and data to be supplied to the Village within ninety (90) days after the issuance of a temporary Certificate of Occupancy of each building verifying that the performance standards of the I-1 Limited Industrial District, as set forth in Section 14.2104.G of the Village Code, are met. Once satisfied, the Village shall issue a final Certificate of Occupancy. Within ninety (90) days after the issuance of a temporary Certificate of Occupancy for each building:

1. The facility will assess the outdoor light intensity using a light intensity meter around the parcel boundary. A report summarizing the findings will be shared for review and any corrective action if needed. Compliance with glare limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

2. The facility will utilize the services of a contractor trained and qualified to collect both daytime and nighttime sound levels with instruments and methods implemented in accordance with the guidelines pursuant to Mount Prospect Administrative Code (MPAC) Section 14.2104.G.1 which applies to the I-1 Limited Industrial District. The report summarizing the findings will be submitted for review. Compliance with noise limitations will be considered satisfied upon review and acceptance by the Village of Mount Prospect;

    a. Substitutions of the noise-mitigation products (acoustical louvered walls, rooftop noise barriers, Titan cooler noise barriers, hospital grade silencers, parallel baffle silencers) identified in the Updated

Sound Assessment of Cloud HQ Data Center Report, prepared by Thunder Hearing & Sound LLC, and dated September 24, 2025, shall be acceptable as long as the new models have noise reduction values (per octave band) that are equal to or greater than the units specified in said report;

3. The facility will acquire vibration data collected in accordance with the guidelines pursuant to Mount Prospect Administrative Code (MPAC) Section 14.2104.G.1 which applies to I-1 Limited Industrial District. The report summarizing the findings will be submitted for review. Compliance with vibration limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

4. The facility will acquire air toxics' concentrations at the parcel boundary through the use of a photoionization detector (PID), which will measure the concentrations at the parcel boundary. A summary of the findings will be shared for review and follow up actions. Compliance with toxic matter limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

5. Within 90 days after the creation of the toxics' report, using the data generated by the PID, comparisons with odor limitations will be conducted and a report summarizing the findings will be shared for review and any corrective actions if required. Compliance with odorous matter limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

Documentation and performance of all special inspections and testing to determine compliance with the I-1 Limited Industrial District's performance standards shall be performed at the Petitioner's or contractor's expense.

iv. The Petitioner may modify the dimensions of the Substation #2 site if necessary to meet ComEd requirements. Any changes to the Substation #2 site configuration (area dedicated to the substation) shall be reviewed and approved as an administrative amendment to the PUD. If the dimensions of the substation lot are modified, a revised final plat shall be submitted, reviewed, approved and recorded prior to a final Certificate of Occupancy for ORD2. The proposed privacy screen wall and landscaping shall be modified as appropriate to accommodate any changes in dimensions of Substation #2, and the Director of Community Development is authorized to approve any such modifications.

v. All rooftop mechanical equipment shall be completely hidden from view from ground level on adjacent rights-of-way. If, at time of final inspection, any rooftop mechanical equipment is visible from ground level as viewed from the public right-of-way, screening shall be required, and it shall be a continuous, permanent, sound attenuating, and noncombustible screen of a color compatible with the principal structure. The Director of Community Development is authorized to approve to the design of any additional required screening;

vi. A fifteen-foot-tall (15'-0") fully opaque precast concrete wall shall be required along the north and west property lines adjacent to Substation #2. The public facing side of said wall shall incorporate a form-liner design, subject to the approval of the Community Development Director;

vii. An eight-foot-tall (8'-0") fully opaque precast concrete wall shall be located along the north, south and east sides of the satellite antenna yard. The public facing side of said wall shall incorporate a form-liner design, subject to the approval of the Community Development Director;





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viii. The proposed 7' + 1' chain link fence with barb wire atop along the southwest and east sides of Substation #2 shall be a black vinyl-coated chain link fence;

ix. Parking lot lighting shall be on a steel pole with a black finish and shall be directed toward the lot and not adjacent properties;

x. All fuel sheds shall be black. Vehicle protection/bollards shall be provided around the fuel polishing sheds if installed in the parking lot. Bollards shall be black;

xi. Solid screening in the form of a precast concrete panel that is consistent with the building's architectural design shall be provided for the thermal energy storage (TES) tank located at the southeast corner of ORD2;

xii. A maintenance plan for the climbing green vines on the building facades shall be provided prior to the issuance of a final Certificate of Occupancy for the data center building located on the southern portion of the Subject Property, fronting Algonquin Road ("ORD1");

xiii. The Petitioner shall make reasonable and good-faith efforts to coordinate with the owner(s) of the adjacent parcel(s) to the west of the Subject Property (PINs 08-23-100-020 and 08-23-100-021) (the "Adjacent Parcel") and roadway authorities, as applicable, to facilitate the following improvements, as generally depicted in **Exhibit F**, subject to all required Village, state, and other agency permits and approvals:

1. **Removal of Driveway within IDOT Right-of-Way:** The Petitioner shall depict removal of the existing ingress/egress drive located on the Adjacent Parcel near the southwest corner of the Subject Property within the Illinois Department of Transportation (IDOT) Algonquin Road right-of-way on the permit plans submitted to IDOT for

review and approval in conjunction with the Petitioner's own driveway work.

a. If IDOT concurs and directs removal of the driveway, such removal shall be included as part of the approved scope of work.
b. If IDOT requires consent of the owner of the Adjacent Parcel, the Petitioner shall make a good-faith effort to obtain such consent and provide documentation to the Village demonstrating the efforts made.

2. **Decommissioning of Lift Station:** Removal and proper decommissioning of the unused sanitary lift station located on the Adjacent Parcel, in accordance with all applicable agency requirements (including MWRD and IEPA, as applicable).

3. **Removal and Restoration of Private Drive:** Removal and restoration of the private drive located on the southeastern portion of the Adjacent Parcel that is no longer in use.

The Petitioner shall provide documentation to the Village demonstrating its good-faith efforts to obtain all necessary permissions and approvals to complete the above work on the Adjacent Parcel and in IDOT right-of-way. In the event that any of the improvements cannot be completed, the Petitioner shall submit written evidence, to the satisfaction of the Village, detailing the steps taken and the reasons such work could not be performed;

f. ON-GOING TESTING AND MAINTENANCE:

i. **Generator Use, Limitation, and Compliance Reporting:** ~~The use of generators on the Subject Property shall be limited to emergency power generation only and shall not serve as a primary or continuous source of energy for the data center facility.~~Generators on the Subject Property will be used in





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compliance with applicable federal, state, and local laws. Routine testing and maintenance of generators shall comply with the noise limitations set forth in Section 14.2104(G)(1) of the Village Code and shall occur only during daytime hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday, excluding Sundays and Village-recognized holidays. The Petitioner shall coordinate generator operation such that no more than three (3) installed generators operate simultaneously for routine testing or maintenance purposes, unless otherwise approved by the Village Manager to verify compliance with applicable noise standards. The Petitioner shall submit quarterly compliance reports to the Village's Community Development Department summarizing generator operation logs, including dates, times, duration, and number of generators operated, to demonstrate adherence to this condition.

**Commented [JS1]:** CloudHQ to propose language.

**Commented [JS2]:** Is this consistent with the noise emission report by Thunder Hearing & Sound? If not, please revise.

Their modeling assumed 1 generator running per building/quadrant, plus one Tomball Controls enclosed generator, for 15 minutes in any given hour. We need to be sure that 3 generators will not exceed any performance standards levels.

**Commented [BG3R2]:** Per Thunder Hearing & Sound: The daytime numbers already include 5 generators running for testing. That's the main difference between the nighttime and daytime levels.

**SECTION FOUR:** Except for the approvals and other relief granted by this Ordinance, all other applicable Village of Mount Prospect, Illinois ordinances and regulations shall remain in full force and effect as to the Subject Property.

**SECTION FIVE:** The Village Clerk is hereby authorized and directed to record a certified copy of this Ordinance and Exhibits "A", "B", "C", "D", "E" and "F" with the Recorder of Deeds of Cook County.

**SECTION SIX:** This Ordinance shall be in full force and effect from and after its passage, approval and publication in pamphlet form in the manner provided by law. This Ordinance shall run with the land and bind and benefit any future fee simple owner of the Subject Property.

AYES:

NAYS:

ABSENT:

PASSED and APPROVED this 28th day of October, 2025.

_____
Paul Wm. Hoefert, President

ATTEST:

_____
Karen M. Agoranos, Village Clerk

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**EXHIBIT A**

FINAL PLAT OF SUBDIVISION “PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO.2”

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**EXHIBIT B**
PUD SITE IMPROVEMENT PLANS (EXCERPTS)

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**EXHIBIT C**
ARCHITECTURAL DRAWINGS

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**EXHIBIT D**
LANDSCAPE PLANS

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**EXHIBIT E**
VILLAGE REVIEW LETTERS

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**ORDINANCE NO. _____**

**AN ORDINANCE AMENDING ORDINANCE NO. 6634 GRANTING A CONDITIONAL USE FOR A PLANNED UNIT DEVELOPMENT AND A FINAL PLAT OF SUBDIVISION FOR THE PROPERTY COMMONLY KNOWN AS THE MOUNT PROSPECT TECHNOLOGY CAMPUS LOCATED AT 1200 EAST ALGONQUIN ROAD AND 1200 DEMPSTER STREET, MOUNT PROSPECT, ILLINOIS**

**WHEREAS,** by Ordinance No. 6634, the Corporate Authorities of the Village of Mount Prospect approved a conditional use permit for a final planned unit development consisting of three (3) data center buildings, three hundred forty-five (345) parking stalls, one (1) electrical substation, and ancillary site improvements for property located at 1200 East Algonquin Road and 1200 Dempster Street ("Subject Property"); and

**WHEREAS,** by Ordinance No. 6634, the Corporate Authorities of the Village of Mount Prospect also approved a final plat of subdivision titled "Planned Unit Development Mount Prospect Technology Campus" that divided the Subject Property into five (5) lots including three (3) buildable lots, one (1) common area lot, and one (1) lot designated for the electrical substation, but the final plat of subdivision has not yet been recorded with the Cook County Recorder of Deeds, and the Subject Property has not yet been developed with data center buildings; and

**WHEREAS,** Tur Ventures LLC, ("Petitioner"), has determined that certain modifications should be made to the approved planned unit development and final plat of subdivision to better meet the evolving needs of the data center industry due to the rapid acceleration of artificial intelligence that has increased the demand for data; and

**WHEREAS,** the Petitioner seeks approval of a final plat of subdivision titled "Planned Unit Development Mount Prospect Technology Campus No. 2"and a conditional use permit to amend the planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five (365) parking spaces, two (2) electrical substations, mechanical yard, satellite antenna yard, and related site improvements at the Subject Property legally described as follows:

PARCEL 1: (MAIN CAMPUS)
LOT 1 IN FRIEDRICH BUSSE, JR. DIVISION OF LAND IN SECTION 23, TOWNSHIP 41 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 20, 1911 AS DOCUMENT NO. 4709799, EXCEPT (A) THAT PART OF SAID LOT 1 TAKEN FOR HIGHWAYS, AND (B) THAT PART FALLING IN BLUE SKY SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED JUNE 5, 2014 AS DOCUMENT NO. 1415616048, (C)THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS 50 FEET SOUTH OF THE NORTHEAST CORNER OF SAID LOT 1; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 1 FOR 40.01 FEET; THENCE NORTH 46 DEGREES 15 MINUTES 15 SECONDS WEST FOR 56.10 FEET TO A LINE 50.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 1; THENCE NORTH 88 DEGREES 15 MINUTES 36 SECONDS EAST FOR 40.01 FEET TO THE POINT OF BEGINNING, (D)THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 1 THAT IS ON THE NORTH LINE OF ALGONQUIN ROAD; THENCE NORTH 63 DEGREES 23 MINUTES 45 SECONDS WEST ALONG THE NORTH LINE OF SAID ALGONQUIN ROAD FOR 28.30 FEET; THENCE NORTH 71 DEGREES 35 MINUTES 52 SECONDS EAST FOR 26.37 FEET TO THE WEST RIGHT OF WAY LINE OF LINNEMAN ROAD; THENCE SOUTH 00 DEGREES 46 MINUTES 07 SECONDS EAST FOR 21.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2: (SUBSTATION PARCEL)
THE WEST 363.00 FEET OF LOT 2 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, EXCEPT THAT PART DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE NORTH 88 DEGREES 20 MINUTES 07 SECONDS EAST ALONG THE NORTH LINE OF SAID LOT 2 FOR 25.00: THENCE SOUTH 43 DEGREES 47 MINUTES 00 SECONDS WEST FOR 35.63 FEET TO THE WEST LINE OF SAID LOT 2; THENCE NORTH 00 DEGREES 46 MINUTES 07 SECONDS WEST FOR 25.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 3: (SUBSTATION PARCEL)
THE NORTH 120.00 FEET OF THE WEST 363.00 FEET OF LOT 3 IN LINNEMAN'S DIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 23, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, AND PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL

MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 10, 1953 AS DOCUMENT NO. 15716544, IN COOK COUNTY, ILLINOIS.

PINs: 08-23-100-018-0000 (PARCEL 1 AND 2), 08-23-200-052-0000 (PARCEL 3) (collectively, the "Subject Property"); and

**WHEREAS,** a public hearing was held on the requests for a final plat of subdivision and a conditional use to amend the planned unit development as a major change for the Subject Property, being the subject of PZ-21-25 before the Planning and Zoning Commission of the Village of Mount Prospect on the 23rd day of October, 2025, pursuant to proper legal notice in the manner required by law, including by publication in the Daily Herald newspaper on the 8th day of October, 2025; and

**WHEREAS,** the Planning and Zoning Commission has submitted its findings and recommendations of approval, with specific conditions, to the President and Board of Trustees in support of the requests being the subject of PZ-21-25; and

**WHEREAS,** the President and Board of Trustees of the Village of Mount Prospect have given consideration to the requests herein and have determined that the same meets the standards of the Village and that the granting of the proposed conditional use to amend the planned unit development as a major change and to approve the amended final plat of subdivision would be in the best interest of the Village.

**NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS ACTING IN THE EXERCISE OF THEIR HOME RULE POWERS:**

**SECTION ONE:** That the recitals set forth hereinabove are incorporated herein as findings of fact by the President and Board of Trustees of the Village of Mount Prospect.

**SECTION TWO:** This Ordinance shall amend, replace, and supersede the conditional use for a planned unit development on the Subject Property approved by Ordinance No. 6634 and any other conditional uses previously approved for the Subject Property.

**SECTION THREE:** The President and Board of Trustees of the Village of Mount Prospect ("Village") do hereby grant approval of the following:

1. A final plat of subdivision titled "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO. 2" prepared by Gewalt Hamilton Associates, Inc. and dated 10/09/2025, attached as **Exhibit A**;

2. A plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/07/2025, attached as **Exhibit A**, dedicating land to the Illinois Department of Transportation (IDOT) for public sidewalks; such plat shall be recorded with Cook County prior to issuance of the first certificate of occupancy for a data center building on the Subject Property;

3. A plat of dedication prepared by Gewalt Hamilton Associates, Inc., and dated 10/09/2025, attached as **Exhibit A**, dedicating land to the Cook County Department of Transportation and Highways for public sidewalks; such plat shall be recorded with Cook County prior to issuance of the first certificate of occupancy for a data center building on the Subject Property;

4. A conditional use to amend the planned unit development as a major change, pursuant to Section 14.504(E)(1) of the Village Code, to construct a two-building data center campus consisting of a total combined gross floor area of approximately 2,172,000 square feet, including three hundred sixty-five (365) parking spaces, two (2) electrical substations, mechanical yard, satellite antenna yard, and related site improvements, as identified on the Petitioner's Approved Plans (as defined below), subject to the conditions of approval identified in subsection (6), below;

5. Deviations or exceptions from the Village's Zoning Code and Subdivision Code as necessary to permit development of the Subject Property as a planned unit development in accordance with this Ordinance and the Approved Plans (as defined below), including all specific zoning and subdivision deviations and exceptions set forth in the Petitioner's application materials.

6. The conditional use to amend the planned unit development as a major change as set forth in this Ordinance is subject to the following conditions of approval:

    a. Development in general conformance with the approved development plans which will consist of the following (collectively the "***Approved Plans***"):

i. PUD Site Improvement Plans (66 sheets) containing civil plans, titled "Mount Prospect Technology Campus PUD Site Improvements" prepared by Gewalt Hamilton Associates, Inc., Corgan, kW Mission Critical Engineering, and PASE, bearing the latest revision date of 10/15/2025, excerpts of which are attached as **Exhibit B**;

ii. Architectural drawings (8 sheets) containing elevations, sections and renderings, prepared by Gewalt Hamilton Associates, Inc., Corgan, kW Mission Critical Engineering, PASE, and Theseus Professional Services, bearing the latest revision date of 10/15/2025, attached as **Exhibit C**; and

iii. Landscape plans (11 sheets), prepared by Land Design, bearing the latest revision date of 10/15/2025, attached as **Exhibit D**;

b. The Petitioner shall address all comments included in the Village review letters dated October 17, 2025 (PZ-21-25) attached as **Exhibit E**. The Director of Community Development shall be authorized to approve minor modifications to the Approved Plans for compliance with such Village review comments and the conditions of this Ordinance. Other modifications to the Approved Plans shall be reviewed and approved in accordance with the procedures for major or minor modifications, as applicable, to a planned unit development pursuant to Section 14.504.E of the Zoning Code;

c. <u>PRIOR TO THE ISSUANCE OF A BUILDING PERMIT</u>:

i. The Petitioner shall submit permit drawings and documentation demonstrating compliance with all applicable Village-adopted building and fire codes, including local amendments. Such submittal shall include a complete code analysis and life safety analysis addressing use, height, area, and occupancy classifications in accordance with the adopted codes.

The required submittal shall, at a minimum, include the following, as applicable to the improvements for which such building permit is requested:

1. A full code analysis identifying building use, construction type, building height and area, penthouse and high-rise definitions, mixed-use classification (separated/non-separated), fire-resistance ratings of structural elements, fire separations, walls, partitions, smoke partitions, and protection of openings.
2. Identification of all electrical vaults, electrical loads, electric vehicle (EV) charging systems, solar systems, and electrical room locations.
3. Complete architectural, structural, mechanical, electrical, plumbing, and fuel gas drawings, including supporting documentation such as structural and electrical load calculations, solar design information, grounding and bonding diagrams (including concrete-encased electrodes), and bonding/grounding details for exterior or rooftop elements.
4. Foundation and structural details adequate to review and construct the building, including soils information, foundations, footings, pads, reinforcing, rebar, supports, anchorage, phasing, and access/bridging details.
5. Documentation and performance of all special inspections and testing as required by the International Building Code shall be performed at the Petitioner's or contractor's expense, including, but not limited to, concrete testing (including slump), steel reinforcing, welding, bolting, bonding, high-rise/limited aerial access areas, pressure testing, mechanical testing and balancing, and stack or pressure tests as required by code.
6. Demonstration of compliance with the Illinois Accessibility Code and Illinois Barrier-Free Design Act.
7. Submittal of all required lift and elevator design documents.

No Certificate of Occupancy shall be issued until the Code Official verifies that all such analyses, drawings, and inspections have been reviewed and accepted as compliant with applicable Village codes and standards;

ii. The Petitioner shall obtain all necessary permits from other entities with jurisdiction including, but not limited to, IDOT, IEPA, Metropolitan Water Reclamation District (MWRD), Cook County, Army Corps of Engineers, and the Illinois Department of Natural Resources;

iii. The Petitioner and the Village shall enter into a Public Improvements Agreement delineating the costs and installation responsibilities of the off-site and public improvements (including, but not limited to, the $2,000,000 contribution to the Village toward construction of a splash pad and other improvements at the RecPlex and additional contributions for a multi-use path, signalization improvements, and streetlights on Algonquin Road between Linneman Road and the western boundary of the property) related to the proposed development prior to the issuance of a building permit;

1. The Petitioner shall make a contribution to the Village in the amount of $2,000,000 toward construction of a splash pad and other improvements at the RecPlex. The donation shall be made on a pro-rata basis, as and when detailed in the Public Improvements Agreement;

iv. All signs shall be submitted, reviewed, and approved during the permitting process. All signs shall conform to Village Code. Any future relief requested for signage shall require an application for a minor amendment to the PUD;

v. Submittal of irrigation and photometric plans that comply with Village codes and regulations; and

vi. Compliance with all applicable development, fire, and other Village Codes and regulations, subject to the approvals and other relief granted by this Ordinance.

d. <u>PRIOR TO THE ISSUANCE OF A TEMPORARY CERTIFICATE OF OCCUPANCY</u>:

i. The Petitioner shall submit a covenants/rights and easements agreement (REA) for staff review and approval prior to a temporary

Certificate of Occupancy for each building. The covenants/REA shall provide for cross access and perpetual maintenance of common improvements, and otherwise ensure that the campus functions cohesively as necessary.

e. PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY:

i. The Petitioner shall record plats of dedication dedicating the sidewalks along Algonquin Road to the Illinois Department of Transportation (IDOT) and along Dempster Street to the Cook County Department of Transportation and Highways (CCDTH), consistent with the Approved Plans prior to issuance of the first temporary certificate of occupancy for a data center building on the Subject Property;

ii. The REA shall be recorded prior to a final Certificate of Occupancy for the data center building located on the northern portion of the Subject Property, fronting Dempster Street ("ORD2");

iii. The Village reserves the right to require testing and data to be supplied to the Village within ninety (90) days after the issuance of a temporary Certificate of Occupancy of each building verifying that the performance standards of the I-1 Limited Industrial District, as set forth in Section 14.2104.G of the Village Code, are met. Once satisfied, the Village shall issue a final Certificate of Occupancy. Within ninety (90) days after the issuance of a temporary Certificate of Occupancy for each building:

1. The facility will assess the outdoor light intensity using a light intensity meter around the parcel boundary. A report summarizing the findings will be shared for review and any corrective action if needed. Compliance with glare limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

2. The facility will utilize the services of a contractor trained and qualified to collect both daytime and nighttime sound levels with instruments and methods implemented in accordance with the guidelines pursuant to Mount Prospect

Administrative Code (MPAC) Section 14.2104.G.1 which applies to the I-1 Limited Industrial District. The report summarizing the findings will be submitted for review. Compliance with noise limitations will be considered satisfied upon review and acceptance by the Village of Mount Prospect;

a. Substitutions of the noise-mitigation products (acoustical louvered walls, rooftop noise barriers, Titan cooler noise barriers, hospital grade silencers, parallel baffle silencers) identified in the Updated Sound Assessment of Cloud HQ Data Center Report, prepared by Thunder Hearing & Sound LLC, and dated September 24, 2025, shall be acceptable as long as the new models have noise reduction values (per octave band) that are equal to or greater than the units specified in said report;

3. The facility will acquire vibration data collected in accordance with the guidelines pursuant to Mount Prospect Administrative Code (MPAC) Section 14.2104.G.1 which applies to I-1 Limited Industrial District. The report summarizing the findings will be submitted for review. Compliance with vibration limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

4. The facility will acquire air toxics' concentrations at the parcel boundary through the use of a photoionization detector (PID), which will measure the concentrations at the parcel boundary. A summary of the findings will be shared for review and follow up actions. Compliance with toxic matter limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

5. Within 90 days after the creation of the toxics' report, using the data generated by the PID, comparisons with odor limitations will be conducted and a report summarizing the findings will be shared for review and any corrective actions if

required. Compliance with odorous matter limitations will be considered satisfied upon review and acceptance of this report by the Village of Mount Prospect;

Documentation and performance of all special inspections and testing to determine compliance with the I-1 Limited Industrial District's performance standards shall be performed at the Petitioner's or contractor's expense.

iv. The Petitioner may modify the dimensions of the Substation #2 site if necessary to meet ComEd requirements. Any changes to the Substation #2 site configuration (area dedicated to the substation) shall be reviewed and approved as an administrative amendment to the PUD. If the dimensions of the substation lot are modified, a revised final plat shall be submitted, reviewed, approved and recorded prior to a final Certificate of Occupancy for ORD2. The proposed privacy screen wall and landscaping shall be modified as appropriate to accommodate any changes in dimensions of Substation #2, and the Director of Community Development is authorized to approve any such modifications.

v. All rooftop mechanical equipment shall be completely hidden from view from ground level on adjacent rights-of-way. If, at time of final inspection, any rooftop mechanical equipment is visible from ground level as viewed from the public right-of-way, screening shall be required, and it shall be a continuous, permanent, sound attenuating, and noncombustible screen of a color compatible with the principal structure. The Director of Community Development is authorized to approve to the design of any additional required screening;

vi. A fifteen-foot-tall (15'-0") fully opaque precast concrete wall shall be required along the north and west property lines adjacent to Substation #2. The public facing side of said wall shall incorporate a form-liner design, subject to the approval of the Community Development Director;

vii. An eight-foot-tall (8'-0") fully opaque precast concrete wall shall be located along the north, south and east sides of the satellite

antenna yard. The public facing side of said wall shall incorporate a form-liner design, subject to the approval of the Community Development Director;

viii. The proposed 7' + 1' chain link fence with barb wire atop along the southwest and east sides of Substation #2 shall be a black vinyl-coated chain link fence;

ix. Parking lot lighting shall be on a steel pole with a black finish and shall be directed toward the lot and not adjacent properties;

x. All fuel sheds shall be black. Vehicle protection/bollards shall be provided around the fuel polishing sheds if installed in the parking lot. Bollards shall be black;

xi. Solid screening in the form of a precast concrete panel that is consistent with the building's architectural design shall be provided for the thermal energy storage (TES) tank located at the southeast corner of ORD2;

xii. A maintenance plan for the climbing green vines on the building facades shall be provided prior to the issuance of a final Certificate of Occupancy for the data center building located on the southern portion of the Subject Property, fronting Algonquin Road ("ORD1");

xiii. The Petitioner shall make reasonable and good-faith efforts to coordinate with the owner(s) of the adjacent parcel(s) to the west of the Subject Property (PINs 08-23-100-020 and 08-23-100-021) (the "Adjacent Parcel") and roadway authorities, as applicable, to facilitate the following improvements, as generally depicted in **Exhibit F**, subject to all required Village, state, and other agency permits and approvals:

1. **Removal of Driveway within IDOT Right-of-Way:** The Petitioner shall depict removal of the existing ingress/egress drive located on the Adjacent Parcel near the southwest corner of the Subject Property within the Illinois Department of Transportation (IDOT) Algonquin Road right-of-way on the

permit plans submitted to IDOT for review and approval in conjunction with the Petitioner's own driveway work.

a. If IDOT concurs and directs removal of the driveway, such removal shall be included as part of the approved scope of work.
b. If IDOT requires consent of the owner of the Adjacent Parcel, the Petitioner shall make a good-faith effort to obtain such consent and provide documentation to the Village demonstrating the efforts made.

2. **Decommissioning of Lift Station:** Removal and proper decommissioning of the unused sanitary lift station located on the Adjacent Parcel, in accordance with all applicable agency requirements (including MWRD and IEPA, as applicable).

3. **Removal and Restoration of Private Drive:** Removal and restoration of the private drive located on the southeastern portion of the Adjacent Parcel that is no longer in use.

The Petitioner shall provide documentation to the Village demonstrating its good-faith efforts to obtain all necessary permissions and approvals to complete the above work on the Adjacent Parcel and in IDOT right-of-way. In the event that any of the improvements cannot be completed, the Petitioner shall submit written evidence, to the satisfaction of the Village, detailing the steps taken and the reasons such work could not be performed;

f. <u>ON-GOING TESTING AND MAINTENANCE:</u>

i. **Generator Use, Limitation, and Compliance Reporting:** Generators on the Subject Property will be used in compliance with applicable federal, state, and local laws. Routine testing and maintenance of generators shall comply with the noise limitations set forth in Section 14.2104(G)(1) of the Village Code and shall occur only during daytime hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday, excluding Sundays and Village-recognized holidays. The Petitioner shall coordinate generator operation such

that no more than three (3) installed generators operate simultaneously for routine testing or maintenance purposes, unless otherwise approved by the Village Manager to verify compliance with applicable noise standards. The Petitioner shall submit quarterly compliance reports to the Village's Community Development Department summarizing generator operation logs, including dates, times, duration, and number of generators operated, to demonstrate adherence to this condition.

**SECTION FOUR:** Except for the approvals and other relief granted by this Ordinance, all other applicable Village of Mount Prospect, Illinois ordinances and regulations shall remain in full force and effect as to the Subject Property.

**SECTION FIVE:** The Village Clerk is hereby authorized and directed to record a certified copy of this Ordinance and Exhibits "A", "B", "C", "D", "E" and "F" with the Recorder of Deeds of Cook County.

**SECTION SIX:** This Ordinance shall be in full force and effect from and after its passage, approval and publication in pamphlet form in the manner provided by law. This Ordinance shall run with the land and bind and benefit any future fee simple owner of the Subject Property.

AYES:

NAYS:

ABSENT:

PASSED and APPROVED this 28th day of October, 2025.

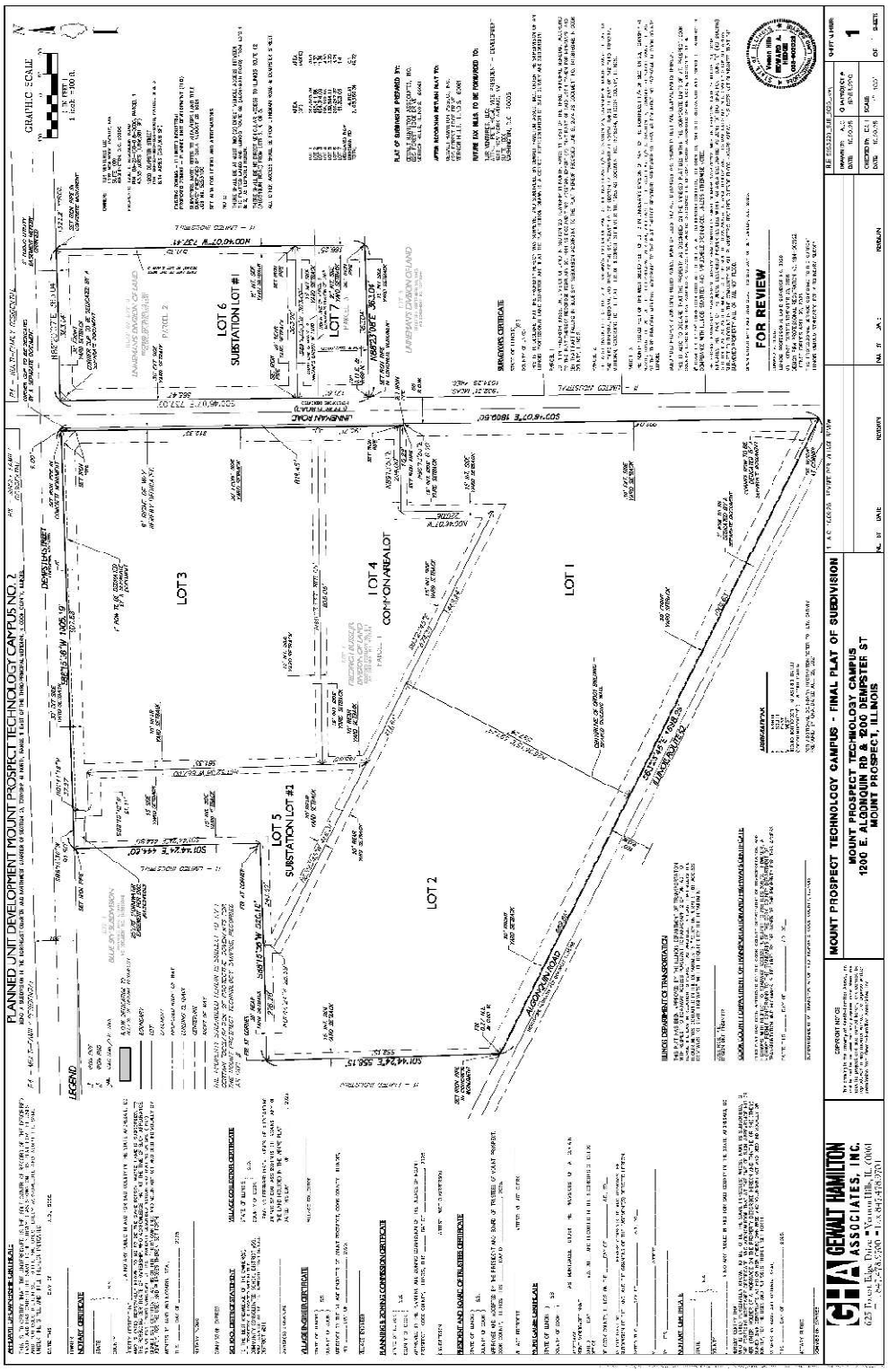
_____
Paul Wm. Hoefert, President

ATTEST:

_____
Karen M. Agoranos, Village Clerk

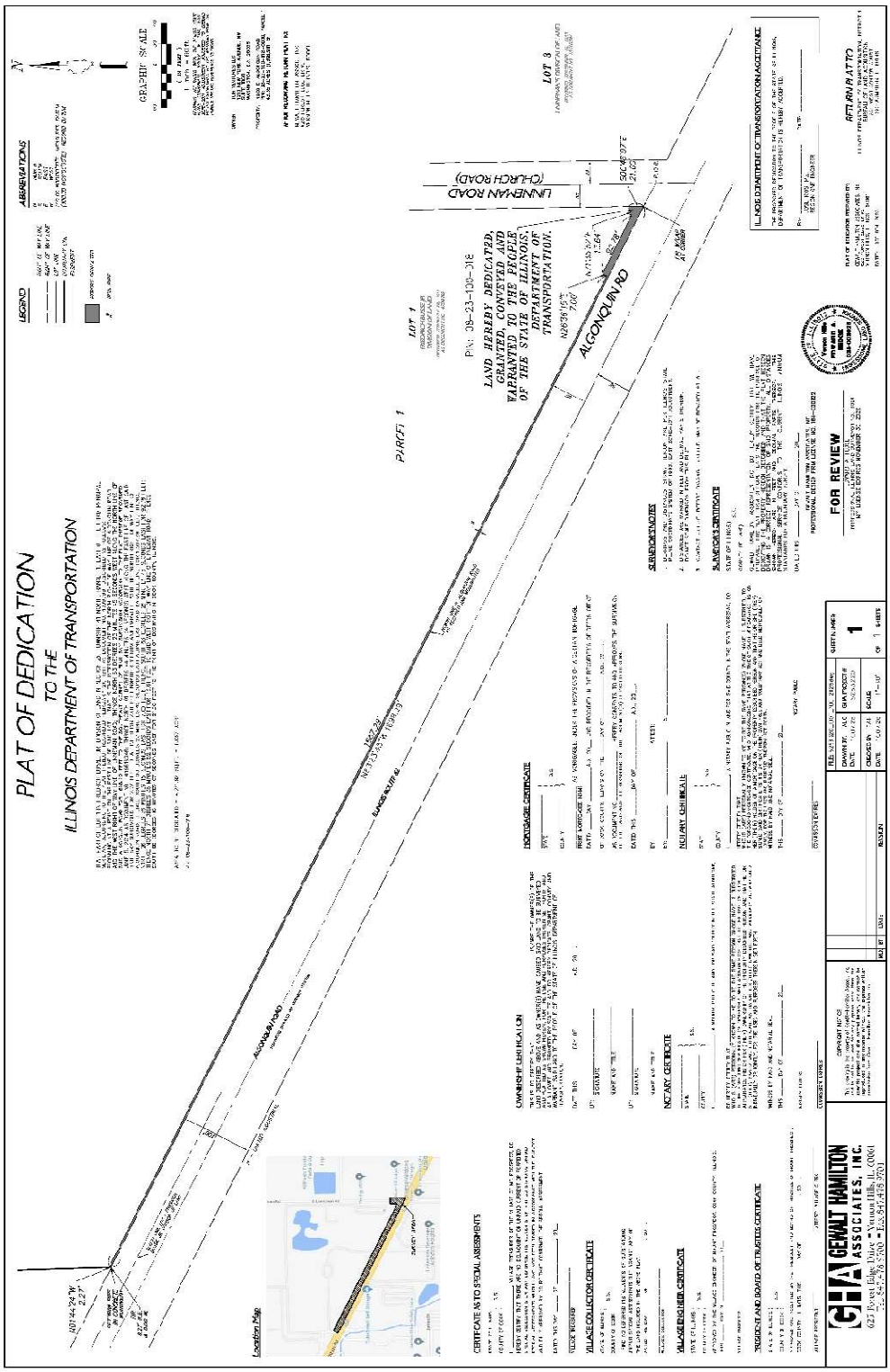
# EXHIBIT A

FINAL PLAT OF SUBDIVISION "PLANNED UNIT DEVELOPMENT MOUNT PROSPECT TECHNOLOGY CAMPUS NO.2"

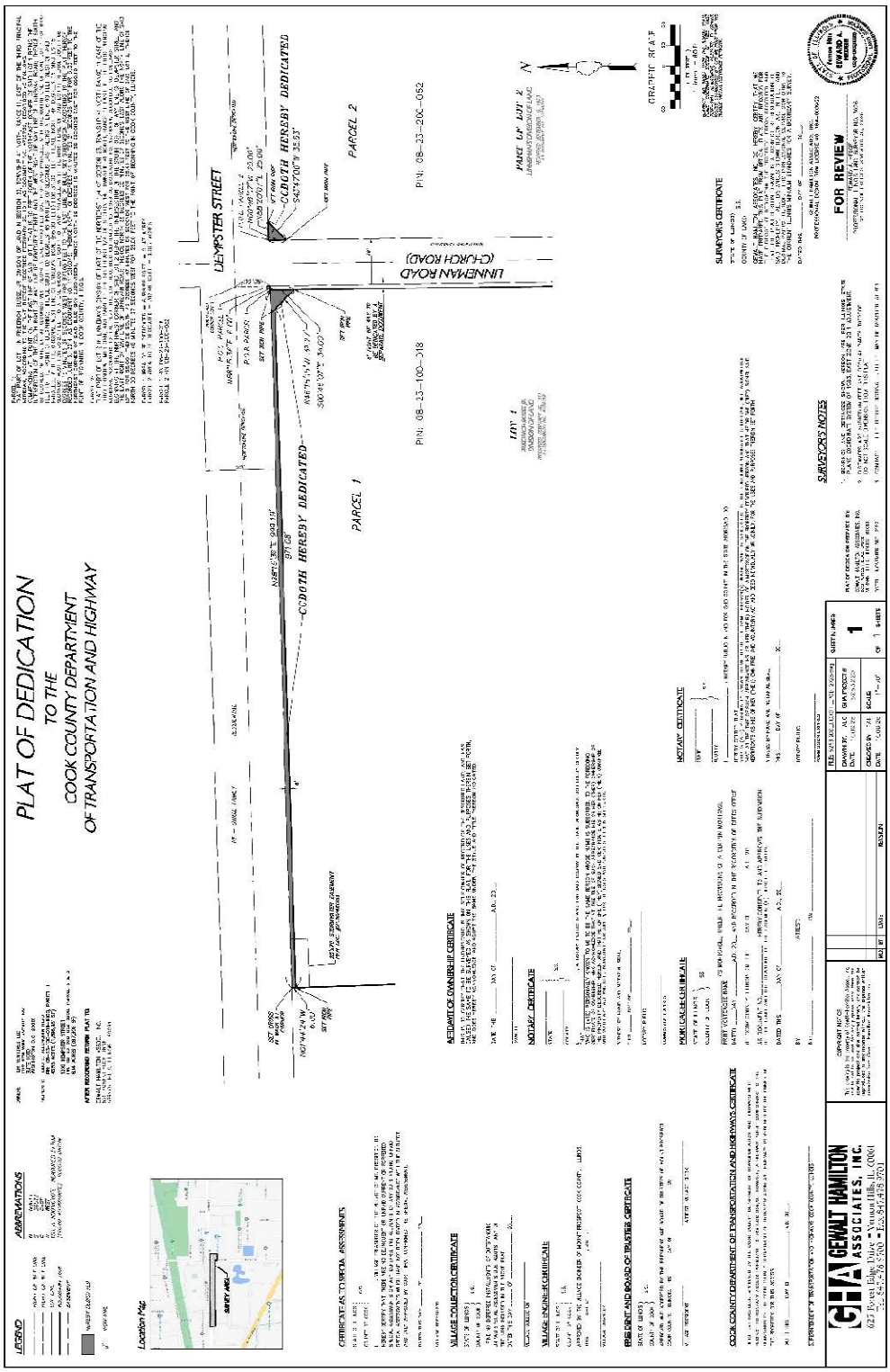


# EXHIBIT A

PLAT OF DEDICATION (IDOT)

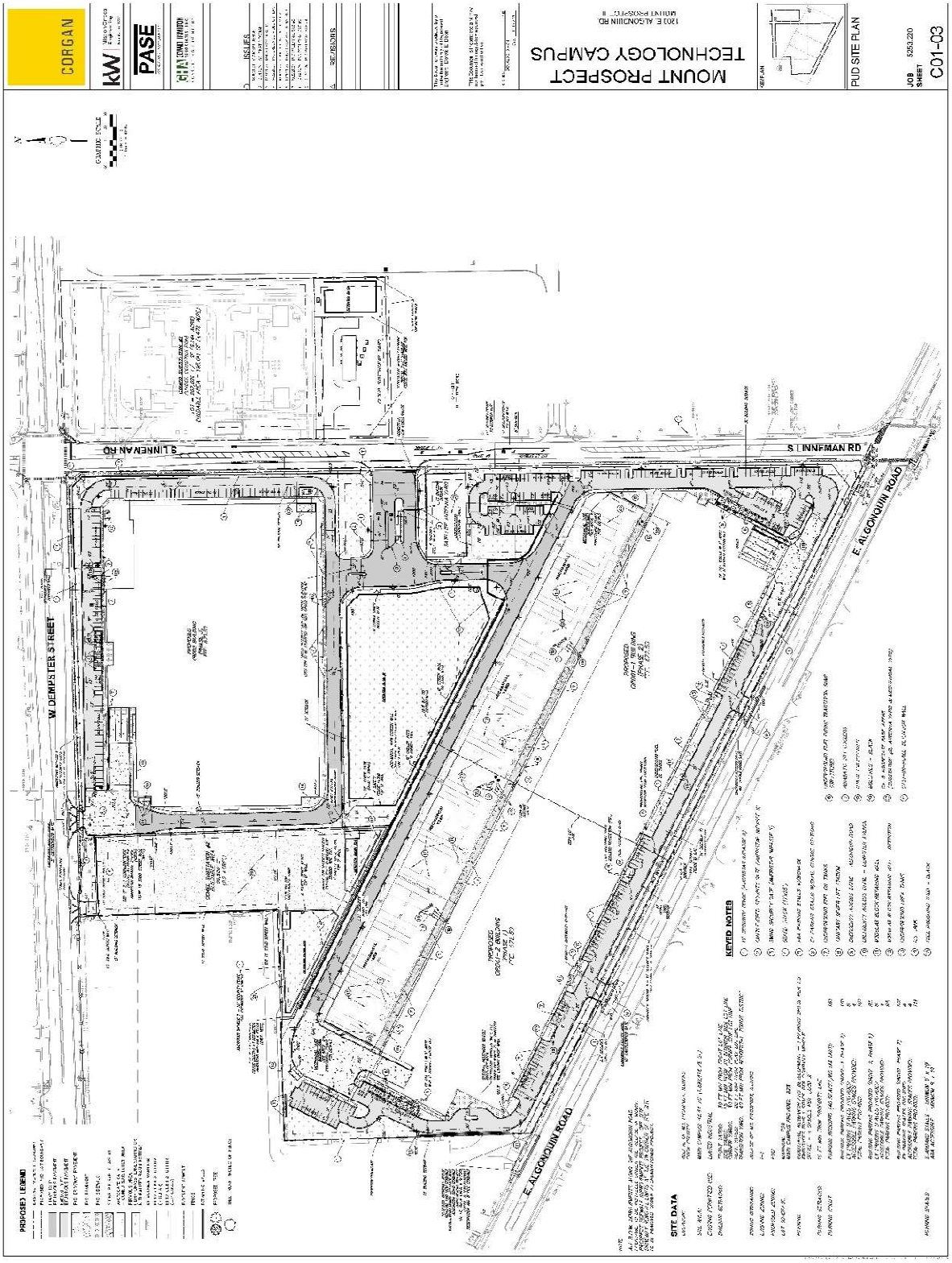


# EXHIBIT A
PLAT OF DEDICATION (CCDTH)

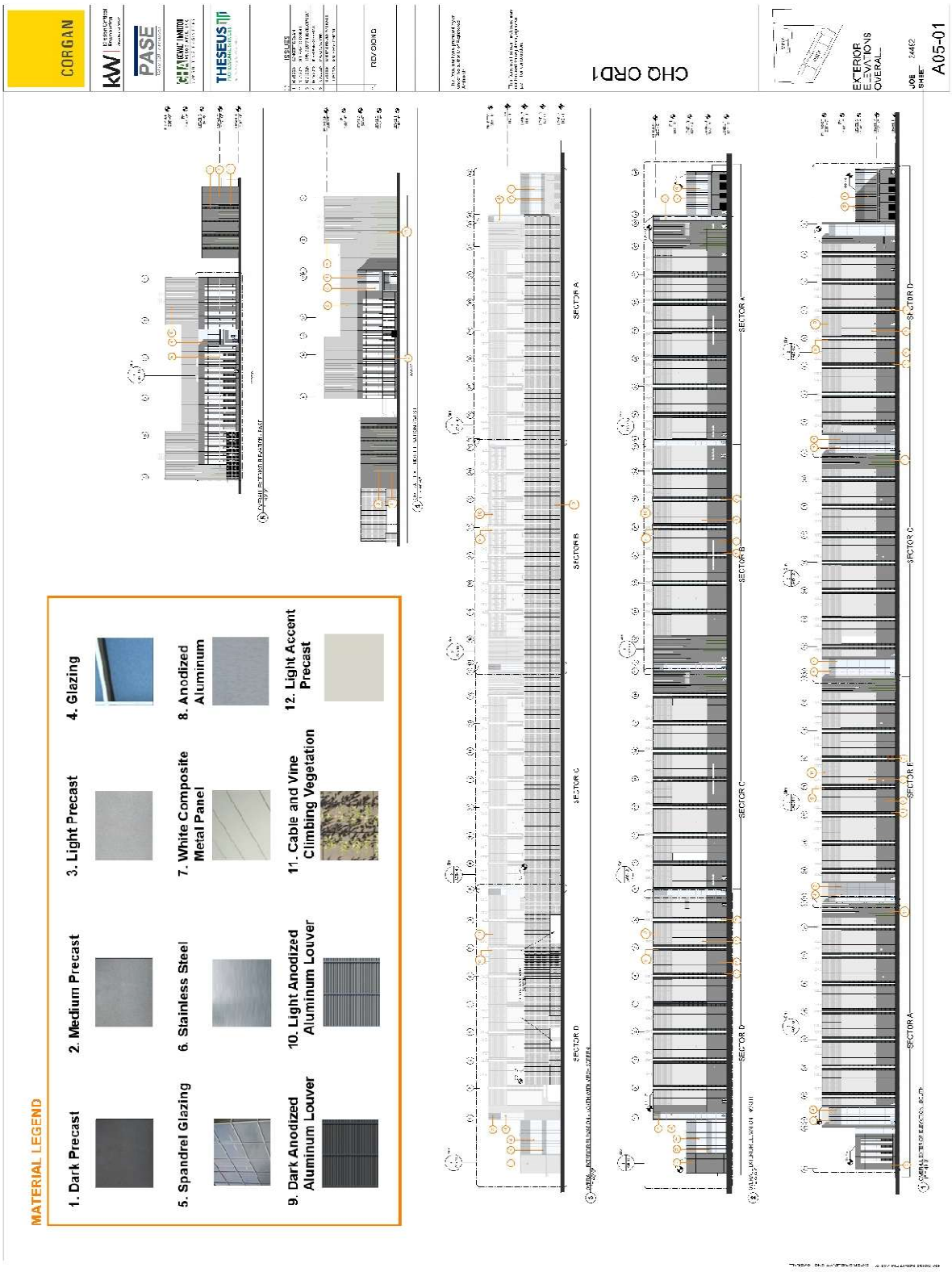


# EXHIBIT B

PUD SITE IMPROVEMENT PLANS (EXCERPTS)



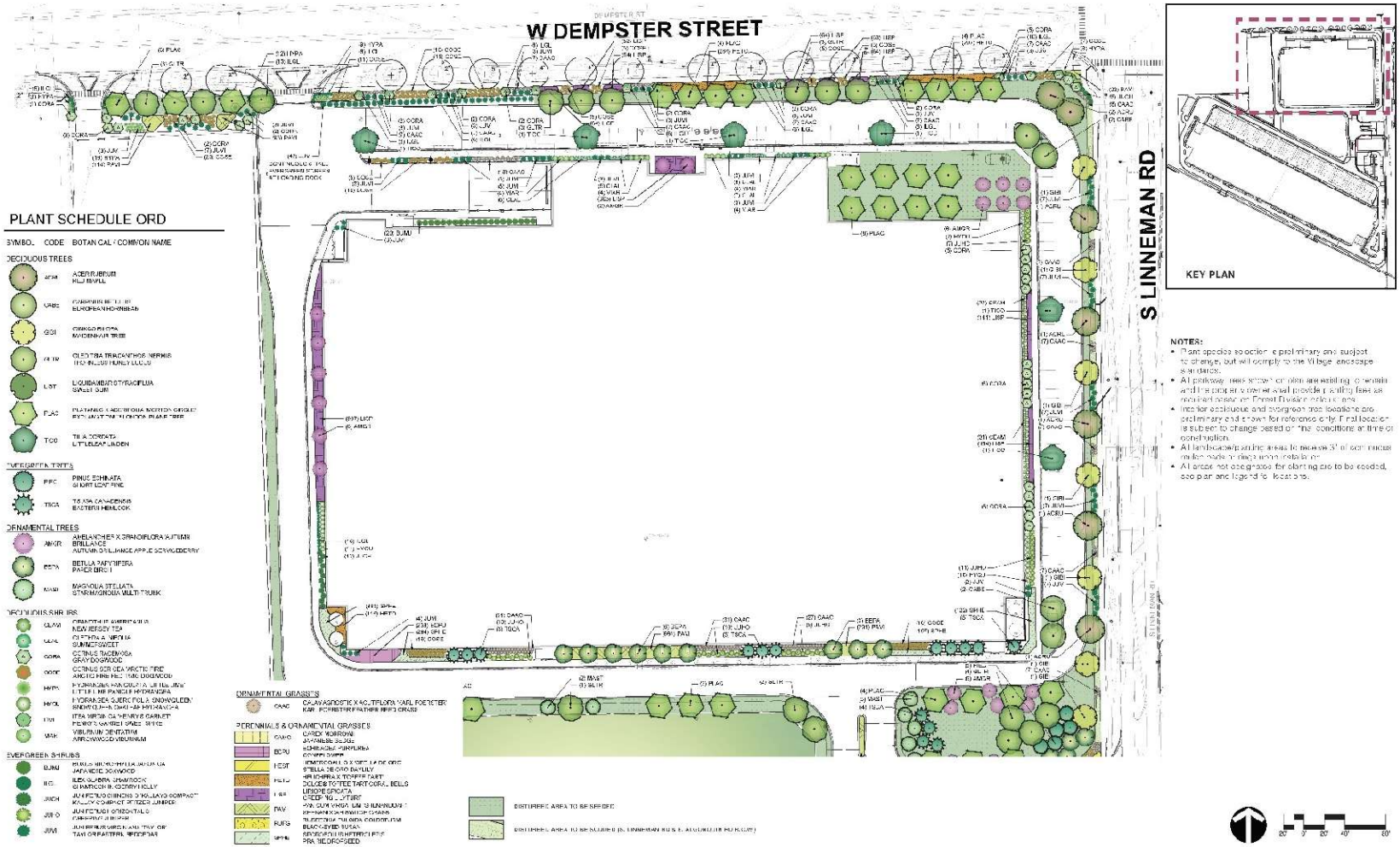
# EXHIBIT C
ARCHITECTURAL DRAWINGS



CORGAN
KW
PASE
THESEUS
ISSUES
REVISIONS
CHQ ORD 2
EXTERIOR ELEVATIONS
JOB 14492
SHEET A05-02
MATERIAL LEGEND
1. Dark Precast
2. Medium Precast
3. Light Precast
4. Glazing
5. Spandrel Glazing
6. Stainless Steel
7. White Composite Metal Panel
8. Anodized Aluminum
9. Dark Anodized Aluminum Louver
10. Light Anodized Aluminum Louver
11. Cable and Vine Climbing Vegetation
12. Light Accent Precast

# EXHIBIT D
LANDSCAPE PLANS






**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

FN 20210363 | 10.15.2025 | CLOUDHQ

**L002**

LandDesign. CloudHQ Where data lives.




**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

FN 2021286 | 10.15.2025 | CLOUDHQ

**L003**

LandDesign. CloudHQ Where data lives.




**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

FN 2021366 | 10.15.2021 | CLOUDHQ

**L004**

LandDesign. CloudHQ Where data lives.

## PLANT SCHEDULE ORD

SYMBO CODE BOTANICAL / COMMON NAME

DECIDUOUS TREES

ACRU ACER RUBRUM
RED MAPLE

CABE CARPINUS BETULUS
EUROPEAN HORNBEAM

GISI GINKGO BILOBA

GLTR GLEDITSIA TRIACANTHOS INERMIS
THORNLESS HONEYLOCUST

LST LIQUIDAMBAR STYRACIFLUA
SWEET GUM

PLAC PLATANUS X ACERIFOLIA 'MORTON CIRCLE'
EXCLAIM AT 20™ LONDON PLANE TREE

TICO TILIA CORDATA
LITTLELEAF LINDEN

EVERGREEN TREES

PIFC PINUS FLEXILIS
SHAGGY BARK PINE

TSCA TSUGA CANADENSIS
EASTERN HEMLOCK

ORNAMENTAL TREES

AMGR AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'
AUTUMN BRILLIANCE APPLE SERVICEBERRY

BEPA BETULA PAPYRIFERA
PAPER BIRCH

MAST MAGNOLIA STELLATA
STAR MAGNOLIA 'ROSEA'

DECIDUOUS SHRUBS

CAMO CEANOTHUS AMERICANUS
NEW JERSEY TEA

DEAL DEUTZIA X 'MEYTIA'
SUMMER SNOWFLAKE

CORA CORNUS RACEMOSA
GRAY DOGWOOD

COSE CORNUS SERICEA 'FARROW'
ARCTIC FIRE® RED TWIG DOGWOOD

HYPA HYDRANGEA PANICULATA 'BULTE'
LITTLE LIME® PANICLE HYDRANGEA

HYQU HYDRANGEA QUERCIFOLIA 'ANNOQUEEN'
SNOW QUEEN OAKLEAF HYDRANGEA

ITVI ITEA VIRGINICA 'HENRYS GARNET'
HENRY'S GARNET SWEETSPIRE

VIDE VIBURNUM DENTATUM
ARROWWOOD VIBURNUM

EVERGREEN SHRUBS

BUMI BUXUS MICROPHYLLA 'WINTER BEAUTY'
JAPANESE BOXWOOD

ILGL ILEX GLABRA 'SHAMROCK'
SHAMROCK INKBERRY HOLLY

JUCH JUNIPERUS CHINENSIS 'SEA GREEN'
SEA GREEN COMPACT CHINESE JUNIPER

JUHO JUNIPERUS HORIZONTALIS
CREEPING JUNIPER

JUVI JUNIPERUS VIRGINIANA 'TAYLOR'
TAYLOR JUNIPER

ORNAMENTAL GRASSES

CAKO CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'
KARL FOERSTER FEATHER REED GRASS

PERENNIALS & ORNAMENTAL GRASSES

CAMO CAREX MORROWII
JAPANESE SEDGE

ECPU ECHINACEA PURPUREA
CONE FLOWER

HEST HEMEROCALLIS 'STELLA DE ORO'
STELLA DE ORO DAYLILY

HETO HELENIUM X 'MOERHEIM BEAUTY'
MOERHEIM BEAUTY TETRAPLOID SNEEZEWEED

LISP LIRIOPE SPICATA
CREEPING LILYTURF

PAVI PANICUM VIRGATUM 'SHENANDOAH'
SHENANDOAH SWITCHGRASS

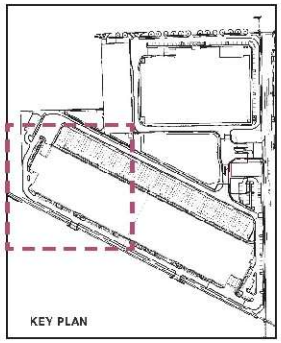
RUFU RUDBECKIA FULGIDA 'GOLDSTURM'
BLACK EYED SUSAN

SPHE SPOROBOLUS HETEROLEPIS
PRAIRIE DROPSEED

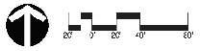
DISTURBED AREA TO BE RESEED

DISTURBED AREA TO BE SODDED
S. LINNEMAN RD & E. ALGONQUIN RD R.O.W.)




NOTES:
- Plant species selection is preliminary and subject to change, but will comply to the Village landscape standards.
- All parkway trees shown on plan are existing, or shall be provided per Village standards.
- Interior deciduous and evergreen tree locations are preliminary and shown for reference only. Final location is subject to change based on "field conditions" at time of construction.
- All landscape/planting areas to receive 3" of compost mulch made of single wood material or.
- All areas not designated for planting are to be seeded, see plan and legend for locations.



**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

FN 2021286 | 10.15.2025 | CLOUDHQ

**L005**

LandDesign. CloudHQ Where data lives.




**MOUNT PROSPECT TECHNOLOGY CAMPUS** VILLAGE OF MOUNT PROSPECT, IL • FINAL PUD SUBMISSION - LANDSCAPE PLAN

FN 2021286 | 10.15.2025 | CLOUDHQ

**L006**

LandDesign. CloudHQ Where data lives.

## PLANT SCHEDULE ORD

| SYMBOL | CODE | QTY | BOTANICAL / COMMON NAME | CONTAINER | CAL | HT | REMARKS |
|---|---|---|---|---|---|---|---|
| **DECIDUOUS TREES** | | | | | | | |
| | ACRU | 22 | ACER RUBRUM / RED MAPLE | B & B | 2.5" CAL MIN. | | PERIMETER TREE |
| | CAPE | 14 | CARPINUS BETULUS 'FASTIGIATA' / HORNBEAM | B & B | 2.5" CAL MIN. | | PARKING LOT TREE |
| | GIBI | 21 | GINKGO BILOBA / MAIDENHAIR TREE | B & B | 2.5" CAL MIN. | | PERIMETER TREE |
| | GLTR | 33 | GLEDITSIA TRIACANTHOS INERMIS / THORNLESS HONEY LOCUST | B & B | 2.5" CAL MIN. | | PERIMETER TREE, SITE TREE |
| | LIST | 11 | LIQUIDAMBAR STYRACIFLUA / SWEET GUM | B & B | 2.5" CAL MIN. | | PARKING LOT TREE |
| | PLAC | 61 | PLATANUS X ACERIFOLIA 'BLOODGOOD' / COLUMBIA™ / LONDON PLANE TREE | B & B | 2.5" CAL MIN. | | PERIMETER TREE, SITE TREE |
| | QUCO | 12 | QUERCUS COCCINEA / SCARLET OAK | B & B | 2.5" CAL MIN. | | PARKING LOT TREE |
| **EVERGREEN TREES** | | | | | | | |
| | PIPU | 10 | PINUS PONDEROSA / PONDEROSA PINE | B & B | | 6' MIN. | SITE TREE |
| | THOC | 12 | THUJA OCCIDENTALIS / EASTERN ARBORVITAE | B & B | | 6' MIN. | SITE TREE |
| **ORNAMENTAL TREES** | | | | | | | |
| | AMCR | 33 | AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / COMMON APPLE SERVICEBERRY | B & B | 1.5" - 2" MIN. CAL. PER STEM | | SITE TREE |
| | BEPA | 31 | BETULA PAPYRIFERA / PAPER BIRCH | B & B | 1.5" - 2" MIN. CAL. PER STEM | | SITE TREE |
| | MAST | 37 | MAGNOLIA STELLATA / STAR MAGNOLIA MULTI TRUNK | B & B | 1.5" - 2" MIN. CAL. PER STEM | | SITE TREE |
| **SYMBOL** | **CODE** | **QTY** | **BOTANICAL / COMMON NAME** | **SIZE** | **HEIGHT** | **SPREAD** | **REMARKS** |
| **DECIDUOUS SHRUBS** | | | | | | | |
| | CEAM | 53 | CEANOTHUS AMERICANUS / NEW JERSEY TEA | #3 | 3' | | 3'-4' HT. AT MATURITY |
| | CLAL | 23 | CLETHRA ALNIFOLIA / SUMMERSWEET | #3 | 3' | | 4'-8' HT. AT MATURITY |
| | CORA | 60 | CORNUS RACEMOSA / GRAY DOGWOOD | 15 GAL | 5' | | 10'-12' HT. AT MATURITY |
| | COSS | 302 | CORNUS SERICEA 'ARCTIC FIRE' / ARCTIC FIRE® RED TWIG DOGWOOD | #3 | 3' | | 4'-5' HT. AT MATURITY |
| | HYPA | 215 | HYDRANGEA PANICULATA 'LITTLE LIME' / LITTLE LIME PANICLE HYDRANGEA | #3 | 3' | | 4'-5' HT. AT MATURITY |
| | HYQU | 72 | HYDRANGEA QUERCIFOLIA 'SNOW QUEEN' / SNOWQUEEN OAK LEAF HYDRANGEA | #3 | 3' | | 5' HT. AT MATURITY |
| | ITVI | 66 | ITEA VIRGINICA 'HENRY'S GARNET' / HENRY'S GARNET SWEETSPIRE | #3 | 3' | | 3'-4' HT. AT MATURITY |
| | TABA | 16 | VIBURNUM DENTATUM / ARROWWOOD VIBURNUM | #5 | 5' | | 8'-9' HT. AT MATURITY |
| **EVERGREEN SHRUBS** | | | | | | | |
| | BUMI | 25 | BUXUS MICROPHYLLA JAPONICA / JAPANESE BOXWOOD | #3 | 3' | | 6'-8' HT. AT MATURITY |
| | ILSK | 103 | ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY | #3 | 3' | | 6'-8' HT. AT MATURITY |
| | JUCC | 171 | JUNIPERUS CHINENSIS 'KALLAY'S COMPACT' / KALLAY'S COMPACT CHINESE JUNIPER | #5 | 3' | 3'-5' | 3'-5' HT. AT MATURITY |
| | JUHO | 91 | JUNIPERUS HORIZONTALIS 'ANDORRA COMPACT' / ANDORRA COMPACT CREEPING JUNIPER | #3 | 15" - 18" | 3'-5' | 15"-18" HT. AT MATURITY |
| | TAX | 218 | TAXUS X MEDIA 'HICKSII' / HICKS YEW | 15 GAL | 5'-6' | | 10'-15' HT. AT MATURITY |
| **ORNAMENTAL GRASSES** | | | | | | | |
| | CAAC | 503 | CALAMAGROSTIS X ACUTIFLORA KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS | #3 | 3' | | 5'-6' HT. AT MATURITY |
| **SYMBOL** | **CODE** | **QTY** | **BOTANICAL / COMMON NAME** | **CONT.** | **HEIGHT** | **SPREAD** | **SPACING** | **REMARKS** |
| **PERENNIALS & ORNAMENTAL GRASSES** | | | | | | | | |
| | CAMO | 810 | CAREX MORROWII / JAPANESE SEDGE | #1 | 6"-9" | | 18" o.c. | 1'-2' HT. AT MATURITY |
| | ECPU | 301 | ECHINACEA PURPUREA / COMMON PURPLE | #2 | 24" - 30" | | 24" o.c. | 3'-4' HT. AT MATURITY |
| | HEDT | 204 | HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY | #1 | 9" - 12" | | 12" o.c. | 1'-2' HT. AT MATURITY |
| | HETA | 468 | HELENIUM X 'MOERHEIM BEAUTY' / SNEEZEWEED 'MOERHEIM BEAUTY' | #1 | 9" - 12" | | 12" o.c. | 1'-2' HT. AT MATURITY |
| | LISP | 5,155 | LIRIOPE SPICATA / CREEPING LILY TURF | #1 | 6" - 12" | | 12" o.c. | 1'-2' HT. AT MATURITY |
| | PAVI | 1,218 | PANICUM VIRGATUM 'SHENANDOAH' / SHENANDOAH SWITCH GRASS | #2 | 24" - 30" | | 24" o.c. | 3'-4' HT. AT MATURITY |
| | RUFG | 513 | RUDBECKIA FULGIDA 'GOLDSTURM' / BLACK-EYED SUSAN | #2 | 24" - 30" | | 24" o.c. | 3'-4' HT. AT MATURITY |
| | SPHE | 472 | SPOROBOLUS HETEROLEPIS 'PRAIRIE DROPSEED' | #2 | 18" - 24" | | 24" o.c. | 2'-3' HT. AT MATURITY |

### PERIMETER LANDSCAPING TABULATIONS

| LOT LINE | DISTANCE | ADJACENT LAND USE | TREES REQUIRED | TREES PROVIDED | SHRUBS REQUIRED | SHRUBS PROVIDED |
|---|---|---|---|---|---|---|
| NORTH (along W. Dempster Street) | 1,013' | Residential | 1 tree / 50' = 20 trees | 20 trees | continuous landscape | 310 shrubs |
| EAST (along S. Linneman Road) | 1,750' | Non-Residential | 1 tree / 75' = 23 trees | 28 trees | 176 shrubs (cluster of 7 / 35' apart / 50% of lot line) | 300 shrubs |
| SOUTH (along E. Algonquin Road) | 1,895' | Non-Residential | 1 tree / 75' = 25 trees | 26 trees | 170 shrubs (cluster of 7 / 35' apart / 50% of lot line) | 321 shrubs |
| WEST (adjacent to non-residential) | 1,525' | Non-Residential | 1 tree / 75' = 20 trees | 20 trees | 152 shrubs (cluster of 7 / 35' apart / 50% of lot line) | 155 shrubs |

### DETENTION POND PLANTING SELECTION

- Calamagrostis canadensis | Bluejoint Grass
- Carex vulpinoidea | Brown Fox Sedge
- Carex crinita | Fringed Sedge
- Carex spp. | Prairie Sedge species
- Carex stipata | Common Fox Sedge
- Elymus canadensis | Canada Wild Rye
- Elymus virginicus | Virginia Wild Rye
- Glyceria striata | Fowl Manna Grass
- Juncus effusus | Common Rush
- Juncus tenuis | Path Rush
- Alisma subcordatum | Common Water Plantain
- Eutrochium maculatum | Common Grass-leaved Goldenrod
- Iris spp. | Blue Flag species
- Lobelia siphilitica | Great Blue Lobelia
- Lycopus americanus | Common Water Horehound
- Mimulus ringens | Monkey Flower
- Pycnanthemum virginianum | Common Mountain Mint
- Rudbeckia hirta | Black-eyed Susan
- Rudbeckia triloba | Brown-eyed Susan
- Zizia aurea | Golden Alexander

### DETENTION POND MAINTENANCE NOTES:

Below is a general outline for the maintenance of native plantings within the detention ponds. Detailed maintenance schedules shall be coordinated between the property owner and approved landscape contractor.

- Year 1:
  - Plants are to be mowed every 4-6 weeks to a height of 4-6 inches to encourage root development and seedling establishment.
  - Regularly inspect for and remove invasive weeds by hand; invasive species shall be removed with their root system to the best of the contractor's ability.
- Year 2 and beyond:
  - Plants are to be mowed twice per year, once in the Spring and once in the Fall. Spring mowing shall only occur once daily temperatures are consistently above 50 degrees F to allow cool season and native to emerge. Fall mowing shall only occur in attempt to prepare for winter after wildflowers have set seed.
  - Regularly inspect for and remove invasive weeds by hand; invasive species shall be removed with their root system to the best of the contractor's ability.

**PLANT SCHEDULE NOTE.**

- Schedule only represents perimeter & foundation landscape requirements, and does not show the proposed landscape.
- Final plant selection subject to change at time of construction/installation based on price, availability, and selection.

# EXHIBIT E
VILLAGE REVIEW LETTER

**MAYOR**
Paul Wm. Hoefert

**TRUSTEES**
Vincent J. Dante
Elizabeth B. DiPrima
Terri Gens
William A. Grossi
John J. Matuszak
Colleen E. Saccotelli

**VILLAGE MANAGER**
Michael J. Cassady

**VILLAGE CLERK**
Karen Agoranos

Phone: 847/962-6000
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www.mountprospect.org

**Village of Mount Prospect**
50 S. Emerson Street, Mount Prospect, Illinois 60056

October 17, 2025

TUR Ventures, LLC
1212 New York Avenue, NW, Suite 1000
Washington, DC 20005
Via e-mail: ddixon@gha-engineers.com

**Re: PZ-21-25 / CU- Major PUD Amendment / 1200 E. Algonquin Road, 1200 Dempster Street / Review Comments #3**

Dear Mr. Dixon,

The Village of Mount Prospect has reviewed the submittal for the Mount Prospect Technology Campus Planned Unit Development (Major PUD Amendment), located at 1200 E. Algonquin Road and 1200 Dempster Street (Subject Property), and below are the following review comments from applicable departments:

**Planning Division:**
COMMENTS TO BE ADDRESSED PRIOR TO GRANTING ZONING APPROVAL:

1. The Petitioner and the Village shall enter into a Memorandum of Understanding delineating the costs and installation responsibilities of the off-site and public improvements (including, but not limited to, the $2,000,000 contribution to the Mount Prospect Park District, multi-use path, sidewalks, streetlights, etc.) related to the proposed development prior to the issuance of a building permit. The MOU shall be approved at the same meeting of the PUD approval before the Village Board on October 28, 2025. **Provide a draft of the MOU for Village review.**

COMMENTS TO BE ADDRESSED PRIOR TO ISSUING A BUILDING PERMIT:

2. A photometric plan that complies with Section 14.314 and includes the substation #2 lighting levels shall be submitted with the building permit application. The calculation summary shows the following areas exceed a maximum illumination of 5 foot-candles:
    a. ORD1 Entrance East 2: 6.20 Fc

b. ORD1 Entrance North 2, 3, 4: 7.68 Fc
c. ORD1 Entrance North 5, 6, 7: 8.18 Fc
d. ORD1 Entrance North 8: 10.50 Fc
e. ORD1 Entrance South 1: 7.20 Fc
f. ORD1 Entrance South 2: 7.10 Fc
g. ORD1 Entrance South 3: 6.90 Fc
h. ORD1 Entrance South 4: 6.75 Fc
i. ORD1 Entrance South 5: 8.25 Fc
j. ORD1 Entrance South 6: 7.35 Fc

Provide an explanation as to why these areas exceed the 5 Fc requirement. Do these areas propose any industrial canopy lighting (which would allow a maximum illumination level of 30 Fc)? If not, please ensure these that areas meet the 5 Fc maximum illumination level requirement for industrial uses. A fully compliant photometric plan will be required at time of building permit submittal.

3. Full cutoff luminaries with a total cutoff angle of not more than ninety degrees (90°) shall be used. Provide fixture cut sheets of all exterior lighting fixtures, including emergency lighting and light poles. Light poles shall not exceed a height of 30 feet including the base.

**Public Works Department:**
Insufficient time was allowed for Public Works to perform a thorough review the plans and plats submitted on October 16, 2025. While we have no objections to the proposed concept, we offer the following comments:

COMMENTS REGARDING THE PLAT OF SUBDIVISION AND PLATS OF DEDICATION TO BE ADDRESSED PRIOR TO GRANTING APPROVAL OF THE PUD AMENDMENTS

4. Previous comments have been addressed; no further comments

COMMENTS REGARDING THE SITE PLANS TO BE ADDRESSED PRIOR TO GRANTING APPROVAL OF THE PUD AMENDMENTS OR VIA THE MOU

5. Confirmation & clarification: The Village shall install the shared use path and streetlights along Algonquin Road, as well as the traffic signal improvements at Algonquin Road and Linneman Road. CloudHQ shall fund these improvements, and shall install their driveways onto Algonquin Road. The sidewalk and streetlight improvements along Dempster Street, the sidewalk along Linneman Road, and the traffic signal improvements at Dempster Street and Linneman Road shall be installed by CloudHQ as part of their site development.

COMMENTS REGARDING THE SITE PLANS TO BE ADDRESSED PRIOR TO ISSUING A BUILDING PERMIT

6. The plat of subdivision shows the proposed right of way dedication along Linneman Road to be extended south to include the entire length of the new sidewalk to be installed. The new right of way limits should also be reflected on the site plans.

7. The applicant shall make every effort to remove the lift station located on the adjacent United Airlines property at 1540 West Algonquin Road. This lift station should be so noted on the plan.

8. An updated Stormwater Management Report will have to be provided supporting the changes made to the design high water level and StormTrap detention chambers as shown on the most current plans.

9. In addition to Village approval, permits must be obtained from the following agencies:

    a. From Metropolitan Water Reclamation District of Greater Chicago (MWRD) for the new sanitary and stormwater management improvements.

    b. From Illinois Department of Transportation (IDOT) for any work in the Algonquin Road right of way.

    c. From Cook County Department of Transportation and Highways (CCDTH) for any work in the Dempster Street right of way.

    d. From the Illinois Environmental Protection Agency for the new watermain, erosion control measures (NPDES, ILR10 permit), and for the underground storage tanks.

    (We understand that permitting thru these other agencies has begun and is ongoing.)

It should be noted that no Code exceptions or variations are indicated on the plans or are approved. It must be understood that a thorough review of the site plans will be performed as part of the Building Permit review. Any additional comments will be provided at that time.

**Building Department:**

10. It is the applicant's responsibility to review the applicable building code and provide an analysis to ensure it is compatible with applicable code use, height, area, and standards set forth in the building and fire codes.

    Permit drawings shall include but not limited to a full and complete code analysis including life safety analysis with egress and occupant loads based on the Village's adopted codes with local amendments. None was included in the zoning submittal. Code analysis and compliance shall include but is not limited to building uses, types of construction, heights, areas, penthouse definition, high-rise definition, mixed use, separated/non-separated, fire ratings including any structural elements. Additionally, indicate any fire ratings, separations, fire walls, fire partitions, smoke partitions, and necessary protection of openings. Additionally, include any electrical vault locations, loads, EV, solar, and electric rooms. Drawings required shall include but are not limited to; full architectural, structural, mechanical, electrical, plumbing, fuel gas supplies, containers, generators, electrical load calculations, solar, structural calculations, grounding and bonding diagram including Ufer (concrete encased electrode), and bonding/grounding diagrams for exterior structural, fuel, and mechanical screening or metallic objects on the exterior or rooftop. Include details adequate for soils, foundation, footings, pads, including any reinforcing, rebar, structural supports, bearing pads, anchorage, phases/stages, bridging access points and any information necessary to review and construct the foundation. Additionally, the special inspections and testing (supplied by ownership/contractor) section of the IBC shall apply including but not limited, concrete, slump, steel reinforcing, welding, bolting, special bonding, high-rise/limited aerial access areas, pressure tests, mechanical test and balances, stack/pressure tests as required in the codes. Additionally, all areas shall be fully accessible based on the Illinois Accessible Code and Barrier Free Act. Additionally, submittal required for lifts/elevators as necessary.

**Fire Department:**

Please advise the petitioner that the following items must be included in the building/site plans submittal:

11. All above and below-ground storage tanks containing flammable and combustible liquids will need a State of Illinois Fire Marshal permit. The State of Illinois Fire Marshal permit is in addition to the Mount Prospect requirements that will be reviewed during the building permitting process.

12. Additional fire hydrants may be required for this project. Hydrants shall be provided around the perimeter of the building at a maximum of three hundred feet (300') spacing measured along access roads. Such hydrants shall be installed not more than fifty feet (50') or less than twenty-five feet (25') from the building. Fire hydrants will be required within three hundred feet (300') (spacing) around the entire building. An additional fire water loop may be required depending on the configuration around the building. This will be reviewed during site plan approval and submittal. Final hydrant locations will be reviewed and approved once the final site plan has been submitted through the building permit process.
13. A fire sprinkler system in accordance with NFPA 13 will be required for this project for all buildings, including generator areas. Ensure fire sprinkler shop drawings, hydraulic calculations, and equipment cut sheets are submitted for review.

    Village of Mount Prospect Fire Prevention Code, 24.202

14. A fire alarm system will be required for this project for all buildings. Ensure fire alarm shop drawings with point-to-point wiring diagrams, battery load calculations, and equipment cut sheets are submitted for review.

    Village of Mount Prospect Fire Prevention Code, 24.204

15. All new sprinkler risers and associated equipment shall be located in a separate room with a minimum of two-hour construction.
16. A fire pump and standpipe system(s) will be required for all buildings. Please ensure drawings are submitted for these systems.
17. Fire hydrants are shown to be supplied from water mains throughout the new development. Water flow calculations will be required to verify that the new proposed water main sizes can meet the required fire flow GPM demand. The minimum fire flow for an industrial occupancy is 6000 gallons per minute at 20 PSI residual pressure. This documentation must be provided to the Village of Mount Prospect's Public Works Engineering Department for review and approval, along with a copy to the Mount Prospect Fire Department. This will be reviewed during site plan approval and submittal. Calculations will be required to be provided indicating that the site has water-flow requirements meeting the maximum allowable provided by the Village's water supply.

    Village of Mount Prospect Fire Prevention Code, 16.403 C

18. A minimum of three feet (3') clear space shall be maintained around the circumference of any new or existing fire hydrant, fire department connection, fire protection control valve, or any other fire protection system component.

19. An egress plan must be provided for all buildings. This plan must include occupant loads, travel distances, egress widths, and common path of travel distances. An egress plan will be required when the building plans are submitted for review. Additional exits may be required.
20. All egress doors are to use keyless locksets on the egress side. No flush bolts, dead or draw bolts, etc. will be allowed.

Life Safety Code, 7.2.1.5.1

21. An emergency vehicle maneuvering plan will be required for the site. This must be provided before the final site plan is approved. This will be reviewed during site plan approval and submittal through the building permit process.
22. All UPS battery systems and Electrical Energy Storage Systems (ESS) must meet the International Fire Code Requirements. This includes all fire testing requirements for any lithium-ion battery storage.

**If any changes are requested, please make the changes as noted above and submit a point-by-point response letter and pdf files of the drawings.** Please upload revisions into the portal. Feel free to contact me at (847) 818-5314 / achoi@mountprospect.org if you have any questions.

Sincerely,

Ann Choi
Development Planner
Community Development

c: File

**EXHIBIT F**

WORK ON THE ADJACENT PARCEL AND IN IDOT RIGHT-OF-WAY



# Item Cover Page

| | |
|---|---|
| **Subject** | **First Reading of AN ORDINANCE ADOPTING AN ANNUAL BUDGET FOR THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2026, AND ENDING DECEMBER 31, 2026, IN LIEU OF PASSAGE OF AN APPROPRIATION ORDINANCE.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Category | NEW BUSINESS |
| Type | Ordinance |

## Information

The Village needs to adopt an annual budget before the beginning of a fiscal year. The Village's financial year aligns with the calendar year, and the Village normally adopts its annual budget for the following year in November of the current year. A series of budget workshops are conducted with the Finance Commission and the Village Board. The budget process began with the Community Investment Plan Workshop in August. A budget workshop was conducted with the Finance Commission on September 25, 2025, and the Village Board on October 14, 2025. This item was created for the first reading of the ordinance. A public hearing, second reading, and the final approval of the ordinance will occur on November 18, 2025. As required by the legislation, a public hearing notice for the budget was published in the Daily Herald Newspaper on October 8, 2025.

## Discussion

The proposed 2026 Operating Budget and Community Investment Plan totals $192.6 million, an increase of $3.4 million or 1.8 percent. The expenditure budget is proportionately larger than prior years due to a few one-time grant-funded projects, including the Melas-Meadows Bridge and Rand-Kensington-Elmhurst Road intersection improvements. The 2026 budget forecasts revenues totaling $187.8 million, an increase of $21.8 million, or 13.1 percent, attributable to federal grants for various capital projects. The major highlights of the 2026 budget are below:

1. The budget proposes a 0 percent property tax levy increase, making the current levy the lowest in the last eleven years.
2. The current budget includes the shift from a state grocery tax to a local grocery tax effective January 1, 2026. This is not a new tax and grocers will not experience additional taxation on groceries as a result of this shift. Items were previously taxed as a sales tax and now will be covered under the municipal grocery tax. The Village has earmarked grocery taxes to fund the public safety pensions.
3. The budget includes $7.1 million in property tax abatement. $2.9 million is allocated to public safety pensions, $3.4 million for debt service, and $1.0 million for fire protection.
4. Sales tax revenue for 2026 is expected to be $39.6 million and income tax is expected

to be $9.9 million. The budget reduces use tax revenues by $1.0 million. Due to recent changes in the taxing classifications, select items previously taxed as use tax are now covered under sales tax. There is a corresponding increase in sales tax.

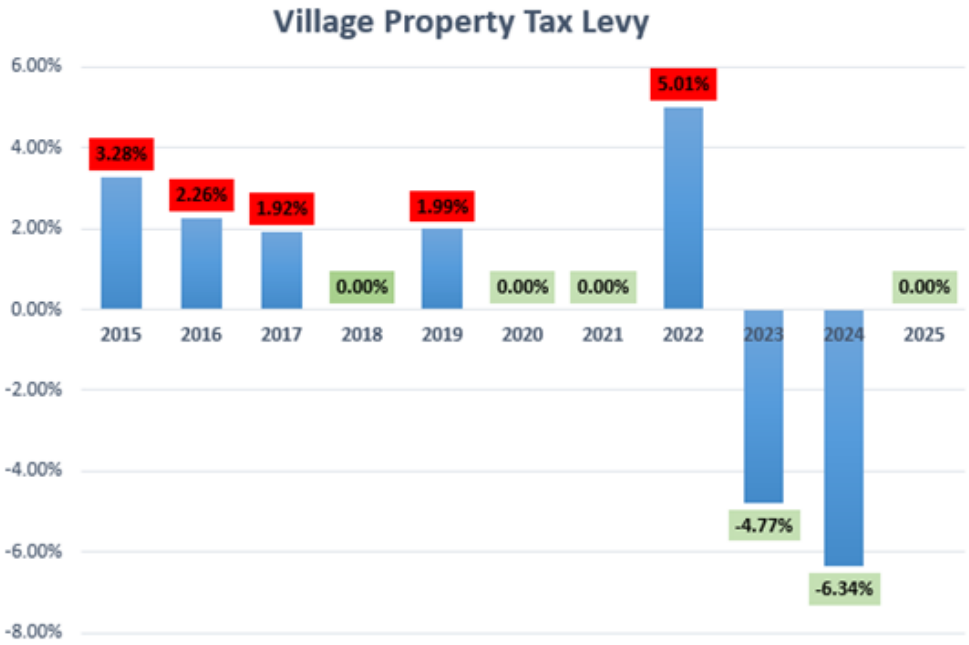
5. Water charges are proposed to increase by 7 percent, sewer charges by 5.75 percent, and refuse charges by 3.5 percent.
6. The budget includes three new firefighters/paramedics, and these new positions are expected to help the Village in lowering the overtime expenses for the year. This version of the budget also includes two new patrol officers, enabling the Village to bring back a traffic unit program.
7. The General Fund budget for the year 2026 is balanced. The revenues and expenses both total $86.4 million. The General Fund is providing support for various abatements and capital projects totaling $7.7 million.

**Revenues**

The 2026 revenue budget is set at $187.7 million, which is $21.8 million or 13.1 percent higher than the previous year. The budget includes a few large grant-funded projects resulting in a higher-than-normal intergovernmental revenue budget. These items were not there in 2025 and are not expected to be repeated in future years. Additionally, inter-fund transfers for 2026 will amount to $8.7 million, representing a reduction of $4.0 million, or 31.4 percent from the 2025 budget, returning to a normal level of inter-fund transfers.

| Revenues | 2026 Budget | 2025 Budget | Increase / (Decrease) | % Change |
|---|---|---|---|---|
| **Reoccurring Revenues** | **179,006,183** | **153,194,432** | **25,811,751** | **16.8%** |
| Property Taxes | 25,537,577 | 24,813,627 | 723,950 | 2.9% |
| Other Taxes | 17,194,500 | 15,554,350 | 1,640,150 | 10.5% |
| Intergovernmental Revenue | 76,740,509 | 54,857,954 | 21,882,555 | 39.9% |
| Licenses, Permits & Fees | 2,059,752 | 1,912,000 | 147,752 | 0.8% |
| Charges For Services | 49,996,827 | 47,342,301 | 2,654,526 | 5.6% |
| Fines & Forfeits | 541,250 | 608,500 | (67,250) | -11.1% |
| Investment Income | 3,257,800 | 3,933,700 | (675,900) | -17.2% |
| Other Revenue | 2,947,168 | 3,085,500 | (138,332) | -4.5% |
| Reimbursements | 730,800 | 1,086,500 | (355,700) | -32.7% |
| **Other Financing Sources** | **8,751,000** | **12,749,433** | **(3,998,433)** | **-31.4%** |
| Other Financing Sources | 8,751,000 | 12,749,433 | (3,998,433) | -31.4% |
| **Grand Total** | **187,757,183** | **165,943,865** | **21,813,318** | **13.1%** |

The Village is actively working to reduce the burden of property taxes. The overall property tax levy for the year is proposed at $18.2 million, a 0 percent increase compared to the 2024 levy payable in 2025. The total property tax category includes the property tax levy totaling $18.2 million, tax increments to be received under two of the Village's Tax Increment Financing Districts totaling $6.3 million, and special service area taxes of $1.0 million from serving the unincorporated Elk Grove Township.




The "other taxes" category includes various locally imposed taxes such as home-rule sales tax, hotel/motel tax, food & beverage tax, and real estate transfer tax, among others. It is projected to generate a total of $17.2 million in taxes, representing an increase of $1.6 million over the 2025 budgeted amount. Due to recent changes in the law, the Village has started collecting higher home-rule sales taxes. The Village is expected to collect $8.1 million in the home-rule sales tax in 2026. The food & beverage tax is expected to be around $1.95 million, utility taxes totaling $3.1 million and real-estate transfer tax is expected to total $1.1 million for 2026.

The largest revenue category, intergovernmental revenues, is expected to total $76.7 million in 2026. Of this amount, state-shared sales tax is projected to be $39.6 million, while income tax (LGDF) is expected to account for $9.9 million. Intergovernmental revenues include $21.7 million in one-time capital project grants for various critical and infrastructure related projects. These one-time grants account for the major increase in intergovernmental revenues as well as overall revenues for the year. These projects are the Melas-Meadows Bridge, Rand-Kensington-Elmhurst intersection improvements, Algonquin Road shared use path project and Schoenbeck Road reconstruction.

The Village's investment income has risen as a result of higher interest rates. The 2025 projection indicates that the investment income will reach $4.1 million, compared to the original budget of $3.9 million. The current market anticipates rate cuts by the Federal Reserve Bank, which will lower the interest income for the remainder of 2025 and for 2026. Based on the anticipated rate cuts, the current budget estimates an interest income of $3.3 million for 2026.

The 2026 budget includes $50.0 million in various charges for services, $2.7 million or 5.6 percent more than the 2025 budgeted amount. The 2026 budget includes new internal service charges: $1.6 million for the building improvement fund and $783,943 for the technology replacement fund. The 2026 budget does not increase ambulance billing fees; ambulance billing fees total $4.1 million and is similar to fees collected during 2025. The water and sewer utility rates are set to increase by 7.0 percent and 5.75 percent in 2026, respectively, as

indicated in the water rate study.

The other financing sources mainly include planned inter-fund transfers, as described below.

| From | To | Purpose | 2026 Amounts |
|---|---|---|---|
| General Fund | Debt Service Fund | 2018B - Police Fire HQ Bond | 1,445,000 |
| General Fund | Debt Service Fund | 2016 Bond Abatements | 1,656,000 |
| General Fund | Capital Project Fund | Supporting CIP Items | 1,750,000 |
| General Fund | Street Const. Fund | Supporting Street Construction Projects | 750,000 |
| General Fund | Pension Stabilization | Pension Stabilization | 2,000,000 |
| General Fund | Parking System | Capital Prjects | 100,000 |
| EGRF SSA | General Fund | Operating Transfer | 1,050,000 |
| **Total** | | | **8,751,000** |

**Expenses**

The budget for 2026 expenditures totals $192.6 million, an increase of $3.4 million, or 1.8 percent, from the amended 2025 budget. The increase in spending is mainly attributable to overall inflation, cost-of-living adjustments, one-time Community Investment Plan (CIP) projects, and other timing differences. The 2025 budget includes carryover projects totaling $11.8 million from 2024, and one-time property purchases of $5.0 million, not expected to be repeated in 2026. The original 2025 budget included a CIP totaling $33.4 million. The proposed 2026 budget includes a CIP totaling $51.1 million, including $26.0 million in grant-funded one-time projects.

| Expense Categories | 2026 Budget | 2025 Budget | Increase / (Decrease) | % Change |
|---|---|---|---|---|
| Operating Budget | $102,751,832 | $98,199,916 | $4,551,916 | 4.6% |
| Community Investment Plan | $51,097,758 | $51,289,372 | ($191,614) | -0.4% |
| Debt Service | $7,800,294 | $7,712,124 | $88,170 | 1.1% |
| Internal Service Funds | $15,199,350 | $14,181,581 | $1,017,769 | 7.2% |
| Special Revenue Business District | $2,029,900 | $2,027,500 | $2,400 | 0.1% |
| Special Revenue TIF | $4,950,000 | $3,020,000 | $1,930,000 | 63.9% |
| Interfund Transfer | $8,751,000 | $12,749,433 | ($3,998,433) | -31.4% |
| **Total Expenditures** | **$192,580,134** | **$189,179,927** | **$3,400,207** | **1.8%** |

The operating budget is scheduled to increase by $4.5 million, or 4.6 percent, from the 2025 amended budget. This increase is primarily due to the hiring of three additional firefighter/paramedics, higher pension contributions, cost-of-living adjustments for personnel, and inflationary adjustments to contracted services, and internal service lease payments.

The 5-year CIP spending for 2026 is projected to be $51.1 million, which is $191,614 lower compared to the 2025 amended budget. The year 2026 has unusually large amounts of grant-funded capital projects, not expected to be repeated each year. A normal CIP year amounts to projects totaling $35.0 million (based on the recent average year CIP).

The total debt service payments for 2025 will amount to $7.8 million. The Internal Service Fund expenditures total $15.2 million, reflecting an increase of $1.0 million compared to the

2025 amended budget. The plan also includes inter-fund transfer outs totaling $8.8 million for 2026, of which $5.1 million will be used to abate debt service and pension property tax levies. A total of $2.6 million will be used to fund various capital projects. This year's inter-fund transfers include an operating transfer of $1.1 million from the Elk Grove Rural Special Service Area Fund to the General Fund.

During 2025, $4.6 million in outstanding principal debt will be repaid, while the total interest payment will be $3.2 million. The Village has not planned any new bond issuance or debt for 2026. However, the Village may amend its budget to fund some crucial capital projects and may issue bonds (if approved by the Board). The next planned bond issuance is expected during 2027 and beyond.

**Conclusion**

The 2026 budget is balanced with a planned use of cash/fund balance. There are timing differences in recognizing revenues and aligning the pertaining project expenses. The total budgeted revenues for the year will be $186.9 million, while the budgeted expenditure totals $192.4 million. This results in an accounting deficit of $5.5 million, mainly for capital project funds. Among the three capital project funds, a deficit of $3.9 million is projected, where the revenues are collected for projects in 2025 and prior; however, the project expenditures are expected to be paid out in 2026. All three capital project funds will have a positive fund balance and will be compliant with the Village’s fund balance policy.

The Village is facing challenges including, inflation, possible recession and uncertain market conditions, legislative changes, deficit levels at the State of Illinois, rising pension costs, aging infrastructure, supply-chain issues, and a few more. Several of these challenges are described below.

a. Chicago-area CPI-U is up 3.1 percent year-over-year (Aug 2025); core (ex-food/energy) is 3.2 percent. Wage, utilities, and materials lines remain above pre-2021 norms, so operating costs are still drifting upward, even as headline inflation has cooled.
b. The Village's finances rely heavily on intergovernmental revenues, with a substantial portion coming from the State of Illinois. In the past, the State has attempted to reduce the Local Government Distributive Fund (LGDF) Income Tax. If the LGDF is further reduced, it would lead to revenue losses for the Village and could potentially put additional strain on the already burdened property tax system. While the State of Illinois has the ability to fully restore the LGDF to its original 10 percent allocation, it has not yet done so.
c. The Village invests a fair amount in capital assets each year through the Community Investment Plan. Funding from various variable revenue sources and charges for services funds the new investment as well as the replacement of the existing assets. Maintaining aging infrastructures and facilities without the issuance of debt or a grant from the state or federal agency is challenging. The Village has received significant grants in recent times, but it is a challenge to receive awards while competing with other grantees.
d. There is a huge demand for construction materials and vehicles in the market. The Village is dealing with high prices and supply chain issues with many capital projects. Many of the recent construction bid results have come in much higher than expected. The Village is also struggling to replace its scheduled Police, Fire, and Public Works fleet. The Village is hopeful that several measures taken by the federal and state governments will curb inflation and supply chain issues.
e. The current interest rates have led to a decrease in real estate transactions. As a result, the Village's revenue from real estate transfer tax is decreasing due to fewer property closings. Although there has been a slight increase in real estate transfer tax collection compared to last year, overall, it is still 33 percent lower than its peak in 2022. The

Village is hopeful for a recovery in the real estate market. In the meantime, the additional investment income is helping offset the loss in real estate transfer tax revenues.

f. The State of Illinois brought legislative changes to the pension system in 2011 and created TIER II for police, fire, and employees participating in IMRF. Recently, various legislative bills have been filed to increase the benefits under TIER II pensions. Any legislative changes that can increase the benefits under TIER II will increase the annual pension costs and the property tax burden for residents and businesses.
g. The Cook County property tax system is very complex and unique. The County struggled again this year with producing the second installment tax bills in a timely manner. The Village, along with all other taxing agencies, has not yet received the second installment of property taxes. If paid on time, these dollars can be effectively used and invested by the Village.

Despite the challenges mentioned above, the Village's financial position remains very strong. Reserve levels have continued to exceed expectations due to revenue growth and responsible spending. The Village's General Fund is estimated to have a fund balance of $44.9 million, which will be 51 percent of the 2027 annual budget. It is important to note that not all fund balances are in liquid form. Some portion of the fund balance is tied up in accounts receivable and is not immediately available. Substantial reserves and balanced annual budgets are two factors contributing to the strong bond rating assigned to Village debt. The General Fund reserves remain well above the target set by the Village Board (40%) through 2025 and 2026.

The 2026 budget can be accessed by clicking here.

Staff will make a brief presentation on the first reading of the ordinance. A public hearing, second reading, and final approval are scheduled for November 18, 2025.

## Alternatives

1. Hold first reading of the ordinance adopting the 2026 Annual Budget.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends holding a first reading of the ordinance for adopting the 2026 annual budget.

## Attachments

1. 2026 Budget Ordinance

**ORDINANCE NO. _____**

**AN ORDINANCE ADOPTING AN ANNUAL BUDGET FOR THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2026, AND ENDING DECEMBER 31, 2026, IN LIEU OF PASSAGE OF AN APPROPRIATION ORDINANCE**

---

PASSED AND APPROVED BY

THE PRESIDENT AND BOARD OF TRUSTEES

This _____ day of November 2025

Published in pamphlet form by
authority of the corporate authorities
of the Village of Mount Prospect, Illinois
this _____ day of November, 2025.

**ORDINANCE NO. _____**

**AN ORDINANCE ADOPTING AN ANNUAL BUDGET FOR THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR COMMENCING JANUARY 1, 2026 AND ENDING DECEMBER 31, 2026 IN LIEU OF PASSAGE OF AN APPROPRIATION ORDINANCE**

---

WHEREAS, the President and Board of Trustees of the Village of Mount Prospect in accordance with State Statutes, have provided for the preparation and adoption of an Annual Budget in lieu of passage of an Appropriation Ordinance; and

WHEREAS, the proposed Annual Budget for the Village of Mount Prospect for the fiscal year beginning January 1, 2026 and ending December 31, 2026, as prepared by the Budget Officer for the Village and submitted to the President and Board of Trustees, was placed on file in the Office of the Village Clerk on September 30, 2025, for public inspection, as provided by Statute; and

WHEREAS, pursuant to notice duly published on October 8, 2025, a public hearing was held by the President and Board of Trustees on said tentative annual budget on November 18, 2025, as provided by Statute; and

WHEREAS, following said public hearing, said proposed Annual Budget was reviewed by the President and Board of Trustees and a copy of said proposed Annual Budget is attached hereto and hereby made a part hereof.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS:

SECTION ONE: The Annual Budget for the Village of Mount Prospect for the fiscal year beginning January 1, 2026, and ending December 31, 2026, a copy of which is attached hereto and made a part hereof, is hereby approved and adopted as the Annual Budget for the Village of Mount Prospect for said fiscal year.

SECTION TWO: Within thirty (30) days following the adoption of this Ordinance there shall be filed with the County Clerk of Cook County a copy thereof duly certified by the Village Clerk and Estimate of Revenues by source anticipated to be received by the Village in the fiscal year beginning January 1, 2026, and ending December 31, 2026, duly certified by the Chief Fiscal Officer.

SECTION THREE: This Ordinance shall be in full force and effect from and after its passage, approval and publication in pamphlet form in the manner provided by law.

AYES:

NAYS:

ABSENT:

ABSTAIN:

PASSED AND APPROVED this _____ day of November 2025.

_____
Paul Wm. Hoefert, Mayor

ATTEST:

_____
Karen Agoranos, Village Clerk

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001-General Fund** | **90,530,200** | **83,654,388** | **86,369,639** | **86,371,950** | **2,717,562** |
| **Property Taxes** | **17,753,593** | **17,781,260** | **17,666,260** | **17,766,210** | **(15,050)** |
| 001.400.002 | | | | | |
| Property Tax Prop Taxes - PY | (322,127) | - | (100,000) | - | - |
| 001.400.003 | | | | | |
| Property Tax Prop Taxes-Police CY | 4,694,151 | 5,126,944 | 5,126,944 | 5,044,098 | (82,846) |
| 001.400.004 | | | | | |
| Property Tax Prop Taxes-Police PY | (93,381) | - | - | - | - |
| 001.400.005 | | | | | |
| Property Tax Prop Taxes-Fire CY | 3,882,545 | 4,133,242 | 4,133,242 | 3,872,363 | (260,879) |
| 001.400.006 | | | | | |
| Property Tax Prop Taxes-Fire PY | (84,709) | - | - | - | - |
| 001.400.009 | | | | | |
| Property Tax Prop Taxes - R&B CY | 109,783 | 125,000 | 110,000 | 110,000 | (15,000) |
| 001.400.010 | | | | | |
| Property Tax Prop Taxes - R&B PY | (3,339) | - | - | - | - |
| 001.60.00.00.0.000.400.001 | | | | | |
| Property Tax Prop Taxes - CY | 4,427,266 | 4,346,500 | 4,346,500 | 4,607,329 | 260,829 |
| 001.70.00.00.0.000.400.001 | | | | | |
| Property Tax Prop Taxes - CY | 5,143,404 | 4,049,574 | 4,049,574 | 4,132,420 | 82,846 |
| **Other Taxes** | **13,899,581** | **13,702,200** | **14,295,100** | **14,372,000** | **669,800** |
| 001.401.001 | | | | | |
| Utility Tax ComEd Electric Tax | 1,136,552 | 1,125,000 | 1,130,000 | 1,132,500 | 7,500 |
| 001.401.002 | | | | | |
| Utility Tax Natural Gas Use Tax | 105,091 | 112,200 | 110,000 | 110,000 | (2,200) |
| 001.401.003 | | | | | |
| Utility Tax NICOR Gas Tax | 498,751 | 750,000 | 550,000 | 550,000 | (200,000) |
| 001.401.004 | | | | | |
| Utility Tax Telecom Tax | 1,070,579 | 1,025,000 | 1,035,000 | 1,035,000 | 10,000 |
| 001.402.001 | | | | | |
| Use Taxes Auto Rental Tax | 30,461 | 30,000 | 32,000 | 32,000 | 2,000 |
| 001.402.003 | | | | | |
| Use Taxes Food & Bev Tax | 1,530,914 | 1,400,000 | 1,575,000 | 1,600,000 | 200,000 |
| 001.402.005 | | | | | |
| Use Taxes Hotel/Motel Tax | 132,615 | 95,000 | 135,600 | 135,000 | 40,000 |
| 001.402.007 | | | | | |
| Use Taxes Real Estate Trsfr Tax | 1,016,083 | 1,020,000 | 1,090,000 | 1,100,000 | 80,000 |
| 001.403.003 | | | | | |
| Home Rule Sales Tax HR Sales Tax-3rd | 7,803,006 | 7,500,000 | 8,050,000 | 8,100,000 | 600,000 |
| 001.404.001 | | | | | |
| Franchise Fees Cable TV - Comcast | 497,905 | 565,000 | 510,000 | 500,000 | (65,000) |
| 001.404.002 | | | | | |
| Franchise Fees Cable TV - WOW | 54,871 | 55,000 | 55,000 | 55,000 | - |
| 001.404.003 | | | | | |
| Franchise Fees Cable TV - AT&T | 22,754 | 25,000 | 22,500 | 22,500 | (2,500) |
| **Intergovernmental Revenue** | **48,939,588** | **41,833,082** | **43,129,830** | **44,008,088** | **2,175,006** |
| 001.415.001 | | | | | |
| State Taxes Charitable Games Tax | 2,540 | 3,500 | 2,500 | 2,500 | (1,000) |
| 001.415.002 | | | | | |
| State Taxes State Income Tax | 9,654,627 | 9,500,000 | 9,664,840 | 9,949,100 | 449,100 |
| 001.415.004 | | | | | |
| State Taxes State Sales Tax | 30,240,722 | 28,000,000 | 31,078,000 | 31,977,300 | 3,977,300 |
| 001.415.005 | | | | | |
| State Taxes State Use Tax | 2,040,366 | 2,310,000 | 1,053,360 | 1,080,188 | (1,229,812) |
| 001.415.007 | | | | | |
| State Taxes Cannabis Education Fund | 91,597 | 95,000 | 90,000 | 90,000 | (5,000) |
| 001.415.008 | | | | | |
| State Taxes Municipal Cannabis Tax | 90,462 | 85,000 | 80,000 | 80,000 | (5,000) |
| 001.416.001 | | | | | |
| Personal Property Replacement Tax Pers Prop Repl Tax | 700,676 | 666,582 | 667,600 | 600,000 | (66,582) |
| 001.416.002 | | | | | |
| Personal Property Replacement Tax Pers Prop Repl Tx-R&B | 13,690 | 10,000 | 11,000 | 9,000 | (1,000) |
| 001.417.001 | | | | | |

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| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Intergovernmental Forest River Fire Dist | 70,858 | 50,000 | 62,500 | 60,000 | 10,000 |
| 001.417.002 | | | | | |
| Other Intergovernmental Maint of State Highways | 96,093 | 120,000 | 110,000 | 105,000 | (15,000) |
| 001.418.006 | | | | | |
| Federal Grants STP Grant | 168,042 | 988,000 | - | - | (988,000) |
| 001.418.021 | | | | | |
| Federal Grants AFG Grant | 48,164 | - | - | - | - |
| 001.418.027 | | | | | |
| Federal Grants American Rescue Plan | 5,572,395 | - | 270,030 | - | - |
| 001.418.028 | | | | | |
| Federal Grants General | 100,825 | - | - | - | - |
| 001.420.003 | | | | | |
| Other Grants Other Grants | 41,514 | - | 35,000 | 50,000 | 50,000 |
| 001.60.00.00.0.000.418.001 | | | | | |
| Federal Grants Body Armor Grant | 7,018 | 5,000 | 5,000 | 5,000 | - |
| **Licenses, Permits & Fees** | **2,029,196** | **1,911,500** | **1,854,175** | **2,059,252** | **147,752** |
| 001.409.001 | | | | | |
| Business Licenses & Permits Alarm Licenses | 42,438 | 45,000 | 42,500 | 43,000 | (2,000) |
| 001.409.002 | | | | | |
| Business Licenses & Permits Business Licenses | 162,263 | 165,000 | 163,000 | 165,000 | - |
| 001.409.003 | | | | | |
| Business Licenses & Permits Contractor Licenses | 135,200 | 130,000 | 138,000 | 138,000 | 8,000 |
| 001.409.005 | | | | | |
| Business Licenses & Permits Elevator Licenses | 26,555 | 30,000 | 29,000 | 30,000 | - |
| 001.409.006 | | | | | |
| Business Licenses & Permits Liquor Licenses | 194,500 | 190,000 | 196,000 | 195,000 | 5,000 |
| 001.409.007 | | | | | |
| Business Licenses & Permits Utility Permit Fee | 4,200 | 3,500 | 3,500 | 3,500 | - |
| 001.409.009 | | | | | |
| Business Licenses & Permits Gaming Applications | 600 | 500 | 500 | 500 | - |
| 001.409.010 | | | | | |
| Business Licenses & Permits Gaming Terminal Fees | 112,000 | 97,500 | 113,675 | 115,000 | 17,500 |
| 001.410.001 | | | | | |
| Nonbusiness Licenses & Permits Building Permit | 1,009,009 | 875,000 | 825,000 | 1,031,252 | 156,252 |
| 001.410.004 | | | | | |
| Nonbusiness Licenses & Permits Landlord/Rental Permit | 322,301 | 325,000 | 323,000 | 323,000 | (2,000) |
| 001.410.009 | | | | | |
| Nonbusiness Licenses & Permits Village Impact Fees | 20,130 | 50,000 | 20,000 | 15,000 | (35,000) |
| **Charges For Services** | **3,661,262** | **4,154,046** | **4,066,500** | **4,145,200** | **(8,846)** |
| 001.449.004 | | | | | |
| Service Charge Permit Reinspection Fee | 5,225 | 8,500 | 1,500 | 3,000 | (5,500) |
| 001.449.008 | | | | | |
| Service Charge Truck Fees | 6,580 | 6,500 | 3,250 | 3,300 | (3,200) |
| 001.449.009 | | | | | |
| Service Charge Vacant Structure Reg | 2,000 | 3,500 | 2,250 | 2,300 | (1,200) |
| 001.449.012 | | | | | |
| Service Charge ZBA Hearing Fees | 3,000 | 2,000 | 3,500 | 3,600 | 1,600 |
| 001.479.021 | | | | | |
| Other Revenue Block Party Beverage Sales | 47,746 | 47,500 | 62,500 | 60,000 | 12,500 |
| 001.60.61.00.0.000.444.001 | | | | | |
| Special Detail Revenue Spec Detail Revenue | 18,821 | 25,000 | 8,500 | 8,000 | (17,000) |
| 001.70.00.00.0.000.449.001 | | | | | |
| Service Charge Ambulance Fee | 3,577,890 | 4,061,046 | 3,985,000 | 4,065,000 | 3,954 |
| **Fines & Forfeits** | **361,580** | **353,500** | **333,140** | **337,500** | **(16,000)** |
| 001.453.003 | | | | | |
| Fines and Forfeits Code Fines | 34,261 | 17,500 | 22,000 | 23,500 | 6,000 |
| 001.453.008 | | | | | |
| Fines and Forfeits Forfeited Escrow Funds | 66,240 | 60,000 | 22,200 | 25,000 | (35,000) |
| 001.453.009 | | | | | |
| Fines and Forfeits Local Ordinance Fines | - | 1,000 | 500 | 500 | (500) |
| 001.453.011 | | | | | |
| Fines and Forfeits Parking Fines | 115,359 | 145,000 | 166,940 | 165,000 | 20,000 |
| 001.60.00.00.0.000.453.001 | | | | | |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Fines and Forfeits Circuit Court Fines | 122,770 | 100,000 | 106,500 | 107,500 | 7,500 |
| 001.60.00.00.0.000.453.006 | | | | | |
| Fines and Forfeits False Alarm Fees | 8,200 | 10,000 | 6,500 | 7,500 | (2,500) |
| 001.60.00.00.0.000.453.007 | | | | | |
| Fines and Forfeits Parental Resp Fines | 750 | - | - | - | - |
| 001.70.00.00.0.000.453.006 | | | | | |
| Fines and Forfeits False Alarm Fees | 14,000 | 20,000 | 8,500 | 8,500 | (11,500) |
| **Investment Income** | **3,064,978** | **2,112,000** | **2,185,920** | **1,748,800** | **(363,200)** |
| 001.456.001 | | | | | |
| Interest Income Interest Income | 2,717,346 | 2,100,000 | 2,173,500 | 1,738,800 | (361,200) |
| 001.457.001 | | | | | |
| Interest Income - Escrow Interest Income - Escrow | 38,465 | 12,000 | 12,420 | 10,000 | (2,000) |
| 001.467.006 | | | | | |
| Unrealized Gains/Losses PMA | 309,167 | - | - | - | - |
| **Other Revenue** | **461,333** | **428,300** | **489,814** | **477,000** | **48,700** |
| 001.10.11.00.0.000.479.022 | | | | | |
| Other Revenue Block Party Vendor | 10,100 | 9,000 | 8,500 | 9,600 | 600 |
| 001.10.11.00.0.001.479.020 | | | | | |
| Other Revenue Sponsorships-Block Party | 67,000 | 70,000 | 75,000 | 75,000 | 5,000 |
| 001.30.01.00.0.000.479.030 | | | | | |
| Other Revenue Paymerang Payment Rewards | - | - | 24,000 | 24,000 | 24,000 |
| 001.479.001 | | | | | |
| Other Revenue Animal Release | 150 | 500 | 490 | 500 | - |
| 001.479.002 | | | | | |
| Other Revenue Cash Over/Short | 75 | - | - | - | - |
| 001.479.005 | | | | | |
| Other Revenue Miscellaneous Income | 151,841 | 120,000 | 157,600 | 155,000 | 35,000 |
| 001.479.006 | | | | | |
| Other Revenue Police and Fire Reports | 6,225 | 6,500 | 6,370 | 6,500 | - |
| 001.479.008 | | | | | |
| Other Revenue Sale of Property | 520 | - | - | - | - |
| 001.479.009 | | | | | |
| Other Revenue Subpoena Fees | 305 | 500 | 490 | 500 | - |
| 001.479.012 | | | | | |
| Other Revenue Event Sponsorship | 5,000 | 4,500 | 4,410 | 4,500 | - |
| 001.480.001 | | | | | |
| Leases Cell Tower | 98,292 | 100,000 | 98,000 | 100,000 | - |
| 001.480.002 | | | | | |
| Leases General Store | 60,901 | 60,900 | 59,682 | 60,000 | (900) |
| 001.480.004 | | | | | |
| Leases Interest Revenue | 4,521 | - | - | - | - |
| 001.495.001 | | | | | |
| Special Events Commission Celestial Celebrations | 23,670 | 40,000 | 39,200 | 25,000 | (15,000) |
| 001.495.004 | | | | | |
| Special Events Commission Family Bike Ride | 1,372 | 1,500 | 1,470 | 1,500 | - |
| 001.495.005 | | | | | |
| Special Events Commission Other Revenues | 910 | 1,000 | 980 | 1,000 | - |
| 001.50.00.00.0.000.476.003 | | | | | |
| Program Income Human Services | 335 | 1,000 | 980 | 1,000 | - |
| 001.50.00.00.0.000.476.008 | | | | | |
| Program Income Nursing Revenue | 782 | 800 | 784 | 800 | - |
| 001.50.00.00.0.000.477.003 | | | | | |
| Donations HS Donations | 140 | 500 | 490 | 500 | - |
| 001.50.54.00.0.000.479.004 | | | | | |
| Other Revenue CCC-Mbr Agency | 500 | 5,000 | 4,900 | 5,000 | - |
| 001.60.00.00.0.000.477.005 | | | | | |
| Donations Police Donations | 12,020 | 4,000 | 3,920 | 4,000 | - |
| 001.70.00.00.0.000.476.002 | | | | | |
| Program Income Fire Training Rev | 9,973 | 600 | 588 | 600 | - |
| 001.70.00.00.0.000.477.002 | | | | | |
| Donations Fire Donations | 4,700 | 500 | 490 | 500 | - |
| 001.80.00.00.0.000.477.006 | | | | | |
| Donations PW Donations | 2,000 | 1,500 | 1,470 | 1,500 | - |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **Reimbursements** | **359,090** | **378,500** | **1,348,900** | **407,900** | **29,400** |
| 001.473.005 | | | | | |
| Reimbursements MP Library Contrib | 34,921 | 15,000 | 15,000 | 15,200 | 200 |
| 001.473.006 | | | | | |
| Reimbursements Other Reimbursements | 700 | 2,500 | 947,900 | 2,600 | 100 |
| 001.473.011 | | | | | |
| Reimbursements Sidewalk - Shared Cost | 2,196 | 2,000 | 2,000 | 2,100 | 100 |
| 001.473.019 | | | | | |
| Reimbursements Ins. Reimb - TTD | 193,251 | 85,000 | 110,000 | 111,100 | 26,100 |
| 001.60.00.00.0.000.473.002 | | | | | |
| Reimbursements High School Youth Officer | 103,341 | 264,000 | 264,000 | 266,700 | 2,700 |
| 001.60.00.00.0.000.473.007 | | | | | |
| Reimbursements Police Training | 22,302 | 8,500 | 8,500 | 8,600 | 100 |
| 001.70.00.00.0.000.473.001 | | | | | |
| Reimbursements Fire Training | 2,378 | 1,500 | 1,500 | 1,600 | 100 |
| **Other Financing Sources** | **-** | **1,000,000** | **1,000,000** | **1,050,000** | **50,000** |
| 001.487.001 | | | | | |
| Transfer In Transfer In | - | 1,000,000 | 1,000,000 | 1,050,000 | 50,000 |
| **002-Debt Service Fund** | **4,702,558** | **4,525,530** | **4,562,348** | **4,563,467** | **37,937** |
| **Property Taxes** | **1,234,925** | **221,367** | **221,367** | **221,367** | **-** |
| 002.00.00.00.2.518.400.001 | | | | | |
| Property Tax Prop Taxes - CY | 1,234,925 | 221,367 | 221,367 | 221,367 | - |
| **Intergovernmental Revenue** | **1,227,261** | **1,178,480** | **1,214,380** | **1,219,300** | **40,820** |
| 002.00.00.00.2.578.415.004 | | | | | |
| State Taxes State Sales Tax | 882,240 | 878,480 | 878,480 | 879,300 | 820 |
| 002.415.006 | | | | | |
| State Taxes Video Gaming Tax | 345,021 | 300,000 | 335,900 | 340,000 | 40,000 |
| **Investment Income** | **69,373** | **26,250** | **27,168** | **21,800** | **(4,450)** |
| 002.456.001 | | | | | |
| Interest Income Interest Income | 69,373 | 26,250 | 27,168 | 21,800 | (4,450) |
| **Other Financing Sources** | **2,171,000** | **3,099,433** | **3,099,433** | **3,101,000** | **1,567** |
| 002.00.00.00.2.519.487.001 | | | | | |
| Transfer In Transfer In | 2,140,000 | 1,444,250 | 1,444,250 | - | (1,444,250) |
| 002.487.001 | | | | | |
| Transfer In Transfer In | 31,000 | 1,655,183 | 1,655,183 | 3,101,000 | 1,445,817 |
| **020-Capital Improvement Fund** | **4,485,809** | **5,109,392** | **3,717,350** | **13,138,521** | **8,029,129** |
| **Intergovernmental Revenue** | **2,096,179** | **3,399,392** | **2,000,000** | **11,214,621** | **7,815,229** |
| 020.415.004 | | | | | |
| State Taxes State Sales Tax | 2,000,000 | 3,200,000 | 2,000,000 | 2,000,000 | (1,200,000) |
| 020.418.006 | | | | | |
| Federal Grants STP Grant | - | - | - | 7,077,023 | 7,077,023 |
| 020.418.018 | | | | | |
| Federal Grants ITEP | 10,465 | 199,392 | - | - | (199,392) |
| 020.418.028 | | | | | |
| Federal Grants General | 85,713 | - | - | - | - |
| 020.420.003 | | | | | |
| Other Grants Other Grants | - | - | - | 2,137,598 | 2,137,598 |
| **Investment Income** | **371,631** | **210,000** | **217,350** | **173,900** | **(36,100)** |
| 020.456.001 | | | | | |
| Interest Income Interest Income | 371,631 | 210,000 | 217,350 | 173,900 | (36,100) |
| **Other Financing Sources** | **2,018,000** | **1,500,000** | **1,500,000** | **1,750,000** | **250,000** |
| 020.487.001 | | | | | |
| Transfer In Transfer In | 2,018,000 | 1,500,000 | 1,500,000 | 1,750,000 | 250,000 |
| **023-Street Improvement Construc Fund** | **4,395,438** | **5,098,000** | **5,030,418** | **18,163,100** | **13,065,100** |
| **Other Taxes** | **747,626** | **732,250** | **760,000** | **760,000** | **27,750** |
| 023.402.006 | | | | | |
| Use Taxes Municipal MFT | 747,626 | 732,250 | 760,000 | 760,000 | 27,750 |
| **Intergovernmental Revenue** | **2,274,909** | **4,197,000** | **4,097,000** | **16,512,000** | **12,315,000** |
| 023.415.004 | | | | | |
| State Taxes State Sales Tax | 2,000,000 | 3,800,000 | 3,800,000 | 4,000,000 | 200,000 |
| 023.418.006 | | | | | |
| Federal Grants STP Grant | 90,914 | 297,000 | 297,000 | 12,512,000 | 12,215,000 |
| 023.418.022 | | | | | |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Federal Grants CMAQ Grant | 183,995 | - | - | - | - |
| 023.420.016 | | | | | |
| Other Grants Cook County | - | 100,000 | - | - | (100,000) |
| **Investment Income** | **251,570** | **146,250** | **151,368** | **121,100** | **(25,150)** |
| 023.456.001 | | | | | |
| Interest Income Interest Income | 251,570 | 146,250 | 151,368 | 121,100 | (25,150) |
| **Other Revenue** | **21,333** | **22,500** | **22,050** | **20,000** | **(2,500)** |
| 023.479.005 | | | | | |
| Other Revenue Miscellaneous Income | 21,333 | 22,500 | 22,050 | 20,000 | (2,500) |
| **Other Financing Sources** | **1,100,000** | **-** | **-** | **750,000** | **750,000** |
| 023.487.001 | | | | | |
| Transfer In Transfer In | 1,100,000 | - | - | 750,000 | 750,000 |
| **024-Flood Control Construction Fund** | **2,297,199** | **97,800** | **96,698** | **86,200** | **(11,600)** |
| **Intergovernmental Revenue** | **1,883,030** | **-** | **-** | **-** | **-** |
| 024.415.004 | | | | | |
| State Taxes State Sales Tax | 1,117,760 | - | - | - | - |
| 024.419.002 | | | | | |
| State Grants DCEO Grants | 765,270 | - | - | - | - |
| **Charges For Services** | **7,044** | **10,000** | **6,000** | **12,500** | **2,500** |
| 024.449.006 | | | | | |
| Service Charge Stormwater Det Fee | 7,044 | 10,000 | 6,000 | 12,500 | 2,500 |
| **Investment Income** | **133,626** | **82,800** | **85,698** | **68,600** | **(14,200)** |
| 024.456.001 | | | | | |
| Interest Income Interest Income | 133,626 | 82,800 | 85,698 | 68,600 | (14,200) |
| **Reimbursements** | **8,500** | **5,000** | **5,000** | **5,100** | **100** |
| 024.473.006 | | | | | |
| Reimbursements Other Reimbursements | 8,500 | 5,000 | 5,000 | 5,100 | 100 |
| **Other Financing Sources** | **265,000** | **-** | **-** | **-** | **-** |
| 024.487.001 | | | | | |
| Transfer In Transfer In | 265,000 | - | - | - | - |
| **036-Rural Special Service Area Fund** | **-** | **1,000,000** | **1,000,000** | **1,050,000** | **50,000** |
| **Property Taxes** | **-** | **1,000,000** | **1,000,000** | **1,050,000** | **50,000** |
| 036.400.007 | | | | | |
| Property Tax Prop Taxes - SSA CY | - | 1,000,000 | 1,000,000 | 1,050,000 | 50,000 |
| **037-SMP TIF Fund** | **824,457** | **800,000** | **850,000** | **1,100,000** | **300,000** |
| **Property Taxes** | **807,581** | **800,000** | **850,000** | **1,100,000** | **300,000** |
| 037.400.011 | | | | | |
| Property Tax Prop Tax Increment CY | 799,601 | 800,000 | 850,000 | 1,100,000 | 300,000 |
| 037.400.012 | | | | | |
| Property Tax Prop Tax Increment PY | 7,980 | - | - | - | - |
| **Investment Income** | **16,876** | **-** | **-** | **-** | **-** |
| 037.456.001 | | | | | |
| Interest Income Interest Income | 16,876 | - | - | - | - |
| **038-Economic Emergency Fund** | **6,995,944** | **363,750** | **376,481** | **301,200** | **(62,550)** |
| **Investment Income** | **495,944** | **363,750** | **376,481** | **301,200** | **(62,550)** |
| 038.456.001 | | | | | |
| Interest Income Interest Income | 495,944 | 363,750 | 376,481 | 301,200 | (62,550) |
| **Other Financing Sources** | **6,500,000** | **-** | **-** | **-** | **-** |
| 038.487.001 | | | | | |
| Transfer In Transfer In | 6,500,000 | - | - | - | - |
| **039-Pension Stabilization Fund** | **2,003,547** | **2,000,000** | **2,000,000** | **2,925,000** | **925,000** |
| **Other Taxes** | **-** | **-** | **-** | **925,000** | **925,000** |
| 039.402.009 | | | | | |
| Use Taxes Grocery Tax | - | - | - | 925,000 | 925,000 |
| **Investment Income** | **3,547** | **-** | **-** | **-** | **-** |
| 039.456.001 | | | | | |
| Interest Income Interest Income | 3,547 | - | - | - | - |
| **Other Financing Sources** | **2,000,000** | **2,000,000** | **2,000,000** | **2,000,000** | **-** |
| 039.487.001 | | | | | |
| Transfer In Transfer In | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | - |
| **040-Refuse Disposal Fund** | **5,505,241** | **5,648,800** | **5,638,049** | **5,817,900** | **169,100** |
| **Charges For Services** | **5,177,634** | **5,275,800** | **5,275,800** | **5,460,500** | **184,700** |
| 040.80.85.00.0.000.445.001 | | | | | |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Refuse Disposal Charges Sgle Fam Ref Disp | 3,869,403 | 3,996,900 | 3,996,900 | 4,136,800 | 139,900 |
| 040.80.85.00.0.000.445.002 | | | | | |
| Refuse Disposal Charges M-Fam Ref Disp | 1,308,231 | 1,278,900 | 1,278,900 | 1,323,700 | 44,800 |
| **Fines & Forfeits** | **38,573** | **43,000** | **39,000** | **39,000** | **(4,000)** |
| 040.80.85.00.0.000.453.010 | | | | | |
| Fines and Forfeits MF Ref Disp Penalties | 9,611 | 10,000 | 8,500 | 8,500 | (1,500) |
| 040.80.85.00.0.000.453.014 | | | | | |
| Fines and Forfeits SF Ref Disp Penalties | 28,962 | 33,000 | 30,500 | 30,500 | (2,500) |
| **Investment Income** | **47,348** | **31,800** | **32,913** | **26,400** | **(5,400)** |
| 040.456.001 | | | | | |
| Interest Income Interest Income | 47,348 | 31,800 | 32,913 | 26,400 | (5,400) |
| **Other Revenue** | **150,274** | **143,200** | **140,336** | **140,500** | **(2,700)** |
| 040.479.005 | | | | | |
| Other Revenue Miscellaneous Income | 18,268 | 12,000 | 11,760 | 10,000 | (2,000) |
| 040.80.85.00.0.000.479.003 | | | | | |
| Other Revenue Cmrcl Cont Admn Fee | 100,000 | 100,000 | 98,000 | 100,000 | - |
| 040.80.85.00.0.000.481.001 | | | | | |
| Sale of Recycling Bins Recycling Bins | 675 | 1,200 | 1,176 | 500 | (700) |
| 040.80.85.00.0.000.485.001 | | | | | |
| Single Family Yard Waste Cart Rental S/F YW Cart Rent | 31,330 | 30,000 | 29,400 | 30,000 | - |
| **Reimbursements** | **91,413** | **155,000** | **150,000** | **151,500** | **(3,500)** |
| 040.473.006 | | | | | |
| Reimbursements Other Reimbursements | 91,413 | 155,000 | 150,000 | 151,500 | (3,500) |
| **041-Motor Fuel Tax Fund** | **2,795,414** | **2,524,400** | **2,497,058** | **2,591,100** | **66,700** |
| **Intergovernmental Revenue** | **2,599,804** | **2,420,000** | **2,387,784** | **2,501,500** | **81,500** |
| 041.415.003 | | | | | |
| State Taxes State Motor Fuel Tax | 2,527,080 | 2,420,000 | 2,387,784 | 2,501,500 | 81,500 |
| 041.419.017 | | | | | |
| State Grants Rebuild Illinois Grant | 72,724 | - | - | - | - |
| **Investment Income** | **179,800** | **96,400** | **99,774** | **79,900** | **(16,500)** |
| 041.456.001 | | | | | |
| Interest Income Interest Income | 179,800 | 96,400 | 99,774 | 79,900 | (16,500) |
| **Reimbursements** | **15,810** | **8,000** | **9,500** | **9,700** | **1,700** |
| 041.473.004 | | | | | |
| Reimbursements MFT Projects Reimb | 8,745 | 5,000 | 6,500 | 6,600 | 1,600 |
| 041.473.006 | | | | | |
| Reimbursements Other Reimbursements | 7,065 | 3,000 | 3,000 | 3,100 | 100 |
| **042-CDBG** | **135,137** | **325,000** | **283,285** | **489,568** | **164,568** |
| **Intergovernmental Revenue** | **94,918** | **295,000** | **253,885** | **285,000** | **(10,000)** |
| 042.418.002 | | | | | |
| Federal Grants Comm Dev Block Grant | 94,918 | 295,000 | 253,885 | 285,000 | (10,000) |
| **Other Revenue** | **40,219** | **30,000** | **29,400** | **204,568** | **174,568** |
| 042.476.001 | | | | | |
| Program Income CDBG Program Income | 40,219 | 30,000 | 29,400 | 204,568 | 174,568 |
| **043-Asset Seizure Fund** | **39,395** | **21,800** | **3,863** | **2,500** | **(19,300)** |
| **Fines & Forfeits** | **36,103** | **20,000** | **2,000** | **1,000** | **(19,000)** |
| 043.60.61.00.0.000.453.013 | | | | | |
| Fines and Forfeits Seized Assets | 36,103 | 20,000 | 2,000 | 1,000 | (19,000) |
| **Investment Income** | **3,291** | **1,800** | **1,863** | **1,500** | **(300)** |
| 043.456.001 | | | | | |
| Interest Income Interest Income | 3,291 | 1,800 | 1,863 | 1,500 | (300) |
| **044-Federal Equitable Share Funds** | **28,296** | **21,200** | **33,632** | **27,650** | **6,450** |
| **Fines & Forfeits** | **21,568** | **16,000** | **28,250** | **23,250** | **7,250** |
| 044.60.61.00.0.000.453.004 | | | | | |
| Fines and Forfeits DEA Seized Assets | - | 1,000 | 750 | 750 | (250) |
| 044.60.61.00.0.450.453.017 | | | | | |
| Fines and Forfeits Justice Funds Seized Assets | 21,568 | 15,000 | 27,500 | 22,500 | 7,500 |
| **Investment Income** | **6,728** | **5,200** | **5,382** | **4,400** | **(800)** |
| 044.458.001 | | | | | |
| Bank Account Interest Bank Account Int | 6,728 | 5,200 | 5,382 | 4,400 | (800) |
| **045-DUI Fine Fund** | **2,358** | **3,250** | **2,828** | **2,400** | **(850)** |
| **Fines & Forfeits** | **-** | **1,000** | **500** | **500** | **(500)** |
| 045.60.61.00.0.000.453.005 | | | | | |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Fines and Forfeits DUI Fines | - | 1,000 | 500 | 500 | (500) |
| **Investment Income** | **2,358** | **2,250** | **2,328** | **1,900** | **(350)** |
| 045.456.001 | | | | | |
| Interest Income Interest Income | 2,358 | 2,250 | 2,328 | 1,900 | (350) |
| **046-Foreign Fire Tax Board Fund** | **163,525** | **136,400** | **149,490** | **144,100** | **7,700** |
| **Other Taxes** | **143,454** | **122,400** | **135,000** | **132,500** | **10,100** |
| 046.402.004 | | | | | |
| Use Taxes Foreign Fire Ins Tax | 143,454 | 122,400 | 135,000 | 132,500 | 10,100 |
| **Investment Income** | **20,071** | **14,000** | **14,490** | **11,600** | **(2,400)** |
| 046.456.001 | | | | | |
| Interest Income Interest Income | 20,071 | 14,000 | 14,490 | 11,600 | (2,400) |
| **048-Business District Fund** | **2,554,430** | **2,027,500** | **2,028,550** | **2,029,900** | **2,400** |
| **Other Taxes** | **1,015,816** | **997,500** | **997,500** | **1,005,000** | **7,500** |
| 048.00.00.00.0.775.402.003 | | | | | |
| Use Taxes Food & Bev Tax | 376,719 | 375,000 | 375,000 | 375,000 | - |
| 048.00.00.00.0.775.402.005 | | | | | |
| Use Taxes Hotel/Motel Tax | 270,528 | 250,000 | 250,000 | 260,000 | 10,000 |
| 048.00.00.00.0.775.402.008 | | | | | |
| Use Taxes Movie Thtre Tax | 52,916 | 62,500 | 62,500 | 60,000 | (2,500) |
| 048.00.00.00.0.775.405.001 | | | | | |
| Business District Tax Business Dist Tax | 315,653 | 310,000 | 310,000 | 310,000 | - |
| **Intergovernmental Revenue** | **1,507,457** | **1,000,000** | **1,000,000** | **1,000,000** | **-** |
| 048.00.00.00.0.775.415.004 | | | | | |
| State Taxes State Sales Tax | 1,507,457 | 1,000,000 | 1,000,000 | 1,000,000 | - |
| **Investment Income** | **31,156** | **30,000** | **31,050** | **24,900** | **(5,100)** |
| 048.456.001 | | | | | |
| Interest Income Interest Income | 31,156 | 30,000 | 31,050 | 24,900 | (5,100) |
| **049-Prospect and Main TIF District** | **4,652,125** | **10,042,500** | **13,832,520** | **5,425,900** | **(4,616,600)** |
| **Property Taxes** | **4,591,577** | **5,011,000** | **5,100,000** | **5,400,000** | **389,000** |
| 049.400.011 | | | | | |
| Property Tax Prop Tax Increment CY | 4,285,346 | 5,011,000 | 5,100,000 | 5,400,000 | 389,000 |
| 049.400.012 | | | | | |
| Property Tax Prop Tax Increment PY | 306,231 | - | - | - | - |
| **Investment Income** | **60,549** | **30,000** | **31,050** | **24,900** | **(5,100)** |
| 049.456.001 | | | | | |
| Interest Income Interest Income | 60,549 | 30,000 | 31,050 | 24,900 | (5,100) |
| **Other Revenue** | **-** | **1,500** | **1,470** | **1,000** | **(500)** |
| 049.479.005 | | | | | |
| Other Revenue Miscellaneous Income | - | 1,500 | 1,470 | 1,000 | (500) |
| **Other Financing Sources** | **-** | **5,000,000** | **8,700,000** | **-** | **(5,000,000)** |
| 049.487.001 | | | | | |
| Transfer In Transfer In | - | 5,000,000 | 8,700,000 | - | (5,000,000) |
| **050-Water and Sewer Fund** | **29,326,928** | **23,011,370** | **22,987,845** | **23,946,730** | **935,360** |
| **Property Taxes** | **(5,397)** | **-** | **-** | **-** | **-** |
| 050.400.008 | | | | | |
| Property Tax Prop Taxes - SSA PY | (5,397) | - | - | - | - |
| **Intergovernmental Revenue** | **-** | **535,000** | **535,000** | **-** | **(535,000)** |
| 050.419.014 | | | | | |
| State Grants State Grant Proceeds | - | 535,000 | 535,000 | - | (535,000) |
| **Licenses, Permits & Fees** | **-** | **500** | **300** | **500** | **-** |
| 050.409.004 | | | | | |
| Business Licenses & Permits Cross Conn Permit Fee | - | 500 | 300 | 500 | - |
| **Charges For Services** | **21,422,659** | **21,790,870** | **21,790,870** | **23,369,330** | **1,578,460** |
| 050.80.84.87.0.000.446.001 | | | | | |
| Water & Sewer Water Sales | 15,883,112 | 16,660,400 | 16,660,400 | 17,909,930 | 1,249,530 |
| 050.80.84.87.0.000.446.004 | | | | | |
| Water & Sewer Water Meter Fees | 24,030 | 48,100 | 48,100 | 35,000 | (13,100) |
| 050.80.84.87.0.000.446.005 | | | | | |
| Water & Sewer Water Tap Fees | 4,955 | 170 | 170 | 2,500 | 2,330 |
| 050.80.84.87.0.000.446.009 | | | | | |
| Water & Sewer Meter Reading | 372 | 600 | 600 | 600 | - |
| 050.80.84.87.0.000.446.010 | | | | | |
| Water & Sewer Water Base Fee | 1,274,217 | 921,600 | 921,600 | 944,640 | 23,040 |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| 050.80.84.88.0.000.446.002 | | | | | |
| Water & Sewer Sewer Fees | 3,445,767 | 3,228,000 | 3,228,000 | 3,470,100 | 242,100 |
| 050.80.84.88.0.000.446.003 | | | | | |
| Water & Sewer Sewer Const Fee | (203) | - | - | - | - |
| 050.80.84.88.0.000.446.011 | | | | | |
| Water & Sewer Sewer Base Fee | 790,409 | 932,000 | 932,000 | 1,006,560 | 74,560 |
| **Fines & Forfeits** | **146,976** | **175,000** | **138,500** | **140,000** | **(35,000)** |
| 050.80.84.87.0.000.453.015 | | | | | |
| Fines and Forfeits Water Penalties | 118,287 | 140,000 | 114,200 | 115,000 | (25,000) |
| 050.80.84.88.0.000.453.016 | | | | | |
| Fines and Forfeits Sewer Penalties | 28,689 | 35,000 | 24,300 | 25,000 | (10,000) |
| **Investment Income** | **993,187** | **425,000** | **439,875** | **351,900** | **(73,100)** |
| 050.456.001 | | | | | |
| Interest Income Interest Income | 993,187 | 425,000 | 439,875 | 351,900 | (73,100) |
| **Other Revenue** | **1,486,007** | **85,000** | **83,300** | **85,000** | **-** |
| 050.479.005 | | | | | |
| Other Revenue Miscellaneous Income | 1,486,007 | 85,000 | 83,300 | 85,000 | - |
| **Other Financing Sources** | **5,283,496** | **-** | **-** | **-** | **-** |
| 050.487.001 | | | | | |
| Transfer In Transfer In | 5,293,312 | - | - | - | - |
| 050.494.001 | | | | | |
| Gain/Loss on Disposal of Assets Gain/Loss Disp of Assets | (9,816) | - | - | - | - |
| **051-Village Parking System Fund** | **229,094** | **198,800** | **225,362** | **176,500** | **(22,300)** |
| **Charges For Services** | **50,177** | **46,100** | **72,650** | **74,000** | **27,900** |
| 051.424.003 | | | | | |
| Village Parking Fund Service Charges Charging Stations | 3,329 | 2,600 | 2,750 | 3,000 | 400 |
| 051.448.001 | | | | | |
| Parking Fees (Village Only) Maple Street | 25,880 | 23,500 | 45,000 | 45,000 | 21,500 |
| 051.448.003 | | | | | |
| Parking Fees (Village Only) Prospect Avenue | 784 | 1,000 | 1,500 | 1,500 | 500 |
| 051.448.005 | | | | | |
| Parking Fees (Village Only) Emerson St Parking Deck | 12,332 | 10,600 | 15,300 | 16,500 | 5,900 |
| 051.480.003 | | | | | |
| Leases Train Depot | 7,853 | 8,400 | 8,100 | 8,000 | (400) |
| **Investment Income** | **2,067** | **1,200** | **1,242** | **1,000** | **(200)** |
| 051.456.001 | | | | | |
| Interest Income Interest Income | 2,067 | 1,200 | 1,242 | 1,000 | (200) |
| **Other Revenue** | **1,850** | **1,500** | **1,470** | **1,500** | **-** |
| 051.479.015 | | | | | |
| Other Revenue Convenience Fee | 1,850 | 1,500 | 1,470 | 1,500 | - |
| **Other Financing Sources** | **175,000** | **150,000** | **150,000** | **100,000** | **(50,000)** |
| 051.487.001 | | | | | |
| Transfer In Transfer In | 175,000 | 150,000 | 150,000 | 100,000 | (50,000) |
| **052-Parking System Revenue Fund** | **143,561** | **140,000** | **148,012** | **150,400** | **10,400** |
| **Charges For Services** | **127,139** | **128,500** | **136,550** | **140,000** | **11,500** |
| 052.447.001 | | | | | |
| Parking Fees (Shared) Meter Lot East | 66,226 | 70,000 | 70,350 | 72,500 | 2,500 |
| 052.447.002 | | | | | |
| Parking Fees (Shared) Meter Lot West | 60,912 | 58,500 | 66,200 | 67,500 | 9,000 |
| **Investment Income** | **8,178** | **3,500** | **3,622** | **2,900** | **(600)** |
| 052.456.001 | | | | | |
| Interest Income Interest Income | 8,178 | 3,500 | 3,622 | 2,900 | (600) |
| **Other Revenue** | **8,244** | **8,000** | **7,840** | **7,500** | **(500)** |
| 052.479.015 | | | | | |
| Other Revenue Convenience Fee | 8,244 | 8,000 | 7,840 | 7,500 | (500) |
| **060-Vehicle Maintenance Fund** | **2,650,080** | **2,766,148** | **2,767,513** | **2,771,421** | **5,273** |
| **Charges For Services** | **2,601,273** | **2,727,148** | **2,727,148** | **2,739,121** | **11,973** |
| 060.20.21.00.0.000.426.001 | | | | | |
| Manager's Office Service Charges Vehicle Maint | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| 060.20.26.00.0.000.427.001 | | | | | |
| Television Services Charges Vehicle Maint | 4,162 | 4,363 | 4,363 | 4,383 | 20 |
| 060.40.41.00.0.000.428.001 | | | | | |
| Planning & Zoning Service Charges Vehicle Maint | 3,902 | 4,091 | 4,091 | 4,109 | 18 |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| 060.40.42.00.0.000.429.001 | | | | | |
| Building Service Charges Vehicle Maint | 5,463 | 5,727 | 5,727 | 5,752 | 25 |
| 060.40.43.41.0.000.430.001 | | | | | |
| Housing Inspections Service Charges Vehicle Maint | 27,313 | 28,635 | 28,635 | 28,761 | 126 |
| 060.40.43.42.0.000.431.001 | | | | | |
| Health Inspections Service Charges Vehicle Maint | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| 060.50.00.00.0.000.432.001 | | | | | |
| Human Services Service Charges Vehicle Maint | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| 060.60.00.00.0.000.433.001 | | | | | |
| Police Administration Service Charges Vehicle Maint | 662,544 | 694,605 | 694,605 | 697,654 | 3,049 |
| 060.70.00.00.0.000.434.001 | | | | | |
| Fire Administration Service Charge Vehicle Maint | 411,261 | 431,162 | 431,162 | 433,055 | 1,893 |
| 060.80.00.00.0.000.435.001 | | | | | |
| Public Works Administration Service Charges Vehicle Maint | 809,516 | 848,687 | 848,687 | 852,413 | 3,726 |
| 060.80.83.00.0.000.436.001 | | | | | |
| Public Works Engineering Service Charges Vehicle Maint | 42,401 | 44,453 | 44,453 | 44,648 | 195 |
| 060.80.84.00.0.000.437.001 | | | | | |
| Public Works Water Service Charge Vehicle Maint | 623,005 | 653,152 | 653,152 | 656,019 | 2,867 |
| **Investment Income** | **48,807** | **39,000** | **40,365** | **32,300** | **(6,700)** |
| 060.456.001 | | | | | |
| Interest Income Interest Income | 48,807 | 39,000 | 40,365 | 32,300 | (6,700) |
| **061-Vehicle Replacement Fund** | **2,411,678** | **2,348,030** | **2,363,030** | **2,119,920** | **(228,110)** |
| **Charges For Services** | **1,642,870** | **2,023,030** | **2,023,030** | **1,841,420** | **(181,610)** |
| 061.20.25.00.0.000.427.002 | | | | | |
| Television Services Charges Vehicle Repl | - | 19,160 | 19,160 | 1,970 | (17,190) |
| 061.40.41.00.0.000.428.002 | | | | | |
| Planning & Zoning Service Charges Vehicle Repl | 1,500 | 1,500 | 1,500 | 1,500 | - |
| 061.40.42.00.0.000.429.002 | | | | | |
| Building Service Charges Vehicle Repl | 15,520 | 14,240 | 14,240 | 8,510 | (5,730) |
| 061.40.43.41.0.000.430.002 | | | | | |
| Housing Inspections Service Charges Vehicle Repl | 13,520 | 13,520 | 13,520 | 12,410 | (1,110) |
| 061.40.43.42.0.000.431.002 | | | | | |
| Health Inspections Service Charges Vehicle Repl | 1,500 | 1,500 | 1,500 | 1,500 | - |
| 061.426.002 | | | | | |
| Manager's Office Service Charges Vehicle Repl | 17,970 | 13,360 | 13,360 | 26,220 | 12,860 |
| 061.50.00.00.0.000.432.002 | | | | | |
| Human Services Service Charges Vehicle Repl | 1,380 | 4,010 | 4,010 | 3,120 | (890) |
| 061.60.00.00.0.000.433.002 | | | | | |
| Police Administration Service Charges Vehicle Repl | 224,780 | 243,490 | 243,490 | 292,830 | 49,340 |
| 061.70.00.00.0.000.434.002 | | | | | |
| Fire Administration Service Charge Vehicle Repl | 699,430 | 640,640 | 640,640 | 917,180 | 276,540 |
| 061.80.00.00.0.000.435.002 | | | | | |
| Public Works Administration Service Charges Vehicle Repl | 320,310 | 673,530 | 673,530 | 302,900 | (370,630) |
| 061.80.83.00.0.000.436.002 | | | | | |
| Public Works Engineering Service Charges Vehicle Repl | 10,620 | 14,420 | 14,420 | 12,020 | (2,400) |
| 061.80.84.00.0.000.437.002 | | | | | |
| Public Works Water Service Charge Vehicle Repl | 336,340 | 383,660 | 383,660 | 261,260 | (122,400) |
| **Investment Income** | **685,879** | **300,000** | **310,500** | **248,400** | **(51,600)** |
| 061.456.001 | | | | | |
| Interest Income Interest Income | 396,664 | 300,000 | 310,500 | 248,400 | (51,600) |
| 061.467.006 | | | | | |
| Unrealized Gains/Losses PMA | 289,214 | - | - | - | - |
| **Other Revenue** | **39,150** | **25,000** | **24,500** | **25,000** | **-** |
| 061.479.005 | | | | | |
| Other Revenue Miscellaneous Income | 39,150 | 25,000 | 24,500 | 25,000 | - |
| **Reimbursements** | **22,510** | **-** | **5,000** | **5,100** | **5,100** |
| 061.473.015 | | | | | |
| Reimbursements Contribution Revenue | 22,510 | - | 5,000 | 5,100 | 5,100 |
| **Other Financing Sources** | **21,269** | **-** | **-** | **-** | **-** |
| 061.493.001 | | | | | |
| Gain/Loss on Sale of Assets Gain/Loss Sale of Assets | 21,269 | - | - | - | - |
| **062-Computer Replacement Fund** | **245,881** | **995,443** | **995,443** | **1,000,443** | **5,000** |
| **Charges For Services** | **229,000** | **995,443** | **995,443** | **1,000,443** | **5,000** |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| 062.20.24.00.0.000.438.001 | | | | | |
| Computer Replacement Computers-IT Div | 217,550 | 200,925 | 200,925 | 205,675 | 4,750 |
| 062.60.01.00.0.000.450.001 | | | | | |
| Technology Replacement Charge Police | - | 384,667 | 384,667 | 384,667 | - |
| 062.70.01.00.0.000.450.002 | | | | | |
| Technology Replacement Charge Fire | - | 399,276 | 399,276 | 399,276 | - |
| 062.80.84.00.0.000.438.005 | | | | | |
| Computer Replacement Computers-Water | 11,450 | 10,575 | 10,575 | 10,825 | 250 |
| **Investment Income** | **16,881** | **-** | **-** | **-** | **-** |
| 062.456.001 | | | | | |
| Interest Income Interest Income | 16,881 | - | - | - | - |
| **063-Risk Management Fund** | **12,207,320** | **11,494,189** | **11,027,316** | **11,771,138** | **276,949** |
| **Charges For Services** | **8,678,073** | **8,601,189** | **8,570,689** | **9,624,138** | **1,022,949** |
| 063.30.00.00.4.000.439.001 | | | | | |
| Risk Management - Liability Gen Fund-Liability | 1,138,052 | 1,146,062 | 1,146,062 | 1,586,622 | 440,560 |
| 063.440.010 | | | | | |
| Risk Management - Medical & Dental Departmental Charges | 5,840,938 | 5,707,963 | 5,707,963 | 6,107,520 | 399,557 |
| 063.440.012 | | | | | |
| Risk Management - Medical & Dental Depart Charges Dental | 152,930 | 158,226 | 158,226 | 169,301 | 11,075 |
| 063.441.010 | | | | | |
| Risk Management - Life Dept Charges-Life | 28,080 | 35,000 | 35,000 | 37,450 | 2,450 |
| 063.80.81.81.4.000.439.002 | | | | | |
| Risk Management - Liability Parking Fund-Liab | 1,337 | 1,187 | 1,187 | 1,383 | 196 |
| 063.80.81.81.4.000.439.005 | | | | | |
| Risk Management - Liability Parking Fund-Liab | 5,243 | 1,456 | 1,456 | 1,735 | 279 |
| 063.80.84.00.4.000.439.006 | | | | | |
| Risk Management - Liability Water Fund-Liab | 272,125 | 229,912 | 229,912 | 313,138 | 83,226 |
| 063.80.85.00.4.000.439.003 | | | | | |
| Risk Management - Liability Refuse Fund-Liab | 26,032 | 25,380 | 25,380 | 39,777 | 14,397 |
| 063.80.86.00.4.000.439.004 | | | | | |
| Risk Management - Liability Veh Maint-Liab | 75,415 | 46,003 | 46,003 | 62,347 | 16,344 |
| 063.90.00.00.4.000.440.003 | | | | | |
| Risk Management - Medical & Dental MPPL - Medical | 1,137,921 | 1,250,000 | 1,219,500 | 1,304,865 | 54,865 |
| **Investment Income** | **412,978** | **12,500** | **12,937** | **10,400** | **(2,100)** |
| 063.456.001 | | | | | |
| Interest Income Interest Income | 412,978 | 12,500 | 12,937 | 10,400 | (2,100) |
| **Other Revenue** | **2,692,686** | **2,340,500** | **2,293,690** | **1,985,100** | **(355,400)** |
| 063.478.001 | | | | | |
| Contributions Employee Health Contrib | 760,289 | 805,000 | 788,900 | 800,000 | (5,000) |
| 063.478.003 | | | | | |
| Contributions Flex Addl Life Contrib | 36,304 | 32,500 | 31,850 | 30,000 | (2,500) |
| 063.478.008 | | | | | |
| Contributions Retiree Medical Contrib | 908,529 | 940,000 | 921,200 | 900,000 | (40,000) |
| 063.478.012 | | | | | |
| Contributions Employee Dental Contrib | 153,106 | 160,000 | 156,800 | 155,000 | (5,000) |
| 063.478.013 | | | | | |
| Contributions Retiree Dental Contrib | 35,285 | 32,000 | 31,360 | 30,000 | (2,000) |
| 063.478.014 | | | | | |
| Contributions Vision Contribution | (4,886) | 20,000 | 19,600 | 20,000 | - |
| 063.478.015 | | | | | |
| Contributions Retiree Vision Contribution | 1,118 | 1,000 | 980 | 100 | (900) |
| 063.479.005 | | | | | |
| Other Revenue Miscellaneous Income | 440,724 | 350,000 | 343,000 | 50,000 | (300,000) |
| 063.479.016 | | | | | |
| Other Revenue Change in IPBC Terminal Reserve | 362,218 | - | - | - | - |
| **Reimbursements** | **423,584** | **540,000** | **150,000** | **151,500** | **(388,500)** |
| 063.473.016 | | | | | |
| Reimbursements Insurance Reimb | 394,693 | 540,000 | 150,000 | 151,500 | (388,500) |
| 063.473.020 | | | | | |
| Reimbursements IRMA Reimbursements | 28,891 | - | - | - | - |
| **064-Building Improvement Fund** | **-** | **1,590,175** | **1,590,175** | **1,590,175** | **-** |
| **Charges For Services** | **-** | **1,590,175** | **1,590,175** | **1,590,175** | **-** |
| 064.60.01.00.0.000.451.001 | | | | | |

| Fund - Revenue Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Building Improvements Charge Police | - | 898,925 | 898,925 | 898,925 | - |
| 064.70.01.00.0.000.451.002 | | | | | |
| Building Improvements Charge Fire | - | 241,250 | 241,250 | 241,250 | - |
| 064.80.01.00.0.000.451.003 | | | | | |
| Building Improvements Charge Public Works | - | 450,000 | 450,000 | 450,000 | - |
| **073-Escrow Deposit Fund** | **2,696** | **-** | **-** | **-** | **-** |
| **Investment Income** | **2,696** | **-** | **-** | **-** | **-** |
| 073.456.001 | | | | | |
| Interest Income Interest Income | 2,696 | - | - | - | - |
| **Grand Total** | **179,328,311** | **165,943,865** | **170,576,905** | **187,757,183** | **21,813,318** |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001-General Fund** | **87,415,083** | **90,795,897** | **82,857,185** | **86,371,950** | **(4,423,947)** |
| **Public Representation** | **629,503** | **779,620** | **778,522** | **799,407** | **19,787** |
| Personal Services, Salaries & Wages | 25,000 | 25,006 | 25,006 | 25,006 | - |
| **001.10.11.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 25,000 | 25,006 | 25,006 | 25,006 | - |
| Employee Benefits | 1,912 | 1,917 | 1,917 | 1,917 | - |
| **001.10.11.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 1,550 | 1,553 | 1,553 | 1,553 | - |
| **001.10.11.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 362 | 364 | 364 | 364 | - |
| Other Employee Costs | 4,308 | 6,000 | 6,000 | 6,200 | 200 |
| **001.10.11.00.0.000.516.001** | | | | | |
| Board/Commissions Activities Board/Comm Activities | 3,513 | 4,500 | 4,500 | 4,600 | 100 |
| **001.10.11.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 795 | 1,500 | 1,500 | 1,600 | 100 |
| Contractual Services | 503,825 | 607,317 | 606,219 | 620,366 | 13,049 |
| **001.10.11.00.0.000.530.002** | | | | | |
| Professional Services Auditing Services | 35,000 | 40,000 | 40,000 | 40,000 | - |
| **001.10.11.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 70,976 | 75,000 | 75,000 | 80,000 | 5,000 |
| **001.10.11.00.0.000.530.020** | | | | | |
| Professional Services Strategic Plan | 37,812 | 45,000 | 45,000 | 45,000 | - |
| **001.10.11.00.0.000.537.001** | | | | | |
| Meeting Expense Meeting Expense | 3,482 | 3,500 | 3,500 | 4,000 | 500 |
| **001.10.11.00.0.000.538.001** | | | | | |
| Memorial Gifts Memorial Gifts | 1,593 | 1,700 | 1,700 | 1,750 | 50 |
| **001.10.11.00.0.000.539.001** | | | | | |
| Special Functions Special Functions | 3,070 | 5,000 | 5,000 | 5,000 | - |
| **001.10.11.00.0.000.543.001** | | | | | |
| Special Projects Special Projects | 5,326 | 7,000 | 7,000 | 7,000 | - |
| **001.10.11.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 36 | 175 | 250 | 300 | 125 |
| **001.10.11.00.0.000.549.001** | | | | | |
| Organizational Memberships Org Memberships | 29,379 | 45,000 | 45,000 | 45,000 | - |
| **001.10.11.00.0.001.578.004** | | | | | |
| Community Groups & Other Sponsored Events Memorial Day Parade | 1,500 | 2,000 | - | 1,500 | (500) |
| **001.10.11.00.0.001.578.005** | | | | | |
| Community Groups & Other Sponsored Events Summer Block Party | 106,564 | 110,000 | 110,000 | 115,000 | 5,000 |
| **001.10.11.00.0.001.578.006** | | | | | |
| Community Groups & Other Sponsored Events MP Historical Society | 50,000 | 50,000 | 50,000 | 50,000 | - |
| **001.10.11.00.0.001.578.011** | | | | | |
| Community Groups & Other Sponsored Events Friday's On The Green | 9,504 | 10,000 | 12,000 | 14,000 | 4,000 |
| **001.10.11.00.0.001.578.014** | | | | | |
| Community Groups & Other Sponsored Events Celebration of Cultures | 23,865 | 32,000 | 32,000 | 28,000 | (4,000) |
| **001.10.11.00.0.001.579.001** | | | | | |
| Special Events Commission Celestial Celebrations | 38,835 | 40,000 | 40,000 | 40,000 | - |
| **001.10.11.00.0.001.579.004** | | | | | |
| Special Events Commission Family Bike Ride | 1,196 | 1,200 | 1,200 | 1,300 | 100 |
| **001.10.11.00.0.001.579.005** | | | | | |
| Special Events Commission Other Expenses | 213 | 650 | 650 | 1,650 | 1,000 |
| **001.10.11.00.8.400.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 1,173 | - | - | (1,173) |
| **001.10.11.00.8.400.578.003** | | | | | |
| Community Groups & Other Sponsored Events July 4th Parade | 22,847 | 25,000 | 25,000 | 25,625 | 625 |
| **001.10.11.00.8.400.578.015** | | | | | |
| Community Groups & Other Sponsored Events Oktoberfest | 15,055 | 15,000 | 15,000 | 15,000 | - |
| **001.10.11.00.8.400.580.005** | | | | | |
| Holiday Decorations Barricade Rental | 1,616 | 2,535 | 2,535 | 2,598 | 63 |
| **001.10.11.00.8.400.580.006** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Holiday Decorations Fireworks | 4,500 | 5,000 | 5,000 | 5,000 | - |
| **001.10.11.00.8.401.580.001** | | | | | |
| Holiday Decorations Holiday Wreath Inst. | 5,910 | 18,284 | 18,284 | 18,741 | 457 |
| **001.10.11.00.8.401.580.004** | | | | | |
| Holiday Decorations White Light Inst. | 35,547 | 72,100 | 72,100 | 73,902 | 1,802 |
| Commodities & Supplies | 87,906 | 124,380 | 124,380 | 133,918 | 9,538 |
| **001.10.11.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 1,180 | 1,200 | 1,200 | 1,300 | 100 |
| **001.10.11.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 1,199 | 2,100 | 2,100 | 2,100 | - |
| **001.10.11.00.0.000.630.001** | | | | | |
| Administration Supplies Recognition Supplies | 3,443 | 3,500 | 3,500 | 10,000 | 6,500 |
| **001.10.11.00.8.400.617.002** | | | | | |
| Community & Civic Services Light Pole Banners | 18,992 | 25,851 | 25,851 | 26,497 | 646 |
| **001.10.11.00.8.400.617.003** | | | | | |
| Community & Civic Services Parade Supplies | 1,535 | 16,441 | 16,441 | 16,852 | 411 |
| **001.10.11.00.8.400.617.004** | | | | | |
| Community & Civic Services Village Flags | 3,338 | 3,444 | 3,444 | 3,530 | 86 |
| **001.10.11.00.8.400.622.008** | | | | | |
| General Sign Making Materials | 649 | 1,126 | 1,126 | 1,154 | 28 |
| **001.10.11.00.8.401.617.005** | | | | | |
| Community & Civic Services Holiday Decorations | 41,754 | 46,758 | 46,758 | 47,926 | 1,168 |
| **001.10.11.00.8.401.617.006** | | | | | |
| Community & Civic Services White Light Supplies | 15,817 | 23,960 | 23,960 | 24,559 | 599 |
| Office Equipment | - | 10,000 | 10,000 | 5,000 | (5,000) |
| **001.10.11.00.0.000.655.002** | | | | | |
| Computer Equipment Computer Eqpt - New | - | 10,000 | 10,000 | 5,000 | (5,000) |
| Other Expenditures | 6,550 | 5,000 | 5,000 | 7,000 | 2,000 |
| **001.10.11.00.0.001.636.010** | | | | | |
| Other Expenditures Property Tax Rebate | 6,550 | 5,000 | 5,000 | 7,000 | 2,000 |
| **Village Administration** | **4,909,608** | **5,630,809** | **5,362,394** | **6,031,620** | **400,811** |
| Personal Services, Salaries & Wages | 1,831,771 | 1,980,864 | 1,984,341 | 2,056,331 | 75,467 |
| **001.20.21.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 652,890 | 703,948 | 703,948 | 748,754 | 44,806 |
| **001.20.21.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | - | - | - | 8,100 | 8,100 |
| **001.20.21.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,000 | 2,200 | 2,200 | 2,400 | 200 |
| **001.20.22.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 98,922 | 101,592 | 101,592 | 105,147 | 3,555 |
| **001.20.22.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 32,886 | 37,946 | 37,946 | 42,391 | 4,445 |
| **001.20.22.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 700 | 1,000 | 1,000 | 1,000 | - |
| **001.20.23.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 288,674 | 350,265 | 350,265 | 344,187 | (6,078) |
| **001.20.23.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 55 | - | - | - | - |
| **001.20.23.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 800 | 1,400 | 800 | 800 | (600) |
| **001.20.24.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 465,553 | 480,489 | 480,489 | 497,195 | 16,706 |
| **001.20.24.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,100 | 2,100 | 2,100 | 2,500 | 400 |
| **001.20.25.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 104,660 | 175,623 | 175,623 | 181,662 | 6,039 |
| **001.20.25.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | - | 4,050 | 4,050 | 8,100 | 4,050 |
| **001.20.25.00.0.000.503.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Overtime Earnings Overtime | - | 8,651 | 8,651 | 2,512 | (6,139) |
| **001.20.25.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 900 | 900 | 900 | 1,200 | 300 |
| **001.20.25.26.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 65,500 | - | - | - | - |
| **001.20.25.26.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 3,852 | - | - | - | - |
| **001.20.25.26.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 4,229 | - | - | - | - |
| **001.20.27.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 102,704 | 106,650 | 106,650 | 110,383 | 3,733 |
| **001.20.27.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 5,348 | 4,050 | 8,100 | - | (4,050) |
| **001.20.27.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | - | - | 27 | - | - |
| Employee Benefits | 995,756 | 1,158,138 | 1,140,659 | 1,270,566 | 112,428 |
| **001.20.21.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 62,249 | 62,179 | 62,179 | 69,943 | 7,764 |
| **001.20.21.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 13,885 | 8,820 | 8,820 | 9,295 | 475 |
| **001.20.21.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,758 | 1,846 | 1,846 | 2,034 | 188 |
| **001.20.21.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 31,862 | 45,872 | 45,872 | 51,030 | 5,158 |
| **001.20.21.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 10,295 | 14,598 | 12,598 | 16,047 | 1,449 |
| **001.20.21.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 45,716 | 45,311 | 45,311 | 47,168 | 1,857 |
| **001.20.21.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 36,075 | 24,997 | 24,997 | 51,172 | 26,175 |
| **001.20.21.00.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | - | - | - | 14,988 | 14,988 |
| **001.20.21.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 6,000 | 6,001 | 6,001 | 6,001 | - |
| **001.20.21.00.0.000.513.006** | | | | | |
| Other Employee Benefits Other Compensation | 23,352 | 22,945 | 22,945 | 28,860 | 5,915 |
| **001.20.21.00.0.000.513.008** | | | | | |
| Other Employee Benefits Market Adjustment Pool | - | 250,000 | 250,000 | 250,000 | - |
| **001.20.22.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 26,041 | 25,431 | 25,431 | 28,607 | 3,176 |
| **001.20.22.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 779 | 798 | 798 | 879 | 81 |
| **001.20.22.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 7,966 | 8,770 | 8,770 | 9,254 | 484 |
| **001.20.22.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,863 | 2,052 | 2,052 | 2,166 | 114 |
| **001.20.22.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 9,071 | 9,221 | 9,221 | 9,926 | 705 |
| **001.20.22.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,494 | 1,501 | 1,501 | 1,350 | (151) |
| **001.20.22.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 697 | - | - | - | - |
| **001.20.23.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 54,542 | 59,768 | 59,768 | 67,232 | 7,464 |
| **001.20.23.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,622 | 1,860 | 1,860 | 2,049 | 189 |
| **001.20.23.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 31,568 | 32,436 | 32,436 | 32,251 | (185) |
| **001.20.23.00.0.000.511.002** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Social Security Contributions Medicare | 9,229 | 8,553 | 8,553 | 8,615 | 62 |
| **001.20.23.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 20,608 | 23,066 | 23,066 | 21,020 | (2,046) |
| **001.20.23.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 2,021 | 2,100 | - | - | (2,100) |
| **001.20.23.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 29,172 | 999 | - | - | (999) |
| **001.20.23.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 4,523 | 6,001 | - | - | (6,001) |
| **001.20.23.00.0.000.513.006** | | | | | |
| Other Employee Benefits Other Compensation | 4,983 | - | 6,500 | - | - |
| **001.20.23.00.0.000.513.007** | | | | | |
| Other Employee Benefits Merit Pay Pool | 302,917 | 230,000 | 230,000 | 250,000 | 20,000 |
| **001.20.24.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 84,946 | 82,955 | 82,955 | 93,314 | 10,359 |
| **001.20.24.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,595 | 2,658 | 2,658 | 2,928 | 270 |
| **001.20.24.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 28,330 | 30,067 | 30,067 | 31,286 | 1,219 |
| **001.20.24.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 6,662 | 7,185 | 7,185 | 7,454 | 269 |
| **001.20.24.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 27,615 | 28,826 | 28,826 | 30,311 | 1,485 |
| **001.20.24.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,202 | 1,301 | 2,200 | 2,251 | 950 |
| **001.20.24.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 8,806 | 12,503 | 12,503 | 12,997 | 494 |
| **001.20.25.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 19,737 | 37,891 | 23,063 | 42,623 | 4,732 |
| **001.20.25.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 507 | 1,040 | 1,040 | 1,146 | 106 |
| **001.20.25.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 6,555 | 12,113 | 12,113 | 12,547 | 434 |
| **001.20.25.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,533 | 2,835 | 2,835 | 2,936 | 101 |
| **001.20.25.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 7,154 | 12,405 | 12,405 | 12,853 | 448 |
| **001.20.25.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,059 | 1,100 | 1,100 | - | (1,100) |
| **001.20.25.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 4,367 | 4,631 | 4,631 | 8,546 | 3,915 |
| **001.20.25.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,000 | 1,001 | 1,001 | 1,001 | - |
| **001.20.25.26.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 19,064 | - | - | - | - |
| **001.20.25.26.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 507 | - | - | - | - |
| **001.20.25.26.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 4,291 | - | - | - | - |
| **001.20.25.26.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,004 | - | - | - | - |
| **001.20.25.26.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 4,417 | - | - | - | - |
| **001.20.27.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 9,119 | 8,906 | 8,906 | 10,018 | 1,112 |
| **001.20.27.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 257 | 264 | 264 | 291 | 27 |
| **001.20.27.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 6,567 | 6,824 | 6,824 | 6,937 | 113 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.20.27.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,536 | 1,596 | 1,596 | 1,623 | 27 |
| **001.20.27.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 6,638 | 6,912 | 6,912 | 7,441 | 529 |
| **001.20.27.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | - | - | 1,050 | 2,176 | 2,176 |
| Other Employee Costs | 68,678 | 120,600 | 75,267 | 117,005 | (3,595) |
| **001.20.21.00.0.000.515.001** | | | | | |
| Board/Staff Workshops Board/Staff Wrkshps | 60 | 1,500 | 1,500 | 1,500 | - |
| **001.20.21.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 7,357 | 7,500 | 7,500 | 8,000 | 500 |
| **001.20.21.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 7,447 | 15,000 | 15,000 | 15,000 | - |
| **001.20.21.00.0.000.525.004** | | | | | |
| Training Training | 2,994 | 4,000 | 4,000 | 5,000 | 1,000 |
| **001.20.22.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 288 | 350 | 350 | 350 | - |
| **001.20.22.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | - | 700 | 700 | 700 | - |
| **001.20.22.00.0.000.525.004** | | | | | |
| Training Training | - | 1,000 | 1,000 | 1,000 | - |
| **001.20.23.00.0.000.513.014** | | | | | |
| Other Employee Benefits Retention Incentive | 25,534 | - | - | - | - |
| **001.20.23.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 1,394 | 1,750 | 1,750 | 4,555 | 2,805 |
| **001.20.23.00.0.000.519.001** | | | | | |
| Employee Recognition Employee Recognition | 3,602 | 5,700 | 5,700 | 5,700 | - |
| **001.20.23.00.0.000.520.001** | | | | | |
| Medical Examinations Medical Examinations | 4,001 | 16,500 | 7,500 | 10,000 | (6,500) |
| **001.20.23.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 2,377 | 6,000 | 6,000 | 6,000 | - |
| **001.20.23.00.0.000.523.001** | | | | | |
| Tuition Reimbursements Tuition Reimbursements | 1,750 | 10,000 | 5,250 | 6,000 | (4,000) |
| **001.20.23.00.0.000.525.003** | | | | | |
| Training Management Trng. | 7,662 | 32,000 | 10,000 | 32,000 | - |
| **001.20.23.00.0.000.525.004** | | | | | |
| Training Training | 2,618 | 3,300 | 2,500 | 5,500 | 2,200 |
| **001.20.24.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 350 | 500 | 500 | 500 | - |
| **001.20.24.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 97 | 1,500 | 1,500 | 1,500 | - |
| **001.20.24.00.0.000.525.004** | | | | | |
| Training Training | - | 5,000 | - | 5,000 | - |
| **001.20.25.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | - | 1,000 | 650 | 1,000 | - |
| **001.20.25.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | - | 2,500 | - | 2,000 | (500) |
| **001.20.25.00.0.000.525.004** | | | | | |
| Training Training | - | 800 | - | 800 | - |
| **001.20.25.27.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 480 | - | - | - | - |
| **001.20.27.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 400 | 500 | 400 | 500 | - |
| **001.20.27.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 268 | 2,400 | 2,380 | 2,800 | 400 |
| **001.20.27.00.0.000.525.004** | | | | | |
| Training Training | - | 1,100 | 1,087 | 1,600 | 500 |
| Contractual Services | 1,914,837 | 2,077,799 | 2,073,429 | 2,023,037 | (54,762) |
| **001.20.21.00.0.000.530.006** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Professional Services Other Prof. Serv. | 5,000 | 30,000 | 75,000 | 30,000 | - |
| **001.20.21.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | - | 225 | 225 | 230 | 5 |
| **001.20.21.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 993 | 2,100 | 2,100 | 2,200 | 100 |
| **001.20.21.00.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 17,970 | 13,360 | 13,360 | 26,220 | 12,860 |
| **001.20.21.00.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| **001.20.21.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 1,796 | 3,500 | 3,000 | 3,500 | - |
| **001.20.21.00.0.050.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | - | 3,000 | - | - |
| **001.20.21.00.0.050.531.001** | | | | | |
| Legal Services Legal-General Counsel | 740,480 | 600,000 | 700,000 | 600,000 | - |
| **001.20.21.00.0.050.531.002** | | | | | |
| Legal Services Legal-Special Counsel | 163,873 | 150,000 | 60,000 | 50,000 | (100,000) |
| **001.20.21.00.0.050.531.003** | | | | | |
| Legal Services Legal-Adm Adjudication | 5,513 | 13,500 | 6,500 | 7,000 | (6,500) |
| **001.20.21.00.0.050.531.006** | | | | | |
| Legal Services Legal-Prosecutor | - | 5,000 | 5,000 | 5,000 | - |
| **001.20.21.00.0.050.544.001** | | | | | |
| Postage Postage - Legal | - | 325 | 400 | 350 | 25 |
| **001.20.22.00.0.000.541.001** | | | | | |
| Legal Notices Legal Notices | 1,981 | 2,150 | 2,300 | 2,300 | 150 |
| **001.20.22.00.0.000.542.001** | | | | | |
| Recording Expense Recording Expense | 1,247 | 7,000 | 7,000 | 7,000 | - |
| **001.20.22.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 167 | 400 | 400 | 400 | - |
| **001.20.22.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 8,226 | 9,000 | 9,000 | 9,000 | - |
| **001.20.22.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 6,554 | 12,500 | 12,755 | 13,200 | 700 |
| **001.20.22.00.0.000.562.003** | | | | | |
| Records Management Codification | 6,272 | 7,500 | 7,500 | 7,500 | - |
| **001.20.23.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 45,000 | 45,000 | 10,000 | (35,000) |
| **001.20.23.00.0.000.531.002** | | | | | |
| Legal Services Legal-Special Counsel | - | - | - | 50,000 | 50,000 |
| **001.20.23.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 511 | 650 | 250 | 450 | (200) |
| **001.20.23.00.0.000.546.002** | | | | | |
| HR Expenses Personnel Recruitment | 9,509 | 6,000 | 6,000 | 7,000 | 1,000 |
| **001.20.23.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 7,089 | 15,000 | 15,000 | 15,000 | - |
| **001.20.24.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 9,278 | 15,000 | 15,000 | 15,000 | - |
| **001.20.24.00.0.000.532.005** | | | | | |
| Equipment Maintenance & Repair Telephone Maint. | - | 15,000 | 15,000 | 15,000 | - |
| **001.20.24.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,087 | 1,550 | 1,550 | 1,550 | - |
| **001.20.24.00.0.000.552.001** | | | | | |
| Computer Lease Payment Computer Repl Fund | 217,550 | 200,925 | 200,925 | 205,675 | 4,750 |
| **001.20.24.00.0.000.560.007** | | | | | |
| Technical Services Computer Maint. | 137,616 | 161,000 | 161,000 | 165,000 | 4,000 |
| **001.20.24.00.0.000.560.011** | | | | | |
| Technical Services Internet Service | 19,841 | 46,000 | 46,000 | 60,000 | 14,000 |
| **001.20.24.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 292,854 | 361,000 | 361,000 | 370,000 | 9,000 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.20.25.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 1,456 | 25,000 | 25,000 | 25,500 | 500 |
| **001.20.25.00.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | - | 19,160 | 19,160 | 1,970 | (17,190) |
| **001.20.25.00.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | - | 4,363 | - | - | (4,363) |
| **001.20.25.00.0.000.560.005** | | | | | |
| Technical Services Internet Hosting | - | - | 1,500 | 1,500 | 1,500 |
| **001.20.25.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 42,646 | 45,000 | 45,000 | 47,000 | 2,000 |
| **001.20.25.26.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 4,162 | - | 4,363 | 4,383 | 4,383 |
| **001.20.25.26.0.000.560.005** | | | | | |
| Technical Services Internet Hosting | 1,255 | - | - | - | - |
| **001.20.25.27.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 15,590 | - | - | - | - |
| **001.20.27.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 9,750 | - | - | - | - |
| **001.20.27.00.0.000.530.010** | | | | | |
| Professional Services Marketing Services | 39,244 | 100,000 | 50,000 | 90,000 | (10,000) |
| **001.20.27.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 48,353 | 56,500 | 57,000 | 58,000 | 1,500 |
| **001.20.27.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 11,642 | 15,000 | 13,050 | 25,000 | 10,000 |
| **001.20.27.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 81,431 | 85,000 | 80,000 | 87,000 | 2,000 |
| Utilities | 28,609 | 33,800 | 29,700 | 30,425 | (3,375) |
| **001.20.21.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 2,817 | 4,000 | - | - | (4,000) |
| **001.20.24.00.0.000.589.001** | | | | | |
| Telephone - Land Lines Telephone - Land Lines | 22,467 | 25,000 | 25,000 | 25,625 | 625 |
| **001.20.24.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 2,387 | 3,500 | 3,500 | 3,500 | - |
| **001.20.25.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 29 | 1,300 | 1,200 | 1,300 | - |
| **001.20.25.27.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 909 | - | - | - | - |
| Insurance | 33,119 | 29,568 | 29,568 | 56,891 | 27,323 |
| **001.20.21.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 33,119 | 29,568 | 29,568 | 56,891 | 27,323 |
| Commodities & Supplies | 9,992 | 14,790 | 14,180 | 15,115 | 325 |
| **001.20.21.00.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 312 | 550 | - | 550 | - |
| **001.20.21.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 2,982 | 5,000 | 5,000 | 5,125 | 125 |
| **001.20.21.00.0.000.612.001** | | | | | |
| Publications Publications | 2,135 | 3,600 | 3,600 | 3,700 | 100 |
| **001.20.21.00.0.000.616.001** | | | | | |
| Vehicle Registration/License Vehicle Reg/License | 151 | 165 | - | 165 | - |
| **001.20.22.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 723 | 800 | 880 | 850 | 50 |
| **001.20.22.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 999 | 1,250 | 1,400 | 1,350 | 100 |
| **001.20.23.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 299 | 300 | 300 | 300 | - |
| **001.20.23.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 189 | 275 | 200 | 275 | - |
| **001.20.23.00.0.000.612.001** | | | | | |
| Publications Publications | 790 | 1,300 | 1,300 | 1,300 | - |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.20.24.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 406 | 500 | 500 | 500 | - |
| **001.20.25.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | - | 1,000 | 1,000 | 1,000 | - |
| **001.20.25.00.0.000.612.001** | | | | | |
| Publications Publications | - | 50 | - | - | (50) |
| **001.20.25.26.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 10 | - | - | - | - |
| **001.20.25.27.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 998 | - | - | - | - |
| Office Equipment | 6,707 | 15,250 | 15,250 | 15,250 | - |
| **001.20.21.00.0.000.656.001** | | | | | |
| Office Equipment Office Eqpt | - | 250 | 250 | 250 | - |
| **001.20.23.00.0.000.655.002** | | | | | |
| Computer Equipment Computer Eqpt - New | 1,609 | - | - | - | - |
| **001.20.24.00.0.000.655.003** | | | | | |
| Computer Equipment Computer Eqpt - Other | 5,098 | 15,000 | 15,000 | 15,000 | - |
| Other Equipment | 9,571 | - | - | 72,000 | 72,000 |
| **001.20.25.00.0.000.665.007** | | | | | |
| Other Equipment Cable TV Equip - New | - | - | - | 3,500 | 3,500 |
| **001.20.25.00.0.000.665.008** | | | | | |
| Other Equipment Cable TV Bd Rm Equip-Repl | - | - | - | 3,500 | 3,500 |
| **001.20.25.26.0.000.665.007** | | | | | |
| Other Equipment Cable TV Equip - New | 4,258 | - | - | - | - |
| **001.20.25.26.0.000.665.008** | | | | | |
| Other Equipment Cable TV Bd Rm Equip-Repl | 5,313 | - | - | - | - |
| **001.20.90.00.1.709.665.005** | | | | | |
| Other Equipment Broadcast Camera Repl. | - | - | - | 65,000 | 65,000 |
| Other Expenditures | 10,567 | 200,000 | - | 375,000 | 175,000 |
| **001.20.21.00.0.000.636.020** | | | | | |
| Other Expenditures Contingencies | 10,567 | 200,000 | - | 200,000 | - |
| **001.20.90.00.0.707.561.001** | | | | | |
| Computer Software Financial Software | - | - | - | 175,000 | 175,000 |
| **Finance** | **1,744,045** | **1,907,525** | **1,708,073** | **1,966,709** | **59,184** |
| Personal Services, Salaries & Wages | 971,258 | 1,045,746 | 1,006,785 | 1,085,172 | 39,426 |
| **001.30.01.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 278,566 | 288,798 | 288,798 | 301,026 | 12,228 |
| **001.30.01.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 900 | 900 | 900 | 900 | - |
| **001.30.31.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 369,755 | 391,239 | 391,239 | 409,090 | 17,851 |
| **001.30.31.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 270 | 40,149 | - | 39,957 | (192) |
| **001.30.31.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 17,019 | 8,812 | 10,000 | 8,100 | (712) |
| **001.30.31.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,100 | 2,700 | 2,700 | 2,300 | (400) |
| **001.30.32.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 189,564 | 195,207 | 195,207 | 201,545 | 6,338 |
| **001.30.32.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 109,637 | 114,381 | 114,381 | 118,221 | 3,840 |
| **001.30.32.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 347 | 335 | 335 | 458 | 123 |
| **001.30.32.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 3,100 | 3,225 | 3,225 | 3,575 | 350 |
| Employee Benefits | 283,765 | 303,343 | 303,742 | 370,846 | 67,503 |
| **001.30.01.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 29,457 | 28,658 | 28,658 | 32,065 | 3,407 |
| **001.30.01.00.0.000.510.003** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Group Insurance Workers' Comp Ins | 9,075 | 5,820 | 5,820 | 6,175 | 355 |
| **001.30.01.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 908 | 930 | 930 | 1,025 | 95 |
| **001.30.01.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 15,034 | 16,264 | 16,264 | 17,515 | 1,251 |
| **001.30.01.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 4,170 | 4,524 | 4,524 | 4,899 | 375 |
| **001.30.01.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 12,139 | 13,475 | 13,475 | 14,135 | 660 |
| **001.30.01.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 8,646 | 17,988 | 17,988 | 21,600 | 3,612 |
| **001.30.01.00.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | - | - | - | 10,010 | 10,010 |
| **001.30.01.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 6,000 | 6,001 | 6,001 | 6,001 | - |
| **001.30.31.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 66,325 | 65,406 | 65,406 | 73,020 | 7,614 |
| **001.30.31.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,129 | 1,180 | 1,180 | 1,301 | 121 |
| **001.30.31.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 23,503 | 27,659 | 27,659 | 28,579 | 920 |
| **001.30.31.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 5,497 | 6,472 | 6,472 | 6,685 | 213 |
| **001.30.31.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 23,524 | 27,675 | 27,675 | 29,137 | 1,462 |
| **001.30.31.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 5,111 | 3,606 | 3,606 | 1,919 | (1,687) |
| **001.30.32.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 26,576 | 25,953 | 25,953 | 59,623 | 33,670 |
| **001.30.32.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,208 | 1,238 | 1,238 | 1,576 | 338 |
| **001.30.32.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 18,447 | 19,752 | 19,752 | 20,582 | 830 |
| **001.30.32.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 4,314 | 4,623 | 4,623 | 4,818 | 195 |
| **001.30.32.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 19,514 | 20,770 | 20,770 | 22,075 | 1,305 |
| **001.30.32.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,192 | 1,201 | 1,600 | 1,550 | 349 |
| **001.30.32.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,996 | 4,148 | 4,148 | 6,556 | 2,408 |
| Other Employee Costs | 7,336 | 36,250 | 26,250 | 38,290 | 2,040 |
| **001.30.01.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 2,912 | 4,160 | 4,160 | 4,200 | 40 |
| **001.30.01.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 2,408 | 15,000 | 5,000 | 15,000 | - |
| **001.30.01.00.0.000.525.004** | | | | | |
| Training Training | 134 | 9,500 | 9,500 | 9,500 | - |
| **001.30.31.00.0.000.525.004** | | | | | |
| Training Training | 1,783 | 4,500 | 4,500 | 6,500 | 2,000 |
| **001.30.32.00.0.000.525.004** | | | | | |
| Training Training | 100 | 3,090 | 3,090 | 3,090 | - |
| Contractual Services | 203,767 | 295,665 | 175,575 | 262,840 | (32,825) |
| **001.30.01.00.0.000.530.001** | | | | | |
| Professional Services Actuarial Services | 1,800 | 5,000 | 3,800 | 4,000 | (1,000) |
| **001.30.01.00.0.000.530.004** | | | | | |
| Professional Services Collection Services | 296 | 2,000 | 1,000 | 2,000 | - |
| **001.30.01.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 19,738 | 52,040 | - | 32,000 | (20,040) |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.30.01.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 10,665 | 10,800 | 10,800 | 11,000 | 200 |
| **001.30.01.00.0.000.535.001** | | | | | |
| Billing Outsource Fees Ambulance Billing | 63,801 | 67,750 | 50,000 | 70,000 | 2,250 |
| **001.30.01.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 1,512 | 800 | 1,500 | 1,500 | 700 |
| **001.30.01.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 4,607 | 5,000 | 5,000 | 5,000 | - |
| **001.30.01.00.0.000.560.012** | | | | | |
| Technical Services Computer Software | 224 | 3,500 | 3,500 | 3,500 | - |
| **001.30.01.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | - | - | - | 23,540 | 23,540 |
| **001.30.01.00.0.000.563.003** | | | | | |
| Banking Fees Bank Processing Fees | 82,313 | 120,000 | 75,000 | 85,000 | (35,000) |
| **001.30.31.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 512 | 500 | 1,000 | 1,000 | 500 |
| **001.30.31.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 4,423 | 11,000 | 11,000 | 11,000 | - |
| **001.30.32.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 9,510 | 5,000 | 5,000 | 5,125 | 125 |
| **001.30.32.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 3,370 | 10,300 | 6,000 | 6,150 | (4,150) |
| **001.30.32.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 996 | 1,975 | 1,975 | 2,025 | 50 |
| Utilities | 1,735 | 1,700 | 2,600 | 2,800 | 1,100 |
| **001.30.01.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 1,735 | 1,700 | 2,600 | 2,800 | 1,100 |
| Insurance | 44,534 | 43,521 | 43,521 | 56,381 | 12,860 |
| **001.30.01.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 16,454 | 15,395 | 15,395 | 26,111 | 10,716 |
| **001.30.01.00.0.100.597.003** | | | | | |
| Medical/Dental & Life Insurance Life Insurance Premiums | 28,080 | 28,126 | 28,126 | 30,270 | 2,144 |
| Commodities & Supplies | 9,686 | 17,800 | 19,600 | 20,380 | 2,580 |
| **001.30.01.00.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | - | 125 | 125 | 125 | - |
| **001.30.01.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 977 | 1,000 | 1,000 | 1,000 | - |
| **001.30.01.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 50 | 550 | 550 | 550 | - |
| **001.30.01.00.0.000.610.001** | | | | | |
| Paper & Supplies Paper & Supplies | 5,567 | 5,000 | 8,000 | 8,000 | 3,000 |
| **001.30.01.00.0.000.612.001** | | | | | |
| Publications Publications | 175 | 500 | - | - | (500) |
| **001.30.31.00.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 224 | 1,000 | 500 | 1,000 | - |
| **001.30.31.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 920 | 1,200 | 1,000 | 1,200 | - |
| **001.30.31.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 520 | 500 | 500 | 500 | - |
| **001.30.31.00.0.000.610.001** | | | | | |
| Paper & Supplies Paper & Supplies | 248 | 500 | 500 | 500 | - |
| **001.30.32.00.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | - | 2,275 | 2,275 | 2,230 | (45) |
| **001.30.32.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 1,005 | 4,120 | 4,120 | 4,220 | 100 |
| **001.30.32.00.0.000.610.001** | | | | | |
| Paper & Supplies Paper & Supplies | - | 1,030 | 1,030 | 1,055 | 25 |
| Other Expenditures | 221,963 | 163,500 | 130,000 | 130,000 | (33,500) |
| **001.30.01.00.0.000.636.011** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Expenditures Property Tax Expense | 11,045 | 13,500 | 50,000 | 50,000 | 36,500 |
| **001.30.01.00.0.000.636.030** | | | | | |
| Other Expenditures Tax Rebate Expense | 210,918 | 150,000 | 80,000 | 80,000 | (70,000) |
| **Community Development** | **3,140,141** | **3,219,006** | **3,225,060** | **3,430,810** | **211,804** |
| Personal Services, Salaries & Wages | 1,880,913 | 2,016,099 | 2,017,369 | 2,071,151 | 55,052 |
| **001.40.45.01.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 137,609 | 133,416 | 133,416 | 138,086 | 4,670 |
| **001.40.45.43.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 59,580 | 44,472 | 44,472 | 46,029 | 1,557 |
| **001.40.45.43.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | - | 8,100 | 8,100 | 8,100 | - |
| **001.40.45.44.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 287,570 | 314,301 | 314,301 | 324,585 | 10,284 |
| **001.40.45.44.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 7,385 | 8,100 | 10,000 | 8,100 | - |
| **001.40.45.44.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 600 | 600 | - | 1,200 | 600 |
| **001.40.46.01.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 178,958 | 184,704 | 184,704 | 196,683 | 11,979 |
| **001.40.46.01.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 800 | 800 | 800 | 900 | 100 |
| **001.40.46.46.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 865,792 | 887,023 | 887,023 | 912,646 | 25,623 |
| **001.40.46.46.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | - | 27,986 | 27,986 | 27,987 | 1 |
| **001.40.46.46.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 7,306 | 16,200 | 16,200 | 16,200 | - |
| **001.40.46.46.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 14 | 30 | - | - | (30) |
| **001.40.46.46.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 5,200 | 5,400 | 5,400 | 5,500 | 100 |
| **001.40.46.47.0.170.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 156,563 | 188,762 | 188,762 | 194,063 | 5,301 |
| **001.40.46.47.0.170.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 6,273 | 7,560 | 7,560 | 7,560 | - |
| **001.40.46.47.0.170.503.001** | | | | | |
| Overtime Earnings Overtime | 156 | 134 | 134 | 200 | 66 |
| **001.40.46.47.0.170.506.001** | | | | | |
| Longevity Pay Longevity Pay | 800 | 800 | 800 | 1,200 | 400 |
| **001.40.46.47.0.171.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 164,774 | 186,211 | 186,211 | 181,697 | (4,514) |
| **001.40.46.47.0.171.503.001** | | | | | |
| Overtime Earnings Overtime | 134 | - | - | 415 | 415 |
| **001.40.46.47.0.171.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,400 | 1,500 | 1,500 | - | (1,500) |
| Employee Benefits | 805,455 | 677,621 | 685,026 | 785,537 | 107,916 |
| **001.40.45.01.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 15,839 | 14,456 | 14,456 | 16,260 | 1,804 |
| **001.40.45.01.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 4,350 | 2,820 | 2,820 | 2,470 | (350) |
| **001.40.45.01.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 464 | 390 | 390 | 430 | 40 |
| **001.40.45.01.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 9,694 | 8,057 | 8,057 | 8,189 | 132 |
| **001.40.45.01.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 2,267 | 2,040 | 2,040 | 2,056 | 16 |
| **001.40.45.01.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 7,927 | 6,380 | 6,380 | 6,349 | (31) |
| **001.40.45.01.0.000.513.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Employee Benefits Sick Leave Incentive | 2,426 | 2,500 | 2,500 | - | (2,500) |
| **001.40.45.01.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 18,728 | 999 | 999 | - | (999) |
| **001.40.45.01.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | 57,276 | - | - | - | - |
| **001.40.45.01.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 3,425 | 4,501 | 4,501 | 4,501 | - |
| **001.40.45.43.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 6,802 | 4,819 | 4,819 | 5,421 | 602 |
| **001.40.45.43.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 195 | 130 | 130 | 144 | 14 |
| **001.40.45.43.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 4,116 | 3,241 | 3,241 | 3,233 | (8) |
| **001.40.45.43.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 963 | 811 | 811 | 804 | (7) |
| **001.40.45.43.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 3,537 | 2,183 | 2,183 | 2,117 | (66) |
| **001.40.45.43.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 809 | 1,000 | 1,000 | - | (1,000) |
| **001.40.45.43.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 6,243 | 999 | 999 | - | (999) |
| **001.40.45.43.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,709 | 1,500 | 1,500 | 1,500 | - |
| **001.40.45.44.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 56,267 | 54,994 | 54,994 | 72,367 | 17,373 |
| **001.40.45.44.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,305 | 1,310 | 1,310 | 1,721 | 411 |
| **001.40.45.44.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 17,046 | 20,029 | 20,029 | 20,703 | 674 |
| **001.40.45.44.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 3,986 | 4,686 | 4,689 | 4,843 | 157 |
| **001.40.45.44.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 18,557 | 20,533 | 20,533 | 21,666 | 1,133 |
| **001.40.45.44.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 613 | - | - | - | - |
| **001.40.46.01.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 20,761 | 19,618 | 19,618 | 20,969 | 1,351 |
| **001.40.46.01.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 18,109 | 16,920 | 16,920 | 17,420 | 500 |
| **001.40.46.01.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 10,617 | 10,507 | 10,507 | 11,342 | 835 |
| **001.40.46.01.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 2,626 | 2,774 | 2,774 | 3,038 | 264 |
| **001.40.46.01.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 12,381 | 12,469 | 12,469 | 13,912 | 1,443 |
| **001.40.46.01.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | - | - | - | 5,201 | 5,201 |
| **001.40.46.01.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 408 | 847 | 847 | 1,604 | 757 |
| **001.40.46.01.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 6,231 | 6,001 | 6,001 | 6,001 | - |
| **001.40.46.46.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 218,557 | 196,678 | 196,678 | 231,257 | 34,579 |
| **001.40.46.46.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 5,128 | 4,774 | 4,774 | 5,550 | 776 |
| **001.40.46.46.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 53,280 | 51,301 | 51,301 | 62,106 | 10,805 |
| **001.40.46.46.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 12,461 | 12,002 | 12,002 | 14,584 | 2,582 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.40.46.46.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 57,784 | 52,847 | 52,847 | 63,173 | 10,326 |
| **001.40.46.46.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,551 | 1,601 | 3,000 | 3,151 | 1,550 |
| **001.40.46.46.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 26,554 | 9,997 | 15,000 | 28,585 | 18,588 |
| **001.40.46.46.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | 14,195 | - | - | 10,010 | 10,010 |
| **001.40.46.47.0.170.510.001** | | | | | |
| Group Insurance Medical Insurance | 16,449 | 19,278 | 19,278 | 25,809 | 6,531 |
| **001.40.46.47.0.170.510.004** | | | | | |
| Group Insurance Dental Insurance | 483 | 594 | 594 | 582 | (12) |
| **001.40.46.47.0.170.511.001** | | | | | |
| Social Security Contributions Social Security | 9,906 | 12,260 | 12,260 | 12,731 | 471 |
| **001.40.46.47.0.170.511.002** | | | | | |
| Social Security Contributions Medicare | 2,317 | 2,869 | 2,869 | 2,979 | 110 |
| **001.40.46.47.0.170.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 10,131 | 12,370 | 12,370 | 13,121 | 751 |
| **001.40.46.47.0.170.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | - | - | 1,000 | 1,818 | 1,818 |
| **001.40.46.47.0.171.510.001** | | | | | |
| Group Insurance Medical Insurance | 27,695 | 44,600 | 44,600 | 29,447 | (15,153) |
| **001.40.46.47.0.171.510.004** | | | | | |
| Group Insurance Dental Insurance | 883 | 982 | 982 | 291 | (691) |
| **001.40.46.47.0.171.511.001** | | | | | |
| Social Security Contributions Social Security | 10,460 | 11,739 | 11,739 | 11,321 | (418) |
| **001.40.46.47.0.171.511.002** | | | | | |
| Social Security Contributions Medicare | 2,446 | 2,747 | 2,747 | 2,649 | (98) |
| **001.40.46.47.0.171.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 11,086 | 12,316 | 12,316 | 12,112 | (204) |
| **001.40.46.47.0.171.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 8,415 | 1,152 | 1,152 | - | (1,152) |
| Other Employee Costs | 27,064 | 41,019 | 32,319 | 38,183 | (2,836) |
| **001.40.45.01.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 650 | 1,750 | 1,750 | 1,750 | - |
| **001.40.45.01.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 3,778 | 4,000 | 4,000 | 4,000 | - |
| **001.40.45.43.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 2,401 | 3,500 | 3,500 | 3,500 | - |
| **001.40.45.44.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 508 | 7,500 | 1,500 | 4,000 | (3,500) |
| **001.40.45.44.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 2,675 | 6,000 | 4,000 | 5,000 | (1,000) |
| **001.40.45.44.0.000.525.004** | | | | | |
| Training Training | 5,033 | 3,700 | 3,000 | 5,000 | 1,300 |
| **001.40.46.46.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 1,586 | 2,369 | 2,369 | 2,428 | 59 |
| **001.40.46.46.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 1,434 | 3,200 | 3,200 | 3,280 | 80 |
| **001.40.46.46.0.000.525.004** | | | | | |
| Training Training | 8,998 | 9,000 | 9,000 | 9,225 | 225 |
| Contractual Services | 361,617 | 404,144 | 410,223 | 440,050 | 35,906 |
| **001.40.45.01.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 58,885 | 72,500 | 72,500 | 72,500 | - |
| **001.40.45.43.0.000.536.001** | | | | | |
| Economic Development Econ Dev Program | 46,835 | 100,000 | 100,000 | 125,000 | 25,000 |
| **001.40.45.43.0.000.581.002** | | | | | |
| Community Development Contractual American Rescue Plan | 74,862 | - | - | - | - |
| **001.40.45.44.0.000.532.002** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Equipment Maintenance & Repair Equipment Maint. | - | 1,800 | - | 1,500 | (300) |
| **001.40.45.44.0.000.541.001** | | | | | |
| Legal Notices Legal Notices | 3,055 | 3,250 | 3,250 | 3,250 | - |
| **001.40.45.44.0.000.544.002** | | | | | |
| Postage Postage Expense | 2,060 | 2,000 | 2,000 | 2,000 | - |
| **001.40.45.44.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,549 | 3,120 | 3,120 | 3,120 | - |
| **001.40.45.44.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 1,500 | 1,500 | 1,500 | 1,500 | - |
| **001.40.45.44.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| **001.40.45.44.0.000.560.001** | | | | | |
| Technical Services Technical Services | - | 1,250 | 1,250 | 10,000 | 8,750 |
| **001.40.45.44.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 1,896 | 7,000 | 9,000 | 7,500 | 500 |
| **001.40.45.44.0.000.562.001** | | | | | |
| Records Management Document Imaging | - | 3,250 | 3,250 | 3,250 | - |
| **001.40.45.44.0.000.562.002** | | | | | |
| Records Management Printing Expense | - | 2,250 | 2,250 | 2,250 | - |
| **001.40.46.46.0.000.530.011** | | | | | |
| Professional Services Elevator Inspection Services | 15,245 | 22,000 | 30,000 | 30,750 | 8,750 |
| **001.40.46.46.0.000.530.026** | | | | | |
| Professional Services Nuisance Abatement | 19,442 | 15,000 | 15,000 | 15,375 | 375 |
| **001.40.46.46.0.000.533.001** | | | | | |
| Building Maintenance & Repair Pest Control | - | 5,800 | 5,800 | 5,945 | 145 |
| **001.40.46.46.0.000.544.002** | | | | | |
| Postage Postage Expense | 3,072 | 1,000 | 1,000 | 1,025 | 25 |
| **001.40.46.46.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,549 | 3,000 | 5,500 | 5,500 | 2,500 |
| **001.40.46.46.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 15,520 | 14,240 | 14,240 | 8,510 | (5,730) |
| **001.40.46.46.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 5,463 | 5,727 | 5,727 | 5,752 | 25 |
| **001.40.46.46.0.000.560.001** | | | | | |
| Technical Services Technical Services | 525 | 10,000 | 10,000 | 10,000 | - |
| **001.40.46.46.0.000.560.013** | | | | | |
| Technical Services Plan Review | - | 5,000 | 5,000 | 5,000 | - |
| **001.40.46.46.0.000.561.002** | | | | | |
| Computer Software Software Development | - | 2,572 | 2,571 | 2,571 | (1) |
| **001.40.46.46.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 51,996 | 57,429 | 57,428 | 58,863 | 1,435 |
| **001.40.46.46.0.000.562.001** | | | | | |
| Records Management Document Imaging | - | 4,000 | 4,000 | 4,000 | - |
| **001.40.46.46.0.000.562.002** | | | | | |
| Records Management Printing Expense | 416 | 4,000 | 4,000 | 4,000 | - |
| **001.40.46.47.0.170.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,549 | 3,120 | - | - | (3,120) |
| **001.40.46.47.0.170.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 1,500 | 1,500 | 1,500 | 1,500 | - |
| **001.40.46.47.0.170.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| **001.40.46.47.0.171.530.026** | | | | | |
| Professional Services Nuisance Abatement | 4,513 | - | - | - | - |
| **001.40.46.47.0.171.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,549 | 1,500 | - | - | (1,500) |
| **001.40.46.47.0.171.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 13,520 | 13,520 | 13,520 | 12,410 | (1,110) |
| **001.40.46.47.0.171.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 27,313 | 28,635 | 28,635 | 28,761 | 126 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Utilities | 9,668 | 10,984 | 10,984 | 11,176 | 192 |
| **001.40.45.01.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 2,464 | 3,300 | 3,300 | 3,300 | - |
| **001.40.46.01.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 7,204 | 7,684 | 7,684 | 7,876 | 192 |
| Insurance | 32,912 | 29,064 | 29,064 | 42,840 | 13,776 |
| **001.40.45.01.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 12,714 | 9,720 | 9,720 | 13,615 | 3,895 |
| **001.40.46.01.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 20,198 | 19,344 | 19,344 | 29,225 | 9,881 |
| Commodities & Supplies | 22,513 | 40,075 | 40,075 | 41,873 | 1,798 |
| **001.40.45.01.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 351 | 1,500 | 1,500 | 1,500 | - |
| **001.40.45.44.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 351 | 6,000 | 5,000 | 6,000 | - |
| **001.40.45.44.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 2,598 | 3,500 | 3,500 | 3,500 | - |
| **001.40.45.44.0.000.612.001** | | | | | |
| Publications Publications | 1,014 | 3,000 | 4,000 | 4,000 | 1,000 |
| **001.40.46.01.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | - | - | - | 225 | 225 |
| **001.40.46.01.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 358 | - | - | - | - |
| **001.40.46.46.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 6,384 | 8,925 | 8,925 | 9,148 | 223 |
| **001.40.46.46.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 1,449 | 4,000 | 4,000 | 4,100 | 100 |
| **001.40.46.46.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 6,795 | 8,000 | 8,000 | 8,200 | 200 |
| **001.40.46.46.0.000.612.001** | | | | | |
| Publications Publications | 263 | 500 | 500 | 500 | - |
| **001.40.46.46.0.000.613.001** | | | | | |
| Reference Materials Reference Materials | 1,794 | 2,000 | 2,000 | 2,050 | 50 |
| **001.40.46.46.0.000.615.001** | | | | | |
| Inspection Supplies Inspection Supplies | 229 | 1,300 | 1,300 | 1,300 | - |
| **001.40.46.47.0.170.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 105 | 600 | 600 | 600 | - |
| **001.40.46.47.0.170.606.001** | | | | | |
| Office Supplies Office Supplies | 597 | - | - | - | - |
| **001.40.46.47.0.171.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 225 | 750 | 750 | 750 | - |
| **Human Services** | **1,497,281** | **1,783,765** | **1,773,366** | **1,741,760** | **(42,005)** |
| Personal Services, Salaries & Wages | 958,100 | 1,034,409 | 1,039,739 | 1,082,974 | 48,565 |
| **001.50.01.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 155,127 | 182,810 | 182,810 | 189,170 | 6,360 |
| **001.50.01.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 17,068 | - | - | - | - |
| **001.50.01.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | - | 8,100 | 8,100 | 8,100 | - |
| **001.50.01.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 729 | - | - | 500 | 500 |
| **001.50.01.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 905 | 905 | 905 | 970 | 65 |
| **001.50.51.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 384,636 | 414,231 | 414,231 | 428,512 | 14,281 |
| **001.50.51.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 12,801 | - | 6,000 | - | - |
| **001.50.51.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 398 | 442 | - | - | (442) |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.50.51.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,625 | 1,625 | 1,625 | 1,960 | 335 |
| **001.50.52.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 92,266 | 112,364 | 112,364 | 122,192 | 9,828 |
| **001.50.52.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 12,801 | - | - | - | - |
| **001.50.52.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 199 | 228 | - | - | (228) |
| **001.50.52.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 90 | 90 | 90 | 90 | - |
| **001.50.53.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 24,676 | 41,912 | 41,912 | 50,185 | 8,273 |
| **001.50.54.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 254,300 | 271,222 | 271,222 | 280,515 | 9,293 |
| **001.50.54.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 480 | 480 | 480 | 780 | 300 |
| Employee Benefits | 275,676 | 305,367 | 306,993 | 327,984 | 22,617 |
| **001.50.01.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 22,135 | 31,277 | 31,277 | 28,324 | (2,953) |
| **001.50.01.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 8,197 | 5,220 | 5,220 | 5,915 | 695 |
| **001.50.01.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 662 | 785 | 785 | 865 | 80 |
| **001.50.01.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 10,593 | 11,912 | 11,912 | 12,768 | 856 |
| **001.50.01.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 2,477 | 2,789 | 2,789 | 3,043 | 254 |
| **001.50.01.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 11,490 | 11,999 | 11,999 | 12,729 | 730 |
| **001.50.01.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,867 | 500 | 500 | 974 | 474 |
| **001.50.01.00.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | - | - | - | 10,010 | 10,010 |
| **001.50.01.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 510 | 511 | 511 | 511 | - |
| **001.50.51.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 65,584 | 71,293 | 71,293 | 75,052 | 3,759 |
| **001.50.51.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,960 | 2,088 | 2,088 | 2,300 | 212 |
| **001.50.51.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 23,616 | 25,963 | 25,963 | 26,853 | 890 |
| **001.50.51.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 5,523 | 6,077 | 6,077 | 6,283 | 206 |
| **001.50.51.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 25,765 | 27,223 | 27,223 | 28,722 | 1,499 |
| **001.50.51.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,351 | 695 | 695 | 888 | 193 |
| **001.50.51.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 2,010 | 2,014 | 2,014 | 2,014 | - |
| **001.50.52.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | - | 7,246 | 7,246 | 3,006 | (4,240) |
| **001.50.52.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | - | 80 | 80 | 88 | 8 |
| **001.50.52.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 6,600 | 7,033 | 7,033 | 7,682 | 649 |
| **001.50.52.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,543 | 1,646 | 1,646 | 1,799 | 153 |
| **001.50.52.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 6,790 | 7,355 | 7,355 | 8,199 | 844 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.50.52.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 509 | 102 | 500 | 988 | 886 |
| **001.50.52.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 600 | 601 | 601 | 601 | - |
| **001.50.53.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 1,530 | 2,599 | 2,599 | 3,112 | 513 |
| **001.50.53.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 358 | 608 | 608 | 728 | 120 |
| **001.50.53.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 1,566 | 2,733 | 2,733 | 3,338 | 605 |
| **001.50.54.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 34,339 | 33,535 | 33,535 | 34,620 | 1,085 |
| **001.50.54.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,235 | 1,299 | 1,299 | 1,432 | 133 |
| **001.50.54.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 15,510 | 16,910 | 16,910 | 17,679 | 769 |
| **001.50.54.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 3,627 | 3,958 | 3,958 | 4,137 | 179 |
| **001.50.54.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 16,413 | 17,744 | 17,744 | 18,922 | 1,178 |
| **001.50.54.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 235 | 491 | 1,800 | 3,321 | 2,830 |
| **001.50.54.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,080 | 1,081 | 1,000 | 1,081 | - |
| Other Employee Costs | 5,517 | 10,133 | 8,285 | 10,079 | (54) |
| **001.50.01.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | (39) | 750 | 450 | 1,650 | 900 |
| **001.50.01.00.0.000.525.004** | | | | | |
| Training Training | 261 | 832 | 500 | 832 | - |
| **001.50.51.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 516 | 1,400 | 1,400 | 1,000 | (400) |
| **001.50.51.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 103 | 562 | 400 | 562 | - |
| **001.50.51.00.0.000.525.004** | | | | | |
| Training Training | 1,787 | 2,725 | 2,000 | 2,100 | (625) |
| **001.50.52.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 330 | 404 | 250 | 575 | 171 |
| **001.50.52.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 115 | 161 | 161 | 161 | - |
| **001.50.52.00.0.000.525.004** | | | | | |
| Training Training | 800 | 424 | 424 | 424 | - |
| **001.50.54.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 236 | 400 | 400 | 300 | (100) |
| **001.50.54.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 54 | 375 | 200 | 375 | - |
| **001.50.54.00.0.000.525.004** | | | | | |
| Training Training | 1,355 | 2,100 | 2,100 | 2,100 | - |
| Contractual Services | 214,681 | 376,162 | 368,721 | 254,931 | (121,231) |
| **001.50.01.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 2,997 | 4,650 | 3,000 | 54,766 | 50,116 |
| **001.50.01.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 88 | 562 | 562 | 576 | 14 |
| **001.50.01.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 3,102 | 4,800 | 3,500 | 3,500 | (1,300) |
| **001.50.01.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 6,886 | 7,210 | 7,210 | 7,210 | - |
| **001.50.01.00.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 1,380 | 4,010 | 4,010 | 3,120 | (890) |
| **001.50.01.00.0.000.554.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Vehicle Maintenance Payment Vehicle Maint Payment | 3,902 | 4,091 | 4,091 | 4,109 | 18 |
| **001.50.01.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 16,670 | 20,522 | 21,000 | 24,000 | 3,478 |
| **001.50.01.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 455 | 900 | 900 | 923 | 23 |
| **001.50.01.00.0.000.573.006** | | | | | |
| Human Services Contractual Volunteer Recruitment | 478 | 700 | 700 | 718 | 18 |
| **001.50.51.00.0.000.573.010** | | | | | |
| Human Services Contractual American Rescue Plan Programs | 75,446 | 200,000 | 200,000 | - | (200,000) |
| **001.50.51.00.0.000.573.012** | | | | | |
| Human Services Contractual Opioid Funds | - | - | 3,000 | 10,000 | 10,000 |
| **001.50.51.00.0.000.609.002** | | | | | |
| Program Supplies Behavioral Health Prog Subsidy | 108 | 15,000 | 10,000 | 15,000 | - |
| **001.50.52.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | - | 515 | 515 | 528 | 13 |
| **001.50.53.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 1,505 | 4,120 | 2,500 | 19,195 | 15,075 |
| **001.50.54.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 93,721 | 97,833 | 97,833 | 100,250 | 2,417 |
| **001.50.54.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | - | 552 | 250 | 566 | 14 |
| **001.50.54.00.0.000.533.002** | | | | | |
| Building Maintenance & Repair Cleaning Service | 7,038 | 8,785 | 8,500 | 8,500 | (285) |
| **001.50.54.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 611 | 800 | 800 | 820 | 20 |
| **001.50.54.00.0.000.560.004** | | | | | |
| Technical Services IT System Security | 294 | 412 | 350 | 350 | (62) |
| **001.50.54.00.0.000.560.007** | | | | | |
| Technical Services Computer Maint. | - | 700 | - | 800 | 100 |
| Utilities | 8,102 | 10,000 | 8,620 | 9,278 | (722) |
| **001.50.01.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 4,691 | 4,500 | 3,840 | 3,640 | (860) |
| **001.50.54.00.0.000.585.001** | | | | | |
| Natural Gas Natural Gas | 2,845 | 4,220 | 3,500 | 4,326 | 106 |
| **001.50.54.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 566 | 1,280 | 1,280 | 1,312 | 32 |
| Insurance | 15,307 | 13,856 | 13,856 | 24,360 | 10,504 |
| **001.50.01.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 15,307 | 13,856 | 13,856 | 24,360 | 10,504 |
| Commodities & Supplies | 17,587 | 29,991 | 23,325 | 30,392 | 401 |
| **001.50.01.00.0.000.605.001** | | | | | |
| Other Equipment Other Equipment | 613 | 649 | 649 | 665 | 16 |
| **001.50.01.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 995 | 1,200 | 1,200 | 1,400 | 200 |
| **001.50.01.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 1,737 | 2,000 | 2,000 | 1,200 | (800) |
| **001.50.01.00.0.000.616.001** | | | | | |
| Vehicle Registration/License Vehicle Reg/License | 8 | - | - | - | - |
| **001.50.01.00.0.000.620.001** | | | | | |
| Human Services Commodities Refreshment Supplies | 350 | 1,125 | 1,000 | 1,153 | 28 |
| **001.50.51.00.0.000.609.001** | | | | | |
| Program Supplies Program Supplies | 1,506 | 1,000 | 1,000 | 2,025 | 1,025 |
| **001.50.52.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 327 | 637 | 400 | 653 | 16 |
| **001.50.52.00.0.000.609.001** | | | | | |
| Program Supplies Program Supplies | 1,549 | 2,250 | 2,000 | 2,306 | 56 |
| **001.50.52.00.0.000.620.002** | | | | | |
| Human Services Commodities Medical Supplies | 404 | 458 | 458 | 469 | 11 |
| **001.50.52.00.0.000.620.003** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Human Services Commodities Flu Program Supplies | 177 | 258 | 258 | 264 | 6 |
| **001.50.52.00.0.000.620.004** | | | | | |
| Human Services Commodities Cholesterol Screening Supplies | 1,323 | 1,545 | 1,545 | 1,584 | 39 |
| **001.50.52.00.0.000.620.005** | | | | | |
| Human Services Commodities INR Testing Supplies | 802 | 1,030 | 1,030 | 1,056 | 26 |
| **001.50.52.00.0.000.620.006** | | | | | |
| Human Services Commodities Lending Closet Supplies | 428 | 530 | 530 | 543 | 13 |
| **001.50.53.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 940 | 4,000 | 2,000 | 2,050 | (1,950) |
| **001.50.53.00.0.000.609.001** | | | | | |
| Program Supplies Program Supplies | 1,028 | 4,000 | 3,000 | 4,100 | 100 |
| **001.50.53.00.0.000.620.001** | | | | | |
| Human Services Commodities Refreshment Supplies | 1,061 | 2,500 | 2,000 | 2,563 | 63 |
| **001.50.54.00.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 475 | 3,771 | 1,217 | 5,247 | 1,476 |
| **001.50.54.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 939 | 1,200 | 1,200 | 1,230 | 30 |
| **001.50.54.00.0.000.609.001** | | | | | |
| Program Supplies Program Supplies | 2,927 | 1,838 | 1,838 | 1,884 | 46 |
| Office Equipment | 542 | 3,104 | 3,084 | 1,000 | (2,104) |
| **001.50.01.00.0.000.656.001** | | | | | |
| Office Equipment Office Eqpt | 542 | 3,104 | 3,084 | 1,000 | (2,104) |
| Other Equipment | 1,768 | 743 | 743 | 762 | 19 |
| **001.50.52.00.0.000.665.093** | | | | | |
| Other Equipment Medical Equipment | 1,768 | 743 | 743 | 762 | 19 |
| **Police** | **23,177,729** | **26,031,458** | **26,033,623** | **27,012,846** | **981,388** |
| Building Improvements | - | 35,000 | - | - | (35,000) |
| **001.60.90.00.1.706.653.020** | | | | | |
| Police Headquarters Facility Improvements | - | 35,000 | - | - | (35,000) |
| Personal Services, Salaries & Wages | 13,554,999 | 14,289,475 | 14,466,250 | 14,624,207 | 334,732 |
| **001.60.01.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 920,827 | 942,964 | 942,964 | 981,446 | 38,482 |
| **001.60.01.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 47,268 | 54,342 | 54,342 | 56,179 | 1,837 |
| **001.60.01.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 2,621 | 6,715 | 6,715 | 6,855 | 140 |
| **001.60.01.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 21,805 | 21,804 | 21,804 | 21,804 | - |
| **001.60.01.00.0.000.505.001** | | | | | |
| Holiday Pay Holiday Pay | 19,852 | 20,708 | 20,708 | 21,608 | 900 |
| **001.60.01.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 5,000 | 5,300 | 5,300 | 6,000 | 700 |
| **001.60.01.61.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 445,826 | 461,215 | 461,215 | 476,735 | 15,520 |
| **001.60.01.61.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 54,388 | 60,170 | 60,170 | 62,167 | 1,997 |
| **001.60.01.61.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | - | 1,825 | - | 1,862 | 37 |
| **001.60.01.61.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 3,200 | 3,200 | 3,200 | 3,800 | 600 |
| **001.60.61.64.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 268,251 | 276,989 | 276,989 | 281,128 | 4,139 |
| **001.60.61.64.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 65,894 | 66,630 | 66,630 | 68,290 | 1,660 |
| **001.60.61.64.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 4,339 | 4,302 | 4,302 | 4,302 | - |
| **001.60.61.64.0.000.505.001** | | | | | |
| Holiday Pay Holiday Pay | 7,215 | 7,540 | 7,540 | 7,804 | 264 |
| **001.60.61.64.0.000.506.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Longevity Pay Longevity Pay | 2,460 | 2,460 | 2,460 | 2,100 | (360) |
| **001.60.61.65.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 8,616,105 | 9,422,615 | 9,422,615 | 9,418,544 | (4,071) |
| **001.60.61.65.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 742,930 | 505,770 | 505,770 | 600,050 | 94,280 |
| **001.60.61.65.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 149,917 | 156,518 | 156,518 | 148,366 | (8,152) |
| **001.60.61.65.0.000.505.001** | | | | | |
| Holiday Pay Holiday Pay | 243,699 | 262,928 | 262,928 | 262,701 | (227) |
| **001.60.61.65.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 43,540 | 46,140 | 46,140 | 42,400 | (3,740) |
| **001.60.61.65.0.253.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 20,666 | - | 105,000 | 102,145 | 102,145 |
| **001.60.61.65.0.253.503.001** | | | | | |
| Overtime Earnings Overtime | 8,330 | 23,720 | 23,720 | 24,287 | 567 |
| **001.60.61.65.0.253.504.001** | | | | | |
| Specialty Pay Specialty Pay | 115 | - | 600 | 501 | 501 |
| **001.60.61.65.0.253.505.001** | | | | | |
| Holiday Pay Holiday Pay | 998 | - | 3,000 | 2,995 | 2,995 |
| **001.60.61.65.8.400.503.001** | | | | | |
| Overtime Earnings Overtime | 63,768 | - | 70,000 | - | - |
| **001.60.61.66.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 1,553,430 | 1,681,076 | 1,681,076 | 1,754,621 | 73,545 |
| **001.60.61.66.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 132,336 | 141,295 | 141,295 | 144,872 | 3,577 |
| **001.60.61.66.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 55,354 | 53,562 | 53,562 | 58,263 | 4,701 |
| **001.60.61.66.0.000.505.001** | | | | | |
| Holiday Pay Holiday Pay | 46,563 | 51,087 | 51,087 | 53,482 | 2,395 |
| **001.60.61.66.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 8,300 | 8,600 | 8,600 | 8,900 | 300 |
| Employee Benefits | 7,328,776 | 7,791,618 | 7,879,619 | 8,306,065 | 514,447 |
| **001.60.01.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 165,827 | 161,797 | 161,797 | 180,342 | 18,545 |
| **001.60.01.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 129,810 | 152,520 | 152,520 | 162,630 | 10,110 |
| **001.60.01.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 3,255 | 3,178 | 3,178 | 3,501 | 323 |
| **001.60.01.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 17,942 | 19,788 | 19,788 | 24,448 | 4,660 |
| **001.60.01.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 14,647 | 15,750 | 15,750 | 17,831 | 2,081 |
| **001.60.01.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 19,360 | 20,809 | 20,809 | 21,963 | 1,154 |
| **001.60.01.00.0.000.512.002** | | | | | |
| Retirement Contributions Police Pension Expense | 4,600,770 | 5,126,970 | 5,126,970 | 5,044,099 | (82,871) |
| **001.60.01.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 4,645 | 4,700 | 5,026 | 5,435 | 735 |
| **001.60.01.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 14,753 | 30,687 | 30,687 | 31,649 | 962 |
| **001.60.01.00.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | - | - | - | 99,990 | 99,990 |
| **001.60.01.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 3,400 | 3,400 | 3,400 | 3,400 | - |
| **001.60.01.61.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 132,903 | 129,244 | 129,244 | 143,481 | 14,237 |
| **001.60.01.61.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 3,352 | 3,434 | 3,434 | 3,783 | 349 |
| **001.60.01.61.0.000.511.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Social Security Contributions Social Security | 29,714 | 32,528 | 32,528 | 33,651 | 1,123 |
| **001.60.01.61.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 6,949 | 7,658 | 7,658 | 7,914 | 256 |
| **001.60.01.61.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 31,999 | 34,207 | 34,207 | 36,093 | 1,886 |
| **001.60.01.61.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,359 | 1,421 | 1,421 | 855 | (566) |
| **001.60.61.64.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 51,494 | 49,598 | 49,568 | 61,444 | 11,846 |
| **001.60.61.64.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,662 | 1,702 | 1,702 | 2,204 | 502 |
| **001.60.61.64.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 1,726 | 1,874 | 1,874 | 1,481 | (393) |
| **001.60.61.64.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 4,917 | 5,224 | 5,224 | 5,441 | 217 |
| **001.60.61.64.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 1,888 | 1,971 | 1,971 | 1,589 | (382) |
| **001.60.61.64.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,731 | 1,800 | 1,800 | 2,795 | 995 |
| **001.60.61.64.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | - | - | - | 9,860 | 9,860 |
| **001.60.61.64.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,700 | 1,700 | 1,700 | 1,700 | - |
| **001.60.61.65.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 1,323,223 | 1,276,988 | 1,276,988 | 1,562,090 | 285,102 |
| **001.60.61.65.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 35,124 | 35,428 | 35,428 | 46,340 | 10,912 |
| **001.60.61.65.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 45,225 | 47,573 | 47,573 | 48,247 | 674 |
| **001.60.61.65.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 138,096 | 147,249 | 147,249 | 154,319 | 7,070 |
| **001.60.61.65.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 49,196 | 50,030 | 50,030 | 51,749 | 1,719 |
| **001.60.61.65.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 3,298 | 3,301 | 3,301 | 2,950 | (351) |
| **001.60.61.65.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 85,346 | 85,991 | 85,991 | 122,777 | 36,786 |
| **001.60.61.65.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | 90,725 | - | 60,500 | - | - |
| **001.60.61.65.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 69,736 | 68,150 | 68,150 | 69,000 | 850 |
| **001.60.61.65.0.253.510.001** | | | | | |
| Group Insurance Medical Insurance | 1,779 | - | 23,000 | 21,895 | 21,895 |
| **001.60.61.65.0.253.511.002** | | | | | |
| Social Security Contributions Medicare | 429 | 345 | 2,000 | 1,898 | 1,553 |
| **001.60.61.65.0.253.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | - | - | 850 | 850 | 850 |
| **001.60.61.65.8.400.511.001** | | | | | |
| Social Security Contributions Social Security | 518 | - | 700 | - | - |
| **001.60.61.65.8.400.511.002** | | | | | |
| Social Security Contributions Medicare | 907 | - | 1,000 | - | - |
| **001.60.61.66.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 184,958 | 197,168 | 197,168 | 241,998 | 44,830 |
| **001.60.61.66.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 4,632 | 4,754 | 4,754 | 6,754 | 2,000 |
| **001.60.61.66.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 25,705 | 28,404 | 28,404 | 29,679 | 1,275 |
| **001.60.61.66.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,369 | 1,401 | 1,401 | 621 | (780) |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.60.61.66.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 11,459 | 21,136 | 21,136 | 24,829 | 3,693 |
| **001.60.61.66.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 11,250 | 11,740 | 11,740 | 12,490 | 750 |
| Other Employee Costs | 191,161 | 191,820 | 172,820 | 211,275 | 19,455 |
| **001.60.01.00.0.000.520.001** | | | | | |
| Medical Examinations Medical Examinations | 16,091 | 35,000 | 16,000 | 32,000 | (3,000) |
| **001.60.01.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 9,367 | 8,270 | 8,270 | 9,100 | 830 |
| **001.60.01.00.0.000.525.004** | | | | | |
| Training Training | 161,760 | 143,500 | 143,500 | 165,000 | 21,500 |
| **001.60.61.64.0.000.525.001** | | | | | |
| Training Community Policing Trng. | 3,943 | 5,050 | 5,050 | 5,175 | 125 |
| Contractual Services | 1,663,341 | 3,213,196 | 3,069,461 | 3,220,353 | 7,157 |
| **001.60.01.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 37,582 | 41,910 | 41,910 | 43,000 | 1,090 |
| **001.60.01.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 4,662 | 6,500 | 5,500 | 6,500 | - |
| **001.60.01.00.0.000.546.003** | | | | | |
| HR Expenses Employment Testing | 30,593 | 35,000 | 35,000 | 60,875 | 25,875 |
| **001.60.01.00.0.000.549.001** | | | | | |
| Organizational Memberships Org Memberships | 4,447 | 7,000 | 5,000 | 7,000 | - |
| **001.60.01.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 4,010 | 5,500 | 5,500 | 5,500 | - |
| **001.60.01.00.0.000.553.002** | | | | | |
| Capital Replacement Payments Technology Replacements | - | 384,667 | 384,667 | 384,667 | - |
| **001.60.01.00.0.000.553.003** | | | | | |
| Capital Replacement Payments Building Improvements | - | 898,925 | 898,925 | 898,925 | - |
| **001.60.01.00.0.000.560.012** | | | | | |
| Technical Services Computer Software | 2,792 | 22,755 | 22,755 | 28,500 | 5,745 |
| **001.60.01.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 173,118 | 306,339 | 206,500 | 227,000 | (79,339) |
| **001.60.01.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 8,574 | 10,500 | 10,500 | 10,762 | 262 |
| **001.60.01.00.0.000.566.001** | | | | | |
| Police Contractual Services Animal Impounding | 1,959 | 4,000 | - | 4,000 | - |
| **001.60.01.00.0.000.566.002** | | | | | |
| Police Contractual Services Accreditation | 500 | 500 | 500 | 750 | 250 |
| **001.60.01.00.0.252.532.001** | | | | | |
| Equipment Maintenance & Repair Digital Imaging Equip. | - | 3,000 | 200 | 2,500 | (500) |
| **001.60.01.00.0.252.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 24,820 | 45,000 | 15,000 | 35,000 | (10,000) |
| **001.60.01.00.0.252.532.003** | | | | | |
| Equipment Maintenance & Repair Pistol Range Maint. | - | 1,000 | 1,000 | 5,500 | 4,500 |
| **001.60.01.00.0.252.532.004** | | | | | |
| Equipment Maintenance & Repair Radio Maintenance | 2,626 | 4,500 | 1,000 | 4,500 | - |
| **001.60.01.00.0.252.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 224,780 | 243,490 | 243,490 | 292,830 | 49,340 |
| **001.60.01.00.0.252.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 662,544 | 694,605 | 694,605 | 697,654 | 3,049 |
| **001.60.01.00.0.252.560.006** | | | | | |
| Technical Services Data Card Maintenance | 15,878 | 18,000 | 18,000 | 18,000 | - |
| **001.60.01.61.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 3,056 | 3,000 | 3,000 | 3,000 | - |
| **001.60.01.61.0.000.562.001** | | | | | |
| Records Management Document Imaging | 985 | 1,800 | 1,500 | 1,800 | - |
| **001.60.61.64.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,664 | 3,000 | 3,000 | 3,000 | - |
| **001.60.61.64.0.000.562.002** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Records Management Printing Expense | 820 | 895 | 895 | 895 | - |
| **001.60.61.65.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 17,099 | 16,975 | 16,975 | 17,400 | 425 |
| **001.60.61.65.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 2,069 | 3,000 | 3,000 | 3,000 | - |
| **001.60.61.65.0.000.558.001** | | | | | |
| NWCD Dispatch Services NWCD - Police | 317,786 | 320,000 | 320,000 | 320,000 | - |
| **001.60.61.65.0.000.566.003** | | | | | |
| Police Contractual Services NIPAS | 7,972 | 10,000 | 9,000 | 10,250 | 250 |
| **001.60.61.65.0.000.566.010** | | | | | |
| Police Contractual Services Northern Illinois Crime Lab | 86,004 | 86,300 | 86,004 | 89,000 | 2,700 |
| **001.60.61.65.0.253.584.001** | | | | | |
| K-9 Unit Contractual Services Training | 584 | 2,575 | 2,575 | 5,075 | 2,500 |
| **001.60.61.65.0.253.584.002** | | | | | |
| K-9 Unit Contractual Services Medical Expenses | 2,663 | 4,000 | 5,000 | 4,000 | - |
| **001.60.61.65.0.253.584.003** | | | | | |
| K-9 Unit Contractual Services Dog Boarding | - | 1,000 | 1,000 | 1,500 | 500 |
| **001.60.61.66.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 14,977 | 12,980 | 12,980 | 13,300 | 320 |
| **001.60.61.66.0.000.534.001** | | | | | |
| Surveillance Expense Surveillance Expense | 679 | 2,000 | 2,000 | 2,000 | - |
| **001.60.61.66.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 3,344 | 4,500 | 4,500 | 4,500 | - |
| **001.60.61.66.0.000.566.004** | | | | | |
| Police Contractual Services MCAT | 4,754 | 7,980 | 7,980 | 8,170 | 190 |
| Utilities | 8,273 | 12,500 | 7,300 | 22,300 | 9,800 |
| **001.60.01.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 7,250 | 10,000 | 6,300 | 19,800 | 9,800 |
| **001.60.61.66.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 1,023 | 2,500 | 1,000 | 2,500 | - |
| Insurance | 228,446 | 195,821 | 195,821 | 316,631 | 120,810 |
| **001.60.01.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 228,446 | 195,821 | 195,821 | 316,631 | 120,810 |
| Commodities & Supplies | 184,783 | 260,618 | 223,917 | 262,255 | 1,637 |
| **001.60.01.00.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 149 | 5,000 | 3,000 | 1,000 | (4,000) |
| **001.60.01.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 4,490 | 4,540 | 3,000 | 4,540 | - |
| **001.60.01.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 4,671 | 5,350 | 5,350 | 5,980 | 630 |
| **001.60.01.00.0.000.612.001** | | | | | |
| Publications Publications | 1,964 | 1,550 | 1,550 | 1,550 | - |
| **001.60.01.00.0.000.616.001** | | | | | |
| Vehicle Registration/License Vehicle Reg/License | 2,581 | 3,000 | 3,000 | 3,000 | - |
| **001.60.01.00.0.000.621.003** | | | | | |
| Police Commodities Training Supplies | 6,423 | 12,730 | 10,000 | 12,730 | - |
| **001.60.01.00.0.252.608.001** | | | | | |
| Other Supplies Other Supplies | 5,133 | 5,510 | 5,510 | 5,600 | 90 |
| **001.60.01.00.0.252.621.012** | | | | | |
| Police Commodities Squad Emergency Eqpt | 18,318 | 37,900 | 20,000 | 38,800 | 900 |
| **001.60.01.61.0.000.604.001** | | | | | |
| Office Equipment Office Equipment | 373 | 860 | 860 | 880 | 20 |
| **001.60.01.61.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 1,743 | 2,310 | 2,000 | 2,310 | - |
| **001.60.01.61.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 1,483 | 2,700 | 2,700 | 2,700 | - |
| **001.60.61.64.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 458 | 480 | 480 | 490 | 10 |
| **001.60.61.64.0.000.608.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Supplies Other Supplies | 2,463 | 2,500 | 2,500 | 2,500 | - |
| **001.60.61.64.0.000.611.001** | | | | | |
| Photo Supplies Photo Supplies | 105 | 115 | 115 | 120 | 5 |
| **001.60.61.64.0.000.621.009** | | | | | |
| Police Commodities Pub Relations Supplies | 3,107 | 3,700 | 3,700 | 3,800 | 100 |
| **001.60.61.64.0.000.621.010** | | | | | |
| Police Commodities Com Policing Supplies | 5,140 | 5,300 | 5,300 | 5,430 | 130 |
| **001.60.61.64.0.000.621.011** | | | | | |
| Police Commodities Ctzn Academy Supplies | 4,115 | 3,500 | 3,500 | 3,500 | - |
| **001.60.61.64.0.000.621.014** | | | | | |
| Police Commodities Donated Supplies | 9,342 | 1,000 | 5,000 | 1,000 | - |
| **001.60.61.64.0.000.621.015** | | | | | |
| Police Commodities Community Engagement Events | 16,807 | 13,300 | 13,300 | 13,600 | 300 |
| **001.60.61.64.0.000.621.016** | | | | | |
| Police Commodities Police Cadets Program | 7,444 | 6,500 | 6,500 | 6,650 | 150 |
| **001.60.61.65.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 23,997 | 32,135 | 25,000 | 32,135 | - |
| **001.60.61.65.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 809 | 2,050 | 2,050 | 2,100 | 50 |
| **001.60.61.65.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 3,246 | 3,100 | 2,400 | 3,100 | - |
| **001.60.61.65.0.000.611.001** | | | | | |
| Photo Supplies Photo Supplies | 2,145 | 2,330 | 2,330 | 2,385 | 55 |
| **001.60.61.65.0.000.621.001** | | | | | |
| Police Commodities Protective Clothing | 16,885 | 24,100 | 18,000 | 40,880 | 16,780 |
| **001.60.61.65.0.000.621.002** | | | | | |
| Police Commodities Honor Guard Supplies | 1,141 | 2,675 | 1,500 | 2,200 | (475) |
| **001.60.61.65.0.000.621.005** | | | | | |
| Police Commodities Ammunition & Targets | 25,567 | 56,633 | 56,632 | 42,230 | (14,403) |
| **001.60.61.65.0.000.621.007** | | | | | |
| Police Commodities Evidence Tech Supplies | 5,590 | 6,200 | 6,200 | 6,510 | 310 |
| **001.60.61.65.0.000.621.008** | | | | | |
| Police Commodities Food for Prisoners | 1,467 | 2,500 | 2,500 | 2,500 | - |
| **001.60.61.65.0.253.632.002** | | | | | |
| K-9 Unit Supplies Food | 2,325 | 5,000 | 5,000 | 5,125 | 125 |
| **001.60.61.65.0.253.632.003** | | | | | |
| K-9 Unit Supplies Equipment & Supplies | 1,122 | 1,040 | 1,040 | 1,500 | 460 |
| **001.60.61.66.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 409 | 910 | 600 | 910 | - |
| **001.60.61.66.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 2,975 | 3,000 | 2,200 | 3,000 | - |
| **001.60.61.66.0.000.611.001** | | | | | |
| Photo Supplies Photo Supplies | 554 | 585 | 585 | 600 | 15 |
| **001.60.61.66.0.000.621.004** | | | | | |
| Police Commodities Peer Jury Supplies | 244 | 515 | 515 | 900 | 385 |
| Office Equipment | 13,409 | 26,125 | 8,950 | 34,475 | 8,350 |
| **001.60.01.00.0.000.655.004** | | | | | |
| Computer Equipment Computer Eqpt - Depts | 11,625 | 20,000 | 5,000 | 20,000 | - |
| **001.60.01.00.0.000.656.006** | | | | | |
| Office Equipment Office Eqpt - Police | 894 | 3,335 | 1,500 | 3,335 | - |
| **001.60.01.61.0.000.656.006** | | | | | |
| Office Equipment Office Eqpt - Police | - | 500 | 500 | 500 | - |
| **001.60.61.65.0.000.657.003** | | | | | |
| Other Office Equipment Evidence Equipment | 891 | 1,850 | 1,850 | 10,200 | 8,350 |
| **001.60.61.66.0.000.656.001** | | | | | |
| Office Equipment Office Eqpt | - | 440 | 100 | 440 | - |
| Other Equipment | 4,540 | 15,285 | 9,485 | 15,285 | - |
| **001.60.01.00.0.252.665.035** | | | | | |
| Other Equipment Radar Replacement | 1,670 | 2,550 | 2,550 | 2,550 | - |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.60.01.00.0.252.665.049** | | | | | |
| Other Equipment Visa Bar Unitrols | - | 2,835 | 2,835 | 2,835 | - |
| **001.60.01.00.0.252.668.003** | | | | | |
| Radio Equipment Radio Equip -Police | 663 | 4,950 | 1,000 | 4,950 | - |
| **001.60.61.65.0.000.665.002** | | | | | |
| Other Equipment Bicycle Patrol Program | - | 1,500 | - | 1,500 | - |
| **001.60.61.65.0.000.665.052** | | | | | |
| Other Equipment Weapons | 2,207 | 3,000 | 3,000 | 3,000 | - |
| **001.60.61.66.0.000.665.031** | | | | | |
| Other Equipment Other Equipment | - | 450 | 100 | 450 | - |
| **Fire** | **21,372,171** | **22,878,590** | **22,856,741** | **24,204,734** | **1,326,144** |
| Building Improvements | 2,500 | 2,500 | 2,500 | 2,500 | - |
| **001.70.71.00.0.000.648.020** | | | | | |
| Fire Station Facility Improvements | 2,500 | 2,500 | 2,500 | 2,500 | - |
| Personal Services, Salaries & Wages | 12,190,634 | 12,358,778 | 12,358,775 | 13,000,463 | 641,685 |
| **001.70.01.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 817,863 | 854,888 | 854,888 | 890,062 | 35,174 |
| **001.70.01.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 6,180 | - | - | - | - |
| **001.70.01.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | - | 2,935 | 2,935 | 2,678 | (257) |
| **001.70.01.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 2,900 | 2,901 | 2,901 | 2,901 | - |
| **001.70.01.00.0.000.505.001** | | | | | |
| Holiday Pay Holiday Pay | 17,615 | 16,286 | 16,286 | 17,031 | 745 |
| **001.70.01.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 4,060 | 4,180 | 4,180 | 4,480 | 300 |
| **001.70.71.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 8,454,820 | 8,963,180 | 8,963,180 | 9,724,890 | 761,710 |
| **001.70.71.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 1,819,342 | 1,300,117 | 1,300,117 | 1,134,202 | (165,915) |
| **001.70.71.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 6,436 | 2,901 | 2,901 | 2,901 | - |
| **001.70.71.00.0.000.505.001** | | | | | |
| Holiday Pay Holiday Pay | 486,119 | 573,492 | 573,492 | 562,953 | (10,539) |
| **001.70.71.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 42,100 | 44,900 | 44,900 | 48,200 | 3,300 |
| **001.70.71.00.0.302.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 15,092 | 43,524 | 43,524 | 48,204 | 4,680 |
| **001.70.71.00.0.302.503.001** | | | | | |
| Overtime Earnings Overtime | 9,276 | 14,007 | 14,007 | 12,222 | (1,785) |
| **001.70.72.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 300,499 | 310,839 | 310,836 | 320,845 | 10,006 |
| **001.70.72.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 837 | 6,937 | 6,937 | 6,170 | (767) |
| **001.70.72.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 600 | 601 | 601 | 601 | - |
| **001.70.72.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,000 | 2,350 | 2,350 | 2,350 | - |
| **001.70.73.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 147,964 | 151,353 | 151,353 | 156,164 | 4,811 |
| **001.70.73.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 45,668 | 49,361 | 49,361 | 50,858 | 1,497 |
| **001.70.73.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 8,273 | 10,005 | 10,005 | 8,730 | (1,275) |
| **001.70.73.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 2,550 | 2,551 | 2,551 | 2,551 | - |
| **001.70.73.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,440 | 1,470 | 1,470 | 1,470 | - |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Employee Benefits | 6,275,683 | 6,655,769 | 6,704,069 | 6,874,391 | 218,622 |
| **001.70.01.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 157,752 | 156,707 | 156,707 | 176,278 | 19,571 |
| **001.70.01.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 114,169 | 250,860 | 250,860 | 276,510 | 25,650 |
| **001.70.01.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 3,208 | 3,352 | 3,352 | 3,692 | 340 |
| **001.70.01.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 18,054 | 19,975 | 19,975 | 24,612 | 4,637 |
| **001.70.01.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 11,927 | 12,891 | 12,891 | 14,903 | 2,012 |
| **001.70.01.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 19,261 | 20,391 | 20,391 | 21,307 | 916 |
| **001.70.01.00.0.000.512.003** | | | | | |
| Retirement Contributions Fire Pension Expense | 3,797,836 | 4,133,243 | 4,133,243 | 3,872,364 | (260,879) |
| **001.70.01.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 2,350 | 2,402 | 2,402 | 2,400 | (2) |
| **001.70.01.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 3,168 | 6,591 | 6,591 | 9,231 | 2,640 |
| **001.70.01.00.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | 141,017 | - | 44,000 | 99,990 | 99,990 |
| **001.70.01.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,890 | 1,800 | 2,340 | 2,100 | 300 |
| **001.70.71.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 1,526,112 | 1,541,179 | 1,541,179 | 1,833,141 | 291,962 |
| **001.70.71.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 38,849 | 42,381 | 42,381 | 50,210 | 7,829 |
| **001.70.71.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 151,466 | 159,327 | 159,327 | 167,893 | 8,566 |
| **001.70.71.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 34,622 | 34,700 | 36,100 | 37,403 | 2,703 |
| **001.70.71.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 5,366 | 10,494 | 10,494 | 6,174 | (4,320) |
| **001.70.71.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 45,000 | 53,400 | 53,400 | 56,700 | 3,300 |
| **001.70.71.00.0.000.513.005** | | | | | |
| Other Employee Benefits Ins. Opt-Out Incent. | 3,250 | 4,000 | 4,000 | 5,000 | 1,000 |
| **001.70.71.00.0.302.511.001** | | | | | |
| Social Security Contributions Social Security | 1,514 | 1,904 | 1,904 | 3,007 | 1,103 |
| **001.70.71.00.0.302.511.002** | | | | | |
| Social Security Contributions Medicare | 354 | 652 | 652 | 879 | 227 |
| **001.70.72.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 74,223 | 72,484 | 72,484 | 81,536 | 9,052 |
| **001.70.72.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,206 | 2,259 | 2,259 | 2,489 | 230 |
| **001.70.72.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 17,798 | 19,426 | 19,426 | 20,045 | 619 |
| **001.70.72.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 4,162 | 4,746 | 4,746 | 4,779 | 33 |
| **001.70.72.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 19,629 | 20,429 | 20,429 | 21,501 | 1,072 |
| **001.70.72.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 3,304 | 6,874 | 6,874 | - | (6,874) |
| **001.70.72.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,125 | - | 1,125 | - | - |
| **001.70.73.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 36,668 | 35,810 | 35,810 | 40,281 | 4,471 |
| **001.70.73.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 999 | 1,024 | 1,024 | 1,128 | 104 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.70.73.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 12,842 | 12,676 | 12,676 | 13,067 | 391 |
| **001.70.73.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 3,003 | 3,218 | 3,218 | 3,307 | 89 |
| **001.70.73.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 13,696 | 13,330 | 13,330 | 14,015 | 685 |
| **001.70.73.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,603 | 1,700 | 1,900 | 1,999 | 299 |
| **001.70.73.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 6,227 | 5,544 | 5,544 | 6,450 | 906 |
| **001.70.73.00.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 1,035 | - | 1,035 | - | - |
| Other Employee Costs | 158,343 | 187,200 | 184,090 | 213,145 | 25,945 |
| **001.70.01.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 7,141 | 9,300 | 9,300 | 9,750 | 450 |
| **001.70.01.00.0.000.520.001** | | | | | |
| Medical Examinations Medical Examinations | 27,371 | 30,000 | 27,000 | 30,600 | 600 |
| **001.70.01.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 5,364 | 4,000 | 4,000 | 4,000 | - |
| **001.70.01.00.0.000.524.001** | | | | | |
| Uniform Expense Uniform Expense | 8,404 | 16,250 | 16,250 | 19,850 | 3,600 |
| **001.70.71.00.0.000.525.002** | | | | | |
| Training Special Rescue Trng. | 8,679 | 9,900 | 9,990 | 9,990 | 90 |
| **001.70.71.00.0.000.525.004** | | | | | |
| Training Training | 52,565 | 65,000 | 65,000 | 85,000 | 20,000 |
| **001.70.71.00.0.000.525.005** | | | | | |
| Training CPR Trng. | 8,351 | 7,300 | 7,300 | 7,705 | 405 |
| **001.70.71.00.0.000.525.006** | | | | | |
| Training EMS Trng. | 28,917 | 31,500 | 31,500 | 31,500 | - |
| **001.70.71.00.0.302.520.001** | | | | | |
| Medical Examinations Medical Examinations | 1,928 | 3,200 | 3,200 | 3,200 | - |
| **001.70.71.00.0.302.524.001** | | | | | |
| Uniform Expense Uniform Expense | 2,215 | 2,800 | 2,800 | 2,800 | - |
| **001.70.71.00.0.302.525.004** | | | | | |
| Training Training | 2,911 | 4,200 | 4,000 | 5,000 | 800 |
| **001.70.72.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 890 | 750 | 750 | 750 | - |
| **001.70.72.00.0.000.525.004** | | | | | |
| Training Training | 2,735 | 2,000 | 2,000 | 2,000 | - |
| **001.70.73.00.0.000.525.004** | | | | | |
| Training Training | 872 | 1,000 | 1,000 | 1,000 | - |
| Contractual Services | 2,268,457 | 3,218,628 | 3,163,903 | 3,496,536 | 277,908 |
| **001.70.01.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 7,106 | 6,000 | 6,000 | 6,000 | - |
| **001.70.01.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 243 | 500 | 200 | 250 | (250) |
| **001.70.01.00.0.000.538.001** | | | | | |
| Memorial Gifts Memorial Gifts | 938 | 600 | 600 | 600 | - |
| **001.70.01.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 516 | 1,000 | 750 | 750 | (250) |
| **001.70.01.00.0.000.546.003** | | | | | |
| HR Expenses Employment Testing | 34,902 | 25,000 | 10,000 | 25,000 | - |
| **001.70.01.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 9,663 | 10,250 | 10,250 | 10,250 | - |
| **001.70.01.00.0.000.553.002** | | | | | |
| Capital Replacement Payments Technology Replacements | - | 399,276 | 399,276 | 399,276 | - |
| **001.70.01.00.0.000.553.003** | | | | | |
| Capital Replacement Payments Building Improvements | - | 241,250 | 241,250 | 241,250 | - |
| **001.70.01.00.0.000.559.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Safety Program Safety Program | 2,492 | 2,500 | 2,500 | 2,500 | - |
| **001.70.01.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 42,332 | 80,200 | 55,000 | 80,000 | (200) |
| **001.70.01.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 898 | 1,000 | 500 | 500 | (500) |
| **001.70.01.00.0.000.567.016** | | | | | |
| Fire Contractual Services GEMT State Share | 888,132 | 1,200,000 | 1,200,000 | 1,200,000 | - |
| **001.70.01.00.0.309.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 699,430 | 640,640 | 640,640 | 917,180 | 276,540 |
| **001.70.01.00.0.309.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 411,261 | 431,162 | 431,162 | 433,055 | 1,893 |
| **001.70.71.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 11,674 | 12,323 | 11,000 | 13,000 | 677 |
| **001.70.71.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 15,836 | 11,440 | 5,000 | 14,700 | 3,260 |
| **001.70.71.00.0.000.558.002** | | | | | |
| NWCD Dispatch Services NWCD - Fire | 110,741 | 120,000 | 120,000 | 120,000 | - |
| **001.70.71.00.0.000.567.001** | | | | | |
| Fire Contractual Services Glenview Training Facility | 15,417 | 17,340 | 13,700 | 14,700 | (2,640) |
| **001.70.71.00.0.000.567.003** | | | | | |
| Fire Contractual Services Ladder Testing | 2,237 | 1,122 | 1,300 | 1,800 | 678 |
| **001.70.71.00.0.000.567.015** | | | | | |
| Fire Contractual Services Breathing Air Comp. Service | 9,197 | 9,525 | 9,525 | 9,975 | 450 |
| **001.70.71.00.0.300.532.004** | | | | | |
| Equipment Maintenance & Repair Radio Maintenance | 1,167 | 2,000 | - | - | (2,000) |
| **001.70.72.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 500 | 250 | 250 | (250) |
| **001.70.72.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 653 | 1,000 | 1,000 | 1,000 | - |
| **001.70.73.00.0.000.567.002** | | | | | |
| Fire Contractual Services Siren Maintenance | 3,621 | 4,000 | 4,000 | 4,500 | 500 |
| Utilities | 13,762 | 14,000 | 14,000 | 17,000 | 3,000 |
| **001.70.71.00.0.300.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 13,762 | 14,000 | 14,000 | 17,000 | 3,000 |
| Insurance | 201,236 | 160,393 | 160,393 | 290,454 | 130,061 |
| **001.70.01.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 201,236 | 160,393 | 160,393 | 290,454 | 130,061 |
| Commodities & Supplies | 64,145 | 74,250 | 69,039 | 86,410 | 12,160 |
| **001.70.01.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 4,717 | 5,000 | 5,000 | 5,000 | - |
| **001.70.01.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 2,719 | 4,000 | 4,000 | 4,000 | - |
| **001.70.01.00.0.000.612.001** | | | | | |
| Publications Publications | - | 500 | 150 | 150 | (350) |
| **001.70.01.00.0.000.619.013** | | | | | |
| Fire Commodities Special Events Supplies | 4,409 | 3,500 | 3,500 | 3,500 | - |
| **001.70.71.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 2,484 | 5,000 | 5,000 | 5,000 | - |
| **001.70.71.00.0.000.614.001** | | | | | |
| Training Supplies Training Supplies | 4,774 | 6,000 | 6,000 | 10,800 | 4,800 |
| **001.70.71.00.0.000.619.006** | | | | | |
| Fire Commodities Chemical Supplies | 3,637 | 3,700 | 3,700 | 5,160 | 1,460 |
| **001.70.71.00.0.000.619.008** | | | | | |
| Fire Commodities Oxygen Tank Supplies | 3,411 | 6,400 | 4,000 | 5,000 | (1,400) |
| **001.70.71.00.0.000.619.011** | | | | | |
| Fire Commodities Firefighting Supplies | 2,601 | 2,750 | 2,750 | 2,750 | - |
| **001.70.71.00.0.300.608.001** | | | | | |
| Other Supplies Other Supplies | 1,969 | 1,500 | 2,000 | 3,500 | 2,000 |
| **001.70.71.00.0.309.616.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Vehicle Registration/License Vehicle Reg/License | 100 | - | - | - | - |
| **001.70.72.00.0.000.605.001** | | | | | |
| Other Equipment Other Equipment | 3,894 | 4,000 | 4,000 | 7,000 | 3,000 |
| **001.70.72.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 828 | 1,500 | 1,500 | 1,750 | 250 |
| **001.70.72.00.0.000.611.001** | | | | | |
| Photo Supplies Photo Supplies | 500 | 250 | 250 | 250 | - |
| **001.70.72.00.0.000.613.001** | | | | | |
| Reference Materials Reference Materials | 643 | 750 | 750 | 1,000 | 250 |
| **001.70.72.00.0.000.619.004** | | | | | |
| Fire Commodities Fire Safety Education Supplies | 7,398 | 8,000 | 8,000 | 8,150 | 150 |
| **001.70.72.00.0.000.622.001** | | | | | |
| General Open House Supplies | 8,617 | 4,500 | 4,500 | 8,500 | 4,000 |
| **001.70.73.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 1,487 | 3,600 | 3,600 | 3,600 | - |
| **001.70.73.00.0.000.605.001** | | | | | |
| Other Equipment Other Equipment | 330 | 600 | 600 | 600 | - |
| **001.70.73.00.0.000.608.003** | | | | | |
| Other Supplies Employee Go Kit Supplies | - | 2,000 | 2,000 | 2,000 | - |
| **001.70.73.00.0.000.619.001** | | | | | |
| Fire Commodities Educational Materials | 916 | 1,500 | 1,500 | 1,500 | - |
| **001.70.73.00.0.000.619.003** | | | | | |
| Fire Commodities Radio Equipment | 1,662 | 2,500 | 1,500 | 1,500 | (1,000) |
| **001.70.73.00.0.000.619.012** | | | | | |
| Fire Commodities EOC Supplies | 5,503 | 5,000 | 3,500 | 4,000 | (1,000) |
| **001.70.73.00.0.000.622.001** | | | | | |
| General Open House Supplies | 1,546 | 1,700 | 1,239 | 1,700 | - |
| Office Equipment | 1,000 | 750 | 750 | 750 | - |
| **001.70.01.00.0.000.656.004** | | | | | |
| Office Equipment Office Eqpt - Fire | 1,000 | 750 | 750 | 750 | - |
| Other Equipment | 196,411 | 206,322 | 199,222 | 223,085 | 16,763 |
| **001.70.01.00.0.000.665.034** | | | | | |
| Other Equipment Phys Cond Equip - Fire | 4,489 | 4,864 | 4,864 | 5,200 | 336 |
| **001.70.71.00.0.000.665.004** | | | | | |
| Other Equipment Breathing Apparatus | 5,430 | 6,450 | 6,450 | 6,450 | - |
| **001.70.71.00.0.000.665.017** | | | | | |
| Other Equipment Fire Hose & Appliances | 11,589 | 10,000 | 10,000 | 17,000 | 7,000 |
| **001.70.71.00.0.000.665.018** | | | | | |
| Other Equipment Firefighting Equipment | 4,685 | 6,500 | 6,500 | 6,750 | 250 |
| **001.70.71.00.0.000.665.021** | | | | | |
| Other Equipment Furniture & Equipment | 31,979 | 20,000 | 20,000 | 23,400 | 3,400 |
| **001.70.71.00.0.000.665.023** | | | | | |
| Other Equipment Haz-Mat Equipment | 5,863 | 6,348 | 6,348 | 5,975 | (373) |
| **001.70.71.00.0.000.665.032** | | | | | |
| Other Equipment Paramedic Equip | 44,448 | 46,000 | 46,000 | 48,000 | 2,000 |
| **001.70.71.00.0.000.665.040** | | | | | |
| Other Equipment Special Rescue Equip | 15,594 | 9,900 | 9,900 | 9,900 | - |
| **001.70.71.00.0.000.665.045** | | | | | |
| Other Equipment Turn Out Clothing | 51,604 | 72,160 | 72,160 | 77,410 | 5,250 |
| **001.70.71.00.0.000.665.051** | | | | | |
| Other Equipment Water Recovery Equip | 3,850 | 10,800 | 7,000 | 7,500 | (3,300) |
| **001.70.71.00.0.300.668.001** | | | | | |
| Radio Equipment Radio Equip -Fire | 9,948 | 8,500 | 5,000 | 7,500 | (1,000) |
| **001.70.71.00.0.302.665.045** | | | | | |
| Other Equipment Turn Out Clothing | 6,932 | 4,800 | 5,000 | 8,000 | 3,200 |
| **Public Works** | **10,628,952** | **16,808,544** | **14,362,826** | **13,475,694** | **(3,332,850)** |
| Building Improvements | - | 30,000 | - | 30,000 | - |
| **001.80.90.00.1.706.651.001** | | | | | |
| Other Public Facilities Other Public Buildings | - | 30,000 | - | 30,000 | - |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Personal Services, Salaries & Wages | 4,224,577 | 4,718,010 | 4,726,108 | 4,919,931 | 201,921 |
| **001.80.01.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 325,187 | 341,772 | 341,772 | 361,079 | 19,307 |
| **001.80.01.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 535 | 728 | 728 | 754 | 26 |
| **001.80.01.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,010 | 2,010 | 2,010 | 2,235 | 225 |
| **001.80.81.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 133,465 | 137,663 | 137,663 | 141,623 | 3,960 |
| **001.80.81.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | - | 9,888 | 9,988 | 10,234 | 346 |
| **001.80.81.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 540 | 541 | 541 | 541 | - |
| **001.80.81.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 540 | 540 | 540 | 630 | 90 |
| **001.80.81.00.8.400.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 37,433 | 39,517 | 39,517 | 40,158 | 641 |
| **001.80.81.00.8.400.503.001** | | | | | |
| Overtime Earnings Overtime | 5,561 | 11,333 | 11,333 | 11,730 | 397 |
| **001.80.81.00.8.400.504.001** | | | | | |
| Specialty Pay Specialty Pay | 30 | 31 | 31 | 31 | - |
| **001.80.81.00.8.400.506.001** | | | | | |
| Longevity Pay Longevity Pay | 155 | 140 | 140 | 185 | 45 |
| **001.80.81.81.0.350.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 277,470 | 300,910 | 300,910 | 308,218 | 7,308 |
| **001.80.81.81.0.350.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 7,652 | 8,250 | 8,250 | 8,250 | - |
| **001.80.81.81.0.350.503.001** | | | | | |
| Overtime Earnings Overtime | 49,743 | 89,893 | 89,893 | 93,041 | 3,148 |
| **001.80.81.81.0.350.506.001** | | | | | |
| Longevity Pay Longevity Pay | 945 | 795 | 795 | 1,205 | 410 |
| **001.80.81.81.0.351.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 37,420 | 40,031 | 40,031 | 40,102 | 71 |
| **001.80.81.81.0.351.503.001** | | | | | |
| Overtime Earnings Overtime | 6,657 | 12,195 | 12,195 | 12,621 | 426 |
| **001.80.81.81.0.351.506.001** | | | | | |
| Longevity Pay Longevity Pay | 90 | 60 | 60 | 100 | 40 |
| **001.80.81.81.0.352.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 74,760 | 81,994 | 81,994 | 84,459 | 2,465 |
| **001.80.81.81.0.352.503.001** | | | | | |
| Overtime Earnings Overtime | 16,707 | 22,928 | 22,928 | 23,731 | 803 |
| **001.80.81.81.0.353.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 82,197 | 87,429 | 87,429 | 89,801 | 2,372 |
| **001.80.81.81.0.353.503.001** | | | | | |
| Overtime Earnings Overtime | 15,241 | 26,897 | 26,897 | 27,839 | 942 |
| **001.80.81.81.0.353.506.001** | | | | | |
| Longevity Pay Longevity Pay | 240 | 60 | 60 | 275 | 215 |
| **001.80.81.81.0.354.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 383,971 | 414,576 | 414,576 | 415,427 | 851 |
| **001.80.81.81.0.354.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 448 | - | - | - | - |
| **001.80.81.81.0.354.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 49,114 | 32,000 | 40,000 | 42,000 | 10,000 |
| **001.80.81.81.0.354.503.001** | | | | | |
| Overtime Earnings Overtime | 57,220 | 89,690 | 89,690 | 92,830 | 3,140 |
| **001.80.81.81.0.354.504.001** | | | | | |
| Specialty Pay Specialty Pay | 1,279 | 1,358 | 1,358 | 1,044 | (314) |
| **001.80.81.81.0.354.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,565 | 1,575 | 1,575 | 1,865 | 290 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.80.81.82.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 563,930 | 597,434 | 597,434 | 598,316 | 882 |
| **001.80.81.82.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 21,309 | 21,914 | 21,914 | 22,545 | 631 |
| **001.80.81.82.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 110,841 | 119,362 | 119,360 | 123,541 | 4,179 |
| **001.80.81.82.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,730 | 2,090 | 2,090 | 2,080 | (10) |
| **001.80.82.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 132,204 | 136,409 | 136,409 | 140,884 | 4,475 |
| **001.80.82.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | - | 1,877 | 1,877 | 1,943 | 66 |
| **001.80.82.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 903 | 903 | 903 | 903 | - |
| **001.80.82.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 760 | 760 | 760 | 855 | 95 |
| **001.80.82.00.8.400.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 45,471 | 50,479 | 50,479 | 52,541 | 2,062 |
| **001.80.82.00.8.400.503.001** | | | | | |
| Overtime Earnings Overtime | 5,575 | 9,095 | 9,095 | 9,413 | 318 |
| **001.80.82.00.8.400.504.001** | | | | | |
| Specialty Pay Specialty Pay | 381 | 402 | 402 | 337 | (65) |
| **001.80.82.00.8.400.506.001** | | | | | |
| Longevity Pay Longevity Pay | 230 | 200 | 200 | 340 | 140 |
| **001.80.82.00.8.401.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 10,071 | 10,934 | 10,934 | 11,262 | 328 |
| **001.80.82.00.8.401.503.001** | | | | | |
| Overtime Earnings Overtime | 801 | 1,830 | 1,830 | 1,895 | 65 |
| **001.80.82.00.8.401.504.001** | | | | | |
| Specialty Pay Specialty Pay | 65 | 66 | 66 | 66 | - |
| **001.80.82.00.8.401.506.001** | | | | | |
| Longevity Pay Longevity Pay | 45 | 45 | 45 | 90 | 45 |
| **001.80.82.83.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 474,098 | 535,616 | 535,616 | 556,362 | 20,746 |
| **001.80.82.83.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 4,136 | 6,150 | 6,150 | 5,890 | (260) |
| **001.80.82.83.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 64,381 | 87,253 | 87,253 | 90,308 | 3,055 |
| **001.80.82.83.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 4,234 | 4,505 | 4,505 | 3,530 | (975) |
| **001.80.82.83.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,430 | 1,980 | 1,980 | 3,495 | 1,515 |
| **001.80.82.84.0.355.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 157,456 | 169,737 | 169,737 | 177,297 | 7,560 |
| **001.80.82.84.0.355.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 26,120 | 41,153 | 41,153 | 41,623 | 470 |
| **001.80.82.84.0.355.503.001** | | | | | |
| Overtime Earnings Overtime | 15,973 | 35,984 | 35,984 | 37,244 | 1,260 |
| **001.80.82.84.0.355.504.001** | | | | | |
| Specialty Pay Specialty Pay | 1,167 | 1,190 | 1,190 | 1,124 | (66) |
| **001.80.82.84.0.355.506.001** | | | | | |
| Longevity Pay Longevity Pay | 780 | 750 | 750 | 1,205 | 455 |
| **001.80.82.84.0.356.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 103,536 | 112,523 | 112,523 | 117,268 | 4,745 |
| **001.80.82.84.0.356.503.001** | | | | | |
| Overtime Earnings Overtime | 10,559 | 22,709 | 22,709 | 23,504 | 795 |
| **001.80.82.84.0.356.504.001** | | | | | |
| Specialty Pay Specialty Pay | 782 | 804 | 804 | 738 | (66) |
| **001.80.82.84.0.356.506.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Longevity Pay Longevity Pay | 505 | 475 | 475 | 795 | 320 |
| **001.80.83.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 781,276 | 835,195 | 835,195 | 954,190 | 118,995 |
| **001.80.83.00.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 36,176 | 30,179 | 30,179 | - | (30,179) |
| **001.80.83.00.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 15,883 | 23,400 | 23,400 | 23,400 | - |
| **001.80.83.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 1,725 | 32,504 | 32,504 | 33,642 | 1,138 |
| **001.80.83.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 83 | - | - | - | - |
| **001.80.83.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 3,700 | 3,700 | 3,700 | 3,600 | (100) |
| **001.80.83.86.0.357.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 57,086 | 58,916 | 58,916 | 60,850 | 1,934 |
| **001.80.83.86.0.357.503.001** | | | | | |
| Overtime Earnings Overtime | - | 4,683 | 4,683 | 4,847 | 164 |
| Employee Benefits | 1,401,611 | 1,520,654 | 1,528,278 | 1,738,795 | 218,141 |
| **001.80.01.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 50,630 | 50,234 | 50,234 | 56,507 | 6,273 |
| **001.80.01.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 56,165 | 75,720 | 75,720 | 81,185 | 5,465 |
| **001.80.01.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 821 | 863 | 863 | 952 | 89 |
| **001.80.01.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 18,526 | 20,870 | 20,870 | 23,099 | 2,229 |
| **001.80.01.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 4,897 | 5,225 | 5,225 | 5,922 | 697 |
| **001.80.01.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 22,913 | 23,479 | 23,479 | 25,128 | 1,649 |
| **001.80.01.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 583 | 601 | 6,000 | 6,000 | 5,399 |
| **001.80.01.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 15,843 | 16,095 | 16,095 | 8,985 | (7,110) |
| **001.80.01.00.0.000.513.003** | | | | | |
| Other Employee Benefits Retiree Sick Incentive | - | - | - | 30,003 | 30,003 |
| **001.80.81.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 19,654 | 17,347 | 17,347 | 19,513 | 2,166 |
| **001.80.81.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 538 | 468 | 468 | 516 | 48 |
| **001.80.81.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 8,750 | 10,242 | 10,242 | 10,257 | 15 |
| **001.80.81.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 2,077 | 2,397 | 2,397 | 2,400 | 3 |
| **001.80.81.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 10,137 | 10,753 | 10,753 | 10,984 | 231 |
| **001.80.81.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 13,263 | 17,058 | 17,058 | 12,125 | (4,933) |
| **001.80.81.00.8.400.510.001** | | | | | |
| Group Insurance Medical Insurance | 6,777 | 6,518 | 6,518 | 7,271 | 753 |
| **001.80.81.00.8.400.510.004** | | | | | |
| Group Insurance Dental Insurance | 191 | 195 | 195 | 215 | 20 |
| **001.80.81.00.8.400.511.001** | | | | | |
| Social Security Contributions Social Security | 2,695 | 3,313 | 3,313 | 3,405 | 92 |
| **001.80.81.00.8.400.511.002** | | | | | |
| Social Security Contributions Medicare | 633 | 780 | 780 | 802 | 22 |
| **001.80.81.00.8.400.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 2,840 | 3,389 | 3,389 | 3,566 | 177 |
| **001.80.81.00.8.400.513.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Employee Benefits Sick Leave Incentive | 231 | 251 | 251 | 200 | (51) |
| **001.80.81.00.8.400.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,557 | 2,101 | 2,101 | 2,561 | 460 |
| **001.80.81.81.0.350.510.001** | | | | | |
| Group Insurance Medical Insurance | 41,054 | 40,095 | 40,095 | 45,097 | 5,002 |
| **001.80.81.81.0.350.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,126 | 1,156 | 1,156 | 1,273 | 117 |
| **001.80.81.81.0.350.511.001** | | | | | |
| Social Security Contributions Social Security | 20,649 | 25,090 | 25,090 | 25,998 | 908 |
| **001.80.81.81.0.350.511.002** | | | | | |
| Social Security Contributions Medicare | 4,829 | 5,873 | 5,873 | 6,084 | 211 |
| **001.80.81.81.0.350.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 21,164 | 25,847 | 25,847 | 27,333 | 1,486 |
| **001.80.81.81.0.350.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,405 | 1,500 | 1,500 | 1,002 | (498) |
| **001.80.81.81.0.350.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 3,453 | 3,270 | 4,000 | 7,504 | 4,234 |
| **001.80.81.81.0.351.510.001** | | | | | |
| Group Insurance Medical Insurance | 6,767 | 6,611 | 6,611 | 7,331 | 720 |
| **001.80.81.81.0.351.510.004** | | | | | |
| Group Insurance Dental Insurance | 193 | 200 | 200 | 220 | 20 |
| **001.80.81.81.0.351.511.001** | | | | | |
| Social Security Contributions Social Security | 2,712 | 3,282 | 3,282 | 3,344 | 62 |
| **001.80.81.81.0.351.511.002** | | | | | |
| Social Security Contributions Medicare | 634 | 770 | 770 | 784 | 14 |
| **001.80.81.81.0.351.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 2,869 | 3,453 | 3,453 | 3,585 | 132 |
| **001.80.81.81.0.351.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 829 | 601 | 601 | 1,031 | 430 |
| **001.80.81.81.0.352.510.001** | | | | | |
| Group Insurance Medical Insurance | 6,840 | 6,679 | 6,679 | 7,513 | 834 |
| **001.80.81.81.0.352.510.004** | | | | | |
| Group Insurance Dental Insurance | 193 | 198 | 198 | 218 | 20 |
| **001.80.81.81.0.352.511.001** | | | | | |
| Social Security Contributions Social Security | 5,621 | 6,559 | 6,559 | 6,954 | 395 |
| **001.80.81.81.0.352.511.002** | | | | | |
| Social Security Contributions Medicare | 1,315 | 1,535 | 1,535 | 1,628 | 93 |
| **001.80.81.81.0.352.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 5,826 | 6,897 | 6,897 | 7,459 | 562 |
| **001.80.81.81.0.352.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 413 | 853 | 2,000 | 3,945 | 3,092 |
| **001.80.81.81.0.353.510.001** | | | | | |
| Group Insurance Medical Insurance | 13,031 | 12,729 | 12,729 | 14,242 | 1,513 |
| **001.80.81.81.0.353.510.004** | | | | | |
| Group Insurance Dental Insurance | 359 | 368 | 368 | 407 | 39 |
| **001.80.81.81.0.353.511.001** | | | | | |
| Social Security Contributions Social Security | 6,087 | 7,216 | 7,216 | 7,405 | 189 |
| **001.80.81.81.0.353.511.002** | | | | | |
| Social Security Contributions Medicare | 1,424 | 1,691 | 1,691 | 1,736 | 45 |
| **001.80.81.81.0.353.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 6,427 | 7,589 | 7,589 | 7,941 | 352 |
| **001.80.81.81.0.353.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 2,816 | 1,943 | 1,943 | 1,466 | (477) |
| **001.80.81.81.0.354.510.001** | | | | | |
| Group Insurance Medical Insurance | 72,205 | 71,451 | 71,451 | 80,579 | 9,128 |
| **001.80.81.81.0.354.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,086 | 2,173 | 2,173 | 2,491 | 318 |
| **001.80.81.81.0.354.511.001** | | | | | |
| Social Security Contributions Social Security | 30,205 | 33,903 | 33,903 | 35,028 | 1,125 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.80.81.81.0.354.511.002** | | | | | |
| Social Security Contributions Medicare | 7,067 | 7,944 | 7,944 | 8,210 | 266 |
| **001.80.81.81.0.354.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 28,413 | 33,549 | 33,549 | 34,693 | 1,144 |
| **001.80.81.81.0.354.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 793 | 801 | 801 | 750 | (51) |
| **001.80.81.81.0.354.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 5,951 | 6,650 | 6,650 | 10,788 | 4,138 |
| **001.80.81.82.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 131,756 | 128,094 | 128,094 | 150,134 | 22,040 |
| **001.80.81.82.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 3,885 | 3,980 | 3,980 | 4,388 | 408 |
| **001.80.81.82.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 42,240 | 46,865 | 46,865 | 47,943 | 1,078 |
| **001.80.81.82.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 9,889 | 10,964 | 10,964 | 11,216 | 252 |
| **001.80.81.82.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 45,246 | 49,283 | 49,283 | 51,424 | 2,141 |
| **001.80.81.82.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 2,196 | 2,200 | 2,200 | 2,050 | (150) |
| **001.80.81.82.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 7,908 | 12,810 | 12,810 | 24,668 | 11,858 |
| **001.80.82.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 20,714 | 19,574 | 19,574 | 27,176 | 7,602 |
| **001.80.82.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 740 | 758 | 758 | 835 | 77 |
| **001.80.82.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 8,069 | 8,793 | 8,793 | 9,140 | 347 |
| **001.80.82.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,887 | 2,058 | 2,058 | 2,139 | 81 |
| **001.80.82.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 8,540 | 9,229 | 9,229 | 9,784 | 555 |
| **001.80.82.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,129 | 2,354 | 2,354 | 3,333 | 979 |
| **001.80.82.00.8.400.510.001** | | | | | |
| Group Insurance Medical Insurance | 9,425 | 9,390 | 9,390 | 11,144 | 1,754 |
| **001.80.82.00.8.400.510.004** | | | | | |
| Group Insurance Dental Insurance | 280 | 292 | 292 | 352 | 60 |
| **001.80.82.00.8.400.511.001** | | | | | |
| Social Security Contributions Social Security | 3,138 | 3,762 | 3,762 | 3,913 | 151 |
| **001.80.82.00.8.400.511.002** | | | | | |
| Social Security Contributions Medicare | 734 | 885 | 885 | 919 | 34 |
| **001.80.82.00.8.400.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 3,277 | 3,955 | 3,955 | 4,179 | 224 |
| **001.80.82.00.8.400.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 72 | 100 | 100 | 100 | - |
| **001.80.82.00.8.400.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 351 | 332 | 332 | 323 | (9) |
| **001.80.82.00.8.401.510.001** | | | | | |
| Group Insurance Medical Insurance | 2,338 | 2,180 | 2,180 | 2,452 | 272 |
| **001.80.82.00.8.401.510.004** | | | | | |
| Group Insurance Dental Insurance | 69 | 66 | 66 | 73 | 7 |
| **001.80.82.00.8.401.511.001** | | | | | |
| Social Security Contributions Social Security | 667 | 816 | 816 | 837 | 21 |
| **001.80.82.00.8.401.511.002** | | | | | |
| Social Security Contributions Medicare | 156 | 193 | 193 | 198 | 5 |
| **001.80.82.00.8.401.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 705 | 974 | 974 | 1,072 | 98 |
| **001.80.82.00.8.401.513.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Employee Benefits Sick Leave Incentive | 72 | 100 | 100 | 100 | - |
| **001.80.82.00.8.401.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 67 | 143 | 143 | 65 | (78) |
| **001.80.82.83.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 94,057 | 95,948 | 95,948 | 116,634 | 20,686 |
| **001.80.82.83.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,797 | 2,987 | 2,987 | 3,752 | 765 |
| **001.80.82.83.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 33,441 | 39,635 | 39,635 | 41,175 | 1,540 |
| **001.80.82.83.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 7,821 | 9,276 | 9,276 | 9,633 | 357 |
| **001.80.82.83.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 34,868 | 41,278 | 41,278 | 43,771 | 2,493 |
| **001.80.82.83.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 144 | 150 | 200 | 200 | 50 |
| **001.80.82.83.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 4,653 | 3,538 | 3,538 | 4,203 | 665 |
| **001.80.82.84.0.355.510.001** | | | | | |
| Group Insurance Medical Insurance | 34,903 | 33,543 | 33,543 | 38,312 | 4,769 |
| **001.80.82.84.0.355.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,039 | 1,034 | 1,034 | 1,168 | 134 |
| **001.80.82.84.0.355.511.001** | | | | | |
| Social Security Contributions Social Security | 12,240 | 15,539 | 15,539 | 16,122 | 583 |
| **001.80.82.84.0.355.511.002** | | | | | |
| Social Security Contributions Medicare | 2,863 | 3,637 | 3,637 | 3,775 | 138 |
| **001.80.82.84.0.355.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 10,982 | 13,659 | 13,659 | 14,354 | 695 |
| **001.80.82.84.0.355.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 577 | 601 | 800 | 850 | 249 |
| **001.80.82.84.0.355.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 693 | 1,138 | 1,138 | 596 | (542) |
| **001.80.82.84.0.356.510.001** | | | | | |
| Group Insurance Medical Insurance | 22,682 | 21,920 | 21,920 | 25,237 | 3,317 |
| **001.80.82.84.0.356.510.004** | | | | | |
| Group Insurance Dental Insurance | 675 | 676 | 676 | 775 | 99 |
| **001.80.82.84.0.356.511.001** | | | | | |
| Social Security Contributions Social Security | 6,991 | 8,536 | 8,536 | 8,884 | 348 |
| **001.80.82.84.0.356.511.002** | | | | | |
| Social Security Contributions Medicare | 1,635 | 2,000 | 2,000 | 2,082 | 82 |
| **001.80.82.84.0.356.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 7,249 | 8,979 | 8,979 | 9,436 | 457 |
| **001.80.82.84.0.356.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 360 | 401 | 500 | 501 | 100 |
| **001.80.82.84.0.356.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 491 | 711 | 711 | 419 | (292) |
| **001.80.83.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 108,358 | 113,945 | 113,945 | 155,783 | 41,838 |
| **001.80.83.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,411 | 2,733 | 2,733 | 4,247 | 1,514 |
| **001.80.83.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 52,380 | 59,241 | 59,241 | 64,317 | 5,076 |
| **001.80.83.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 12,250 | 13,860 | 13,860 | 15,046 | 1,186 |
| **001.80.83.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 53,437 | 60,013 | 60,013 | 65,947 | 5,934 |
| **001.80.83.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 2,632 | 2,702 | 2,702 | 2,352 | (350) |
| **001.80.83.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 19,529 | 27,530 | 27,530 | 19,483 | (8,047) |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.80.83.86.0.357.510.001** | | | | | |
| Group Insurance Medical Insurance | 11,182 | 9,637 | 9,637 | 14,304 | 4,667 |
| **001.80.83.86.0.357.510.004** | | | | | |
| Group Insurance Dental Insurance | 254 | 260 | 260 | 440 | 180 |
| **001.80.83.86.0.357.511.001** | | | | | |
| Social Security Contributions Social Security | 3,435 | 3,950 | 3,950 | 4,080 | 130 |
| **001.80.83.86.0.357.511.002** | | | | | |
| Social Security Contributions Medicare | 803 | 924 | 924 | 955 | 31 |
| **001.80.83.86.0.357.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 3,750 | 4,148 | 4,148 | 4,370 | 222 |
| Other Employee Costs | 59,319 | 49,290 | 49,290 | 49,758 | 468 |
| **001.80.01.00.0.000.517.001** | | | | | |
| CDL Reimbursement CDL Reimbursement | 390 | 803 | 803 | 803 | - |
| **001.80.01.00.0.000.521.001** | | | | | |
| Other Employee Expenses Other Employee Exp. | 4,032 | 3,529 | 3,529 | 3,617 | 88 |
| **001.80.01.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 9,173 | 6,035 | 6,035 | 6,035 | - |
| **001.80.01.00.0.000.524.001** | | | | | |
| Uniform Expense Uniform Expense | 12,738 | 13,169 | 13,169 | 13,498 | 329 |
| **001.80.01.00.0.000.525.004** | | | | | |
| Training Training | 13,442 | 11,170 | 11,170 | 11,170 | - |
| **001.80.82.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 2,965 | 2,075 | 2,075 | 2,126 | 51 |
| **001.80.82.83.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 10,212 | 6,723 | 6,723 | 6,723 | - |
| **001.80.83.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 2,087 | 1,533 | 1,533 | 1,533 | - |
| **001.80.83.00.0.000.525.004** | | | | | |
| Training Training | 4,279 | 4,253 | 4,253 | 4,253 | - |
| Contractual Services | 2,884,346 | 4,390,336 | 4,391,443 | 4,094,008 | (296,328) |
| **001.80.01.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 178 | 596 | 596 | 610 | 14 |
| **001.80.01.00.0.000.544.002** | | | | | |
| Postage Postage Expense | 2,811 | 10,857 | 10,857 | 11,128 | 271 |
| **001.80.01.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 10,454 | 11,560 | 11,560 | 11,560 | - |
| **001.80.01.00.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 320,310 | 673,530 | 673,530 | 302,900 | (370,630) |
| **001.80.01.00.0.000.553.003** | | | | | |
| Capital Replacement Payments Building Improvements | - | 450,000 | 450,000 | 450,000 | - |
| **001.80.01.00.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 809,516 | 848,687 | 848,687 | 852,413 | 3,726 |
| **001.80.01.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 67,035 | 54,776 | 54,776 | 67,619 | 12,843 |
| **001.80.01.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 2,111 | 2,251 | 2,251 | 2,307 | 56 |
| **001.80.01.00.0.000.574.005** | | | | | |
| Public Works - General Contractual Uniform Rent/Cleaning | 14,716 | 16,238 | 16,238 | 16,643 | 405 |
| **001.80.81.81.0.350.547.001** | | | | | |
| Equipment Rental Other Eqpt Rental | - | 724 | 724 | 742 | 18 |
| **001.80.81.81.0.350.569.008** | | | | | |
| Water Contractual Services Refuse Disposal | 7,060 | 7,272 | 7,272 | 7,454 | 182 |
| **001.80.81.81.0.350.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 8,559 | 9,574 | 9,574 | 9,813 | 239 |
| **001.80.81.81.0.350.575.001** | | | | | |
| Public Works - Streets Contractual Brick Sidewalk Maintenance | 12,515 | 12,926 | 12,926 | 13,249 | 323 |
| **001.80.81.81.0.350.575.002** | | | | | |
| Public Works - Streets Contractual Crack Filling | - | 67,799 | 67,799 | 69,494 | 1,695 |
| **001.80.81.81.0.350.575.004** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Public Works - Streets Contractual Pavement Markings | - | 78,577 | 78,577 | 80,541 | 1,964 |
| **001.80.81.81.0.350.575.014** | | | | | |
| Public Works - Streets Contractual Streetscape Furnishing Maint. | 41,725 | 47,771 | 47,771 | 48,965 | 1,194 |
| **001.80.81.81.0.350.575.016** | | | | | |
| Public Works - Streets Contractual Sidewalk Maintenance | - | 59,714 | 59,714 | 61,207 | 1,493 |
| **001.80.81.81.0.351.547.001** | | | | | |
| Equipment Rental Other Eqpt Rental | - | 1,499 | 1,499 | 1,536 | 37 |
| **001.80.81.81.0.351.569.008** | | | | | |
| Water Contractual Services Refuse Disposal | 1,819 | 1,951 | 1,951 | 2,000 | 49 |
| **001.80.81.81.0.351.571.005** | | | | | |
| Sewer Contractual Services Catch Basin Cleaning | 5,513 | 8,049 | 8,049 | 8,250 | 201 |
| **001.80.81.81.0.351.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 3,297 | 3,680 | 3,680 | 3,772 | 92 |
| **001.80.81.81.0.351.575.002** | | | | | |
| Public Works - Streets Contractual Crack Filling | 7,300 | 7,755 | 7,755 | 7,949 | 194 |
| **001.80.81.81.0.353.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 2,865 | 3,266 | 3,266 | 3,348 | 82 |
| **001.80.81.81.0.353.571.004** | | | | | |
| Sewer Contractual Services Storm Sewer Repairs | - | 2,315 | 2,315 | 2,373 | 58 |
| **001.80.81.81.0.353.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 3,247 | 3,629 | 3,629 | 3,720 | 91 |
| **001.80.81.81.0.353.574.013** | | | | | |
| Public Works - General Contractual Opus Ponds - Maint | - | 3,375 | 3,375 | 3,459 | 84 |
| **001.80.81.81.0.354.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 5,254 | 7,180 | 7,180 | 7,360 | 180 |
| **001.80.81.81.0.354.547.001** | | | | | |
| Equipment Rental Other Eqpt Rental | 241 | 4,097 | 4,097 | 4,199 | 102 |
| **001.80.81.81.0.354.574.006** | | | | | |
| Public Works - General Contractual Weather Forecasting | 15,322 | 14,632 | 14,632 | 14,997 | 365 |
| **001.80.81.81.0.354.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 5,450 | 6,103 | 6,103 | 6,256 | 153 |
| **001.80.81.81.0.354.575.011** | | | | | |
| Public Works - Streets Contractual Snow Removal | 39,049 | 168,207 | 168,207 | 172,412 | 4,205 |
| **001.80.81.81.0.354.576.016** | | | | | |
| Public Works - Forestry Contractual Plow Damage Seeding Contract | 4,133 | 17,323 | 17,323 | 17,756 | 433 |
| **001.80.81.82.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 9,850 | 10,650 | 10,650 | 10,916 | 266 |
| **001.80.81.82.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 125,939 | 129,121 | 129,121 | 132,349 | 3,228 |
| **001.80.81.82.0.000.533.002** | | | | | |
| Building Maintenance & Repair Cleaning Service | 187,919 | 193,408 | 188,454 | 193,165 | (243) |
| **001.80.81.82.0.000.533.003** | | | | | |
| Building Maintenance & Repair Roof Repairs | - | 6,034 | 8,034 | 8,235 | 2,201 |
| **001.80.81.82.0.000.533.007** | | | | | |
| Building Maintenance & Repair HVAC Repairs | 66,128 | 88,830 | 93,784 | 96,129 | 7,299 |
| **001.80.81.82.0.000.533.008** | | | | | |
| Building Maintenance & Repair Overhead Door Repair | 24,926 | 28,135 | 28,135 | 28,838 | 703 |
| **001.80.81.82.0.000.533.009** | | | | | |
| Building Maintenance & Repair General Store Maint. | 4,269 | 4,913 | 4,913 | 5,036 | 123 |
| **001.80.81.82.0.000.533.010** | | | | | |
| Building Maintenance & Repair Historical Building Maint. | 7,524 | 11,152 | 11,152 | 11,431 | 279 |
| **001.80.81.82.0.000.574.002** | | | | | |
| Public Works - General Contractual Reseal Floors | 48,430 | 28,430 | 28,430 | 29,141 | 711 |
| **001.80.81.82.0.000.574.003** | | | | | |
| Public Works - General Contractual Reseal Walls | - | 22,958 | 22,985 | 23,532 | 574 |
| **001.80.82.83.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 3,130 | 5,464 | 5,464 | 5,601 | 137 |
| **001.80.82.83.0.000.569.008** | | | | | |
| Water Contractual Services Refuse Disposal | 5,459 | 5,811 | 5,811 | 5,956 | 145 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.80.82.83.0.000.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 7,881 | 8,283 | 8,283 | 8,490 | 207 |
| **001.80.82.83.0.000.576.006** | | | | | |
| Public Works - Forestry Contractual Tree Removal | 141,411 | 146,404 | 146,404 | 150,064 | 3,660 |
| **001.80.82.83.0.000.576.007** | | | | | |
| Public Works - Forestry Contractual Stump Removal | 56,908 | 66,704 | 66,704 | 68,372 | 1,668 |
| **001.80.82.83.0.000.576.008** | | | | | |
| Public Works - Forestry Contractual Perennial Flower Maintenance | 1,635 | 3,879 | 3,879 | 3,976 | 97 |
| **001.80.82.83.0.000.576.011** | | | | | |
| Public Works - Forestry Contractual Tree Trimming | 235,400 | 242,462 | 242,462 | 248,524 | 6,062 |
| **001.80.82.83.0.000.576.013** | | | | | |
| Public Works - Forestry Contractual Tree Treatments/Spraying | 33,871 | 39,389 | 39,389 | 40,374 | 985 |
| **001.80.82.84.0.355.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 7,403 | 8,602 | 8,602 | 8,817 | 215 |
| **001.80.82.84.0.355.574.011** | | | | | |
| Public Works - General Contractual St-scape Corr Maint | 192,659 | 224,755 | 224,755 | 230,374 | 5,619 |
| **001.80.82.84.0.355.574.014** | | | | | |
| Public Works - General Contractual Grounds Maintenance | 90,289 | 111,477 | 111,477 | 114,264 | 2,787 |
| **001.80.82.84.0.355.575.010** | | | | | |
| Public Works - Streets Contractual Railroad Station Maintenance | 4,370 | 1,500 | 1,500 | 1,538 | 38 |
| **001.80.82.84.0.355.576.014** | | | | | |
| Public Works - Forestry Contractual Contract Spraying | 14,237 | 14,668 | 14,668 | 15,035 | 367 |
| **001.80.82.84.0.355.576.015** | | | | | |
| Public Works - Forestry Contractual Contract Sprinkler Maintenance | 11,699 | 14,410 | 14,410 | 14,770 | 360 |
| **001.80.82.84.0.356.574.010** | | | | | |
| Public Works - General Contractual Beautify RR ROW | 1,497 | 2,953 | 2,953 | 3,027 | 74 |
| **001.80.83.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 137,850 | 163,591 | 163,591 | 167,680 | 4,089 |
| **001.80.83.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 60 | 1,739 | 1,739 | 1,782 | 43 |
| **001.80.83.00.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 10,620 | 14,420 | 14,420 | 12,020 | (2,400) |
| **001.80.83.00.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 42,401 | 44,453 | 44,453 | 44,648 | 195 |
| **001.80.83.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 4,134 | 4,286 | 4,286 | 4,961 | 675 |
| **001.80.83.00.0.000.562.004** | | | | | |
| Records Management Maps & Plats | 3,237 | 1,332 | 1,332 | 1,365 | 33 |
| **001.80.83.00.0.000.577.004** | | | | | |
| Public Works - Engineering Contractual ROW Restoration | 6,391 | 7,990 | 7,990 | 8,190 | 200 |
| **001.80.83.86.0.357.577.001** | | | | | |
| Public Works - Engineering Contractual Streetlight Maint | - | 5,000 | 5,000 | 5,125 | 125 |
| **001.80.83.86.0.357.577.002** | | | | | |
| Public Works - Engineering Contractual Traffic Light Maint | - | 112,300 | 112,300 | 115,108 | 2,808 |
| **001.80.83.86.0.357.577.003** | | | | | |
| Public Works - Engineering Contractual Traffic Signal Device | 6,340 | 8,920 | 8,000 | 9,143 | 223 |
| Infrastructure | 1,256,015 | 4,629,634 | 2,199,237 | 1,056,714 | (3,572,920) |
| **001.80.90.00.0.704.674.001** | | | | | |
| Needs Study Intersection Studies | 400,814 | 3,078,397 | 1,235,000 | - | (3,078,397) |
| **001.80.90.00.0.704.676.003** | | | | | |
| Streetlights & Traffic Signals Traffic Signal Repl | - | - | - | 100,000 | 100,000 |
| **001.80.90.00.0.705.675.003** | | | | | |
| Sidewalks Sidewalk Share-Cost Program | 328,389 | 335,000 | 335,000 | 300,000 | (35,000) |
| **001.80.90.00.0.705.675.007** | | | | | |
| Sidewalks Brick Sidewalks | - | 50,000 | 50,000 | 50,000 | - |
| **001.80.90.00.0.710.679.005** | | | | | |
| Other Infrastructure Reforestation | 60,402 | 63,012 | 63,012 | - | (63,012) |
| **001.80.90.00.0.710.679.006** | | | | | |
| Other Infrastructure Tree Repl - Village | 77,017 | 79,531 | 79,531 | 256,714 | 177,183 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.80.90.00.0.710.679.007** | | | | | |
| Other Infrastructure Tree Repl - Cost Rec | 89,363 | 91,897 | 91,897 | - | (91,897) |
| **001.80.90.00.0.710.679.008** | | | | | |
| Other Infrastructure Tree Repl - Pub Prop | 11,810 | 14,797 | 14,797 | - | (14,797) |
| **001.80.90.00.1.705.675.009** | | | | | |
| Sidewalks Sidewalk Imp Program (CIP) | 288,220 | 330,000 | 330,000 | 350,000 | 20,000 |
| **001.80.90.00.1.705.676.001** | | | | | |
| Streetlights & Traffic Signals Streetlight Improv | - | 587,000 | - | - | (587,000) |
| Utilities | 61,312 | 307,989 | 301,959 | 309,660 | 1,671 |
| **001.80.01.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 6,764 | 4,777 | 4,777 | 4,896 | 119 |
| **001.80.81.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 4,212 | 4,777 | 4,777 | 4,896 | 119 |
| **001.80.81.82.0.000.585.001** | | | | | |
| Natural Gas Natural Gas | 1,245 | 36,013 | 36,013 | 36,913 | 900 |
| **001.80.81.82.0.000.591.001** | | | | | |
| Water & Sewer Water & Sewer | 17,705 | 16,913 | 11,033 | 11,309 | (5,604) |
| **001.80.82.83.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 5,582 | 8,606 | 8,606 | 8,821 | 215 |
| **001.80.83.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 4,452 | 6,753 | 6,753 | 6,921 | 168 |
| **001.80.83.86.0.357.587.001** | | | | | |
| Electricity - Street Lights Electricity - Street Lights | 1,956 | 5,150 | 5,000 | 5,279 | 129 |
| **001.80.83.86.0.357.588.001** | | | | | |
| Electricity - Street Lights Electricity - Street Lights | 19,396 | 225,000 | 225,000 | 230,625 | 5,625 |
| Insurance | 256,818 | 183,262 | 183,262 | 267,735 | 84,473 |
| **001.80.01.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 256,818 | 183,262 | 183,262 | 267,735 | 84,473 |
| Commodities & Supplies | 438,934 | 911,766 | 915,646 | 939,801 | 28,035 |
| **001.80.01.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 175 | 558 | 558 | 746 | 188 |
| **001.80.01.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 10,380 | 10,617 | 10,617 | 10,882 | 265 |
| **001.80.01.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 712 | 799 | 799 | 818 | 19 |
| **001.80.01.00.0.000.614.001** | | | | | |
| Training Supplies Training Supplies | 1,698 | 1,731 | 1,731 | 1,731 | - |
| **001.80.01.00.0.000.616.001** | | | | | |
| Vehicle Registration/License Vehicle Reg/License | 189 | - | - | - | - |
| **001.80.01.00.0.000.622.001** | | | | | |
| General Open House Supplies | 23,438 | 23,893 | 23,893 | 24,490 | 597 |
| **001.80.81.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 237 | 3,921 | 3,921 | 4,289 | 368 |
| **001.80.81.00.8.400.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 13 | 217 | 217 | 237 | 20 |
| **001.80.81.81.0.350.622.002** | | | | | |
| General Small Tools | 702 | 724 | 724 | 742 | 18 |
| **001.80.81.81.0.350.624.003** | | | | | |
| Public Works - Streets Refuse Containers | - | 633 | 633 | 648 | 15 |
| **001.80.81.81.0.350.624.006** | | | | | |
| Public Works - Streets Guard Rail Supplies | 355 | 761 | 761 | 780 | 19 |
| **001.80.81.81.0.350.624.008** | | | | | |
| Public Works - Streets Patching Materials | 57,231 | 65,016 | 45,016 | 46,141 | (18,875) |
| **001.80.81.81.0.350.624.011** | | | | | |
| Public Works - Streets St Sweeper Supplies | 7,097 | 7,310 | 7,310 | 7,493 | 183 |
| **001.80.81.81.0.351.622.002** | | | | | |
| General Small Tools | 694 | 747 | 747 | 765 | 18 |
| **001.80.81.81.0.351.622.007** | | | | | |
| General Snow Plow Blades | 1,117 | 1,722 | 1,722 | 1,765 | 43 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **001.80.81.81.0.351.624.007** | | | | | |
| Public Works - Streets Basin Supplies | 937 | 1,008 | 1,008 | 1,033 | 25 |
| **001.80.81.81.0.351.624.008** | | | | | |
| Public Works - Streets Patching Materials | 6,691 | 6,924 | 6,924 | 7,097 | 173 |
| **001.80.81.81.0.351.624.009** | | | | | |
| Public Works - Streets Salt/Calcium Chloride | 5,611 | 23,187 | 23,187 | 23,767 | 580 |
| **001.80.81.81.0.351.624.010** | | | | | |
| Public Works - Streets Salt Spreader Parts | - | 1,587 | 1,587 | 1,627 | 40 |
| **001.80.81.81.0.351.624.011** | | | | | |
| Public Works - Streets St Sweeper Supplies | - | 1,909 | 1,909 | 1,957 | 48 |
| **001.80.81.81.0.352.622.002** | | | | | |
| General Small Tools | 662 | 645 | 645 | 661 | 16 |
| **001.80.81.81.0.352.622.006** | | | | | |
| General Emergency Barricades | 2,077 | 2,325 | 2,325 | 2,383 | 58 |
| **001.80.81.81.0.352.622.008** | | | | | |
| General Sign Making Materials | 32,508 | 33,762 | 33,762 | 34,606 | 844 |
| **001.80.81.81.0.352.624.004** | | | | | |
| Public Works - Streets Folding Stop Signs | 668 | 695 | 695 | 712 | 17 |
| **001.80.81.81.0.352.624.012** | | | | | |
| Public Works - Streets Traffic Marking Paint | 717 | 747 | 747 | 766 | 19 |
| **001.80.81.81.0.353.624.005** | | | | | |
| Public Works - Streets Det/Ret Supplies | - | 1,587 | 1,587 | 1,627 | 40 |
| **001.80.81.81.0.353.624.007** | | | | | |
| Public Works - Streets Basin Supplies | 4,119 | 9,952 | 9,952 | 10,201 | 249 |
| **001.80.81.81.0.354.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 28 | 264 | 264 | 301 | 37 |
| **001.80.81.81.0.354.622.005** | | | | | |
| General Restoration Materials | 4,034 | 4,913 | 4,913 | 5,036 | 123 |
| **001.80.81.81.0.354.622.007** | | | | | |
| General Snow Plow Blades | 4,465 | 5,857 | 5,857 | 6,003 | 146 |
| **001.80.81.81.0.354.624.009** | | | | | |
| Public Works - Streets Salt/Calcium Chloride | - | 407,450 | 427,450 | 438,136 | 30,686 |
| **001.80.81.81.0.354.624.010** | | | | | |
| Public Works - Streets Salt Spreader Parts | - | 4,234 | 4,234 | 4,340 | 106 |
| **001.80.81.81.0.354.624.013** | | | | | |
| Public Works - Streets Snow Blowers | - | 1,576 | 1,576 | 1,615 | 39 |
| **001.80.81.82.0.000.622.002** | | | | | |
| General Small Tools | 568 | 585 | 585 | 600 | 15 |
| **001.80.81.82.0.000.624.002** | | | | | |
| Public Works - Streets Custodial Supplies | 52,727 | 64,648 | 64,648 | 66,264 | 1,616 |
| **001.80.81.82.0.000.627.002** | | | | | |
| Gas Generators | - | - | 3,880 | 3,977 | 3,977 |
| **001.80.81.82.0.000.628.001** | | | | | |
| Maintenance & Repair Supplies M&R Supplies - VH | 30,063 | 31,568 | 31,568 | 32,357 | 789 |
| **001.80.81.82.0.000.628.003** | | | | | |
| Maintenance & Repair Supplies M&R Supplies - PW | 20,419 | 23,678 | 23,678 | 24,270 | 592 |
| **001.80.81.82.0.000.628.004** | | | | | |
| Maintenance & Repair Supplies M&R Supplies - Sta 12 | 4,829 | 6,446 | 6,446 | 6,607 | 161 |
| **001.80.81.82.0.000.628.005** | | | | | |
| Maintenance & Repair Supplies M&R Supplies - Sta 14 | 10,432 | 11,123 | 11,123 | 11,401 | 278 |
| **001.80.81.82.0.000.628.006** | | | | | |
| Maintenance & Repair Supplies M&R Supplies -CC Ctr | 2,073 | 3,139 | 3,139 | 3,217 | 78 |
| **001.80.81.82.0.000.628.008** | | | | | |
| Maintenance & Repair Supplies M&R Supplies-Police HQ | 10,162 | 16,881 | 16,881 | 17,303 | 422 |
| **001.80.81.82.0.000.628.009** | | | | | |
| Maintenance & Repair Supplies M&R Supplies- Sta 13 | 12,150 | 13,393 | 13,393 | 13,728 | 335 |
| **001.80.81.82.0.000.628.010** | | | | | |
| Maintenance & Repair Supplies M&R Supplies- Sta 11 | - | 6,446 | 6,446 | 6,607 | 161 |
| **001.80.82.00.0.000.603.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Clothing Supplies Clothing Supplies | 285 | 1,073 | 1,073 | 285 | (788) |
| **001.80.82.83.0.000.605.001** | | | | | |
| Other Equipment Other Equipment | 8,593 | 10,232 | 10,232 | 10,488 | 256 |
| **001.80.82.83.0.000.622.005** | | | | | |
| General Restoration Materials | 1,589 | 2,165 | 2,165 | 2,219 | 54 |
| **001.80.82.83.0.000.623.001** | | | | | |
| Public Works - Forestry Fertilizer | 1,211 | 1,423 | 1,423 | 1,459 | 36 |
| **001.80.82.84.0.355.622.002** | | | | | |
| General Small Tools | 572 | 592 | 592 | 607 | 15 |
| **001.80.82.84.0.355.622.003** | | | | | |
| General Grounds Maintenance Supplies | 8,195 | 9,319 | 9,319 | 9,552 | 233 |
| **001.80.82.84.0.355.622.004** | | | | | |
| General Lawn Care Equipment | 785 | 1,019 | 1,019 | 1,044 | 25 |
| **001.80.82.84.0.355.623.001** | | | | | |
| Public Works - Forestry Fertilizer | 251 | 259 | 259 | 265 | 6 |
| **001.80.82.84.0.356.622.002** | | | | | |
| General Small Tools | 100 | 247 | 247 | 253 | 6 |
| **001.80.82.84.0.356.623.002** | | | | | |
| Public Works - Forestry Tree/Bush/Flower Repl | 35,077 | 41,365 | 41,365 | 42,339 | 974 |
| **001.80.83.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 1,120 | 1,300 | 1,300 | 2,932 | 1,632 |
| **001.80.83.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 1,364 | 1,318 | 1,318 | 1,350 | 32 |
| **001.80.83.00.0.000.626.002** | | | | | |
| Public Works - Water/Sewer Engineering Supplies | 1,672 | 3,989 | 3,989 | 4,088 | 99 |
| **001.80.83.86.0.357.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 144 | 293 | 293 | 400 | 107 |
| **001.80.83.86.0.357.622.010** | | | | | |
| General Street Light Supplies | 27,737 | 31,994 | 31,994 | 32,794 | 800 |
| **001.80.90.00.1.709.605.001** | | | | | |
| Other Equipment Other Equipment | 40,261 | - | - | - | - |
| Office Equipment | 3,708 | 6,521 | 6,521 | 6,683 | 162 |
| **001.80.01.00.0.000.656.005** | | | | | |
| Office Equipment Office Eqpt - PW | 3,105 | 5,815 | 5,815 | 5,960 | 145 |
| **001.80.83.00.0.000.656.002** | | | | | |
| Office Equipment Office Eqpt - Eng | 603 | 706 | 706 | 723 | 17 |
| Other Equipment | 42,313 | 56,111 | 56,111 | 57,514 | 1,403 |
| **001.80.81.81.0.354.665.039** | | | | | |
| Other Equipment Snowplows | 10,461 | 13,239 | 13,239 | 13,570 | 331 |
| **001.80.82.84.0.355.665.014** | | | | | |
| Other Equipment Sprinkler System | 1,925 | 8,992 | 8,992 | 9,217 | 225 |
| **001.80.82.84.0.355.665.041** | | | | | |
| Other Equipment Repl St Furniture | 27,948 | 31,827 | 31,827 | 32,623 | 796 |
| **001.80.83.00.0.000.665.012** | | | | | |
| Other Equipment Engineering Equipment | 1,978 | 2,053 | 2,053 | 2,104 | 51 |
| Other Expenditures | - | 4,971 | 4,971 | 5,095 | 124 |
| **001.80.81.82.0.000.636.003** | | | | | |
| Other Expenditures General Store Property Taxes | - | 4,971 | 4,971 | 5,095 | 124 |
| **ND** | **20,315,653** | **11,756,580** | **6,756,580** | **7,708,370** | **(4,048,210)** |
| Interfund Transfers | 19,522,312 | 11,749,433 | 6,749,433 | 7,701,000 | (4,048,433) |
| **001.00.00.00.0.000.697.001** | | | | | |
| Transfers Transfer Out | 19,522,312 | 11,749,433 | 6,749,433 | 7,701,000 | (4,048,433) |
| Other Expenditures | 786,394 | - | - | - | - |
| **001.00.00.00.0.000.636.004** | | | | | |
| Other Expenditures Property Acquisition | 786,394 | - | - | - | - |
| Pension Benefits | 6,948 | 7,147 | 7,147 | 7,370 | 223 |
| **001.00.00.00.3.000.528.001** | | | | | |
| Pension Benefits & Refunds Retirement Pensions | 6,948 | 7,147 | 7,147 | 7,370 | 223 |
| **002-Debt Service Fund** | **4,532,139** | **4,524,180** | **4,524,180** | **4,525,050** | **870** |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **ND** | **4,532,139** | **4,524,180** | **4,524,180** | **4,525,050** | **870** |
| Bank & Fiscal Fees | 900 | 1,900 | 1,900 | 1,900 | - |
| **002.00.00.00.2.518.695.034** | | | | | |
| Bank & Fiscal Fees 2016 GO Bank Fees | 450 | 450 | 450 | 450 | - |
| **002.00.00.00.2.519.695.038** | | | | | |
| Bank & Fiscal Fees 2018B GO Bond Bank Fees | 450 | 450 | 450 | 450 | - |
| **002.00.00.00.2.578.695.044** | | | | | |
| Bank & Fiscal Fees 2022B G.O. Bank Fees | - | 1,000 | 1,000 | 1,000 | - |
| Bond Principal | 2,500,000 | 2,580,000 | 2,580,000 | 2,660,000 | 80,000 |
| **002.00.00.00.2.518.685.034** | | | | | |
| Bond Principal 2016 GO Bond Principal | 1,060,000 | 1,740,000 | 1,740,000 | 1,795,000 | 55,000 |
| **002.00.00.00.2.519.685.039** | | | | | |
| Bond Principal 2018B GO Bond Prin - Refunding | 770,000 | 155,000 | 155,000 | 160,000 | 5,000 |
| **002.00.00.00.2.578.685.044** | | | | | |
| Bond Principal 2022B G.O. Bond Principal | 670,000 | 685,000 | 685,000 | 705,000 | 20,000 |
| Interest Expense | 2,031,239 | 1,942,280 | 1,942,280 | 1,863,150 | (79,130) |
| **002.00.00.00.2.518.690.034** | | | | | |
| Bond Interest 2016 GO Bond Interest | 250,350 | 218,550 | 218,550 | 166,350 | (52,200) |
| **002.00.00.00.2.519.690.038** | | | | | |
| Bond Interest 2018B GO Bond Interest, P&FBuild | 1,444,250 | 1,444,250 | 1,444,250 | 1,444,250 | - |
| **002.00.00.00.2.519.690.039** | | | | | |
| Bond Interest 2018B GO Bond Int -Refunding | 124,500 | 86,000 | 86,000 | 78,250 | (7,750) |
| **002.00.00.00.2.578.690.044** | | | | | |
| Bond Interest 2022B G.O. Bond Interest | 212,139 | 193,480 | 193,480 | 174,300 | (19,180) |
| **020-Capital Improvement Fund** | **4,307,572** | **7,528,663** | **3,195,832** | **15,278,462** | **7,749,799** |
| **Village Administration** | **-** | **125,000** | **-** | **-** | **(125,000)** |
| Commodities & Supplies | - | 55,000 | - | - | (55,000) |
| **020.20.90.00.1.709.617.001** | | | | | |
| Community & Civic Services Civic Events Sign | - | 55,000 | - | - | (55,000) |
| Other Equipment | - | 70,000 | - | - | (70,000) |
| **020.20.90.00.1.709.665.008** | | | | | |
| Other Equipment Cable TV Bd Rm Equip-Repl | - | 70,000 | - | - | (70,000) |
| **Community Development** | **59,112** | **865,000** | **100,000** | **200,000** | **(665,000)** |
| Other Expenditures | 59,112 | 865,000 | 100,000 | 200,000 | (665,000) |
| **020.40.90.00.0.710.636.007** | | | | | |
| Other Expenditures Facade Program | 59,112 | 865,000 | 100,000 | 200,000 | (665,000) |
| **Police** | **-** | **300,000** | **-** | **-** | **(300,000)** |
| Other Equipment | - | 300,000 | - | - | (300,000) |
| **020.60.90.00.1.707.665.056** | | | | | |
| Other Equipment Mobile Video Rec Sys | - | 300,000 | - | - | (300,000) |
| **Fire** | **189,313** | **1,243,648** | **142,500** | **-** | **(1,243,648)** |
| Office Equipment | 93,119 | - | - | - | - |
| **020.70.90.00.1.707.655.008** | | | | | |
| Computer Equipment EOC Technology Upgrade | 93,119 | - | - | - | - |
| Other Equipment | 96,194 | 1,243,648 | 142,500 | - | (1,243,648) |
| **020.70.90.00.1.709.665.032** | | | | | |
| Other Equipment Paramedic Equip | - | 816,708 | 142,500 | - | (816,708) |
| **020.70.90.00.1.709.665.081** | | | | | |
| Other Equipment Extrication Equipment | - | 134,728 | - | - | (134,728) |
| **020.70.90.00.1.709.668.001** | | | | | |
| Radio Equipment Radio Equip -Fire | 96,194 | 292,212 | - | - | (292,212) |
| **Public Works** | **4,059,147** | **4,995,016** | **2,953,332** | **15,078,462** | **10,083,446** |
| Building Improvements | 1,978,336 | 1,009,994 | 623,075 | 570,825 | (439,169) |
| **020.80.90.00.0.706.645.020** | | | | | |
| Village Hall Facility Improvements | 71,916 | 187,619 | 100,000 | 80,850 | (106,769) |
| **020.80.90.00.0.706.646.020** | | | | | |
| Fire Station #12 Facility Improvements | 6,469 | - | - | - | - |
| **020.80.90.00.1.706.648.020** | | | | | |
| Fire Station Facility Improvements | 1,624,919 | 155,075 | 75,075 | 43,350 | (111,725) |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **020.80.90.00.1.706.649.020** | | | | | |
| Public Works Facility Facility Imp | 40,562 | 138,700 | 138,700 | 124,320 | (14,380) |
| **020.80.90.00.1.706.651.001** | | | | | |
| Other Public Facilities Other Public Buildings | 56,628 | 240,000 | 240,000 | 165,000 | (75,000) |
| **020.80.90.00.1.706.651.010** | | | | | |
| Other Public Facilities Repl HVAC-Pub Bldgs | 177,842 | 138,600 | 69,300 | 157,305 | 18,705 |
| **020.80.90.00.1.707.651.006** | | | | | |
| Other Public Facilities Connectivity | - | 150,000 | - | - | (150,000) |
| Infrastructure | 1,466,953 | 3,661,325 | 2,006,561 | 14,507,637 | 10,846,312 |
| **020.80.90.00.0.705.679.003** | | | | | |
| Other Infrastructure Parking Lot Imp | - | - | - | 400,000 | 400,000 |
| **020.80.90.00.1.703.677.005** | | | | | |
| Flood Control Detention Pond Improv | 530,286 | - | - | - | - |
| **020.80.90.00.1.704.679.028** | | | | | |
| Other Infrastructure Intersection Improvements | - | 650,000 | - | 650,000 | - |
| **020.80.90.00.1.705.675.007** | | | | | |
| Sidewalks Brick Sidewalks | 249,300 | - | - | - | - |
| **020.80.90.00.1.705.676.001** | | | | | |
| Streetlights & Traffic Signals Streetlight Improv | 70,609 | 243,980 | 243,980 | 215,859 | (28,121) |
| **020.80.90.00.1.705.676.007** | | | | | |
| Streetlights & Traffic Signals Corridor Streetlight Improvement | 51,591 | 5,409 | 5,409 | 780,000 | 774,591 |
| **020.80.90.00.1.705.676.008** | | | | | |
| Streetlights & Traffic Signals Res Streetlight Improv | 186,268 | 506,403 | 506,402 | 350,000 | (156,403) |
| **020.80.90.00.1.705.678.008** | | | | | |
| Streets Bridge Rehab | 8,719 | 355,000 | 105,000 | 461,000 | 106,000 |
| **020.80.90.00.1.705.679.002** | | | | | |
| Other Infrastructure Ped Bridge - Melas/Mead | 120,223 | 620,445 | 620,445 | 8,346,278 | 7,725,833 |
| **020.80.90.00.1.705.679.027** | | | | | |
| Other Infrastructure Bike Path Improvements | 249,957 | 1,280,088 | 525,325 | 3,304,500 | 2,024,412 |
| Other Expenditures | 613,858 | 323,697 | 323,696 | - | (323,697) |
| **020.80.90.00.1.704.636.033** | | | | | |
| Other Expenditures Central Road Ped Crossing | 613,858 | 323,697 | 323,696 | - | (323,697) |
| **023-Street Improvement Construc Fund** | **4,047,676** | **6,429,149** | **4,929,148** | **19,284,829** | **12,855,680** |
| **Public Works** | **4,047,676** | **6,429,149** | **4,929,148** | **19,284,829** | **12,855,680** |
| Contractual Services | 17,948 | 95,000 | 95,000 | 50,000 | (45,000) |
| **023.80.81.81.1.000.575.003** | | | | | |
| Public Works - Streets Contractual Pavement Evaluation Study | - | 55,000 | 55,000 | - | (55,000) |
| **023.80.81.81.1.000.575.006** | | | | | |
| Public Works - Streets Contractual Resurface Testing | 17,948 | 40,000 | 40,000 | 50,000 | 10,000 |
| Infrastructure | 4,029,727 | 6,334,149 | 4,834,148 | 19,234,829 | 12,900,680 |
| **023.80.90.00.0.705.678.003** | | | | | |
| Streets Resurfacing-SC Fund | 3,789,950 | 4,745,466 | 4,745,465 | 5,605,579 | 860,113 |
| **023.80.90.00.0.710.679.020** | | | | | |
| Other Infrastructure Traffic Imp | 7,321 | 50,000 | 50,000 | 400,000 | 350,000 |
| **023.80.90.00.1.704.678.009** | | | | | |
| Streets Street Reconstruction | 232,456 | 1,538,683 | 38,683 | 13,229,250 | 11,690,567 |
| **024-Flood Control Construction Fund** | **1,281,330** | **2,117,061** | **1,867,060** | **234,201** | **(1,882,860)** |
| **Public Works** | **1,281,330** | **2,117,061** | **1,867,060** | **234,201** | **(1,882,860)** |
| Contractual Services | 252,449 | 326,971 | 318,970 | 118,193 | (208,778) |
| **024.80.00.00.0.000.571.004** | | | | | |
| Sewer Contractual Services Storm Sewer Repairs | 55,721 | 57,395 | 57,395 | 58,830 | 1,435 |
| **024.80.00.00.0.000.583.001** | | | | | |
| Flood Control Contractual Services Levee Repairs & Services | 28,498 | 53,915 | 45,915 | 47,063 | (6,852) |
| **024.80.00.00.0.000.583.002** | | | | | |
| Flood Control Contractual Services Culvert & Ditch Maintenance | 25,654 | 12,000 | 12,000 | 12,300 | 300 |
| **024.80.01.00.1.702.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 142,576 | 203,661 | 203,660 | - | (203,661) |
| Infrastructure | 1,023,942 | 1,776,261 | 1,534,261 | 101,834 | (1,674,427) |
| **024.80.00.00.0.000.677.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Flood Control Creek Bank Stabilization | - | 17,000 | 25,000 | 25,625 | 8,625 |
| **024.80.00.00.0.000.677.002** | | | | | |
| Flood Control Creek Tree Trimming | 19,900 | 25,570 | 25,570 | 26,209 | 639 |
| **024.80.90.00.0.702.672.009** | | | | | |
| Sewer System Detention Basin Repairs | - | 300,000 | 50,000 | - | (300,000) |
| **024.80.90.00.0.702.677.001** | | | | | |
| Flood Control Creek Bank Stabilization | - | 60,000 | 60,000 | - | (60,000) |
| **024.80.90.00.0.702.677.004** | | | | | |
| Flood Control Priv Prop Drainage | 44,831 | 150,000 | 150,000 | 50,000 | (100,000) |
| **024.80.90.00.0.702.677.007** | | | | | |
| Flood Control Weller Creek Imp | 24,350 | 25,600 | 25,600 | - | (25,600) |
| **024.80.90.00.1.702.677.003** | | | | | |
| Flood Control Levee 37 | - | 50,000 | 50,000 | - | (50,000) |
| **024.80.90.00.1.703.677.005** | | | | | |
| Flood Control Detention Pond Improv | - | 325,000 | 325,000 | - | (325,000) |
| **024.80.90.00.1.703.677.019** | | | | | |
| Flood Control Storm Sewer Imp | 934,861 | 823,091 | 823,091 | - | (823,091) |
| Utilities | 4,939 | 8,090 | 8,090 | 8,292 | 202 |
| **024.80.00.00.0.000.585.001** | | | | | |
| Natural Gas Natural Gas | - | 3,090 | 3,090 | 3,167 | 77 |
| **024.80.00.00.0.000.586.001** | | | | | |
| Electricity Electricity | 4,939 | 5,000 | 5,000 | 5,125 | 125 |
| Commodities & Supplies | - | 5,739 | 5,739 | 5,882 | 143 |
| **024.80.00.00.0.000.629.001** | | | | | |
| Flood Control Supplies Levee Supplies | - | 5,739 | 5,739 | 5,882 | 143 |
| **036-Rural Special Service Area Fund** | **-** | **1,000,000** | **1,000,000** | **1,050,000** | **50,000** |
| **ND** | **-** | **1,000,000** | **1,000,000** | **1,050,000** | **50,000** |
| Interfund Transfers | - | 1,000,000 | 1,000,000 | 1,050,000 | 50,000 |
| **036.00.00.00.0.000.697.001** | | | | | |
| Transfers Transfer Out | - | 1,000,000 | 1,000,000 | 1,050,000 | 50,000 |
| **037-SMP TIF Fund** | **80,683** | **2,305,000** | **82,000** | **870,000** | **(1,435,000)** |
| **Village Administration** | **80,683** | **95,000** | **32,000** | **-** | **(95,000)** |
| Contractual Services | 80,683 | 95,000 | 32,000 | - | (95,000) |
| **037.20.00.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 71,534 | 45,000 | 30,000 | - | (45,000) |
| **037.20.00.00.0.000.531.007** | | | | | |
| Legal Services Legal TIF | 9,149 | 50,000 | 2,000 | - | (50,000) |
| **Community Development** | **-** | **50,000** | **50,000** | **870,000** | **820,000** |
| Contractual Services | - | - | - | 70,000 | 70,000 |
| **037.40.45.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | - | - | 70,000 | 70,000 |
| Other Expenditures | - | 50,000 | 50,000 | 800,000 | 750,000 |
| **037.40.45.00.0.000.636.019** | | | | | |
| Other Expenditures Developer Incentives | - | - | - | 750,000 | 750,000 |
| **037.40.90.00.0.710.636.007** | | | | | |
| Other Expenditures Facade Program | - | 50,000 | 50,000 | 50,000 | - |
| **Public Works** | **-** | **2,160,000** | **-** | **-** | **(2,160,000)** |
| Distribution Systems | - | 2,160,000 | - | - | (2,160,000) |
| **037.80.90.00.1.700.671.007** | | | | | |
| Water Distribution Water Main - New | - | 2,160,000 | - | - | (2,160,000) |
| **039-Pension Stabilization Fund** | **2,000,000** | **2,000,000** | **2,000,000** | **2,925,000** | **925,000** |
| **Police** | **1,000,000** | **1,000,000** | **1,000,000** | **1,462,500** | **462,500** |
| Employee Benefits | 1,000,000 | 1,000,000 | 1,000,000 | 1,462,500 | 462,500 |
| **039.60.01.00.0.000.512.002** | | | | | |
| Retirement Contributions Police Pension Expense | 1,000,000 | 1,000,000 | 1,000,000 | 1,462,500 | 462,500 |
| **Fire** | **1,000,000** | **1,000,000** | **1,000,000** | **1,462,500** | **462,500** |
| Employee Benefits | 1,000,000 | 1,000,000 | 1,000,000 | 1,462,500 | 462,500 |
| **039.70.01.00.0.000.512.003** | | | | | |
| Retirement Contributions Fire Pension Expense | 1,000,000 | 1,000,000 | 1,000,000 | 1,462,500 | 462,500 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **040-Refuse Disposal Fund** | **5,274,197** | **5,311,967** | **5,315,517** | **5,470,505** | **158,538** |
| **Finance** | **20,157** | **16,000** | **18,000** | **18,450** | **2,450** |
| Contractual Services | 20,157 | 16,000 | 18,000 | 18,450 | 2,450 |
| **040.30.01.00.0.102.563.003** | | | | | |
| Banking Fees Bank Processing Fees | 20,157 | 16,000 | 18,000 | 18,450 | 2,450 |
| **Public Works** | **5,254,041** | **5,295,967** | **5,297,517** | **5,452,055** | **156,088** |
| Personal Services, Salaries & Wages | 344,707 | 397,225 | 397,225 | 416,084 | 18,859 |
| **040.80.85.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 159,544 | 168,814 | 168,814 | 182,199 | 13,385 |
| **040.80.85.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 196 | 2,332 | 2,332 | 2,414 | 82 |
| **040.80.85.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,020 | 1,020 | 1,020 | 1,100 | 80 |
| **040.80.85.00.0.365.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 152,313 | 163,353 | 163,353 | 166,245 | 2,892 |
| **040.80.85.00.0.365.503.001** | | | | | |
| Overtime Earnings Overtime | 30,624 | 60,681 | 60,681 | 62,806 | 2,125 |
| **040.80.85.00.0.365.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,010 | 1,025 | 1,025 | 1,320 | 295 |
| Employee Benefits | 128,063 | 143,068 | 144,618 | 144,201 | 1,133 |
| **040.80.85.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 24,664 | 24,483 | 24,483 | 27,540 | 3,057 |
| **040.80.85.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 7,403 | 9,000 | 9,000 | 9,880 | 880 |
| **040.80.85.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 508 | 533 | 533 | 586 | 53 |
| **040.80.85.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 9,386 | 10,691 | 10,691 | 11,393 | 702 |
| **040.80.85.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 2,331 | 2,572 | 2,572 | 2,739 | 167 |
| **040.80.85.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 10,970 | 11,550 | 11,550 | 12,541 | 991 |
| **040.80.85.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 117 | 150 | 1,700 | 1,702 | 1,552 |
| **040.80.85.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 5,037 | 5,449 | 5,449 | 1,836 | (3,613) |
| **040.80.85.00.0.365.510.001** | | | | | |
| Group Insurance Medical Insurance | 35,519 | 34,691 | 34,691 | 38,866 | 4,175 |
| **040.80.85.00.0.365.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,058 | 1,085 | 1,085 | 1,195 | 110 |
| **040.80.85.00.0.365.511.001** | | | | | |
| Social Security Contributions Social Security | 11,353 | 14,547 | 14,547 | 14,442 | (105) |
| **040.80.85.00.0.365.511.002** | | | | | |
| Social Security Contributions Medicare | 2,656 | 3,405 | 3,405 | 3,383 | (22) |
| **040.80.85.00.0.365.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 12,171 | 15,427 | 15,427 | 15,597 | 170 |
| **040.80.85.00.0.365.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 137 | 150 | 150 | 150 | - |
| **040.80.85.00.0.365.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 4,754 | 9,335 | 9,335 | 2,351 | (6,984) |
| Other Employee Costs | 291 | 1,636 | 1,636 | 1,636 | - |
| **040.80.85.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | - | 231 | 231 | 231 | - |
| **040.80.85.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 291 | 1,405 | 1,405 | 1,405 | - |
| Contractual Services | 4,744,886 | 4,708,888 | 4,708,888 | 4,830,621 | 121,733 |
| **040.80.85.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 4,774 | 7,416 | 7,416 | 7,601 | 185 |
| **040.80.85.00.0.000.544.002** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Postage Postage Expense | 13,829 | 8,956 | 8,956 | 9,179 | 223 |
| **040.80.85.00.0.000.568.001** | | | | | |
| Refuse Contractual Services S/F Refuse Collection | 1,452,336 | 1,489,140 | 1,489,140 | 1,523,052 | 33,912 |
| **040.80.85.00.0.000.568.002** | | | | | |
| Refuse Contractual Services M/F Refuse Collection | 739,964 | 756,500 | 756,500 | 773,408 | 16,908 |
| **040.80.85.00.0.000.568.005** | | | | | |
| Refuse Contractual Services Tipping Fees - SWANCC | 1,143,496 | 1,126,752 | 1,126,752 | 1,165,401 | 38,649 |
| **040.80.85.00.0.000.568.006** | | | | | |
| Refuse Contractual Services Fixed Costs - SWANCC | 108,960 | - | - | - | - |
| **040.80.85.00.0.000.568.008** | | | | | |
| Refuse Contractual Services S/F Recycling | 763,308 | 782,544 | 782,544 | 800,628 | 18,084 |
| **040.80.85.00.0.000.568.009** | | | | | |
| Refuse Contractual Services M/F Recycling | 147,236 | 150,440 | 150,440 | 153,716 | 3,276 |
| **040.80.85.00.0.000.568.012** | | | | | |
| Refuse Contractual Services Tipping Fees | 15,923 | 13,360 | 13,360 | 13,694 | 334 |
| **040.80.85.00.0.000.568.013** | | | | | |
| Refuse Contractual Services Single Fam Yard Waste Collection | 221,130 | 226,872 | 226,872 | 233,448 | 6,576 |
| **040.80.85.00.0.000.568.014** | | | | | |
| Refuse Contractual Services Single Family Cart Rental | 24,540 | 25,080 | 25,080 | 25,620 | 540 |
| **040.80.85.00.0.000.568.015** | | | | | |
| Refuse Contractual Services Hazardous Waste Collection | 102,590 | 112,540 | 112,540 | 115,354 | 2,814 |
| **040.80.85.00.0.365.568.011** | | | | | |
| Refuse Contractual Services Street Sweeper Rental | 6,800 | 9,288 | 9,288 | 9,520 | 232 |
| Insurance | 18,629 | 16,380 | 16,380 | 29,876 | 13,496 |
| **040.80.85.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 18,629 | 16,380 | 16,380 | 29,876 | 13,496 |
| Commodities & Supplies | 17,465 | 28,770 | 28,770 | 29,637 | 867 |
| **040.80.85.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 150 | 313 | 313 | 470 | 157 |
| **040.80.85.00.0.000.623.006** | | | | | |
| Public Works - Forestry Recycling Supplies | - | 5,150 | 5,150 | 5,278 | 128 |
| **040.80.85.00.0.365.622.009** | | | | | |
| General Repair/Maint Supplies | - | 3,728 | 3,728 | 3,821 | 93 |
| **040.80.85.00.0.365.623.003** | | | | | |
| Public Works - Forestry St Sweeper Brooms | 6,077 | 6,259 | 6,259 | 6,415 | 156 |
| **040.80.85.00.0.365.623.004** | | | | | |
| Public Works - Forestry Leaf Machine Parts | 11,238 | 11,638 | 11,638 | 11,929 | 291 |
| **040.80.85.00.0.365.623.005** | | | | | |
| Public Works - Forestry Leaf Truck Boxes | - | 1,682 | 1,682 | 1,724 | 42 |
| **041-Motor Fuel Tax Fund** | **2,334,064** | **2,524,400** | **2,524,000** | **3,500,000** | **975,600** |
| **Public Works** | **2,334,064** | **2,524,400** | **2,524,000** | **3,500,000** | **975,600** |
| Contractual Services | 376,780 | - | - | - | - |
| **041.80.81.81.0.350.575.002** | | | | | |
| Public Works - Streets Contractual Crack Filling | 65,700 | - | - | - | - |
| **041.80.81.81.0.350.575.004** | | | | | |
| Public Works - Streets Contractual Pavement Markings | 76,045 | - | - | - | - |
| **041.80.81.81.0.350.575.016** | | | | | |
| Public Works - Streets Contractual Sidewalk Maintenance | 57,121 | - | - | - | - |
| **041.80.81.81.0.354.575.011** | | | | | |
| Public Works - Streets Contractual Snow Removal | 87,901 | - | - | - | - |
| **041.80.83.86.0.357.577.002** | | | | | |
| Public Works - Engineering Contractual Traffic Light Maint | 90,014 | - | - | - | - |
| Infrastructure | 1,449,872 | 2,524,400 | 2,524,000 | 3,500,000 | 975,600 |
| **041.80.90.00.0.704.676.003** | | | | | |
| Streetlights & Traffic Signals Traffic Signal Repl | - | 100,000 | 100,000 | - | (100,000) |
| **041.80.90.00.0.705.678.002** | | | | | |
| Streets Resurfacing - MFT Fund | 1,449,872 | 2,424,400 | 2,424,000 | 3,500,000 | 1,075,600 |
| Utilities | 233,351 | - | - | - | - |
| **041.80.83.86.0.357.588.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Electricity - Street Lights Electricity - Street Lights | 233,351 | - | - | - | - |
| Commodities & Supplies | 274,060 | - | - | - | - |
| **041.80.81.81.0.354.624.009** | | | | | |
| Public Works - Streets Salt/Calcium Chloride | 274,060 | - | - | - | - |
| **042-CDBG** | **135,137** | **283,285** | **283,285** | **489,568** | **206,283** |
| **Community Development** | **135,137** | **283,285** | **283,285** | **489,568** | **206,283** |
| Contractual Services | 135,137 | 283,285 | 283,285 | 489,568 | 206,283 |
| **042.40.41.00.0.152.572.002** | | | | | |
| CDBG Programs Pads to Hope, Inc. | - | 8,200 | 8,200 | 13,000 | 4,800 |
| **042.40.41.00.0.152.572.009** | | | | | |
| CDBG Programs Northwest CASA | 6,875 | 6,600 | 6,600 | 10,380 | 3,780 |
| **042.40.41.00.0.152.572.010** | | | | | |
| CDBG Programs Wings | 4,500 | 4,300 | 4,300 | 5,500 | 1,200 |
| **042.40.41.00.0.152.572.013** | | | | | |
| CDBG Programs Children's Advocacy Center | 3,375 | 4,300 | 4,300 | 6,000 | 1,700 |
| **042.40.41.00.0.152.572.014** | | | | | |
| CDBG Programs SPHCC Access to Care | - | 5,800 | 5,800 | 7,000 | 1,200 |
| **042.40.41.00.0.152.572.044** | | | | | |
| CDBG Programs Northwest Compass Inc. | 6,968 | 8,600 | 8,600 | 10,000 | 1,400 |
| **042.40.41.00.0.152.572.052** | | | | | |
| CDBG Programs Escorted Transportation Service | 1,374 | 1,793 | 1,793 | 1,800 | 7 |
| **042.40.41.00.0.152.572.054** | | | | | |
| CDBG Programs North Suburban Legal Aid Clinic | 1,017 | 2,900 | 2,900 | - | (2,900) |
| **042.40.41.00.0.154.572.042** | | | | | |
| CDBG Programs Single Family Rehab and WG | 71,623 | - | - | - | - |
| **042.40.41.00.0.154.572.045** | | | | | |
| CDBG Programs Search Inc. Rehab | 22,253 | 25,000 | 25,000 | 25,000 | - |
| **042.40.41.00.0.154.572.050** | | | | | |
| CDBG Programs Journeys The Road Home New Const | 8,500 | - | - | - | - |
| **042.40.41.00.0.154.572.055** | | | | | |
| CDBG Programs Connections Field | 8,653 | - | - | - | - |
| **042.40.41.00.0.154.572.057** | | | | | |
| CDBG Programs SF Rehab Prog-NW Housing Partner | - | 50,000 | 50,000 | 215,888 | 165,888 |
| **042.40.41.00.1.154.572.043** | | | | | |
| CDBG Programs Sidewalk Improvements | - | 165,792 | 165,792 | 195,000 | 29,208 |
| **043-Asset Seizure Fund** | **6,190** | **67,000** | **15,302** | **3,000** | **(64,000)** |
| **Police** | **6,190** | **67,000** | **15,302** | **3,000** | **(64,000)** |
| Other Employee Costs | - | 1,000 | - | 1,000 | - |
| **043.60.61.66.0.000.525.004** | | | | | |
| Training Training | - | 1,000 | - | 1,000 | - |
| Contractual Services | - | 2,000 | - | 2,000 | - |
| **043.60.61.66.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 1,000 | - | 1,000 | - |
| **043.60.61.66.0.000.566.012** | | | | | |
| Police Contractual Services Investigative Purchases | - | 1,000 | - | 1,000 | - |
| Motor Equipment | - | 64,000 | - | - | (64,000) |
| **043.60.90.00.1.708.660.003** | | | | | |
| Motor Equipment Police Vehicles | - | 64,000 | - | - | (64,000) |
| Other Equipment | 6,190 | - | 15,302 | - | - |
| **043.60.61.66.0.000.665.031** | | | | | |
| Other Equipment Other Equipment | 6,190 | - | 15,302 | - | - |
| **044-Federal Equitable Share Funds** | **26,939** | **1,500** | **23,342** | **1,500** | **-** |
| **Police** | **26,939** | **1,500** | **23,342** | **1,500** | **-** |
| Contractual Services | - | 500 | 1,000 | 500 | - |
| **044.60.61.66.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 500 | 1,000 | 500 | - |
| Other Equipment | 26,939 | 1,000 | 22,342 | 1,000 | - |
| **044.60.61.65.0.000.665.031** | | | | | |
| Other Equipment Other Equipment | 26,939 | 1,000 | 22,342 | 1,000 | - |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **045-DUI Fine Fund** | **12,800** | **2,000** | **10,840** | **-** | **(2,000)** |
| **Police** | **12,800** | **2,000** | **10,840** | **-** | **(2,000)** |
| Other Employee Costs | - | - | 8,550 | - | - |
| **045.60.61.65.0.000.525.004** | | | | | |
| Training Training | - | - | 8,550 | - | - |
| Contractual Services | - | 1,000 | - | - | (1,000) |
| **045.60.61.65.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 1,000 | - | - | (1,000) |
| Other Equipment | 12,800 | 1,000 | 2,290 | - | (1,000) |
| **045.60.61.65.0.000.665.031** | | | | | |
| Other Equipment Other Equipment | 12,800 | 1,000 | 2,290 | - | (1,000) |
| **046-Foreign Fire Tax Board Fund** | **176,579** | **151,000** | **152,500** | **281,800** | **130,800** |
| **Fire** | **176,579** | **151,000** | **152,500** | **281,800** | **130,800** |
| Other Employee Costs | 25,684 | 29,000 | 29,500 | 50,000 | 21,000 |
| **046.70.71.00.0.301.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 2,859 | 5,000 | 2,500 | 20,000 | 15,000 |
| **046.70.71.00.0.301.524.001** | | | | | |
| Uniform Expense Uniform Expense | 12,827 | 14,000 | 17,000 | 20,000 | 6,000 |
| **046.70.71.00.0.301.525.004** | | | | | |
| Training Training | 9,999 | 10,000 | 10,000 | 10,000 | - |
| Contractual Services | 14,493 | 11,000 | 18,000 | 111,800 | 100,800 |
| **046.70.71.00.0.301.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 14,020 | 10,000 | 17,000 | 110,000 | 100,000 |
| **046.70.71.00.0.301.544.002** | | | | | |
| Postage Postage Expense | 474 | 1,000 | 1,000 | 1,800 | 800 |
| Commodities & Supplies | 47,961 | 81,000 | 90,000 | 90,000 | 9,000 |
| **046.70.71.00.0.301.605.001** | | | | | |
| Other Equipment Other Equipment | 47,961 | 71,000 | 80,000 | 80,000 | 9,000 |
| **046.70.71.00.0.301.608.001** | | | | | |
| Other Supplies Other Supplies | - | 10,000 | 10,000 | 10,000 | - |
| Other Equipment | 88,440 | 30,000 | 15,000 | 30,000 | - |
| **046.70.71.00.0.301.665.021** | | | | | |
| Other Equipment Furniture & Equipment | 81,611 | 30,000 | 15,000 | 30,000 | - |
| **046.70.71.00.0.301.665.045** | | | | | |
| Other Equipment Turn Out Clothing | 6,829 | - | - | - | - |
| **048-Business District Fund** | **2,554,430** | **2,027,500** | **2,028,550** | **2,029,900** | **2,400** |
| **ND** | **2,554,430** | **2,027,500** | **2,028,550** | **2,029,900** | **2,400** |
| Interest Expense | 2,554,430 | 2,027,500 | 2,028,550 | 2,029,900 | 2,400 |
| **048.00.00.00.0.775.691.002** | | | | | |
| Note Interest Randhurst RDA Interest Payment | 2,554,430 | 2,027,500 | 2,028,550 | 2,029,900 | 2,400 |
| **049-Prospect and Main TIF District** | **3,012,015** | **11,097,738** | **13,357,738** | **5,822,738** | **(5,275,000)** |
| **Village Administration** | **42,693** | **85,000** | **-** | **-** | **(85,000)** |
| Contractual Services | 42,693 | 85,000 | - | - | (85,000) |
| **049.20.00.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 4,150 | 10,000 | - | - | (10,000) |
| **049.20.00.00.0.000.531.007** | | | | | |
| Legal Services Legal TIF | 38,543 | 75,000 | - | - | (75,000) |
| **Finance** | **638,126** | **815,000** | **815,000** | **815,000** | **-** |
| Contractual Services | - | 10,000 | 10,000 | 10,000 | - |
| **049.30.00.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | - | 10,000 | 10,000 | 10,000 | - |
| Other Expenditures | 638,126 | 805,000 | 805,000 | 805,000 | - |
| **049.30.00.00.0.000.636.011** | | | | | |
| Other Expenditures Property Tax Expense | 1,521 | 5,000 | 5,000 | 5,000 | - |
| **049.30.00.00.0.000.637.001** | | | | | |
| Return of Increment Rtrn of Inc-Cook County | 636,605 | 800,000 | 800,000 | 800,000 | - |
| **Community Development** | **1,021,808** | **7,225,000** | **9,570,000** | **3,415,000** | **(3,810,000)** |
| Contractual Services | 71,999 | 70,000 | 70,000 | 90,000 | 20,000 |
| **049.40.45.00.0.000.530.006** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Professional Services Other Prof. Serv. | 71,999 | 70,000 | 70,000 | 90,000 | 20,000 |
| Other Expenditures | 949,810 | 7,155,000 | 9,500,000 | 3,325,000 | (3,830,000) |
| **049.40.01.00.0.000.636.035** | | | | | |
| Other Expenditures Student Impact Fees | 222,286 | 475,000 | 475,000 | 475,000 | - |
| **049.40.45.00.0.000.636.019** | | | | | |
| Other Expenditures Developer Incentives | 727,524 | 1,480,000 | 4,000,000 | 2,750,000 | 1,270,000 |
| **049.40.90.00.0.710.636.004** | | | | | |
| Other Expenditures Property Acquisition | - | 5,000,000 | 5,000,000 | - | (5,000,000) |
| **049.40.90.00.0.710.636.007** | | | | | |
| Other Expenditures Facade Program | - | 200,000 | 25,000 | 100,000 | (100,000) |
| **Public Works** | **-** | **1,625,000** | **1,625,000** | **200,000** | **(1,425,000)** |
| Infrastructure | - | 200,000 | 200,000 | 200,000 | - |
| **049.80.90.00.1.705.675.007** | | | | | |
| Sidewalks Brick Sidewalks | - | 200,000 | 200,000 | 200,000 | - |
| Land Improvements | - | 1,425,000 | 1,425,000 | - | (1,425,000) |
| **049.80.90.00.1.704.641.001** | | | | | |
| Land Improvements Corridor Improv | - | 1,425,000 | 1,425,000 | - | (1,425,000) |
| **ND** | **1,309,388** | **1,347,738** | **1,347,738** | **1,392,738** | **45,000** |
| Bank & Fiscal Fees | 900 | 900 | 900 | 900 | - |
| **049.00.00.00.2.565.695.036** | | | | | |
| Bank & Fiscal Fees 2017 GO Bank Fees | 225 | 225 | 225 | 225 | - |
| **049.00.00.00.2.566.695.037** | | | | | |
| Bank & Fiscal Fees 2018A GO Bank Fees | 225 | 225 | 225 | 225 | - |
| **049.00.00.00.2.568.695.041** | | | | | |
| Bank & Fiscal Fees 2019B GO Bond Bank Fees | 450 | 450 | 450 | 450 | - |
| Bond Principal | 670,000 | 740,000 | 740,000 | 820,000 | 80,000 |
| **049.00.00.00.2.565.685.036** | | | | | |
| Bond Principal 2017 GO Bond Principal | 185,000 | 200,000 | 200,000 | 220,000 | 20,000 |
| **049.00.00.00.2.566.685.037** | | | | | |
| Bond Principal 2018A GO Bond Principal | 250,000 | 280,000 | 280,000 | 310,000 | 30,000 |
| **049.00.00.00.2.568.685.041** | | | | | |
| Bond Principal 2019B GO Bond Principal | 235,000 | 260,000 | 260,000 | 290,000 | 30,000 |
| Interest Expense | 638,488 | 606,838 | 606,838 | 571,838 | (35,000) |
| **049.00.00.00.2.565.690.036** | | | | | |
| Bond Interest 2017 GO Bond Interest | 140,769 | 133,369 | 133,369 | 125,369 | (8,000) |
| **049.00.00.00.2.566.690.037** | | | | | |
| Bond Interest 2018A GO Bond Interest | 242,869 | 230,369 | 230,369 | 216,369 | (14,000) |
| **049.00.00.00.2.568.690.041** | | | | | |
| Bond Interest 2019B GO Bond Interest | 254,850 | 243,100 | 243,100 | 230,100 | (13,000) |
| **050-Water and Sewer Fund** | **16,490,987** | **30,499,040** | **27,596,346** | **27,006,034** | **(3,493,006)** |
| **Finance** | **441,665** | **538,547** | **496,732** | **527,997** | **(10,550)** |
| Personal Services, Salaries & Wages | 106,811 | 144,972 | 145,172 | 148,889 | 3,917 |
| **050.30.32.00.0.102.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 105,507 | 108,891 | 108,891 | 112,677 | 3,786 |
| **050.30.32.00.0.102.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | - | 34,956 | 34,956 | 34,787 | (169) |
| **050.30.32.00.0.102.503.001** | | | | | |
| Overtime Earnings Overtime | 204 | - | 200 | - | - |
| **050.30.32.00.0.102.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,100 | 1,125 | 1,125 | 1,425 | 300 |
| Employee Benefits | 43,414 | 53,518 | 53,518 | 60,539 | 7,021 |
| **050.30.32.00.0.102.510.001** | | | | | |
| Group Insurance Medical Insurance | 28,321 | 27,658 | 27,658 | 34,027 | 6,369 |
| **050.30.32.00.0.102.510.004** | | | | | |
| Group Insurance Dental Insurance | 844 | 864 | 864 | 1,023 | 159 |
| **050.30.32.00.0.102.511.001** | | | | | |
| Social Security Contributions Social Security | 6,407 | 9,229 | 9,229 | 9,468 | 239 |
| **050.30.32.00.0.102.511.002** | | | | | |
| Social Security Contributions Medicare | 1,499 | 2,160 | 2,160 | 2,217 | 57 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **050.30.32.00.0.102.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 2,523 | 9,757 | 9,757 | 10,003 | 246 |
| **050.30.32.00.0.102.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 1,301 | 1,401 | 1,401 | 1,450 | 49 |
| **050.30.32.00.0.102.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 2,520 | 2,449 | 2,449 | 2,351 | (98) |
| Other Employee Costs | - | 500 | 500 | 515 | 15 |
| **050.30.32.00.0.102.525.004** | | | | | |
| Training Training | - | 500 | 500 | 515 | 15 |
| Contractual Services | 291,440 | 338,733 | 296,718 | 317,204 | (21,529) |
| **050.30.01.00.0.102.563.003** | | | | | |
| Banking Fees Bank Processing Fees | 169,318 | 205,000 | 158,000 | 175,000 | (30,000) |
| **050.30.32.00.0.102.530.002** | | | | | |
| Professional Services Auditing Services | 6,290 | 19,879 | 19,879 | 20,380 | 501 |
| **050.30.32.00.0.102.530.004** | | | | | |
| Professional Services Collection Services | 964 | 1,000 | 1,000 | 1,025 | 25 |
| **050.30.32.00.0.102.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 38,111 | 35,000 | 38,500 | 39,460 | 4,460 |
| **050.30.32.00.0.102.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | - | 515 | - | - | (515) |
| **050.30.32.00.0.102.544.002** | | | | | |
| Postage Postage Expense | 75,889 | 76,000 | 78,000 | 80,000 | 4,000 |
| **050.30.32.00.0.102.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 868 | 1,339 | 1,339 | 1,339 | - |
| Commodities & Supplies | - | 824 | 824 | 850 | 26 |
| **050.30.32.00.0.102.606.001** | | | | | |
| Office Supplies Office Supplies | - | 309 | 309 | 320 | 11 |
| **050.30.32.00.0.102.610.001** | | | | | |
| Paper & Supplies Paper & Supplies | - | 515 | 515 | 530 | 15 |
| **Public Works** | **15,261,950** | **28,120,287** | **25,259,408** | **24,595,531** | **(3,524,756)** |
| Building Improvements | (44,881) | - | - | - | - |
| **050.80.90.00.1.700.651.012** | | | | | |
| Other Public Facilities Pump Station Facility Improv | (44,881) | - | - | - | - |
| Personal Services, Salaries & Wages | 2,504,163 | 2,775,046 | 2,771,142 | 2,870,178 | 95,132 |
| **050.80.84.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 394,506 | 411,139 | 411,139 | 432,850 | 21,711 |
| **050.80.84.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 339 | 4,320 | 4,320 | 4,471 | 151 |
| **050.80.84.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 600 | 601 | 601 | 601 | - |
| **050.80.84.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,270 | 2,270 | 2,270 | 2,465 | 195 |
| **050.80.84.87.0.375.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 179,969 | 196,729 | 192,729 | 203,293 | 6,564 |
| **050.80.84.87.0.375.503.001** | | | | | |
| Overtime Earnings Overtime | 23,424 | 40,578 | 40,574 | 41,999 | 1,421 |
| **050.80.84.87.0.375.504.001** | | | | | |
| Specialty Pay Specialty Pay | 1,130 | 1,134 | 1,134 | 1,134 | - |
| **050.80.84.87.0.375.506.001** | | | | | |
| Longevity Pay Longevity Pay | 360 | 360 | 360 | 420 | 60 |
| **050.80.84.87.0.376.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 33,779 | 35,353 | 35,353 | 37,508 | 2,155 |
| **050.80.84.87.0.376.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 7,884 | 18,744 | 18,744 | 18,744 | - |
| **050.80.84.87.0.376.503.001** | | | | | |
| Overtime Earnings Overtime | 3,812 | 9,256 | 9,256 | 9,580 | 324 |
| **050.80.84.87.0.376.504.001** | | | | | |
| Specialty Pay Specialty Pay | 255 | 257 | 257 | 257 | - |
| **050.80.84.87.0.376.506.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Longevity Pay Longevity Pay | 185 | 185 | 185 | 230 | 45 |
| **050.80.84.87.0.379.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 387,970 | 401,057 | 401,057 | 412,220 | 11,163 |
| **050.80.84.87.0.379.503.001** | | | | | |
| Overtime Earnings Overtime | 55,529 | 80,073 | 80,073 | 82,876 | 2,803 |
| **050.80.84.87.0.379.504.001** | | | | | |
| Specialty Pay Specialty Pay | 1,400 | 1,404 | 1,404 | 1,404 | - |
| **050.80.84.87.0.379.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,315 | 2,415 | 2,515 | 2,925 | 510 |
| **050.80.84.87.0.380.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 549,247 | 584,829 | 584,829 | 601,649 | 16,820 |
| **050.80.84.87.0.380.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | 23,970 | 19,563 | 19,563 | 30,490 | 10,927 |
| **050.80.84.87.0.380.503.001** | | | | | |
| Overtime Earnings Overtime | 89,134 | 127,442 | 127,442 | 131,904 | 4,462 |
| **050.80.84.87.0.380.504.001** | | | | | |
| Specialty Pay Specialty Pay | 1,440 | 1,443 | 1,443 | 1,443 | - |
| **050.80.84.87.0.380.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,790 | 2,790 | 2,790 | 2,970 | 180 |
| **050.80.84.87.0.381.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 52,101 | 54,663 | 54,663 | 56,307 | 1,644 |
| **050.80.84.87.0.381.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | 4,448 | 7,656 | 7,656 | 7,656 | - |
| **050.80.84.87.0.381.503.001** | | | | | |
| Overtime Earnings Overtime | 3,315 | 8,470 | 8,470 | 8,767 | 297 |
| **050.80.84.87.0.381.504.001** | | | | | |
| Specialty Pay Specialty Pay | 300 | 301 | 301 | 301 | - |
| **050.80.84.87.0.381.506.001** | | | | | |
| Longevity Pay Longevity Pay | 400 | 400 | 400 | 440 | 40 |
| **050.80.84.87.0.382.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 205,900 | 219,839 | 219,839 | 229,477 | 9,638 |
| **050.80.84.87.0.382.503.001** | | | | | |
| Overtime Earnings Overtime | 36,649 | 52,846 | 52,846 | 54,697 | 1,851 |
| **050.80.84.87.0.382.504.001** | | | | | |
| Specialty Pay Specialty Pay | 631 | 635 | 635 | 635 | - |
| **050.80.84.87.0.382.506.001** | | | | | |
| Longevity Pay Longevity Pay | 1,125 | 1,125 | 1,125 | 1,095 | (30) |
| **050.80.84.88.0.383.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 365,042 | 387,381 | 387,381 | 386,586 | (795) |
| **050.80.84.88.0.383.503.001** | | | | | |
| Overtime Earnings Overtime | 68,574 | 96,417 | 96,417 | 99,793 | 3,376 |
| **050.80.84.88.0.383.504.001** | | | | | |
| Specialty Pay Specialty Pay | 1,080 | 1,081 | 1,081 | 1,081 | - |
| **050.80.84.88.0.383.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,290 | 2,290 | 2,290 | 1,910 | (380) |
| Employee Benefits | 346,767 | 854,437 | 856,030 | 929,051 | 74,614 |
| **050.80.84.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 69,974 | 68,730 | 68,730 | 77,313 | 8,583 |
| **050.80.84.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 37,011 | 48,780 | 48,780 | 52,390 | 3,610 |
| **050.80.84.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 1,481 | 1,529 | 1,529 | 1,685 | 156 |
| **050.80.84.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 23,335 | 25,858 | 25,858 | 27,211 | 1,353 |
| **050.80.84.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 5,923 | 6,324 | 6,324 | 6,654 | 330 |
| **050.80.84.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 4,703 | 27,490 | 27,490 | 29,183 | 1,693 |
| **050.80.84.00.0.000.513.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Other Employee Benefits Sick Leave Incentive | 2,560 | 500 | 500 | 5,151 | 4,651 |
| **050.80.84.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 54,015 | 18,527 | 18,527 | 14,524 | (4,003) |
| **050.80.84.00.0.000.513.009** | | | | | |
| Other Employee Benefits OPEB Expense | (97,173) | - | - | - | - |
| **050.80.84.87.0.375.510.001** | | | | | |
| Group Insurance Medical Insurance | 25,230 | 24,583 | 24,583 | 27,493 | 2,910 |
| **050.80.84.87.0.375.510.004** | | | | | |
| Group Insurance Dental Insurance | 751 | 771 | 771 | 819 | 48 |
| **050.80.84.87.0.375.511.001** | | | | | |
| Social Security Contributions Social Security | 12,494 | 14,890 | 14,890 | 15,425 | 535 |
| **050.80.84.87.0.375.511.002** | | | | | |
| Social Security Contributions Medicare | 2,922 | 3,486 | 3,486 | 3,613 | 127 |
| **050.80.84.87.0.375.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (9,475) | 15,660 | 15,660 | 16,545 | 885 |
| **050.80.84.87.0.375.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 1,116 | 1,296 | 1,296 | 1,900 | 604 |
| **050.80.84.87.0.376.510.001** | | | | | |
| Group Insurance Medical Insurance | 7,546 | 7,267 | 7,267 | 8,174 | 907 |
| **050.80.84.87.0.376.510.004** | | | | | |
| Group Insurance Dental Insurance | 225 | 227 | 227 | 249 | 22 |
| **050.80.84.87.0.376.511.001** | | | | | |
| Social Security Contributions Social Security | 2,784 | 3,974 | 3,974 | 4,125 | 151 |
| **050.80.84.87.0.376.511.002** | | | | | |
| Social Security Contributions Medicare | 651 | 932 | 932 | 967 | 35 |
| **050.80.84.87.0.376.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (1,965) | 2,956 | 2,956 | 3,103 | 147 |
| **050.80.84.87.0.376.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 72 | 100 | 100 | 100 | - |
| **050.80.84.87.0.376.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 67 | 143 | 143 | 65 | (78) |
| **050.80.84.87.0.379.510.001** | | | | | |
| Group Insurance Medical Insurance | 70,833 | 68,912 | 68,912 | 76,941 | 8,029 |
| **050.80.84.87.0.379.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,153 | 2,209 | 2,209 | 2,309 | 100 |
| **050.80.84.87.0.379.511.001** | | | | | |
| Social Security Contributions Social Security | 27,213 | 30,344 | 30,344 | 31,295 | 951 |
| **050.80.84.87.0.379.511.002** | | | | | |
| Social Security Contributions Medicare | 6,364 | 7,105 | 7,105 | 7,326 | 221 |
| **050.80.84.87.0.379.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (71,724) | 31,910 | 31,910 | 33,566 | 1,656 |
| **050.80.84.87.0.379.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 4,081 | 4,360 | 4,360 | 5,217 | 857 |
| **050.80.84.87.0.380.510.001** | | | | | |
| Group Insurance Medical Insurance | 95,961 | 93,407 | 93,407 | 104,497 | 11,090 |
| **050.80.84.87.0.380.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,905 | 2,977 | 2,977 | 3,159 | 182 |
| **050.80.84.87.0.380.511.001** | | | | | |
| Social Security Contributions Social Security | 40,495 | 44,770 | 44,770 | 48,173 | 3,403 |
| **050.80.84.87.0.380.511.002** | | | | | |
| Social Security Contributions Medicare | 9,471 | 10,477 | 10,477 | 11,271 | 794 |
| **050.80.84.87.0.380.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (64,946) | 47,080 | 47,080 | 51,667 | 4,587 |
| **050.80.84.87.0.380.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 4,622 | 5,481 | 5,481 | 8,389 | 2,908 |
| **050.80.84.87.0.381.510.001** | | | | | |
| Group Insurance Medical Insurance | 3,648 | 3,563 | 3,563 | 4,008 | 445 |
| **050.80.84.87.0.381.510.004** | | | | | |
| Group Insurance Dental Insurance | 103 | 106 | 106 | 117 | 11 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **050.80.84.87.0.381.511.001** | | | | | |
| Social Security Contributions Social Security | 3,703 | 4,443 | 4,443 | 4,580 | 137 |
| **050.80.84.87.0.381.511.002** | | | | | |
| Social Security Contributions Medicare | 866 | 1,042 | 1,042 | 1,074 | 32 |
| **050.80.84.87.0.381.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (1,207) | 4,174 | 4,174 | 4,404 | 230 |
| **050.80.84.87.0.381.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 66 | 143 | 400 | 387 | 244 |
| **050.80.84.87.0.382.510.001** | | | | | |
| Group Insurance Medical Insurance | 27,990 | 27,352 | 27,352 | 30,646 | 3,294 |
| **050.80.84.87.0.382.510.004** | | | | | |
| Group Insurance Dental Insurance | 829 | 853 | 853 | 941 | 88 |
| **050.80.84.87.0.382.511.001** | | | | | |
| Social Security Contributions Social Security | 14,773 | 17,046 | 17,046 | 17,806 | 760 |
| **050.80.84.87.0.382.511.002** | | | | | |
| Social Security Contributions Medicare | 3,455 | 3,991 | 3,991 | 4,170 | 179 |
| **050.80.84.87.0.382.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (38,351) | 17,927 | 17,927 | 19,098 | 1,171 |
| **050.80.84.87.0.382.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 190 | 395 | 1,200 | 1,208 | 813 |
| **050.80.84.88.0.383.510.001** | | | | | |
| Group Insurance Medical Insurance | 80,452 | 78,576 | 78,576 | 86,908 | 8,332 |
| **050.80.84.88.0.383.510.004** | | | | | |
| Group Insurance Dental Insurance | 2,356 | 2,415 | 2,415 | 2,661 | 246 |
| **050.80.84.88.0.383.511.001** | | | | | |
| Social Security Contributions Social Security | 26,124 | 30,226 | 30,226 | 30,394 | 168 |
| **050.80.84.88.0.383.511.002** | | | | | |
| Social Security Contributions Medicare | 6,109 | 7,075 | 7,075 | 7,114 | 39 |
| **050.80.84.88.0.383.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | (56,144) | 31,786 | 31,786 | 32,247 | 461 |
| **050.80.84.88.0.383.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 128 | 269 | 800 | 789 | 520 |
| Other Employee Costs | 48,479 | 49,606 | 49,606 | 50,270 | 664 |
| **050.80.84.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 4,942 | 4,942 | 4,942 | 4,942 | - |
| **050.80.84.00.0.000.521.001** | | | | | |
| Other Employee Expenses Other Employee Exp. | 3,460 | 3,927 | 3,927 | 4,025 | 98 |
| **050.80.84.00.0.000.522.001** | | | | | |
| Travel & Meetings Travel & Meetings | 5,274 | 4,973 | 4,973 | 4,973 | - |
| **050.80.84.00.0.000.524.001** | | | | | |
| Uniform Expense Uniform Expense | 21,150 | 22,653 | 22,653 | 23,219 | 566 |
| **050.80.84.00.0.000.525.004** | | | | | |
| Training Training | 13,654 | 13,111 | 13,111 | 13,111 | - |
| Contractual Services | 9,727,571 | 10,420,333 | 10,420,333 | 10,536,889 | 116,556 |
| **050.80.84.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 62,700 | 5,739 | 5,739 | 5,882 | 143 |
| **050.80.84.00.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 1,355 | 1,494 | 1,494 | 1,531 | 37 |
| **050.80.84.00.0.000.551.001** | | | | | |
| Copier Lease Payment Copier Lease Payment | 1,555 | 2,409 | 2,409 | 2,469 | 60 |
| **050.80.84.00.0.000.552.001** | | | | | |
| Computer Lease Payment Computer Repl Fund | 11,450 | 10,575 | 10,575 | 10,825 | 250 |
| **050.80.84.00.0.000.560.002** | | | | | |
| Technical Services Comp Programming | - | 1,540 | 1,540 | - | (1,540) |
| **050.80.84.00.0.000.560.007** | | | | | |
| Technical Services Computer Maint. | - | 1,655 | 1,655 | - | (1,655) |
| **050.80.84.00.0.000.560.009** | | | | | |
| Technical Services GIS Maintenance | 19,077 | 26,629 | 26,629 | 20,000 | (6,629) |
| **050.80.84.00.0.000.561.004** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Computer Software Cloud-Based Service | 70,708 | 62,972 | 62,972 | 76,642 | 13,670 |
| **050.80.84.00.0.000.562.002** | | | | | |
| Records Management Printing Expense | 5,517 | 7,256 | 7,256 | 7,437 | 181 |
| **050.80.84.00.0.000.563.002** | | | | | |
| Banking Fees Bank & Fiscal Fees | - | 2,583 | 2,583 | 2,647 | 64 |
| **050.80.84.00.0.000.574.005** | | | | | |
| Public Works - General Contractual Uniform Rent/Cleaning | 5,361 | 12,709 | 12,709 | 13,026 | 317 |
| **050.80.84.01.0.000.553.001** | | | | | |
| Capital Replacement Payments Vehicle Lease Payment | 336,340 | 383,660 | 383,660 | 261,260 | (122,400) |
| **050.80.84.01.0.000.554.001** | | | | | |
| Vehicle Maintenance Payment Vehicle Maint Payment | 623,005 | 653,152 | 653,152 | 656,019 | 2,867 |
| **050.80.84.87.0.375.533.003** | | | | | |
| Building Maintenance & Repair Roof Repairs | - | 1,000 | 1,000 | 1,025 | 25 |
| **050.80.84.87.0.375.533.005** | | | | | |
| Building Maintenance & Repair Building Repairs | 3,235 | 5,517 | 5,517 | 5,655 | 138 |
| **050.80.84.87.0.376.574.012** | | | | | |
| Public Works - General Contractual Landscape & Fence Maintenance | - | 258 | 258 | 264 | 6 |
| **050.80.84.87.0.376.574.014** | | | | | |
| Public Works - General Contractual Grounds Maintenance | 52,429 | 59,156 | 59,156 | 60,635 | 1,479 |
| **050.80.84.87.0.378.570.001** | | | | | |
| Water Purchases JAWA - Water Purchase | 5,929,485 | 6,167,341 | 6,167,341 | 6,321,525 | 154,184 |
| **050.80.84.87.0.378.570.002** | | | | | |
| Water Purchases JAWA - Power Cost | 164,489 | 102,032 | 102,032 | 104,583 | 2,551 |
| **050.80.84.87.0.378.570.003** | | | | | |
| Water Purchases JAWA - O&M Cost | 380,709 | 483,664 | 483,664 | 495,756 | 12,092 |
| **050.80.84.87.0.378.570.004** | | | | | |
| Water Purchases JAWA - Fixed Cost | 1,440,558 | 1,642,583 | 1,642,583 | 1,683,648 | 41,065 |
| **050.80.84.87.0.379.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 60,255 | 66,200 | 66,200 | 67,855 | 1,655 |
| **050.80.84.87.0.379.533.004** | | | | | |
| Building Maintenance & Repair Emergency Repairs | - | 2,142 | 2,142 | 2,195 | 53 |
| **050.80.84.87.0.379.533.006** | | | | | |
| Building Maintenance & Repair Electrical Repairs | 1,633 | 5,517 | 5,517 | 5,654 | 137 |
| **050.80.84.87.0.379.569.003** | | | | | |
| Water Contractual Services Water Sample Testing | 22,205 | 30,894 | 30,894 | 31,666 | 772 |
| **050.80.84.87.0.379.569.004** | | | | | |
| Water Contractual Services Water Tank Repairs | - | 3,310 | 3,310 | 3,392 | 82 |
| **050.80.84.87.0.380.530.005** | | | | | |
| Professional Services Control System Programming | 33,996 | 38,617 | 38,617 | 39,582 | 965 |
| **050.80.84.87.0.380.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 20,202 | 31,051 | 31,051 | 31,827 | 776 |
| **050.80.84.87.0.380.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 5,648 | 6,737 | 6,737 | 6,905 | 168 |
| **050.80.84.87.0.380.569.006** | | | | | |
| Water Contractual Services Parkway Restoration | 45,146 | 56,270 | 56,270 | 57,676 | 1,406 |
| **050.80.84.87.0.380.569.007** | | | | | |
| Water Contractual Services Pavement Restoration | 45,567 | 48,727 | 48,727 | 49,945 | 1,218 |
| **050.80.84.87.0.380.569.008** | | | | | |
| Water Contractual Services Refuse Disposal | 7,472 | 7,761 | 7,761 | 7,955 | 194 |
| **050.80.84.87.0.380.571.006** | | | | | |
| Sewer Contractual Services Backflow Prevention Program | 16,624 | 28,135 | 28,135 | 28,838 | 703 |
| **050.80.84.87.0.380.574.007** | | | | | |
| Public Works - General Contractual Julie Service Charges | 10,569 | 11,033 | 11,033 | 11,308 | 275 |
| **050.80.84.87.0.380.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 35,502 | 39,425 | 39,425 | 40,410 | 985 |
| **050.80.84.87.0.381.547.003** | | | | | |
| Equipment Rental Vehicle Rental | - | 1,688 | 1,688 | 1,730 | 42 |
| **050.80.84.87.0.381.560.002** | | | | | |
| Technical Services Comp Programming | 32,133 | 33,100 | 33,100 | 33,928 | 828 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **050.80.84.87.0.381.569.001** | | | | | |
| Water Contractual Services Meter Installation | 63,364 | 80,764 | 80,764 | 82,783 | 2,019 |
| **050.80.84.87.0.381.569.002** | | | | | |
| Water Contractual Services Meter Testing & Repair | 21,878 | 27,583 | 27,583 | 28,273 | 690 |
| **050.80.84.87.0.382.574.001** | | | | | |
| Public Works - General Contractual Painting Services | 42,370 | 45,915 | 45,915 | 47,063 | 1,148 |
| **050.80.84.87.0.382.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 23,156 | 23,851 | 23,851 | 24,447 | 596 |
| **050.80.84.88.0.383.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | - | 6,620 | 6,620 | 6,785 | 165 |
| **050.80.84.88.0.383.569.008** | | | | | |
| Water Contractual Services Refuse Disposal | 5,425 | 6,463 | 6,463 | 6,624 | 161 |
| **050.80.84.88.0.383.571.001** | | | | | |
| Sewer Contractual Services Sewer Repair/Repl | 37,481 | 38,617 | 38,617 | 39,582 | 965 |
| **050.80.84.88.0.383.571.002** | | | | | |
| Sewer Contractual Services Building Sewer Insp | 44,153 | 55,167 | 55,167 | 56,546 | 1,379 |
| **050.80.84.88.0.383.571.003** | | | | | |
| Sewer Contractual Services Sewer Cleaning | 38,587 | 56,270 | 56,270 | 57,676 | 1,406 |
| **050.80.84.88.0.383.571.007** | | | | | |
| Sewer Contractual Services Flow Monitoring Analy | - | 27,583 | 27,583 | 28,272 | 689 |
| **050.80.84.88.0.383.574.008** | | | | | |
| Public Works - General Contractual Contract Hauling | 6,230 | 6,969 | 6,969 | 7,143 | 174 |
| Distribution Systems | 586,401 | 12,947,936 | 10,169,368 | 9,172,721 | (3,775,215) |
| **050.80.84.87.0.379.671.002** | | | | | |
| Water Distribution Tank Repair/Inspection | 16,880 | 21,218 | 21,218 | 21,748 | 530 |
| **050.80.84.87.0.379.671.004** | | | | | |
| Water Distribution Tank Dsgn Engineering | 7,210 | 21,218 | 21,218 | 21,748 | 530 |
| **050.80.84.87.0.380.671.006** | | | | | |
| Water Distribution Wireless Telemetry System Maint | 3,602 | 9,000 | 9,000 | 9,225 | 225 |
| **050.80.90.00.0.700.672.008** | | | | | |
| Sewer System Lead Service Line Rebate Program | - | 100,000 | 100,000 | 250,000 | 150,000 |
| **050.80.90.00.1.700.671.001** | | | | | |
| Water Distribution Tank Repair/Ren | 25,725 | 662,933 | 662,932 | - | (662,933) |
| **050.80.90.00.1.700.671.003** | | | | | |
| Water Distribution Water Main Repl | - | 6,652,931 | 6,500,000 | 6,500,000 | (152,931) |
| **050.80.90.00.1.700.671.005** | | | | | |
| Water Distribution Deep Well Rehab | - | 535,000 | 535,000 | - | (535,000) |
| **050.80.90.00.1.700.671.007** | | | | | |
| Water Distribution Water Main - New | - | 1,684,000 | - | - | (1,684,000) |
| **050.80.90.00.1.701.672.001** | | | | | |
| Sewer System Basin 14 Foot Tile/OH Sewer Prog | 63,298 | 470,000 | 470,000 | 470,000 | - |
| **050.80.90.00.1.701.672.002** | | | | | |
| Sewer System Lift Station Rehab | 269,769 | 408,932 | - | - | (408,932) |
| **050.80.90.00.1.701.672.005** | | | | | |
| Sewer System Sewer Main Repair/Replacement | - | 1,000,000 | 1,000,000 | 1,000,000 | - |
| **050.80.90.00.1.702.672.001** | | | | | |
| Sewer System Basin 14 Foot Tile/OH Sewer Prog | 67,296 | 582,704 | 50,000 | 100,000 | (482,704) |
| **050.80.90.00.1.702.672.008** | | | | | |
| Sewer System Lead Service Line Rebate Program | 92,630 | - | - | - | - |
| **050.80.90.00.1.703.672.003** | | | | | |
| Sewer System Combined Swr Imp | 39,991 | 800,000 | 800,000 | 800,000 | - |
| Infrastructure | 7,500 | - | - | - | - |
| **050.80.84.87.0.000.731.001** | | | | | |
| Asset Retirement Obligation Amortization | 7,500 | - | - | - | - |
| Utilities | 146,326 | 131,793 | 131,793 | 135,086 | 3,293 |
| **050.80.84.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 8,019 | 12,357 | 12,357 | 12,665 | 308 |
| **050.80.84.87.0.375.585.001** | | | | | |
| Natural Gas Natural Gas | 6,560 | 7,603 | 7,603 | 7,793 | 190 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **050.80.84.87.0.379.586.001** | | | | | |
| Electricity Electricity | 112,383 | 91,833 | 91,833 | 94,128 | 2,295 |
| **050.80.84.88.0.383.586.001** | | | | | |
| Electricity Electricity | 19,365 | 20,000 | 20,000 | 20,500 | 500 |
| Insurance | 235,114 | 181,111 | 181,111 | 260,738 | 79,627 |
| **050.80.84.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 235,114 | 181,111 | 181,111 | 260,738 | 79,627 |
| Commodities & Supplies | 228,634 | 329,170 | 329,170 | 337,847 | 8,677 |
| **050.80.84.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 175 | 1,573 | 1,573 | 2,087 | 514 |
| **050.80.84.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 3,868 | 4,926 | 4,926 | 5,049 | 123 |
| **050.80.84.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 852 | 2,485 | 2,485 | 2,547 | 62 |
| **050.80.84.00.0.000.614.001** | | | | | |
| Training Supplies Training Supplies | - | 815 | 815 | 815 | - |
| **050.80.84.00.0.000.622.001** | | | | | |
| General Open House Supplies | 3,120 | 3,531 | 3,531 | 3,619 | 88 |
| **050.80.84.00.0.000.626.002** | | | | | |
| Public Works - Water/Sewer Engineering Supplies | 495 | 1,000 | 1,000 | 1,025 | 25 |
| **050.80.84.00.0.000.626.004** | | | | | |
| Public Works - Water/Sewer Water Conservation Supplies | - | 500 | 500 | 512 | 12 |
| **050.80.84.87.0.375.628.003** | | | | | |
| Maintenance & Repair Supplies M&R Supplies - PW | - | 1,900 | 1,900 | 1,947 | 47 |
| **050.80.84.87.0.376.622.002** | | | | | |
| General Small Tools | 239 | 246 | 246 | 252 | 6 |
| **050.80.84.87.0.376.622.003** | | | | | |
| General Grounds Maintenance Supplies | 2,888 | 2,987 | 2,987 | 3,062 | 75 |
| **050.80.84.87.0.376.622.004** | | | | | |
| General Lawn Care Equipment | 522 | 567 | 567 | 581 | 14 |
| **050.80.84.87.0.376.622.007** | | | | | |
| General Snow Plow Blades | 2,700 | 3,693 | 3,693 | 3,785 | 92 |
| **050.80.84.87.0.379.622.009** | | | | | |
| General Repair/Maint Supplies | 24,389 | 25,347 | 25,347 | 25,980 | 633 |
| **050.80.84.87.0.379.626.005** | | | | | |
| Public Works - Water/Sewer Water Treatment Chemicals | 17,477 | 19,860 | 19,860 | 20,356 | 496 |
| **050.80.84.87.0.379.627.002** | | | | | |
| Gas Generators | 11,606 | 16,550 | 16,550 | 16,963 | 413 |
| **050.80.84.87.0.380.622.002** | | | | | |
| General Small Tools | 152 | 503 | 503 | 515 | 12 |
| **050.80.84.87.0.380.622.005** | | | | | |
| General Restoration Materials | 30,139 | 34,169 | 34,169 | 35,023 | 854 |
| **050.80.84.87.0.380.622.006** | | | | | |
| General Emergency Barricades | 2,161 | 2,398 | 2,398 | 2,457 | 59 |
| **050.80.84.87.0.380.622.009** | | | | | |
| General Repair/Maint Supplies | 22,198 | 54,671 | 54,671 | 56,037 | 1,366 |
| **050.80.84.87.0.380.627.003** | | | | | |
| Gas Water - Gas Pumps/Generators | - | 2,483 | 2,483 | 2,545 | 62 |
| **050.80.84.87.0.381.622.002** | | | | | |
| General Small Tools | 209 | 217 | 217 | 222 | 5 |
| **050.80.84.87.0.381.626.008** | | | | | |
| Public Works - Water/Sewer Water Meter Repair Parts | 3,529 | 3,725 | 3,725 | 3,818 | 93 |
| **050.80.84.87.0.382.622.005** | | | | | |
| General Restoration Materials | 10,006 | 11,183 | 11,183 | 11,463 | 280 |
| **050.80.84.87.0.382.622.009** | | | | | |
| General Repair/Maint Supplies | 19,110 | 22,508 | 22,508 | 23,071 | 563 |
| **050.80.84.87.0.382.626.001** | | | | | |
| Public Works - Water/Sewer Painting Supplies | 1,732 | 1,864 | 1,864 | 1,911 | 47 |
| **050.80.84.87.0.382.626.006** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Public Works - Water/Sewer Water Hydrants | 43,655 | 45,016 | 45,016 | 46,141 | 1,125 |
| **050.80.84.87.0.382.626.007** | | | | | |
| Public Works - Water/Sewer Water Valves | 11,131 | 35,828 | 35,828 | 36,724 | 896 |
| **050.80.84.88.0.383.622.005** | | | | | |
| General Restoration Materials | 4,584 | 5,124 | 5,124 | 5,252 | 128 |
| **050.80.84.88.0.383.622.009** | | | | | |
| General Repair/Maint Supplies | 7,273 | 16,881 | 16,881 | 17,303 | 422 |
| **050.80.84.88.0.383.626.003** | | | | | |
| Public Works - Water/Sewer Manhole Frame Supp | 4,425 | 6,620 | 6,620 | 6,785 | 165 |
| Office Equipment | - | 1,241 | 1,241 | 1,272 | 31 |
| **050.80.84.87.0.380.656.007** | | | | | |
| Office Equipment Office Eqpt - Water | - | 1,241 | 1,241 | 1,272 | 31 |
| Other Equipment | 197,464 | 429,614 | 349,614 | 301,479 | (128,135) |
| **050.80.84.87.0.381.665.050** | | | | | |
| Other Equipment Water Meters | 93,294 | 74,614 | 74,614 | 76,479 | 1,865 |
| **050.80.90.00.1.700.665.054** | | | | | |
| Other Equipment Booster Pump/Panel Repl | 72,860 | 225,000 | 225,000 | 225,000 | - |
| **050.80.90.00.1.700.665.079** | | | | | |
| Other Equipment SCADA Wireless Telemetry | 31,310 | 50,000 | 50,000 | - | (50,000) |
| **050.80.90.00.1.709.665.025** | | | | | |
| Other Equipment Leak Detection Equipment | - | 80,000 | - | - | (80,000) |
| Other Expenditures | 1,278,412 | - | - | - | - |
| **050.80.84.00.0.000.638.001** | | | | | |
| Depreciation Depreciation | 1,278,412 | - | - | - | - |
| **ND** | **787,372** | **1,840,206** | **1,840,206** | **1,882,506** | **42,300** |
| Bank & Fiscal Fees | 1,350 | 1,575 | 1,575 | 1,575 | - |
| **050.00.00.00.2.565.695.036** | | | | | |
| Bank & Fiscal Fees 2017 GO Bank Fees | 225 | 225 | 225 | 225 | - |
| **050.00.00.00.2.566.695.037** | | | | | |
| Bank & Fiscal Fees 2018A GO Bank Fees | 225 | 450 | 450 | 450 | - |
| **050.00.00.00.2.567.695.040** | | | | | |
| Bank & Fiscal Fees 2019A GO Bank Fees | 450 | 450 | 450 | 450 | - |
| **050.00.00.00.2.569.695.043** | | | | | |
| Bank & Fiscal Fees 2022A G.O. Bank Fees | 450 | 450 | 450 | 450 | - |
| Bond Principal | - | 995,000 | 995,000 | 1,085,000 | 90,000 |
| **050.00.00.00.2.565.685.036** | | | | | |
| Bond Principal 2017 GO Bond Principal | - | 205,000 | 205,000 | 220,000 | 15,000 |
| **050.00.00.00.2.566.685.037** | | | | | |
| Bond Principal 2018A GO Bond Principal | - | 190,000 | 190,000 | 210,000 | 20,000 |
| **050.00.00.00.2.567.685.040** | | | | | |
| Bond Principal 2019A GO Bond Principal | - | 345,000 | 345,000 | 375,000 | 30,000 |
| **050.00.00.00.2.569.685.043** | | | | | |
| Bond Principal 2022A G.O. Bond Principal | - | 255,000 | 255,000 | 280,000 | 25,000 |
| Interest Expense | 883,826 | 843,631 | 843,631 | 795,931 | (47,700) |
| **050.00.00.00.2.565.690.036** | | | | | |
| Bond Interest 2017 GO Bond Interest | 130,497 | 123,531 | 123,531 | 115,331 | (8,200) |
| **050.00.00.00.2.566.690.037** | | | | | |
| Bond Interest 2018A GO Bond Interest | 151,771 | 143,750 | 143,750 | 134,250 | (9,500) |
| **050.00.00.00.2.567.690.040** | | | | | |
| Bond Interest 2019A GO Bond Interest | 296,737 | 282,300 | 282,300 | 265,050 | (17,250) |
| **050.00.00.00.2.569.690.043** | | | | | |
| Bond Interest 2022 G.O. Bond Interest | 304,821 | 294,050 | 294,050 | 281,300 | (12,750) |
| Long Term Debt | (97,804) | - | - | - | - |
| **050.00.00.00.2.565.730.009** | | | | | |
| Amortization of change in premium Debt Int/ Fiscal | (97,804) | - | - | - | - |
| **051-Village Parking System Fund** | **154,922** | **215,637** | **218,737** | **207,790** | **(7,847)** |
| **Finance** | **13,091** | **10,000** | **11,100** | **15,000** | **5,000** |
| Contractual Services | 13,091 | 10,000 | 11,100 | 15,000 | 5,000 |
| **051.30.01.00.0.000.563.003** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Banking Fees Bank Processing Fees | 13,091 | 10,000 | 11,100 | 15,000 | 5,000 |
| **Public Works** | **141,832** | **205,637** | **207,637** | **192,790** | **(12,847)** |
| Contractual Services | 39,440 | 44,302 | 46,302 | 47,438 | 3,136 |
| **051.80.81.81.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 9,447 | 10,033 | 4,516 | 4,629 | (5,404) |
| **051.80.81.81.0.000.533.002** | | | | | |
| Building Maintenance & Repair Cleaning Service | 10,557 | 16,068 | 16,068 | 16,470 | 402 |
| **051.80.81.81.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | - | - | 5,517 | 5,655 | 5,655 |
| **051.80.81.81.0.000.563.004** | | | | | |
| Banking Fees Mobile Payment Convenience Fees | 1,850 | - | 2,000 | 2,000 | 2,000 |
| **051.80.81.81.0.000.575.007** | | | | | |
| Public Works - Streets Contractual Parking Lot Sealcoating | 13,301 | 13,714 | 13,714 | 14,085 | 371 |
| **051.80.81.81.0.000.575.008** | | | | | |
| Public Works - Streets Contractual Striping Parking Lots | 4,285 | 4,487 | 4,487 | 4,599 | 112 |
| Infrastructure | 86,371 | 148,201 | 148,201 | 132,000 | (16,201) |
| **051.80.90.00.0.706.679.021** | | | | | |
| Other Infrastructure Parking Deck Maint | 86,371 | 148,201 | 148,201 | 132,000 | (16,201) |
| Utilities | 10,152 | 11,033 | 11,033 | 11,308 | 275 |
| **051.80.81.82.0.375.586.001** | | | | | |
| Electricity Electricity | 10,152 | 11,033 | 11,033 | 11,308 | 275 |
| Insurance | 5,243 | 1,456 | 1,456 | 1,383 | (73) |
| **051.80.81.81.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 5,243 | 1,456 | 1,456 | 1,383 | (73) |
| Commodities & Supplies | 626 | 645 | 645 | 661 | 16 |
| **051.80.81.81.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 626 | 645 | 645 | 661 | 16 |
| **052-Parking System Revenue Fund** | **100,763** | **142,195** | **137,767** | **147,704** | **5,509** |
| **Finance** | **9,432** | **12,000** | **6,000** | **8,750** | **(3,250)** |
| Contractual Services | 9,432 | 12,000 | 6,000 | 8,750 | (3,250) |
| **052.30.01.00.0.000.563.003** | | | | | |
| Banking Fees Bank Processing Fees | 9,432 | 12,000 | 6,000 | 8,750 | (3,250) |
| **Public Works** | **91,330** | **130,195** | **131,767** | **138,954** | **8,759** |
| Contractual Services | 78,810 | 109,777 | 111,349 | 117,508 | 7,731 |
| **052.80.81.81.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 583 | 6,000 | 2,000 | 2,000 | (4,000) |
| **052.80.81.81.0.000.533.002** | | | | | |
| Building Maintenance & Repair Cleaning Service | 3,519 | 4,515 | 4,515 | 4,628 | 113 |
| **052.80.81.81.0.000.550.001** | | | | | |
| Land Lease Metra Land Lease | 42,380 | 55,000 | 55,000 | 60,000 | 5,000 |
| **052.80.81.81.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 6,215 | 8,000 | 8,000 | 8,200 | 200 |
| **052.80.81.81.0.000.563.004** | | | | | |
| Banking Fees Mobile Payment Convenience Fees | 8,244 | 2,428 | 8,000 | 8,000 | 5,572 |
| **052.80.81.81.0.000.574.010** | | | | | |
| Public Works - General Contractual Beautify RR ROW | - | 11,330 | 11,330 | 11,613 | 283 |
| **052.80.81.81.0.000.575.007** | | | | | |
| Public Works - Streets Contractual Parking Lot Sealcoating | 14,999 | 15,514 | 15,514 | 15,902 | 388 |
| **052.80.81.81.0.000.575.008** | | | | | |
| Public Works - Streets Contractual Striping Parking Lots | 2,870 | 2,995 | 2,995 | 3,070 | 75 |
| **052.80.81.81.0.000.575.011** | | | | | |
| Public Works - Streets Contractual Snow Removal | - | 3,995 | 3,995 | 4,095 | 100 |
| Utilities | 2,805 | 6,837 | 6,837 | 7,008 | 171 |
| **052.80.81.81.0.000.585.001** | | | | | |
| Natural Gas Natural Gas | 1,333 | 3,253 | 3,253 | 3,334 | 81 |
| **052.80.81.81.0.000.586.001** | | | | | |
| Electricity Electricity | 1,040 | 3,000 | 3,000 | 3,075 | 75 |
| **052.80.81.81.0.000.591.001** | | | | | |
| Water & Sewer Water & Sewer | 432 | 584 | 584 | 599 | 15 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Insurance | 1,337 | 1,187 | 1,187 | 1,734 | 547 |
| **052.80.81.81.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 1,337 | 1,187 | 1,187 | 1,734 | 547 |
| Commodities & Supplies | 8,379 | 12,394 | 12,394 | 12,704 | 310 |
| **052.80.81.81.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | 6,937 | 7,990 | 7,990 | 8,190 | 200 |
| **052.80.81.81.0.000.624.014** | | | | | |
| Public Works - Streets Bicycle Racks | 768 | 1,593 | 1,593 | 1,633 | 40 |
| **052.80.81.81.0.000.624.015** | | | | | |
| Public Works - Streets Parking Bumpers | - | 775 | 775 | 794 | 19 |
| **052.80.81.81.0.000.628.007** | | | | | |
| Maintenance & Repair Supplies M&R Supplies -RR Sta | 674 | 2,036 | 2,036 | 2,087 | 51 |
| **060-Vehicle Maintenance Fund** | **2,353,788** | **2,688,148** | **2,692,660** | **2,706,821** | **18,673** |
| **Public Works** | **2,353,788** | **2,688,148** | **2,692,660** | **2,706,821** | **18,673** |
| Personal Services, Salaries & Wages | 1,107,338 | 1,293,034 | 1,293,034 | 1,248,092 | (44,942) |
| **060.80.86.00.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 132,085 | 136,327 | 136,327 | 146,144 | 9,817 |
| **060.80.86.00.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | - | 3,250 | 3,250 | 3,364 | 114 |
| **060.80.86.00.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 600 | 601 | 601 | 601 | - |
| **060.80.86.00.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 800 | 800 | 800 | 800 | - |
| **060.80.86.89.0.000.500.001** | | | | | |
| Full-Time Earnings Full-Time Earnings | 858,699 | 927,435 | 927,435 | 893,908 | (33,527) |
| **060.80.86.89.0.000.501.001** | | | | | |
| Part-Time Earnings Part-Time Earnings | - | 19,563 | 19,563 | - | (19,563) |
| **060.80.86.89.0.000.502.001** | | | | | |
| Seasonal Earnings Seasonal Earnings | - | 6,600 | 6,600 | - | (6,600) |
| **060.80.86.89.0.000.503.001** | | | | | |
| Overtime Earnings Overtime | 109,226 | 191,656 | 191,656 | 198,366 | 6,710 |
| **060.80.86.89.0.000.504.001** | | | | | |
| Specialty Pay Specialty Pay | 3,318 | 3,562 | 3,562 | 1,939 | (1,623) |
| **060.80.86.89.0.000.506.001** | | | | | |
| Longevity Pay Longevity Pay | 2,610 | 3,240 | 3,240 | 2,970 | (270) |
| Employee Benefits | 329,306 | 417,014 | 421,526 | 442,186 | 25,172 |
| **060.80.86.00.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 25,053 | 24,466 | 24,466 | 27,521 | 3,055 |
| **060.80.86.00.0.000.510.003** | | | | | |
| Group Insurance Workers' Comp Ins | 20,032 | 23,520 | 23,520 | 26,130 | 2,610 |
| **060.80.86.00.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 779 | 798 | 798 | 879 | 81 |
| **060.80.86.00.0.000.511.001** | | | | | |
| Social Security Contributions Social Security | 8,013 | 8,867 | 8,867 | 9,324 | 457 |
| **060.80.86.00.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 1,874 | 2,076 | 2,076 | 2,181 | 105 |
| **060.80.86.00.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 8,686 | 9,304 | 9,304 | 9,980 | 676 |
| **060.80.86.00.0.000.513.001** | | | | | |
| Other Employee Benefits Sick Leave Incentive | 588 | - | - | - | - |
| **060.80.86.00.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | (9,695) | 2,496 | 2,496 | - | (2,496) |
| **060.80.86.00.0.000.513.009** | | | | | |
| Other Employee Benefits OPEB Expense | (43,718) | - | - | - | - |
| **060.80.86.89.0.000.510.001** | | | | | |
| Group Insurance Medical Insurance | 155,954 | 159,076 | 159,076 | 170,825 | 11,749 |
| **060.80.86.89.0.000.510.004** | | | | | |
| Group Insurance Dental Insurance | 4,405 | 4,752 | 4,752 | 5,792 | 1,040 |
| **060.80.86.89.0.000.511.001** | | | | | |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| Social Security Contributions Social Security | 59,250 | 70,872 | 70,872 | 69,302 | (1,570) |
| **060.80.86.89.0.000.511.002** | | | | | |
| Social Security Contributions Medicare | 13,857 | 16,580 | 16,580 | 16,213 | (367) |
| **060.80.86.89.0.000.512.001** | | | | | |
| Retirement Contributions IMRF Pension Expense | 61,644 | 74,599 | 74,599 | 74,406 | (193) |
| **060.80.86.89.0.000.513.002** | | | | | |
| Other Employee Benefits Vac/Pers Leave Incent. | 12,801 | 10,488 | 15,000 | 20,513 | 10,025 |
| **060.80.86.89.0.000.513.004** | | | | | |
| Other Employee Benefits Employee Allowances | 9,785 | 9,120 | 9,120 | 9,120 | - |
| Other Employee Costs | 8,843 | 7,395 | 7,395 | 7,395 | - |
| **060.80.86.00.0.000.518.001** | | | | | |
| Dues & Memberships Dues & Memberships | 140 | 3,060 | 3,060 | 3,060 | - |
| **060.80.86.00.0.000.525.004** | | | | | |
| Training Training | 8,703 | 4,335 | 4,335 | 4,335 | - |
| Contractual Services | 107,588 | 139,861 | 139,861 | 144,552 | 4,691 |
| **060.80.86.00.0.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 5,947 | 9,270 | 9,270 | 9,501 | 231 |
| **060.80.86.00.0.000.561.004** | | | | | |
| Computer Software Cloud-Based Service | 16,724 | 20,023 | 20,023 | 21,720 | 1,697 |
| **060.80.86.89.0.000.532.002** | | | | | |
| Equipment Maintenance & Repair Equipment Maint. | 82,643 | 108,036 | 108,036 | 110,736 | 2,700 |
| **060.80.86.89.0.000.574.009** | | | | | |
| Public Works - General Contractual Fuel System Maintenance | 2,275 | 2,532 | 2,532 | 2,595 | 63 |
| Utilities | 3,214 | 5,063 | 5,063 | 5,190 | 127 |
| **060.80.86.00.0.000.590.001** | | | | | |
| Telephone - Cellular Telephone - Cellular | 3,214 | 5,063 | 5,063 | 5,190 | 127 |
| Insurance | 55,383 | 22,503 | 22,503 | 36,247 | 13,744 |
| **060.80.86.00.0.000.593.001** | | | | | |
| Insurance Expense General Liability | 55,383 | 22,503 | 22,503 | 36,247 | 13,744 |
| Commodities & Supplies | 716,803 | 799,918 | 799,918 | 819,715 | 19,797 |
| **060.80.86.00.0.000.603.001** | | | | | |
| Clothing Supplies Clothing Supplies | 300 | 945 | 945 | 1,269 | 324 |
| **060.80.86.00.0.000.606.001** | | | | | |
| Office Supplies Office Supplies | 481 | 752 | 752 | 771 | 19 |
| **060.80.86.00.0.000.608.001** | | | | | |
| Other Supplies Other Supplies | - | 1,279 | 1,279 | 1,311 | 32 |
| **060.80.86.89.0.000.622.002** | | | | | |
| General Small Tools | 3,881 | 4,758 | 4,758 | 4,877 | 119 |
| **060.80.86.89.0.000.625.001** | | | | | |
| Public Works - Vehicle Maintenance Fuel System Repair Parts | - | 1,410 | 1,410 | 1,445 | 35 |
| **060.80.86.89.0.000.625.002** | | | | | |
| Public Works - Vehicle Maintenance Steam Cleaner Chemicals | 1,501 | 1,546 | 1,546 | 1,584 | 38 |
| **060.80.86.89.0.000.625.003** | | | | | |
| Public Works - Vehicle Maintenance Vehicle Maint Supplies | 303,733 | 289,228 | 289,228 | 296,458 | 7,230 |
| **060.80.86.89.0.000.627.001** | | | | | |
| Gas Gas Vehicles | 406,907 | 500,000 | 500,000 | 512,000 | 12,000 |
| Office Equipment | - | 705 | 705 | 723 | 18 |
| **060.80.86.00.0.000.656.001** | | | | | |
| Office Equipment Office Eqpt | - | 705 | 705 | 723 | 18 |
| Other Equipment | 25,313 | 2,655 | 2,655 | 2,721 | 66 |
| **060.80.86.89.0.000.665.030** | | | | | |
| Other Equipment Oil Pump Replacement | - | 967 | 967 | 991 | 24 |
| **060.80.86.89.0.000.665.031** | | | | | |
| Other Equipment Other Equipment | 24,620 | - | - | - | - |
| **060.80.86.89.0.000.668.004** | | | | | |
| Radio Equipment Radio Equip -Vcle Mnt | 693 | 1,688 | 1,688 | 1,730 | 42 |
| **061-Vehicle Replacement Fund** | **1,282,631** | **5,316,134** | **5,128,128** | **1,138,000** | **(4,178,134)** |
| **Village Administration** | **-** | **55,000** | **45,000** | **59,000** | **4,000** |
| Motor Equipment | - | 55,000 | 45,000 | 59,000 | 4,000 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **061.20.90.00.1.708.660.011** | | | | | |
| Motor Equipment Village Admin Vehicles | - | - | - | 59,000 | 59,000 |
| **061.20.90.00.1.708.660.012** | | | | | |
| Motor Equipment TV Serv Vehicles | - | 55,000 | 45,000 | - | (55,000) |
| **Finance** | **1,268,381** | **-** | **-** | **-** | **-** |
| Other Expenditures | 1,268,381 | - | - | - | - |
| **061.30.01.00.1.000.638.001** | | | | | |
| Depreciation Depreciation | 1,268,381 | - | - | - | - |
| **Community Development** | **-** | **46,000** | **-** | **46,000** | **-** |
| Motor Equipment | - | 46,000 | - | 46,000 | - |
| **061.40.90.00.1.708.660.014** | | | | | |
| Motor Equipment CD Bldg Vehicles | - | 46,000 | - | 46,000 | - |
| **Police** | **-** | **813,134** | **898,128** | **335,000** | **(478,134)** |
| Motor Equipment | - | 813,134 | 898,128 | 335,000 | (478,134) |
| **061.60.90.00.1.708.660.003** | | | | | |
| Motor Equipment Police Vehicles | - | 813,134 | 898,128 | 335,000 | (478,134) |
| **Fire** | **477** | **2,100,000** | **1,920,000** | **116,000** | **(1,984,000)** |
| Motor Equipment | 477 | 2,100,000 | 1,920,000 | 116,000 | (1,984,000) |
| **061.70.90.00.1.708.660.005** | | | | | |
| Motor Equipment Fire Vehicles | 477 | 2,100,000 | 1,920,000 | 116,000 | (1,984,000) |
| **Public Works** | **13,774** | **2,302,000** | **2,265,000** | **582,000** | **(1,720,000)** |
| Motor Equipment | 13,774 | 2,302,000 | 2,265,000 | 582,000 | (1,720,000) |
| **061.80.90.00.1.708.660.006** | | | | | |
| Motor Equipment PW Vehicles | 13,774 | 2,302,000 | 2,265,000 | 582,000 | (1,720,000) |
| **062-Computer Replacement Fund** | **94,979** | **211,500** | **211,500** | **742,753** | **531,253** |
| **Village Administration** | **94,979** | **211,500** | **211,500** | **216,500** | **5,000** |
| Office Equipment | 89,395 | 211,500 | 211,500 | 216,500 | 5,000 |
| **062.20.90.00.1.707.655.001** | | | | | |
| Computer Equipment Computer Eqpt - IT | 89,395 | 211,500 | 211,500 | 216,500 | 5,000 |
| Other Expenditures | 5,584 | - | - | - | - |
| **062.20.00.00.0.000.638.665** | | | | | |
| Depreciation Equipment | 5,584 | - | - | - | - |
| **Police** | **-** | **-** | **-** | **343,753** | **343,753** |
| Other Equipment | - | - | - | 343,753 | 343,753 |
| **062.60.90.00.0.709.665.056** | | | | | |
| Other Equipment Mobile Video Rec Sys | - | - | - | 343,753 | 343,753 |
| **Fire** | **-** | **-** | **-** | **182,500** | **182,500** |
| Other Equipment | - | - | - | 182,500 | 182,500 |
| **062.70.90.00.1.709.665.032** | | | | | |
| Other Equipment Paramedic Equip | - | - | - | 182,500 | 182,500 |
| **063-Risk Management Fund** | **11,268,334** | **11,940,933** | **11,386,083** | **12,492,529** | **551,596** |
| **Village Administration** | **21,060** | **485,000** | **27,521** | **107,320** | **(377,680)** |
| Building Improvements | 2,500 | 447,500 | - | - | (447,500) |
| **063.20.90.00.1.706.645.020** | | | | | |
| Village Hall Facility Improvements | 2,500 | 447,500 | - | - | (447,500) |
| Commodities & Supplies | 18,560 | 37,500 | 27,521 | 107,320 | 69,820 |
| **063.20.23.00.4.000.631.001** | | | | | |
| Health & Wellness Supplies Health & Wellness Supplies | 15,372 | 25,500 | 22,521 | 94,300 | 68,800 |
| **063.20.23.00.4.000.631.002** | | | | | |
| Health & Wellness Supplies Employee Participation Committee | 3,187 | 12,000 | 5,000 | 13,020 | 1,020 |
| **Public Works** | **10,165** | **11,033** | **11,033** | **11,309** | **276** |
| Contractual Services | 10,165 | 11,033 | 11,033 | 11,309 | 276 |
| **063.80.82.83.4.000.576.012** | | | | | |
| Public Works - Forestry Contractual Tree Hazard Study | 10,165 | 11,033 | 11,033 | 11,309 | 276 |
| **ND** | **11,237,110** | **11,444,900** | **11,347,529** | **12,373,900** | **929,000** |
| Contractual Services | 14,773 | - | 6,000 | 10,000 | 10,000 |
| **063.00.00.00.4.000.530.006** | | | | | |
| Professional Services Other Prof. Serv. | 14,773 | - | 6,000 | 10,000 | 10,000 |
| Insurance | 11,222,337 | 11,444,900 | 11,341,529 | 12,363,900 | 919,000 |

| Fund - Dept - Accounts | 2024 Actual | 2025 Budget | 2025 Estimates | 2026 Budget | $ Change - 2026 Budget vs. 2025 Budget |
|---|---|---|---|---|---|
| **063.00.00.00.4.000.595.002** | | | | | |
| Claims Administration Claims Admin-Medical | 385,444 | 275,000 | 386,400 | 399,900 | 124,900 |
| **063.00.00.00.4.000.596.008** | | | | | |
| Property & Liability Insurance Premiums Other Insurance | 18,844 | 50,000 | 12,000 | 50,000 | - |
| **063.00.00.00.4.000.596.010** | | | | | |
| Property & Liability Insurance Premiums IRMA Annual Contribution | 1,077,790 | 1,150,000 | 1,303,429 | 1,400,000 | 250,000 |
| **063.00.00.00.4.000.597.001** | | | | | |
| Medical/Dental & Life Insurance Medical - PPO Premiums | 7,112,738 | 7,325,000 | 7,530,000 | 8,120,000 | 795,000 |
| **063.00.00.00.4.000.597.002** | | | | | |
| Medical/Dental & Life Insurance Medical HMO Premiums | 1,220,543 | 1,269,900 | 1,085,000 | 1,146,000 | (123,900) |
| **063.00.00.00.4.000.597.003** | | | | | |
| Medical/Dental & Life Insurance Life Insurance Premiums | 71,107 | 65,000 | 79,500 | 84,500 | 19,500 |
| **063.00.00.00.4.000.597.005** | | | | | |
| Medical/Dental & Life Insurance Dental Premiums | 380,092 | 405,000 | 415,200 | 438,500 | 33,500 |
| **063.00.00.00.4.000.597.006** | | | | | |
| Medical/Dental & Life Insurance Vision Insurance | - | 25,000 | 25,000 | 25,000 | - |
| **063.00.00.00.4.000.599.001** | | | | | |
| Property & Liability Claims Property Claims | - | 80,000 | 75,000 | 75,000 | (5,000) |
| **063.00.00.00.4.000.599.002** | | | | | |
| Property & Liability Claims Liability Claims | 48,750 | 100,000 | 25,000 | 100,000 | - |
| **063.00.00.00.4.000.599.003** | | | | | |
| Property & Liability Claims Workers' Comp. Claims | 866,529 | 600,000 | 350,000 | 450,000 | (150,000) |
| **063.00.00.00.4.000.600.002** | | | | | |
| Other Insurance Claims & Expenses Miscellaneous Property Claims | 9,045 | 50,000 | 15,000 | 25,000 | (25,000) |
| **063.00.00.00.4.000.600.004** | | | | | |
| Other Insurance Claims & Expenses Unemplymnt Comp. Clms | 7,163 | 25,000 | 15,000 | 25,000 | - |
| **063.00.00.00.4.000.600.005** | | | | | |
| Other Insurance Claims & Expenses Misc. IRMA Claims | 24,292 | 25,000 | 25,000 | 25,000 | - |
| **Grand Total** | **148,943,237** | **189,179,927** | **171,537,700** | **192,580,134** | **3,400,207** |

# Item Cover Page

| | |
|---|---|
| **Subject** | **First Reading of AN ORDINANCE AUTHORIZING THE LEVY AND COLLECTION OF TAXES FOR THE CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Category | NEW BUSINESS |
| Type | Ordinance |

## Information

The Village must file its 2025 tax levy ordinance with Cook County prior to December 2024. The filing includes corporate tax levy and abatement ordinances. The Village will receive proceeds from the 2025 tax levy in 2026. This agenda item covers the first reading of the tax levy ordinance. The public hearing, second reading, and final approval of the ordinance will occur on November 18, 2025.

## Discussion

The proposed 2025 property tax levy for the Village (payable in 2026) is $18.2 million, reflecting a 0 percent change from the 2024 level. The Police Protection levy is $4,699,527, an increase of $266,097 or 6.0 percent. The Fire Protection levy is $4,215,068, reflecting an increase of $84,503 or 2.05 percent. The Village will be deploying $925,000 from grocery taxes towards the public safety pension abatement. The Village will also be deploying $2.0 million in public safety pension abatement from the Pension Stabilization Fund. With the total abatement of $2,925,000, the public safety pension levies will be $5,144,980 and $3,949,810 for the Police and Fire Departments, respectively. With these abatements, the public safety pension will show a reduction of $84,503 for the Police Department and $266,097 for the Fire Department. These reductions on the pension side offset the increases in the operating levies.

The Village has a total debt service payment of $7,795,919 due in 2026. Of this amount, the Village will be abating $7,574,552 and levy $225,794 (with 2% loss and costs).

The Village also approves and reports the annual levy for the Mount Prospect Library to Cook County. The Mount Prospect Library will have an annual levy of $11,517,290, which shows a 2.0 percent increase over the 2024 extended taxes payable in 2025.

| | Gross 2025 Levy | Subsidy/ Abatements | Net 2025 Levy | 2% Provision Loss and Costs | Total 2025 Extension | 2024 Tax Total 2024 Extension | Inc/( |
|---|---|---|---|---|---|---|---|
| **VILLAGE OF MOUNT PROSPECT** | | | | | | | |
| Police Protection | 4,607,379 | - | 4,607,379 | 92,148 | 4,699,527 | 4,433,430 | 2 |
| Fire Protection | 5,132,420 | 1,000,000 | 4,132,420 | 82,648 | 4,215,068 | 4,130,565 | |
| Police Pension Fund | 6,506,598 | 1,462,500 | 5,044,098 | 100,882 | 5,144,980 | 5,229,483 | ( |
| Firefighters' Pension Fund | 5,334,863 | 1,462,500 | 3,872,363 | 77,447 | 3,949,810 | 4,215,907 | (2 |
| **Total Operational Levy** | 21,581,260 | 3,925,000 | 17,656,260 | 353,125 | 18,009,385 | 18,009,385 | |
| **Total Debt Service Levy** | 7,795,919 | 7,574,552 | 221,367 | 4,427 | 225,794 | 225,794 | |
| **Total Village Levy** | 29,377,179 | 11,499,552 | 17,877,627 | 357,552 | 18,235,179 | 18,235,179 | |
| **MOUNT PROSPECT PUBLIC LIBRARY** | | | | | | | |
| Library Levy Fund | 11,291,461 | - | 11,291,461 | 225,829 | 11,517,290 | 11,291,461 | 2 |
| **Total Library Levy** | 11,291,461 | - | 11,291,461 | 225,829 | 11,517,290 | 11,291,461 | 2 |
| **Total Village and Library Combined** | 40,668,640 | 11,499,552 | 29,169,088 | 583,382 | 29,752,469 | 29,526,640 | 2 |
| **Total Operating Levy** | 32,872,721 | 3,925,000 | 28,947,721 | 578,954 | 29,526,675 | 29,300,846 | 2 |
| **Total Debt Service Levy** | 7,795,919 | 7,574,552 | 221,367 | 4,427 | 225,794 | 225,794 | |
| | 40,668,640 | 11,499,552 | 29,169,088 | 583,382 | 29,752,469 | 29,526,640 | 2 |

The Village's levy, totaling $18.2 million, will be the lowest in the last eleven years. In order to achieve the above levy, the Village is abating a total of $7.4 million from various sources.

### SSA Taxes - $1,000,000

- $1,000,000 – Abatement from the EGRF SSA Taxes paid by Unincorporated Area Residents and Businesses.

### General Fund - $5,099,433

- $1,000,000 – Police Pension Abatements
- $1,000,000 – Fire Pension Abatements
- $1,444,250 – Series 2018B Police and Fire HQ Bonds Abatements
- $1,655,183 – Series 2016B Bonds Abatements

### Other Debt Service Abatements - $323,050

- $300,050 – Video Gaming Tax
- $23,000 – Debt Service Fund Interest Income

### Grocery Taxes - $925,000

- $925,000 – Grocery Taxes to be used for the Police and Fire Pension Abatements

The Village has used the additional revenue from the sales tax (General Fund) to provide property tax abatements totaling $5.1 million. Out of this amount, $2.0 million will be allocated to the Police Pension Fund and Fire Pension Fund. The remaining $3.1 million is taken from the General Fund to fulfill various G.O. Bonds debt service obligations. The debt service abatement includes $1.4 million for the Police and Fire HQ Bonds and $1.7 million for

the series 2016 G.O. Bonds. The Village will also be deploying $925,000 from grocery taxes towards the pension abatement and $323,050 in debt service abatement from video gaming tax and interest income. Without these abatements totaling $7.4 million, the property tax levy would have shown a 41.1 percent increase over the 2024 amount. This would have been the highest levy in the last eleven years. The total levy in 2015 was $18.3 million. With the proposed abatements, the 2025 levy will be the lowest in the past decade.

With the above abatements and levy amounts, an average home valued at $400,000 will see a total property tax for the Village at $1,003. In the absence of the abatement, this amount would have increased by $412.

| Property Taxes - Village | 2024 Payable 2025 | Without Abatements 2025 Payable 2026 | With Abatements 2025 Payable 2026 |
|---|---|---|---|
| Average House Value | $ 400,000 | $ 400,000 | $ 400,000 |
| Assessed Value - 10% | $ 40,000 | $ 40,000 | $ 40,000 |
| Equalization Factor | 3.0355 | 3.0355 | 3.0355 |
| Equalized Assessed Value | $ 121,420 | $ 121,420 | $ 121,420 |
| Village Rate | 0.826 | 1.17 | 0.83 |
| Property Tax | $ 1,003 | $ 1,415 | $ 1,003 |
| Increase/(Decrease) | | 412 | - |
| Percent Increase/(Decrease) | | 41.1% | 0.0% |

The second reading, public hearing and the final approval are scheduled for November 18, 2025.

## Alternatives

1. Hold a first reading of the ordinance authorizing the levy and collection of 2025 property taxes payable in 2026, reflecting a 0 percent increase in the Village Levy and a 2.0 percent increase in the Mount Prospect Library Levy.
2. Action at the discretion of the Village.

## Staff Recommendation

Staff recommends holding a first reading of the ordinance authorizing the levy and collection of 2025 property taxes payable in 2026, reflecting a 0 percent increase in the Village Levy and a 2.0 percent increase in the Mount Prospect Library Levy.

## Attachments

1. Final Levy Ordinance - 2025

**ORDINANCE NO.**

**AN ORDINANCE AUTHORIZING THE LEVY AND COLLECTION OF TAXES FOR THE CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025**

---

PASSED AND APPROVED BY

THE PRESIDENT AND BOARD OF TRUSTEES

the _____ day of November, 2025

Published in pamphlet form by
authority of the corporate authorities
of the Village of Mount Prospect, Illinois
the _____day of _____, 2025.

**ORDINANCE NO.**

**AN ORDINANCE AUTHORIZING THE LEVY AND COLLECTION OF TAXES FOR THE CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025**

---

NOW, THEREFORE, BE IT ORDAINED BY THE President and Board of Trustees of the Village of Mount Prospect, Cook County, Illinois, as follows:

Section 1: That the sum of Twenty Nine Million One Hundred Sixty Nine Thousand and Eighty Eight Dollars ($29,169,088), the same being the total amount to be levied of budget appropriations heretofore made for the corporate and municipal purposes for the fiscal year beginning January 1, 2025, and ending December 31, 2025, as approved by the President and Board of Trustees of the Village of Mount Prospect, be and the same is hereby levied on all taxable property within the Village of Mount Prospect according to the valuation of said property as is, or shall be assessed or equalized by the State and County purposes for the current year 2025.

Section 2: The budgetary appropriations having been made by the President and Board of Trustees of the Village of Mount Prospect were passed and approved by Ordinance No. 6762 at a meeting hereof regularly convened and held in said Village of Mount Prospect, Illinois, on the 6th day of November, 2024, and amended by Ordinance No. 6782 on the 18th day of March, 2025, by Ordinance No. 6789 on 15th day of April, 2025, by Ordinance No. 8794 on 8th day of July, 2025 and thereafter duly published according to law, the various objects and purposes for said budgetary appropriations are heretofore made and set forth under the column entitled "Amount Budgeted", and the specific amount herein levied for each object and purpose is set forth under the column entitled "Amount Levied", in Articles I through VI.

# VILLAGE OF MOUNT PROSPECT, ILLINOIS

## 2025 Tax Levy

| | Amount Budgeted | Amount Levied |
|---|---|---|
| **ARTICLE I - POLICE PROTECTION** | | |
| Personal Services, Salaries & Wages | 14,289,475.0 | 4,607,379 |
| Employee Benefits | 8,791,618.0 | 0 |
| Other Employee Costs | 191,820.0 | 0 |
| Contractual Services | 3,213,195.7 | 0 |
| Utilities | 12,500.0 | 0 |
| Insurance | 195,821.0 | 0 |
| Commodities & Supplies | 260,617.9 | 0 |
| Office Equipment | 26,125.0 | 0 |
| Other Equipment | 15,285.0 | 0 |
| Building Improvements | 35,000.0 | 0 |
| Total Police Department | 27,031,458 | 4,607,379 |
| TOTAL BUDGET FOR POLICE PROTECTION | 27,031,458 | |
| AMOUNT TO BE RAISED BY TAX LEVY | | 4,607,379 |
| ADD 2% FOR LOSS & COST OF COLLECTION | | 92,148 |
| TOTAL AMOUNT TO BE RAISED BY TAX LEVY FOR POLICE PROTECTION | | 4,699,527 |
| **ARTICLE II - FIRE PROTECTION** | | |
| Personal Services, Salaries & Wages | 12,358,778.00 | 4,132,420 |
| Employee Benefits | 7,655,769.00 | 0 |
| Other Employee Costs | 187,200.00 | 0 |
| Contractual Services | 3,218,628.00 | 0 |
| Utilities | 14,000.00 | 0 |
| Insurance | 160,393.00 | 0 |
| Commodities & Supplies | 74,250.00 | 0 |
| Building Improvements | 2,500.00 | 0 |
| Office Equipment | 750.00 | 0 |
| Other Equipment | 206,322.00 | 0 |
| Total Fire Department | 23,878,590 | 4,132,420 |
| TOTAL BUDGET FOR FIRE PROTECTION | 23,878,590 | |
| AMOUNT TO BE RAISED BY TAX LEVY | | 4,132,420 |
| ADD 2% FOR LOSS & COST OF COLLECTION | | 82,648 |
| TOTAL AMOUNT TO BE RAISED BY TAX LEVY FOR FIRE PROTECTION | | 4,215,068 |
| **ARTICLE III - DEBT SERVICE** | | |
| 00 Debt Service | | |
| 00 00 518 G.O. Bonds - Series 2016 | | |
| Bond Principal | 1,795,000 | 221,367 |
| Interest Expense | 166,350 | 0 |
| Bank and Fiscal Fees | 0 | 0 |
| Total G.O. Bonds - Series 2016 | 1,961,350 | 221,367 |

**ARTICLE III - DEBT SERVICE (continued)**

| | | | |
|---|---|---|---|
| 00 00 565 | G.O. Bonds - Series 2017 - TIF | | |
| | Bond Principal | 220,000 | 0 |
| | Interest Expense | 125,369 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2017 | 345,369 | 0 |
| 00 00 565 | G.O. Bonds - Series 2017 - Water | | |
| | Bond Principal | 220,000 | 0 |
| | Interest Expense | 115,331 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2017 | 335,331 | 0 |
| 00 00 566 | G.O. Bonds - Series 2018A - TIF | | |
| | Bond Principal | 310,000 | 0 |
| | Interest Expense | 216,369 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2018A - TIF | 526,369 | 0 |
| 00 00 566 | G.O. Bonds - Series 2018A - Water | | |
| | Bond Principal | 210,000 | 0 |
| | Interest Expense | 134,250 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2018A - Water | 344,250 | 0 |
| 00 00 519 | G.O. Bonds - Series 2018B - New | | |
| | Bond Principal | 0 | 0 |
| | Interest Expense | 1,444,250 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2018B - New | 1,444,250 | 0 |
| 00 00 519 | G.O. Bonds - Series 2018B - Refi | | |
| | Bond Principal | 160,000 | 0 |
| | Interest Expense | 78,250 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2018B - Refi | 238,250 | 0 |
| 00 00 565 | G.O. Bonds - Series 2019A - Water | | |
| | Bond Principal | 375,000 | 0 |
| | Interest Expense | 265,050 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2017 | 640,050 | 0 |
| 00 00 565 | G.O. Bonds - Series 2019B - TIF | | |
| | Bond Principal | 290,000 | 0 |
| | Interest Expense | 230,100 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2017 | 520,100 | 0 |
| 00 00 | G.O. Bomds - Series 2022 - Water/Sewer | | |
| | Bond Principal | 280,000 | 0 |
| | Interest Expense | 281,300 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2022 | 561,300 | 0 |

**ARTICLE III - DEBT SERVICE (continued)**

| | | | |
|---|---|---|---|
| 00 00 | G.O. Bomds - Series 2022B - Flood Control | | |
| | Bond Principal | 705,000 | 0 |
| | Interest Expense | 174,300 | 0 |
| | Bank and Fiscal Fees | 0 | 0 |
| | Total G.O. Bonds - Series 2022 | 879,300 | 0 |
| TOTAL BUDGET FOR DEBT SERVICE | | 7,795,919 | |
| AMOUNT TO BE RAISED BY TAX LEVY | | | 221,367 |
| ADD 2% FOR LOSS & COST OF COLLECTION | | | 4,427 |
| TOTAL AMOUNT TO BE RAISED BY TAX LEVY FOR DEBT SERVICE | | | 225,794 |

**ARTICLE IV - POLICE PENSION**

| | | | |
|---|---|---|---|
| 00 | Police Pensions | | |
| | Annual Pension Costs | 6,506,598 | 5,044,098 |
| | Total Police Pensions | 6,506,598 | 5,044,098 |
| TOTAL BUDGET FOR POLICE PENSION | | 6,506,598 | |
| AMOUNT TO BE RAISED BY TAX LEVY | | | 5,044,098 |
| ADD 2% FOR LOSS & COST OF COLLECTION | | | 100,882 |
| TOTAL AMOUNT TO BE RAISED BY TAX LEVY FOR POLICE PENSION | | | 5,144,980 |

**ARTICLE V - FIREFIGHTERS' PENSION**

| | | | |
|---|---|---|---|
| 00 | Fire Pensions | | |
| | Annual Pension Costs | 5,334,863 | 3,872,363 |
| | Total Firefighters' Pensions | 5,334,863 | 3,872,363 |
| TOTAL BUDGET FOR FIREFIGHTERS' PENSION | | 5,334,863 | |
| AMOUNT TO BE RAISED BY TAX LEVY | | | 3,872,363 |
| ADD 2% FOR LOSS & COST OF COLLECTION | | | 77,447 |
| TOTAL AMOUNT TO BE RAISED BY TAX LEVY FOR FIREFIGHTERS' PENSION | | | 3,949,810 |

**ARTICLE VI - MOUNT PROSPECT LIBRARY**

| | | | |
|---|---|---|---|
| 90 | Mount Prospect Library | | |
| | Library Expenditures | 17,941,000 | 11,291,461 |
| | Bond Principal | 0 | 0 |
| | Interest Expense/Fiscal Charges | 0 | 0 |
| | Total Library Services | 17,941,000 | 11,291,461 |
| TOTAL BUDGET FOR MOUNT PROSPECT LIBRARY | | 17,941,000 | |
| AMOUNT TO BE RAISED BY TAX LEVY - Library Expenditures | | | 11,291,461 |
| AMOUNT TO BE RAISED BY TAX LEVY - Bond Principal and Interest | | | 0 |
| ADD 2% FOR LOSS & COST OF COLLECTION | | | 225,829 |
| TOTAL AMOUNT TO BE RAISED BY TAX LEVY FOR MOUNT PROSPECT LIBRARY | | | 11,517,290 |

| | |
|---|---|
| Total Levy w/o L&C | 29,169,088 |
| Total Levy w/ L&C | 29,752,469 |

**VILLAGE OF MOUNT PROSPECT, ILLINOIS**
**2025 TAX LEVY SUMMARY**

| Article | Fund | | Amount Budgeted | Amount to be Raised by Tax Levy | Amount for Loss and Cost | Total Tax Levy Incl. Loss and Cost |
|---|---|---|---|---|---|---|
| I | Police Protection | $ | 27,031,458 | 4,607,379 | 92,148 | 4,699,527 |
| II | Fire Protection | | 23,878,590 | 4,132,420 | 82,648 | 4,215,068 |
| III | Debt Service | | 7,795,919 | 221,367 | 4,427 | 225,794 |
| IV | Police Pension | | 6,506,598 | 5,044,098 | 100,882 | 5,144,980 |
| V | Firefighters' Pension | | 5,334,863 | 3,872,363 | 77,447 | 3,949,810 |
| | Village Totals | | 70,547,428 | 17,877,627 | 357,552 | 18,235,179 |
| VI | Mount Prospect Library | | | | | |
| | Library Services | | 17,941,000 | 11,291,461 | 225,829 | 11,517,290 |
| | Library Debt Service | | - | - | - | - |
| | Library Totals | | 17,941,000 | 11,291,461 | 225,829 | 11,517,290 |
| | Village and Library Totals | $ | 88,488,428 | 29,169,088 | 583,381 | 29,752,469 |

Section 3: The sum of $666,582 is budgeted to be received from personal property replacement tax revenue during the fiscal year commencing January 1, 2025 and ending December 31, 2025 and has been included herein as funds to be derived from sources other than property taxes supporting expenses related to police and fire protection, general obligation bonds and interest, public safety pensions and library services.

Section 4: That the County Clerk is directed to add 2% to the requested tax levy as a provision for loss and cost.

Section 5: That the Village Clerk of the Village of Mount Prospect is hereby directed to certify a copy of this Ordinance and is hereby authorized and directed to file a copy of the same with the County Clerk of Cook County, Illinois, within the time specified by law.

Section 6: That, if any part or parts of this Ordinance shall be held to be unconstitutional or otherwise invalid, such constitutionality or invalidity, shall not affect the validity of the remaining parts of this Ordinance. The President and Board of Trustees of the Village of Mount Prospect hereby declares that they would have passed the remaining parts of the Ordinance of they had known that such parts or parts thereof would be declared unconstitutional or otherwise invalid.

Section 7: That this Ordinance shall be in full force and effect from and after its passage, approval, publication in pamphlet form and recording, as provided by law.

AYES:

NAYES:

ABSENT:

PASSED and APPROVED this _____ day of November 2025.

_____
Paul Wm. Hoefert, Mayor

ATTEST:

_____
Karen Agoranos, Village Clerk

# Item Cover Page

| | |
|---|---|
| **Subject** | **First Reading of AN ORDINANCE TO ABATE A PART OF THE TAXES LEVIED FOR CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT, ILLINOIS, FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025, AND ENDING DECEMBER 31, 2025.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Category | NEW BUSINESS |
| Type | Ordinance |

## Information

The Village approves and files its levy and abatement ordinance each year with Cook County before December. This ordinance abates part of the debt service levy to be used for general obligation bonds. The Village has alternative revenue sources to pay for the debt service obligation for the year 2026. In the absence of the attached abatement ordinance, the County will levy on all the previously issued bonds, which could result in significant property tax increases for the Village's portion. The second reading and the final approval of this ordinance are expected on November 18, 2025.

## Discussion

The proposed ordinance is a part of the annual budget process. The Village abates part of the debt service property tax levy every year. Several general obligation bonds have been issued in the past, and Cook County will levy debt service property tax levy unless the Village abates part of the bond levies. There are certain debt service payments which the Village pays from alternative revenue sources, and this eliminates the need to levy property taxes for such bond principal and interest amounts. For the assessment year 2025 (payable in 2026), the Village will be abating the following debt service payments.

| Bond Issue | Debt Sevice | Abatements | Levy Amount | 2% Loss and Costs | Net Levy |
|---|---|---|---|---|---|
| Series 2016 | 1,961,350 | 1,739,983 | 221,367 | 4,427 | 225,794 |
| Series 2017 (TIF) | 345,369 | 345,369 | - | - | - |
| Series 2017 (WTR) | 335,331 | 335,331 | - | - | - |
| Series 2018a (TIF) | 526,369 | 526,369 | - | - | - |
| Series 2018a (WTR) | 344,250 | 344,250 | - | - | - |
| Series 2018b (new) | 1,444,250 | 1,444,250 | - | - | - |
| Series 2018b (refi) | 238,250 | 238,250 | - | - | - |
| Series 2019a (WTR) | 640,050 | 640,050 | - | - | - |
| Series 2019B (TIF) | 520,100 | 520,100 | - | - | - |
| Series 2022 (WTR) | 561,300 | 561,300 | - | - | - |
| Series 2022A (Flood) | 879,300 | 879,300 | - | - | - |
| **Total Debt Service** | **7,795,919** | **7,574,552** | **221,367** | **4,427** | **225,794** |

The above table shows that the Village will levy only $221,367 in debt service levy, and the remaining $7,574,552 will be abated using the following alternative revenue sources.

| | | Funding Sources | | | | | |
|---|---|---|---|---|---|---|---|
| Debt Service | 2026 Debt Service | Property Taxes | General Fund Abatements | Sales Tax | Water & Sewer Charges | TIF Increment | Video Gaming & Other |
| **Debt Service Fund** | **4,523,150** | **221,367** | **3,099,433** | **879,300** | **-** | **-** | **323,050** |
| Bond Principal | 2,660,000 | 221,367 | 1,410,583 | 705,000 | - | - | 323,050 |
| Interest Expense | 1,863,150 | - | 1,688,850 | 174,300 | - | - | - |
| **Prospect and Main TIF District** | **1,391,838** | **-** | **-** | **-** | **-** | **1,391,838** | **-** |
| Bond Principal | 820,000 | - | - | - | - | 820,000 | - |
| Interest Expense | 571,838 | - | - | - | - | 571,838 | - |
| **Water and Sewer Fund** | **1,880,931** | **-** | **-** | **-** | **1,880,931** | **-** | **-** |
| Bond Principal | 1,085,000 | - | - | - | 1,085,000 | - | - |
| Interest Expense | 795,931 | - | - | - | 795,931 | - | - |
| **Grand Total** | **7,795,919** | **221,367** | **3,099,433** | **879,300** | **1,880,931** | **1,391,838** | **323,050** |

The total debt service payments due during the fiscal year 2026 are $7,795,919. The Village will be abating $7,574,552 of this amount and levy only for one of the issued bonds in the amount of $221,367. Series 2017, 2018A, and 2019B are TIF bonds and will be paid with TIF increments from the Prospect & Main TIF District. Series 2017, Series 2018A, Series 2019A and Series 2022 are Water/Sewer Bonds and will be paid from utility service charges. Series 2018B was issued in 2018 for the Police and Fire Headquarters, as well as for refunding 2009 Series Bonds. The Village is using the General Fund revenues to abate these bonds. The video gaming tax and interest income totaling $323,050 are used to abate part of the 2018B and 2016 bonds. After all the abatements, series 2016 bonds will have a net levy of $221,367 and with a 2% provision for loss and costs, the final levy amount would be $225,794.

## Alternatives

1. Hold the first reading of the ordinance abating $7,574,552 in 2025 debt service levy payable in 2026.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff recommends holding the first reading of an ordinance abating $7,574,552 in 2025 debt service levy payable in 2026.

**Attachments**

1. General Village Levy Abatement Ordinance - Nov 6 2024

**ORDINANCE NO.**

**AN ORDINANCE TO ABATE A PART OF THE TAXES LEVIED FOR CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT, ILLINOIS FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025 AND ENDING DECEMBER 31, 2025**

---

PASSED AND APPROVED BY

THE PRESIDENT AND BOARD OF TRUSTEES

the ____ day of _____, 2025

Published in pamphlet form by
authority of the corporate authorities
of the Village of Mount Prospect, Illinois,
the ___ day of _____, 2025.

**ORDINANCE NO. _____**

**AN ORDINANCE TO ABATE A PART OF THE TAXES LEVIED FOR CORPORATE AND MUNICIPAL PURPOSES OF THE VILLAGE OF MOUNT PROSPECT, ILLINOIS FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2025 AND ENDING DECEMBER 31, 2025**

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BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF MOUNT PROSPECT, COOK COUNTY, ILLINOIS:

Section 1: The President and Board of Trustees of the Village of Mount Prospect find as follows:

A. That pursuant to Village Ordinance No. 6320 adopted May 2, 2017, authorizing the issuance of general obligation bonds series 2016 for refunding previously issued bonds in the Village, there was levied for the year 2025 the sum of $1,961,350 for bond principal and interest payments.

B. That pursuant to Village Ordinance No. 6347 adopted November 7, 2017, authorizing the issuance of general obligation bonds series 2017 for financing the costs of certain water and sewer capital projects in the Village, there was levied for the year 2025 the sum of $335,331 for bond principal and interest payments.

C. That pursuant to Village Ordinance No. 6347 adopted November 7, 2017, authorizing the issuance of general obligation series 2017 bonds for financing the costs of certain capital projects in the Village (TIF), there was levied for the year 2025 the sum of $345,369 for bond principal and interest payments.

D. That pursuant to Village Ordinance No. 6385 adopted April 17, 2018, authorizing the issuance of general obligation bonds series 2018A for financing the costs of certain water and sewer capital projects in the Village, there was levied for the year 2025 the sum of $344,250 for bond principal and interest payments.

E. That pursuant to Village Ordinance No. 6385 adopted April 17, 2018, authorizing the issuance of general obligation bonds series 2018A for financing the costs of certain capital projects in the Village (TIF), there was levied for the year 2025 the sum of $526,369 for bond principal and interest payments.

F. That pursuant to Village Ordinance No. 6403 adopted September 4, 2018, authorizing the issuance of general obligation bonds series 2018B for financing the construction of Police and Fire HQ projects and refunding of certain bonds of the village there was levied for the year 2025 the sum of $1,682,500.00 for bond principal and interest payments.

G. That pursuant to Village Ordinance No. 6449 adopted April 16, 2019, authorizing the issuance of general obligation bonds series 2019A for financing the costs of certain water and sewer capital projects in the Village, there was levied for the year 2025 the sum of $640,050 for bond principal and interest payments.

H. That pursuant to Village Ordinance No. 6483 adopted October 15, 2019, authorizing the issuance of general obligation bonds series 2019B for financing the construction of various capital projects with the TIF District of Prospect and Main of the Village of Mount Prospect, there was levied for the year 2025 the sum of $520,100 for bond principal and interest payments.

I. That pursuant to Village Ordinance No. 6594 adopted December 7, 2021, authorizing the issuance of general obligation bonds series 2022 for financing the construction of various water and sewer projects throughout the village there was levied for the year 2025 the sum of $561,300 for bond principal and interest payments.

J. That pursuant to Village Ordinance No. 6622 adopted April 5, 2022, authorizing the issuance of general obligation bonds series 2022A for refunding Series 2013 G.O. Bond of the Village of Mount Prospect, levied for the year 2025 the sum of $879,300 for bond principal and interest payments.

Section 2: Section 11: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $1,961,350.00 levied for G.O. Bond series 2016A interest and principal payments for the purpose of refunding prior bonds throughout the village pursuant to Ordinance No. 6320 be and the same is hereby abated in the amount of $1,739,983.00 being the partial amount levied for such bond interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 3: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $335,331 levied for G.O. Bond series 2017 interest and principal payments for the purpose of funding water and sewer construction projects throughout the village pursuant to Ordinance No. 6347 be and the same is hereby abated in the amount of $335,331 being the entire amount levied for such bond interest payment purposes for the fiscal year commencing January 1, 2025, and ending December 31, 2025.

Section 4: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $345,369 levied for G.O. Bond series 2017 principal and interest payments for the purpose of funding construction projects throughout the village (TIF) pursuant to Ordinance No. 6347 be and the same is hereby abated in the amount of $345,369 being the entire amount levied for such bond principal and interest payment purposes for the fiscal year commencing January 1, 2025, and ending December 31, 2025.

Section 5: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $344,250 levied for G.O. Bond series 2018A interest and principal payments for the purpose of funding water and sewer construction projects throughout the village pursuant to Ordinance No. 6385 be and the same is hereby abated in the amount of $344,250 being

the entire amount levied for such bond interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 6: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $526,369 levied for G.O. Bond series 2018A principal and interest payments for the purpose of funding construction projects throughout the village (TIF) pursuant to Ordinance No. 6385 be and the same is hereby abated in the amount of $526,369 being the entire amount levied for such bond principal and interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 7: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $1,682,500 levied for G.O. Bond series 2018 B interest payments for the purpose of funding construction projects and refunding of 2009 bonds for the Village pursuant to Ordinance No. 6403 be and the same is hereby abated in the amount of $1,682,500 being the entire amount levied for such bond principal and interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 8: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $640,050.00 levied for G.O. Bond series 2019A principal and interest payments for the purpose of funding water and sewer construction projects throughout the village pursuant to Ordinance No. 6449 be and the same is hereby abated in the amount of $640,050 being the entire amount levied for such bond principal and interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 9: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $520,100 levied for G.O. Bond series 2019B principal and interest payment for the purpose of funding construction projects in the area of Prospect & Main TIF of the Village of Mount Prospect pursuant to Ordinance No. 6483 be and the same is hereby abated in the amount of $520,100 being the entire amount levied for such bond principal and interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 10: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $561,300.00 levied for G.O. Bond series 2022 interest and principal payments for the purpose of funding the construction of various water and sewer projects throughout the village pursuant to Ordinance No. 6594 be and the same is hereby abated in the amount of $561,300.00 being the entire amount levied for such bond interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 11: It is hereby declared by the President and Board of Trustees of the Village of Mount Prospect that the amount of $879,300 levied for G.O. Bond series 2022A interest and principal payments for the purpose of refunding general obligation bonds series 2013 pursuant to Ordinance No. 6622 be and the same is hereby abated in the amount of $879,300 being the entire amount levied for such bond interest payment purposes for the fiscal year commencing January 1, 2025 and ending December 31, 2025.

Section 10: Village Ordinance Nos. 6320, 6347, 6385, 6403, 6449, 6483, 6594, and 6622 are hereby amended with respect to the tax abatements declared herein and set forth in Sections Two through Nine of this Ordinance.

Section 11: The Village Clerk of the Village of Mount Prospect is hereby authorized and directed to file a certified copy of this Ordinance with the County Clerk of Cook County, Illinois within the time specified by law.

Section 12: This Ordinance shall be in full force and effect upon its passage, approval and publication in pamphlet form and filing as provided by law.

AYES:

NAYS:

ABSENT:

PASSED and APPROVED this _____day of November 2025.

_____
Paul Wm. Hoefert, Mayor

ATTEST:

_____
Karen Agoranos, Village Clerk

**Village of Mount Prospect**
**Tax Levy - 2025**
**Debt Service Abatement Summary**

| Bond Issue | Debt Sevice | Abatements | Levy Amount | 2% Loss and Costs | Net Levy |
|---|---|---|---|---|---|
| Series 2016 | 1,961,350 | 1,739,983 | 221,367 | 4,427 | 225,794 |
| Series 2017 (TIF) | 345,369 | 345,369 | - | - | - |
| Series 2017 (WTR) | 335,331 | 335,331 | - | - | - |
| Series 2018a (TIF) | 526,369 | 526,369 | - | - | - |
| Series 2018a (WTR) | 344,250 | 344,250 | - | - | - |
| Series 2018b (new) | 1,444,250 | 1,444,250 | - | - | - |
| Series 2018b (refi) | 238,250 | 238,250 | - | - | - |
| Series 2019a (WTR) | 640,050 | 640,050 | - | - | - |
| Series 2019B (TIF) | 520,100 | 520,100 | - | - | - |
| Series 2022 (WTR) | 561,300 | 561,300 | - | - | - |
| Series 2022A (Flood) | 879,300 | 879,300 | - | - | - |
| **Total Debt Service** | **7,795,919** | **7,574,552** | **221,367** | **4,427** | **225,794** |

**VILLAGE OF MOUNT PROSPECT**
**Property Tax Levy - 2025**

| | Gross 2025 Levy | Subsidy/ Abatements | Net 2025 Levy | 2% Provision Loss and Costs | Total 2025 Extension | 2024 Tax Extension Total 2024 Extension | $ Inc/(Dec.) | % Inc/(Dec.) |
|---|---|---|---|---|---|---|---|---|
| **VILLAGE OF MOUNT PROSPECT** | | | | | | | | |
| Police Protection | 4,607,379 | - | 4,607,379 | 92,148 | 4,699,527 | 4,433,430 | 266,097 | 6.00% |
| Fire Protection | 5,132,420 | **1,000,000** | 4,132,420 | 82,648 | 4,215,068 | 4,130,565 | 84,503 | 2.05% |
| Police Pension Fund | 6,506,598 | **1,462,500** | 5,044,098 | 100,882 | 5,144,980 | 5,229,483 | (84,503) | -1.62% |
| Firefighters' Pension Fund | 5,334,863 | **1,462,500** | 3,872,363 | 77,447 | 3,949,810 | 4,215,907 | (266,097) | -6.31% |
| **Total Operational Levy** | **21,581,260** | **3,925,000** | **17,656,260** | **353,125** | **18,009,385** | **18,009,385** | **-** | **0.00%** |
| **Debt Service Funds** | | | | | | | | |
| - General Government | | | | | | | | |
| 2016 - Series Bonds | 1,961,350 | 1,739,983 | 221,367 | 4,427.34 | 225,794 | 225,794 | - | 0.00% |
| 2018B - Police & Fie H | 1,444,250 | 1,444,250 | - | - | - | - | - | 0.00% |
| 2018B - 2009 Refundi | 238,250 | 238,250 | - | - | - | - | - | 0.00% |
| 2022B - Flood Control | 879,300 | 879,300 | - | - | - | - | - | 0.00% |
| - TIF | | | | | | | | |
| Series 2017 | 345,369 | 345,369 | - | - | - | - | - | 0.00% |
| Series 2018A | 526,369 | 526,369 | - | - | - | - | - | 0.00% |
| Series 2019B | 520,100 | 520,100 | - | - | - | - | - | 0.00% |
| - Water/Sewer | | | | | | | | |
| Series 2017 | 335,331 | 335,331 | - | - | - | - | - | 0.00% |
| Series 2018A | 344,250 | 344,250 | - | - | - | - | - | 0.00% |
| Series 2019A | 640,050 | 640,050 | - | - | - | - | - | 0.00% |
| Series 2022 | 561,300 | 561,300 | - | - | - | - | - | 0.00% |
| **Total Debt Service Levy** | **7,795,919** | **7,574,552** | **221,367** | **4,427** | **225,794** | **225,794** | **-** | **0.00%** |
| **Total Village Levy** | **29,377,179** | **11,499,552** | **17,877,627** | **357,552** | **18,235,179** | **18,235,179** | **-** | **0.00%** |
| **MOUNT PROSPECT PUBLIC LIBRARY** | | | | | | | | |
| Library Levy Fund | 11,291,461 | - | 11,291,461 | 225,829 | 11,517,290 | 11,291,461 | 225,829 | 2.00% |
| **Total Library Levy** | **11,291,461** | **-** | **11,291,461** | **225,829** | **11,517,290** | **11,291,461** | **225,829** | **2.00%** |
| **Total Village and Library Combined** | **40,668,640** | **11,499,552** | **29,169,088** | **583,382** | **29,752,469** | **29,526,640** | **225,829** | **0.76%** |
| **Total Operating Levy** | **32,872,721** | **3,925,000** | **28,947,721** | **578,954** | **29,526,675** | **29,300,846** | 225,829 | **0.77%** |
| **Total Debt Service Levy** | **7,795,919** | **7,574,552** | **221,367** | **4,427** | **225,794** | **225,794** | - | **0.00%** |
| | **40,668,640** | **11,499,552** | **29,169,088** | **583,382** | **29,752,469** | **29,526,640** | **225,829** | **0.76%** |

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to approve a traffic-calming project on William Street between Prospect Avenue and Golf Road.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $20,000.00 |
| Budget Source | Capital Improvements Fund |
| Category | VILLAGE MANAGER'S REPORT |
| Type | Action Item |

## Information

The Transportation Safety Commission transmits their recommendation to construct a traffic-calming project on William Street between Prospect Avenue and Golf Road and approve associated traffic regulations. This section of William Street is the first project to be recommended through the Friendly Neighborhood Streets Program, an update to the Village Traffic Calming Program. Proposed improvements include:

- Parking changes, pavement markings and marked crosswalks on William Street between Prospect Avenue and Shabonee Trail.
- Speed feedback signs on the 600 and 700 blocks of William Street.
- Raised median island and associated pavement markings at the crosswalk south of Weller Creek.
- “No Parking Here to Corner” signs at the intersection of William Street and Sunset Road.

A petition for a traffic-calming project on the 600 and 700 blocks of South William Street was submitted to Public Works on September 30, 2024. After receiving the petition, staff advanced the project through the Friendly Neighborhood Streets Program process, expanding the limits from Prospect Avenue to Golf Road. This included traffic studies, alternative analysis, preferred design development and multiple public meetings. Residents within the study area were mailed information on the project four times, including surveys and ballots. A traffic-calming trial was installed in May 2025 and remained in place for three weeks, allowing residents to experience proposed improvements and for staff to evaluate their effectiveness.

More project information is available on the Village's website, including design memos, plans and public outreach summaries.

## Discussion

Traffic counts recorded 15% of vehicles traveling over 35 mph on the street, or about 250 vehicles per day, prior to any traffic-calming. The traffic-calming trial showed that the proposed traffic-calming measures reduced the percentage of vehicles traveling over 35 mph on the street to 4%, or 75 vehicles per day. The trial showed the proposed traffic-calming measures would successfully address the reported traffic concerns. The measures resulted in a loss of on-street parking along the 800 and 900 blocks that the residents on the street were vocally against. Staff adjusted the traffic-calming plan in response to residents' comments.

Staff's recommended traffic-calming plan was presented to the Transportation Safety Commission at their August 11 meeting. This included:

- Parking changes, pavement markings and marked crosswalks on William Street between Prospect Avenue and Shabonee Trail.
- Speed feedback signs on the 600 and 700 blocks of William Street and a new crosswalk between the 600 and 700 blocks of William Street.
- Raised median island and associated pavement markings at the crosswalk south of Weller Creek.
- Intersection bump outs at the intersection of Sunset Road and William Street to increase STOP sign compliance and enhance pedestrian safety.

After much discussion and resident input, the Commission voted to recommend the following traffic-calming plan to the Village Board:

- Parking changes, pavement markings and marked crosswalks on William Street between Prospect Avenue and Shabonee Trail.
- Speed feedback signs on the 600 and 700 blocks of William Street.
- Raised median island and associated pavement markings at the crosswalk south of Weller Creek.
- "No Parking Here to Corner" signs at the intersection of William Street and Sunset Road.

The Commission also eliminated a proposed crosswalk between the 600 and 700 blocks and intersection bump outs at the Sunset Road intersection due to resident concerns over on-street parking loss and minimal effectiveness.

The recommendation from the Commission will meet the goals of the Friendly Neighborhood Streets Program but may not be as impactful as staff's original recommendation. There is less impact to on-street parking with the Commission's recommendation while still meeting the goals of the program.

With the Village Board's approval of the traffic-calming plan, staff will create design plans and likely incorporate the improvements into the 2026 Street Resurfacing Program. The estimated cost for these improvements is $20,000 for two speed feedback signs, raised median island, and pavement markings. Funding is included in the 2026 Budget for general traffic-calming and would cover the amount of this project.

If approved by the Village Board, traffic regulations will need to be included in the Village Code. These proposed regulations will be presented in a separate agenda item.

## Alternatives

1. Approve proposed traffic-calming program on William Street between Prospect Avenue and Golf Road.
2. Action at the discretion of the Village Board.

## Staff Recommendation

Staff concurs with the recommendation of the Transportation Safety Commission to implement a traffic-calming project on William Street between Prospect Avenue and Golf Road.

## Attachments

1. 01 - William Traffic Calming Plan
2. 02 - TSC Minutes

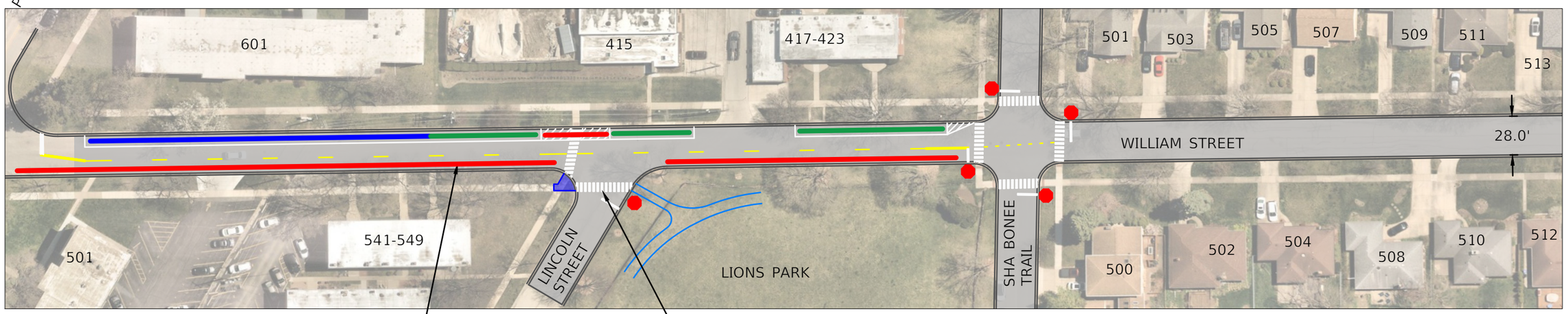
LEGEND

BETWEEN PROSPECT AVENUE AND SHA BONEE TRAIL

2 HOUR PARKING

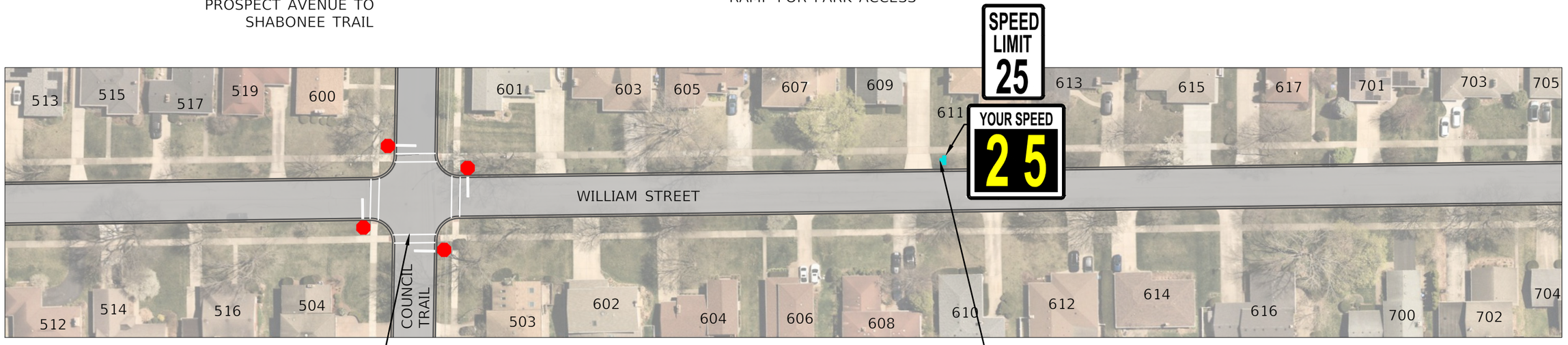
NO PARKING RESTRICTIONS

NO PARKING ANY TIME




PARKING CHANGES AND PAVEMENT MARKING FROM PROSPECT AVENUE TO SHABONEE TRAIL

NEW CROSSWALK AND SIDEWALK RAMP FOR PARK ACCESS




STRIPE CROSSWALKS AT INTERSECTION

INSTALL SPEED FEEDBACK SIGN

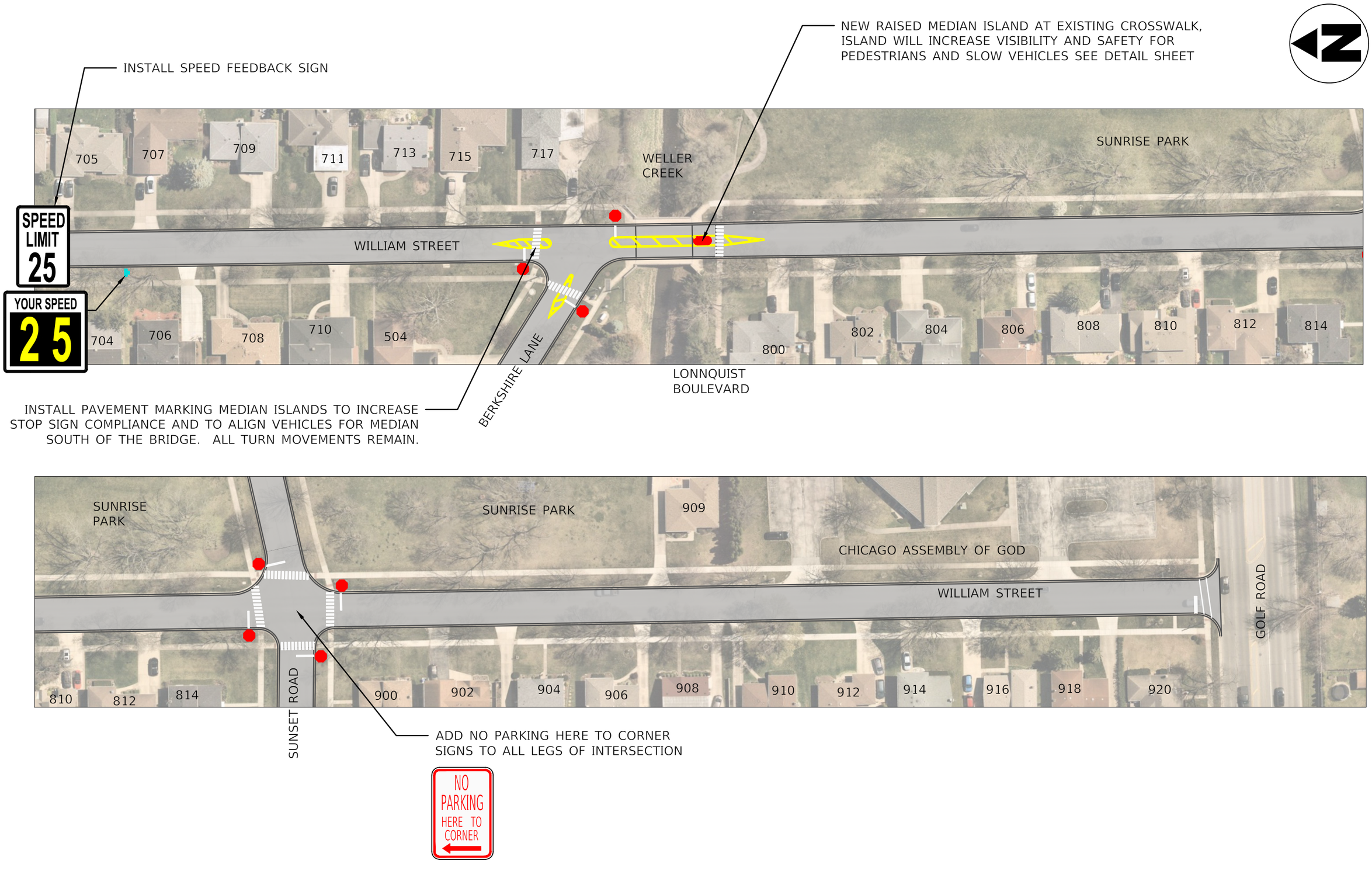
H:\Engineering\Traffic\Calming\FNSP Projects\2024 - William Street\CAD\William Street CAD - Village Board.dwg

| | | | |
|---|---|---|---|
| USER NAME = LJF | DESIGNED - LJF | REVISED - | **VILLAGE OF MOUNT PROSPECT** |
| | DRAW - LJF | REVISED - | |
| PLOT SCALE = | CHECKED - MPL | REVISED - | |
| PLOT DATE = 8/22/2025 | DATE - 8/22/2025 | REVISED - | |

FRIENDLY NEIGHBORHOOD STREETS PROGRAM
WILLIAM STREET - FINAL DESIGN OVERVIEW

SCALE: 1:75 | SHEET 1 OF 2 SHEETS | PROSPECT AVE - COUNCIL TRL

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 3 | 1 |
| | | CONTRACT NO. N/A | | |
| | ILLINOIS | | | |




| | | | |
|---|---|---|---|
| USER NAME = LJF | DESIGNED - LJF | REVISED - | VILLAGE OF MOUNT PROSPECT |
| | DRAW - LJF | REVISED - | |
| PLOT SCALE = | CHECKED - MPL | REVISED - | |
| PLOT DATE = 8/22/2025 | DATE - 8/22/2025 | REVISED - | |

FRIENDLY NEIGHBORHOOD STREETS PROGRAM
WILLIAM STREET - FINAL DESIGN OVERVIEW

SCALE: 1:75 | SHEET 2 OF 2 SHEETS | COUNCIL TRL - GOLF RD

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 3 | 2 |
| | | CONTRACT NO. N/A | | |
| | ILLINOIS | | | |

H:\Engineering\Traffic\Calming\FNSP Projects\2024 - William Street\CAD\William Street CAD - Village Board.dwg

**MAYOR**
Paul Wm. Hoefert

**TRUSTEES**
Vincent J. Dante
Elizabeth B. DiPrima
Terri Gens
William A. Grossi
John J. Matuszak
Colleen E. Saccotelli

**VILLAGE MANAGER**
Michael J. Cassady

**DIRECTOR OF PUBLIC WORKS**
Sean Dorsey

Phone: 847/870-5640
Fax: 847/253-9377
www.mountprospect.org

# Village of Mount Prospect
## Public Works

1700 W. Central Road, Mount Prospect, Illinois 60056

## MINUTES OF THE MOUNT PROSPECT TRANSPORTATION SAFETY COMMISSION

CALL TO ORDER

The meeting of the Mount Prospect Transportation Safety Commission was called to order at 7:00 p.m. on Monday, August 11, 2025.

ROLL CALL

| | | |
|---|---|---|
| Present upon roll call: | Justin Kuehlthau | Chairman |
| | Christopher Prosperi | Vice Chairman |
| | Jeffrey Nejdl | Commissioner |
| | B-L Pellicore | Commissioner |
| | Charlie Lowry | Commissioner |
| | Tina DeAragon | Commissioner |
| | Nicholas Mavraganis | Police Department Representative |
| | Joesph Vena | Fire Department Representative |
| | Scott Moe | Public Works Department Representative |
| | Luke Foresman | Project Engineer – Staff Liaison |
| Absent: | Nicholas Mavraganis | Police Department Representative |

| | | | |
|---|---|---|---|
| Others in Attendance: | Carrie Radon | Resident | 612 S. William Street |
| | Wayne Grubaugh | Resident | 916 S. William Street |
| | Donna & Jim Prandini | Residents | 812 S. William Street |
| | Carole Martz | Residents | 105 W. Berkshire Lane |
| | Peg Mangon | Residents | 709 S. William Street |
| | Ellie Slesicki | Resident | 814 S. William Street |
| | George Clowes | Resident | 604 S. Elm Street |
| | Debbie Geavaras | Resident | 200 S. Audrey Lane |
| | Patrick & Robin Moran | Residents | 800 S. William Street |
| | Craig Wolfe | Resident | 810 S. William Street |
| | Vito LiRosi | Resident | 17 S. Audrey Lane |

APPROVAL OF MINUTES

Commissioner Nejdl, seconded by Commissioner Pellicore, moved to approve the minutes of the regular meeting of the Transportation Safety Commission held on June 9, 2025. The minutes were approved by a vote of 7-0. Vice Chairman Prosperi abstained.

CITIZENS TO BE HEARD

Ms. Martz, of 105 W. Berkshire Drive, spoke to the Commission about golf cart safety. Specifically, she spoke on the golf carts that were used by the Lions Club during the Fourth of July Festival. Ms. Martz presented, and gave copies to the commission, various statistics regarding golf cart related injuries and requested the Village institute specific regulations regarding golf cart safety.

There was discussion among the Commission and Commissioner Pellicore motioned that the Commission recommend the Village Board consider golf cart safety regulations at the same time as e-bike and e-scooter regulations. This was seconded by Commission DeAragon. The Commission voted 3-3 with the Fire Department Representative and Public Works Representative abstaining. The motion failed.

The was a second motion by Vice Chairman Prosperi to have Staff review existing golf cart regulations in and present to the Commission at a future meeting. This motion was seconded by Commissioner Lowry. The Commission voted 7-0 with the Fire Department Representative abstaining. The motion passed.

Ms. Geavaras, of 200 S. Audrey Lane, spoke on the Hatlen Heights Friendly Neighborhood Streets Program Project and had questions for the Commission. These included: why certain traffic calming measures are proposed over others, why stop signs were not considered, how the traffic calming projects are evaluated after completion and why these traffic calming measures are not in neighboring communities. Staff Liaison Foresman answered the questions with reference to the Friendly Neighborhood Streets Program documents. Liaison Foresman also indicated that addressing traffic and safety concerns in neighborhoods is a priority of the Village Board. As such, Staff developed this program, and it is one of the first in our area that is this robust.

Mr. LiRosi, of 17 S. Audrey Lane, spoke on the Hatlen Heights Friendly Neighborhood Street Program Project and asked if the proposed traffic calming measures would address cut-through traffic. Staff Liaison Foresman indicated that the traffic calming measures were selected to reduce vehicle speed and increase safety but would not specifically address cut-through traffic. Instead, having the traffic calming measures in place would likely discourage cut-through traffic from using the route.

OLD BUSINESS

None.

NEW BUSINESS

**William Street – Prospect Avenue to Golf Road – Friendly Neighborhood Streets Program Project**

Staff Liaison Foresman presented the following on William Street Friendly Neighborhood Streets Program Project:

Overview: Staff will be presenting their recommendation for a traffic calming project on South William Street between Prospect Avenue and Golf Road in accordance with the Friendly Neighborhood Streets Program. The Commission will then vote on whether the project should move forward to the Village Board for approval or not.

Project Status: Below are the steps of the Friendly Neighborhood Streets Program, we are currently at the bolded steps:

1. Initiation
2. Petition Review
3. Traffic Study
4. Eligibility
5. Prioritization
6. Initial Public Outreach
7. Initial Plan
8. Second Public Outreach
9. Temporary Measures
10. On-Site Meeting (hosted at TSC meeting)
11. Revised Plan
12. **Balloting**
13. **TSC Meeting**
14. Board Approval
15. Construction

Background: Detailed project information can be found on the project website including the initial petition, traffic counts, public outreach summaries, alternative analysis memos and previous versions of the plan.
https://www.mountprospect.org/departments/public-works/engineering/traffic/traffic-calming/william-street-traffic-calming-project
This project was first presented to the Transportation Safety Commission at the March 10, 2025 meeting. Minutes are attached to this memo.

This memo will give a brief overview of the history of the project that was covered at the previous meeting. Refer to the above documents for more information.

Initial Outreach and Plan: A petition for the Friendly Neighborhood Streets Program for William Street was received on September 30, 2024. Staff found the street qualified for the program and determined the study area.

Staff sent a letter to all properties within the study area soliciting feedback on existing traffic issues, 78 surveys were sent out and 25 were returned. Primary concerns included vehicle volume and speed, stop sign compliance and pedestrian safety.

An initial plan was developed to address traffic issues on the street. The initial plan included median islands, intersection bump outs, parking changes, pavement markings and speed feedback signs. The initial plan was mailed to residents within the study

area soliciting input. Additionally, the plan was presented to the Transportation Safety Commission for feedback.

In general, residents were concerned over the impact the traffic calming measures would have on the street and were unsure how effective they would be. The one measure that had particularly negative feedback was the median island on the 500 block of William Street. This was removed from the plan prior to the traffic calming trial.

Staff then developed a traffic calming trial to demonstrate the proposed traffic calming measures to the public and to conduct additional traffic counts to determine their effectiveness.

Traffic Calming Trial

A traffic calming trial was installed on the street for three weeks from April 28th to May 19th. This trial consisted of cones, rubber curbs and temporary pavement markings to demonstrate median islands, intersection bump outs and parking changes. Full details of the trial are included in the attached memos. The results showed the trial measures reduced the number of drivers exceeding 35 MPH on the street by about 70% without an adverse impact on traffic operations. This shows how the traffic calming measures were designed to make it difficult for vehicles to reach excessive speeds but still allow vehicles to travel at appropriate speeds down the street. The relatively small change in average speed (from 27.6 MPH to 25.9 MPH) shows the measures have a limited impact on vehicles that previously were traveling close to the speed limit. However, the traffic calming measures would require parking changes on the street.

Residents were sent a letter prior to the trial requesting feedback on the trial measures. A total of 14 comments were received. 7 were generally in favor of some or all of the proposed measures, 5 were against them and 2 were general comments. The general theme from comments received was that the impact the traffic calming measures have on vehicle speed and pedestrian safety needs to be greater than any negative impact to residents on William Street.

Revised Design

Based on comments received, traffic count results and staff observations, the following changes were made to the initial plan:

- Reduce the size of the bump outs at the intersection of Sunset Road and William Street to make turning easier for vehicles
- Install additional No Parking Here to Corner signs near Sunrise Park to discourage illegal parking near crosswalks and stop signs to increase visibility for drivers and pedestrians
- Reduce the width of striped medians on William Street as the extra width wasn't needed to have the desired effect on vehicles
- Remove median island from the 500 block due to resident feedback

The revised design is described in detail in the available Revised Design Memo. Overall, there are four items that were included for residents to vote on:

- Item 1: Parking changes, pavement markings and crosswalk installation between Prospect Avenue and Shabonee Trail.
- Item 2: Median island (Option 1) or speed feedback signs (Option 2) with a new crosswalk between the 600 and 700 blocks of William Street.
- Item 3: Median island at crosswalk just south of Weller Creek.
- Item 4: Intersection bump outs and striped parking on the 800 and 900 blocks of William Street. Prohibit parking on the west side of the street.

Balloting

The revised design plans and a ballot were sent to all residents on William Street, a detailed breakdown of the balloting is included in the attachments, the below table provides a brief summary:

| William Street Balloting Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| Item 1 | | | Item 2 | | | | |
| For | Neither For or Against | Against | For Option 1 | For Option 2 | For Either Option | Neither For or Against | Against Both Options |
| 16 | 4 | 16 | 6 | 10 | 4 | 3 | 12 |
| Item 3 | | | Item 4 | | | | |
| For | Neither For or Against | Against | For | Neither For or Against | Against | | |
| 17 | 2 | 17 | 14 | 2 | 20 | | |

Staff also looked at how residents who live on the block where the traffic calming measures were proposed voted, the result of that analysis is shown on the next page.

The results of balloting are non-binding and were used to inform Staff's recommendation.

| William Street Balloting Summary<br>Responses from the Block the Traffic Calming Measure is Proposed | | | | | | | |
|---|---|---|---|---|---|---|---|
| Item 1 – 400 Block | | | Item 2 – 600 and 700 Blocks | | | | |
| For | Neither For or Against | Against | For Option 1 | For Option 2 | For Either Option | Neither For or Against | Against Both Options |
| No Responses | | | 3 | 6 | 2 | 1 | 2 |
| Item 3 – 800 Block | | | Item 4 – 800 and 900 Blocks | | | | |
| For | Neither For or Against | Against | For | Neither For or Against | Against | | |
| 5 | 0 | 3 | 3 | 0 | 11 | | |

Staff Recommend-ation:

Staff's recommendation is shown on the Final Design Plans. This includes:

- Parking changes, pavement markings and crosswalk installation between Prospect Avenue and Shabonee Trail.
- Speed feedback signs with a new crosswalk between the 600 and 700 blocks of William Street.
- A median island at crosswalk just south of Weller Creek.
- Intersection bump outs at the intersection with Sunset Road. No parking changes on the 800 and 900 blocks of William Street.

This combination of traffic calming measures are expected to meet the projects goals of improving safety on the street while not greatly impacting residents. The total cost for these improvements is $20,000 to $30,000. Funding is included in the 2025 budget for general traffic calming. Construction would take place next year, either as part of the resurfacing program or as a stand alone project.

Options:

The Transportation Safety Commission can vote to:

- Advance the project to the Village Board in accordance with Staff's recommendation
- Advance the project to the Village Board with changes to Staff's recommendation
- Send the project back to Staff for changes and to bring it to a future Transportation Safety Commission Meeting
- Reject the proposed changes, effectively terminating the project

Or action at the discretion of the Commission.

Discussion:

Police Representative Mavraganis arrived at 8:10 PM.

There was general discussion among Commission members asking about large vehicle and maintenance impacts from the traffic calming measures. Liaison Foresman indicated the measures are designed to allow large vehicles through at low speeds and that Public Works maintenance activities will be able to accommodate the measures.

In general, the Commission understood the traffic calming measures and their anticipated effects. Additionally, they were appreciative of the Friendly Neighborhood Streets Program process.

Numerous members of the public commented on the recommended traffic calming plan.

Ms. Slesicki of 814 S. William Street read from prepared comments regarding the project. She mentioned moving to Mount Prospect for wide streets and that wide streets promoted safety. She was upset with a perceived lack of transparency with the project and indicated she didn't believe anything needed to be done since any traffic issues only occur for a minor part of the day.

Ms. Radon of 612 S. William Street indicated the initial petitioners were not aware that the petition was for a project of this magnitude. Additionally, on the ballot, the wording for item #2 was confusing. She felt the 10' lanes recommended in item #3 were too narrow and that the recommended bump outs at the intersection of William Street and Sunset Road were likely to increase traffic crashes.

Mr. Prandini of 812 S. William Street requested the current parking regulations stay in place. He suggested an option of installing "No Parking Here to Corner" signs at all four legs of the intersection of William Street and Sunset Road instead of the bump outs. He also commented on dangerous pedestrian behavior increasing safety issues at the crosswalk south of the bridge.

Mr. Clowes of 604 S. Elm Street Was surprised traffic was an issue and mentioned that William Street is a key access route for residents in the neighborhood due to the bridge. He suggested police enforcement to address traffic issues during specific times.

After those comments there was general discussion among the audience and the Commission. Representative Mavraganis indicated the point of this program is to create self-enforcing streets with the idea that police enforcement is not needed to improve safety due to the way the street is designed.

Motion: The Commission elected to do separate motions for each of the items included on the ballot. The results of the motions are described below.

**Ballot Item #1**: Pavement striping and parking changes on William Street between Prospect Avenue and Shabonee Trail.

Motion 1 by Vice Chairman Prosperi, seconded by Commissioner Nejdl: Recommend crosswalk improvements only, no parking changes or pavement markings.

Motion failed by a vote of 0-9.

**Motion 2 by Commissioner Lowery, seconded by Commissioner Pellicore: Approving Staff's recommendation.**

**Motion passed by a vote of 8-1.**

**Ballot Item #2:** New crosswalk with speed feedback signs or median island.

Motion 1 by Commissioner Pellicore, seconded by Vice Chairman Prosperi: Approve Staff's recommendation (Option 2) including speed feedback signs and a new midblock crosswalk.

Motion failed by a vote of 4-5.

**Motion 2 by Commissioner Lowery, seconding by Representative Moe: Recommend speed feedback signs only, no new crosswalk.**

**Motion passed by a vote of 7-2.**

**Ballot Item #3:** Median island south of Weller Creek bridge and intersection striping at the intersection with Berkshire Lane.

**Motion by Commissioner Lowery, seconded by Commissioner Pellicore: Approve Staff's recommendation of installing the median island and intersection pavement markings.**

**Motion passed by a vote of 8-0. Commissioner Nejdl was absent for this vote.**

**Ballot Item #4:** Parking changes on William Street between Weller Creek and Golf Road and intersection bump outs at the intersection of William Street and Sunset Road.

**Motion by Commissioner Pellicore, seconded by Chaiman Kuehlthau: Recommend only installing "No Parking Here to Corner" signs at the intersection, no bump outs or parking changes.**

**The motion passed by a vote of 6-2. Commissioner Nejdl abstained.**

Overall, the Commissions recommends the following:

- Parking changes, pavement markings and crosswalk improvements on William Street between Prospect Avenue and Shabonee Trail
- Speed feedback signs only on the 600 and 700 blocks of William Street
- Median island south of Weller Creek and intersection pavement markings at the intersection of William Street and Berkshire Lane
- "No Parking Here to Corner" Signs at the intersection of William Street and Sunset Road

COMMISSION ISSUES

Vice Chairman Prosperi asked Police Representative Mavraganis if they had recorded an increase in noise complaints relating to vehicles. Representative Mavraganis indicated the Police had noticed an increase in complaints and are working internally on ways to address the issue.

Chairman Kuehlthau brought up to the Commission that the Village Board recently passed an ordinance giving the chairperson the ability to limit public comment to 4 minutes per person. He asked the Commission if they wished to implement this limit going forward. There was general discussion, and the consensus was that the Commission was comfortable with how the meetings have been run and do not wish to implement the time limit at this time.

ADJOURNMENT

With no further business to discuss, the Transportation Safety Commission voted 9-0 to adjourn at 9:40 p.m. upon the motion of Commissioner Nejdl. Commissioner Pellicore seconded the motion.

Respectfully submitted,

Luke Foresman, P.E.
Project Engineer

# Item Cover Page

| | |
|---|---|
| **Subject** | **Motion to accept lowest-cost, responsive bid for the 2025 Burning Bush Lane Street Lighting Improvements for a cost not to exceed $240,991.** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | Y |
| Dollar Amount | $240,991.00 |
| Budget Source | Capital Improvements Fund |
| Category | VILLAGE MANAGER'S REPORT |
| Type | Action Item |

## Information

Improving the Village's residential street light system is a key component of the Mount Prospect Strategic Plan. Street lighting improvements are targeted for Burning Bush Lane between Kensington Road and Euclid Avenue for 2025. Burning Bush Lane is one of the highest ranked projects on the Village's Streetlight Priority Matrix (see attached).

Burning Bush Lane is classified as a collector street, a neighborhood street that carries more traffic than other local streets. Prairie Trails is along the east side of the street, streetlights will be constructed along the east side.

The Village has entered into a contract with Ciorba Group, Inc. to perform design and construction engineering. The engineering design services are complete, and Ciorba will provide inspection services during construction. Staff are seeking to enter into a construction contract at this time. Work is expected to begin in October and be completed pending delivery of the light poles. The light poles are anticipated to be delivered first quarter 2026 and installed soon after, weather depending. ComEd will then energize the street lights. Funds for this project have been allocated in the 2025 budget.

## Bid Results

A Notice to Bidders was posted on the Demandstar (Euna OpenBids) website and Village staff contacted local electrical contractors. Nine contractors viewed the bidding documents and three submitted a bid. The bid opening for the Burning Bush Lane Lighting Improvements was held on September 29, 2025, at 1:00 p.m. The complete bid results are:

| Bidders | Total Bid |
|---|---|
| Utility Dynamics Corporation | $219,083.00 |
| Integral Power Atlantic, LLC | $225,814.53 |
| Powerlink Electric, LLC | $244,998.25 |

| | |
|---|---|
| Engineer's Estimate | $246,040.00 |

## Discussion

The bidders submitted bid bonds in the amount of 10% of the total bid, as required in the bid proposal packet. The bid was checked for accuracy and no mistakes were found. The bid and bid bond were correctly signed.

The bidding history on street lighting projects has routinely produced very few bidders and Utility Dynamics Corporation has consistently been the low bidder. They have successfully completed several lighting improvement projects within the Village.

Of the seven previous Village funded street lighting improvement projects, the number of bids received for each project varied between one and three. Utility Dynamics Corporation was the lowest bidder on six of them and second-lowest bidder on one.

A primary business focus for the Utility Dynamics Corporation is street light installation. They meet the eligibility requirements to perform street light work pursuant to the contract documents. Their clients include municipalities and private companies. They have successfully completed several Village street lighting projects including on Lonnquist Boulevard, Seminole Lane Street, and Burning Bush Lane between Euclid Avenue and Camp McDonald Road. They also completed a privately funded project to install street lights around Randhurst Village.

Village staff recommends including a 10% contingency in the project award to allow for quantity variances and unanticipated construction conflicts which would result in a total recommended award of $240,991 ($219,083 + $21,908 = $240,991).

## Alternatives

1. Accept lowest cost, responsive bid for the Burning Bush Lane Lighting Improvements.
2. Action at discretion of Village Board.

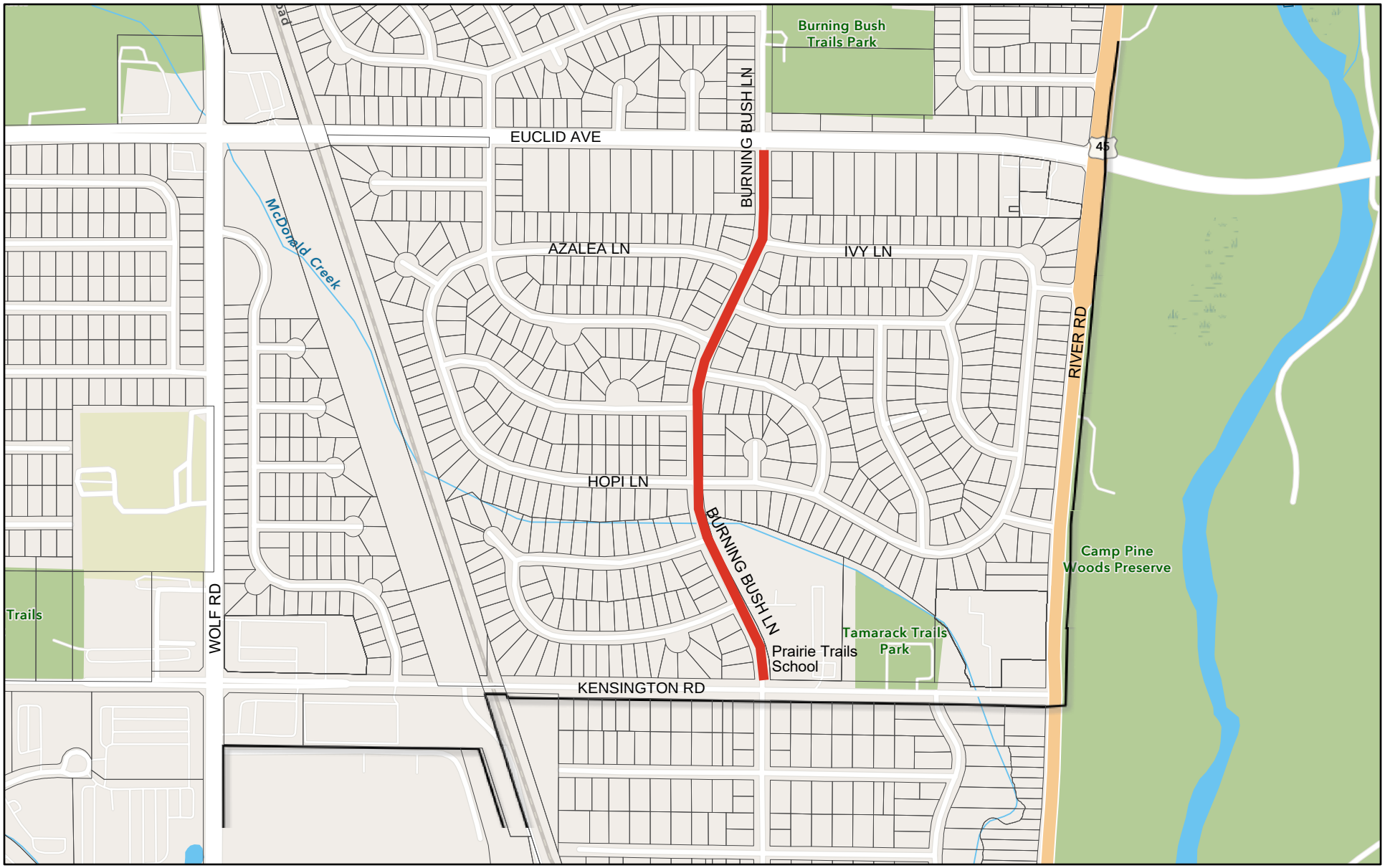
## Staff Recommendation

Staff recommends that the Village Board accept the lowest responsible bid from Utility Dynamics Corporation of Oswego, IL for construction of the Burning Bush Lighting Improvements in the amount not to exceed $240,991.

## Attachments

1. location map
2. Burning Bush Lighting Plans
3. Utility Dynamics Corporation Bid
4. bid tab 9-29-25
5. Residential Lighting Program Matrix

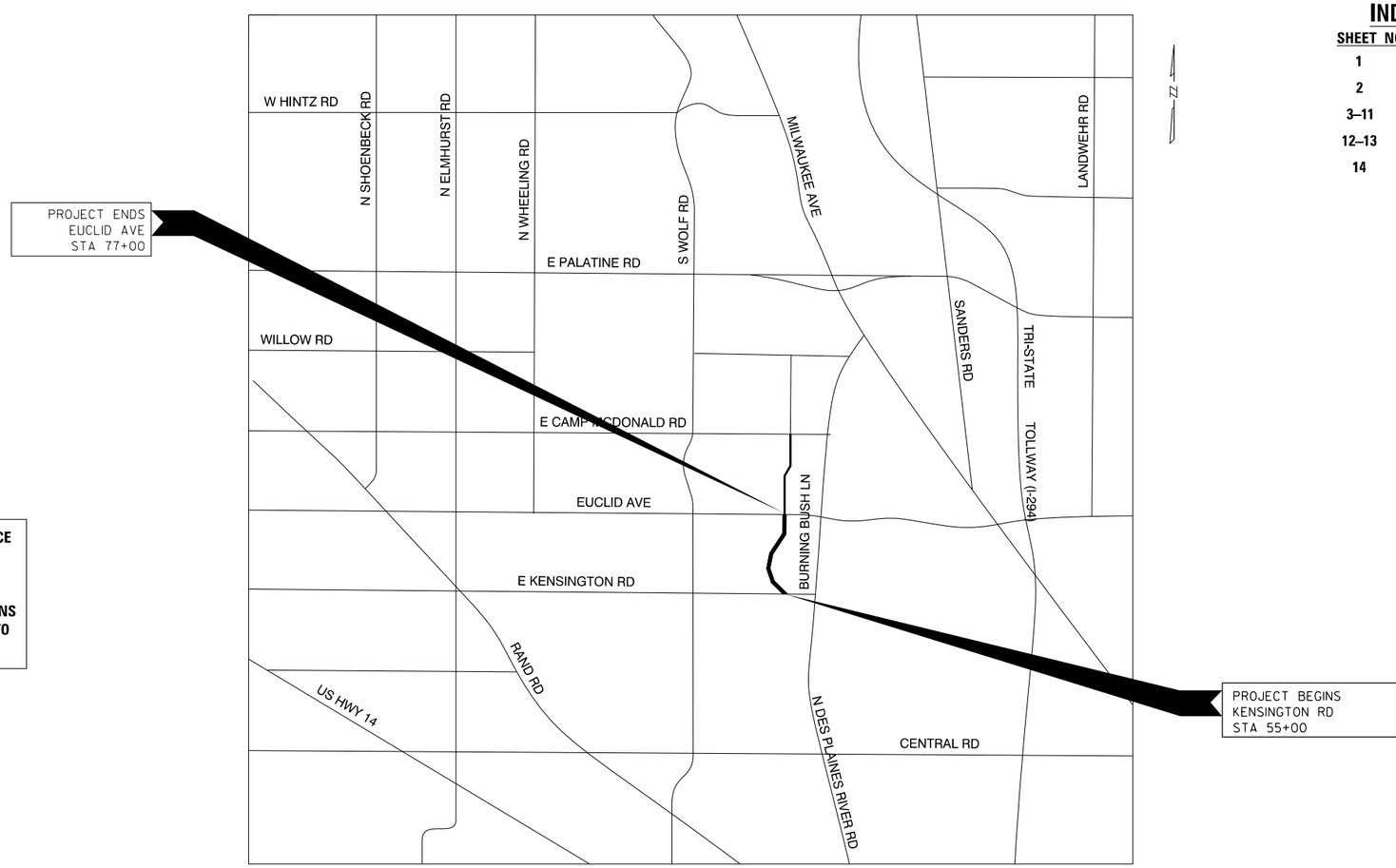
# Burning Bush Lane Lighting Project



| TOTAL SHEETS | SHEET NO |
|---|---|
| 14 | 1 |

# BURNING BUSH LANE STREET LIGHTING

## VILLAGE OF MOUNT PROSPECT, ILLINOIS



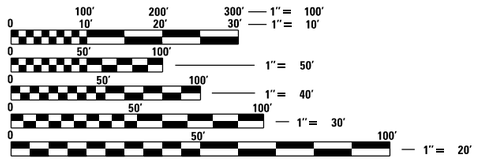

**LOCATION MAP**
**(NOT TO SCALE)**

**GROSS LENGTH = 2,784 FEET (0.53 MILES)**
**NET LENGTH = 2,784 FEET (0.53 MILES)**

## INDEX OF SHEETS


| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | COVER SHEET, INDEX OF SHEETS |
| 2 | GENERAL NOTES, LEGEND, SUMMARY OF QUANTITIES |
| 3–11 | DETAIL SHEETS |
| 12–13 | LIGHTING PLANS |
| 14 | SINGLE LINE DIAGRAM |


**THE CONTRACTOR WILL NOT BE ALLOWED TO COMMENCE CONSTRUCTION UNTIL CERTIFICATES OF INSURANCE INDEMNIFYING AS ADDITIONAL INSURED PARTIES THE VILLAGE OF MOUNT PROSPECT AND THE CONSULTING ENGINEER, CIORBA GROUP, INC., 8725, SUITE 600, W. HIGGINS ROAD, CHICAGO, ILLINOIS 60631, HAVE BEEN DELIVERED TO AND APPROVED BY CIORBA GROUP, INC.**




**FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.**

**J.U.L.I.E.**
**JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION**
**1–800–892–0123**
**OR 811**

JOSEPH M. VONDRA
062-055846
LICENSED PROFESSIONAL ENGINEER
OF
ILLINOIS

DATE: 9/10/2025
SEAL EXPIRES: 11/30/2025

SIGNED: Joseph M Vondra


CiorbaGroup
CONSULTING ENGINEERS
DESIGN FIRM REGISTRATION NUMBER: 184-001016
8725 W. Higgins Road, Suite 600 | Chicago, IL 60631
P 773.775.4009 | www.ciorba.com

## ACCESS

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN INGRESS AND EGRESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING THE CONSTRUCTION PERIOD. DURING CONSTRUCTION, GARBAGE TRUCKS MUST BE PERMITTED ACCESS TO THE WORK ZONE IN ORDER TO PICK UP COMMERCIAL GARBAGE FOR THOSE PROPERTIES IMPACTED BY CONSTRUCTION. IF GARBAGE TRUCKS ACCESS IS NOT PROVIDED, THE CONTRACTOR WILL BE REQUIRED TO MOVE TRASH CONTAINERS TO AN ACCESSIBLE LOCATION.

## UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD SURVEYS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THE DATA IS ESSENTIALLY CORRECT, BUT THE VILLAGE OF MOUNT PROSPECT, AND/OR OTHER OFFICES AND AGENCIES ASSOCIATED WITH THE DEVELOPMENT OF THESE PLANS DO NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE LOCATION OF EACH FACILITY WITH THE UTILITY COMPANY, AND SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY SUCH FACILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED IN ACCORDANCE WITH ARTICLE LR 105.

ADJUSTMENTS REQUIRED BY UTILITY COMPANIES WILL BE PERFORMED BY THE COMPANY INVOLVED OR ITS CONTRACTOR, BUT WILL BE COORDINATED BY THE GENERAL CONTRACTOR.

COORDINATION OF ALL UTILITY WORK INVOLVED IN THE CONSTRUCTION AREA WILL BE DISCUSSED AT A PRE-CONSTRUCTION CONFERENCE.

THE CONTRACTOR SHALL USE EXTREME CAUTION IN THE REMOVAL OF ABANDONED EXISTING GAS LINES SINCE RESIDUAL MATERIALS CONTAINED THEREIN ARE HIGHLY EXPLOSIVE, FLAMMABLE, AND TOXIC. ONCE THE MAINS ARE ABANDONED BY THE OWNER, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DAMAGE AND/OR INJURY OCCURRING ON THE PROJECT DUE TO HIS OPERATIONS NEXT TO THE MAINS AND/OR THE METHOD OF REMOVAL OF THE ABANDONED MAINS.

## OPEN EXCAVATION

THE CONTRACTOR WILL NOT BE ALLOWED TO LEAVE EXCAVATIONS OPEN OVERNIGHT. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETELY BACKFILLING OR PLATING OVER ALL EXCAVATIONS AT THE END OF EACH DAY. IF THE EXCAVATIONS ARE BACKFILLED THEY SHALL BE FILLED WITH AN AGGREGATE MEETING THE GRADATION OF CA-6. THE MATERIAL WILL BE COMPACTED SUFFICIENTLY TO PREVENT RUTTING OR SETTLEMENT OF MATERIALS UNDER TRAFFIC LOADS. IF PLATES ARE USED THEY SHALL BE OF SUFFICIENT THICKNESS TO SUPPORT VEHICULAR LOADS. ADDITIONALLY THEY SHALL EXTEND A MINIMUM OF NINE INCHES (9") BEYOND THE LIMITS OF THE EXCAVATION ON ALL SIDES. IF THE PLATES ARE TO BE LEFT OVER THE WEEKEND, THE EDGES OF THE PLATES SHALL BE CUSHIONED WITH A BITUMINOUS MIXTURE IN AREAS WHERE VEHICULAR TRAFFIC WILL CROSS THE PLATES.

THE COST FOR PROVIDING THE AGGREGATE, PLATES AND BITUMINOUS MIXTURE WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

## TREE PROTECTION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR BEING FAMILIAR WITH AND COMPLYING WITH ALL ASPECTS OF THE VILLAGE OF MOUNT PROSPECT TREE PROTECTION ORDINANCES AND ARBORICULTURAL STANDARDS MANUAL.

## STREET SIGNS

IF ANY STREET SIGNS ARE DAMAGED DURING CONSTRUCTION THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

## MAINTENANCE OF EXISTING DRAINAGE STRUCTURES

LOOSE MATERIAL THAT IS DEPOSITED IN THE FLOW LINE OF GUTTERS OR DRAINAGE STRUCTURES THAT INHIBITS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE FACILITIES SHALL BE CLEAN AND FREE OF ALL OBSTRUCTIONS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

## SAW CUTTING

THE CONTRACTOR SHALL SAW CUT ASPHALT PAVEMENT AND CONCRETE PAVEMENT AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, TO SEPARATE THE EXISTING PAVEMENT TO BE REMOVED BY MEANS OF AN APPROVED CONCRETE SAW TO A DEPTH AS DIRECTED BY THE ENGINEER. SUITABLE GUIDELINES OR DEVICES SHALL BE USED TO ASSURE CUTTING A NEAT, STRAIGHT LINE AS SHOWN ON THE PLANS. CARE SHALL BE TAKEN BY THE CONTRACTOR SO AS NOT TO DAMAGE THE REMAINING PAVEMENT DIRECTLY ADJACENT TO THE PAVEMENT TO BE REMOVED. ANY DAMAGE TO THE EXISTING PAVEMENT RESULTING FROM PAVEMENT REMOVAL OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE PRICE OF SAW CUTTING, AS NOTED ABOVE, SHALL BE INCLUDED IN THE PARTICULAR PAY ITEMS.

## TRAFFIC PROTECTION

WHEN WORK COMMENCES, THE CONTRACTOR SHALL ASSUME THE MAINTENANCE OF ALL PAVEMENT, SHOULDERS, DRAINAGE FACILITIES, TRAFFIC CONTROL SIGNS, PAVEMENT MARKING, AND OTHER APPURTENANCES ON ROADWAYS WITHIN THE LIMITS OF THE CONTRACT WHICH ARE TO BE USED BY THE PUBLIC DURING CONSTRUCTION AND TO RETAIN THIS MAINTENANCE RESPONSIBILITY UNTIL PROJECT COMPLETION. NEED FOR SNOW AND ICE CONTROL DURING THE CONSTRUCTION PERIOD SHALL BE ACCOMMODATED FOR BY OTHERS. ALL UNBALLASTED TYPE I & II BARRICADES SHALL HAVE TWO SANDBAGS ONE ACROSS EACH BOTTOM RAIL.

## SUMARY OF QUANTITIES

| | PAY ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|---|
| | 1 | UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" | FOOT | 120 |
| | 2 | UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" | FOOT | 276 |
| | 3 | UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE | FOOT | 2,915 |
| | 4 | ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE), 1/C NO. 2 | FOOT | 495 |
| | 5 | LIGHT STANDARD, ALUMINUM, 25' M.H., 10 FT. CLAMP-ON MAST ARM, LED LUMINAIRE | EACH | 11 |
| * | 6 | LIGHT STANDARD, ALUMINUM, 25' M.H., 12 FT. CLAMP-ON MAST ARM, LED LUMINAIRE | EACH | 1 |
| * | 7 | LIGHT STANDARD, ALUMINUM, 25' M.H., 15 FT. CLAMP-ON MAST ARM, LED LUMINAIRE | EACH | 1 |
| | 8 | ELECTRIC UTILITY SERVICE CONNECTION (COMED) | L SUM | 1 |
| | 9 | ELECTRIC SERVICE INSTALLATION | EACH | 1 |
| | 10 | LIGHTING CONTROLLER | EACH | 1 |
| | 11 | BREAKAWAY DEVICE WITH ALUMINUM SKIRT | EACH | 13 |
| | 12 | LIGHT POLE FOUNDATION, METAL, 11" BOLT CIRCLE, 8 5/8" X 6' | EACH | 13 |
| * | 13 | TREE PROTECTION FENCE | FOOT | 500 |
| * | 14 | COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT | FOOT | 10 |
| | 15 | TRAFFIC CONTROL AND PROTECTION | L SUM | 1 |
| | 16 | ELECTRICAL HANDHOLE | EACH | 1 |
| * | 17 | CLASS D PATCHES, SPECIAL | SQ YD | 5 |
| | 18 | MAINTENANCE BOND (24-MONTH) | L SUM | 1 |

* = NOMINAL QUANTITY PROVIDED FOR ADJUSTMENTS DURING CONSTRUCTION

## LEGEND

- EXISTING LIGHT POLE AND LUMINAIRE
- EXISTING MAST ARM AND LUMINAIRE MOUNTED ON UTILITY POLE
- EXISTING MAST ARM AND LUMINAIRE TO BE REMOVED (R)
- LIGHT STANDARD, 25 FT. M.H., 10 FT. CLAMP-ON MAST ARM, LED LUMINAIRE ON LIGHT POLE FOUDATION, METAL
- PROPOSED HANDHOLE
- PROPOSED LIGHTING CONTROLLER
- PROPOSED UNIT DUCT WITH 2-1/C No. 6 & 1-1/C No. 8 GROUND, 600V (XLP-TYPE USE), 1" DIA. OR AS NOTED
- PROPOSED RIGID GALVANIZED STEEL CONDUIT

A1-1 — CONTROLLER IDENTIFICATION (TYP.), CIRCUIT NUMBER (TYP.), POLE NUMBER (TYP.)

MODEL: Default
FILE NAME: c:\pw~cgi\prod\dms\604070\0222007.01-Border-Plan.dgn

CiorbaGroup
10 S. 10th Ridge Road, Suite 500, Chicago, IL 60607 | 773.775.1009 | www.ciorba.com

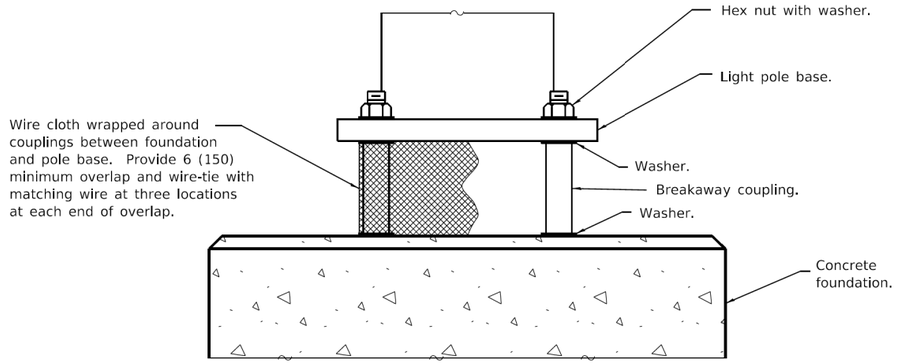
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| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**GENEREAL NOTES, LEGEND, SUMMARY OF QUANTITIES**

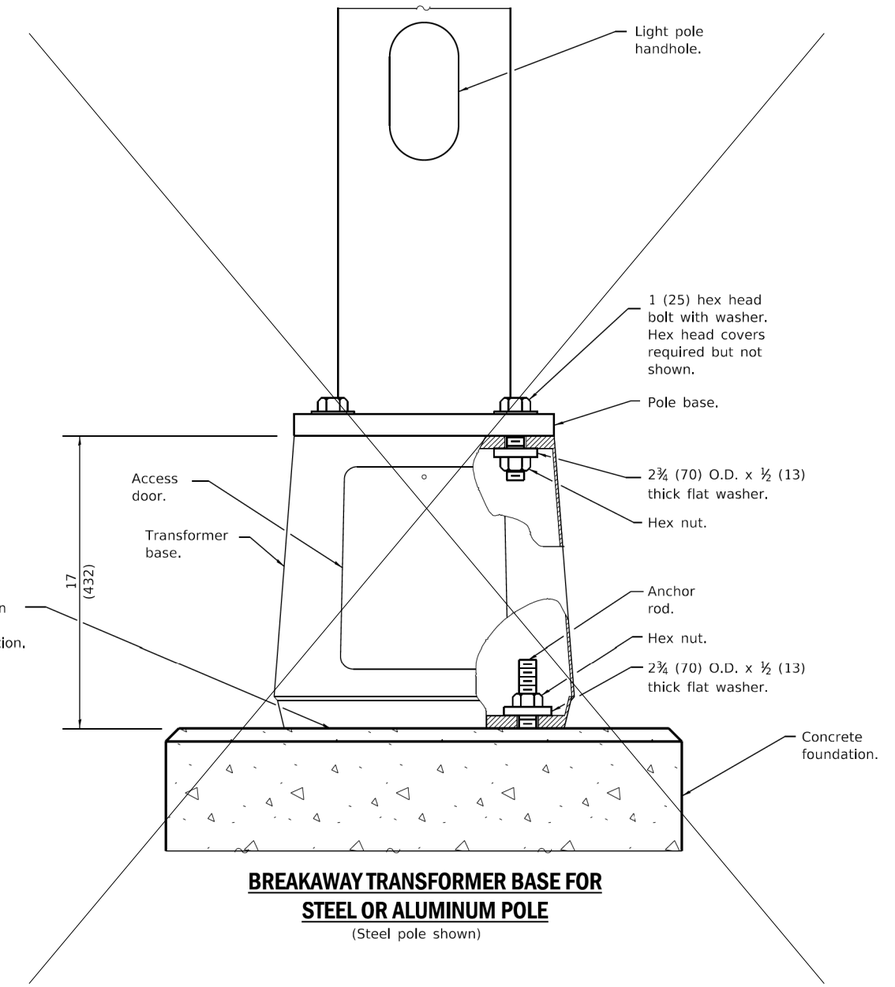
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| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |



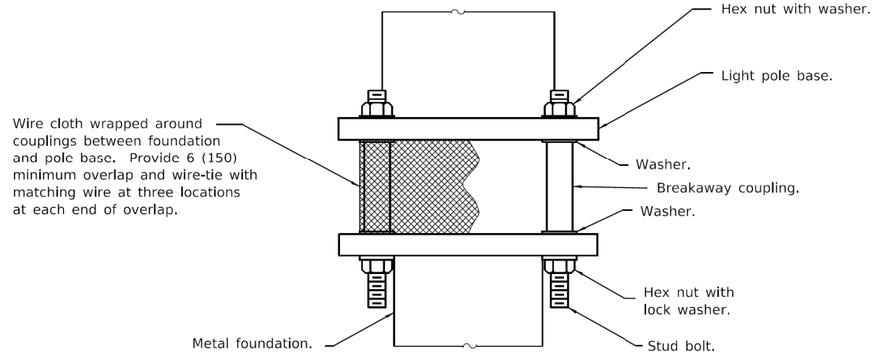

**BREAKAWAY COUPLINGS ON CONCRETE FOUNDATION FOR STEEL LIGHT POLE**

(Provide pole base skirt around wire cloth when required.)




**BREAKAWAY TRANSFORMER BASE FOR STEEL OR ALUMINUM POLE**

(Steel pole shown)




**BREAKAWAY COUPLINGS ON METAL FOUNDATION FOR STEEL POLE**

(Provide pole base skirt around wire cloth when required.)

See Sheet 2 for GENERAL NOTES.

Illinois Department of Transportation

PASSED January 1, 2018
ENGINEER OF PRELIMINARY ENGINEERING

APPROVED January 1, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12

| DATE | REVISIONS |
|---|---|
| 1-1-18 | Revised to show rodent |
| | shield installation for |
| | aluminum poles. |
| 1-1-14 | New Standard. |
| | |
| | |

# BREAKAWAY DEVICES

(Sheet 1 of 2)

**STANDARD 838001-01**

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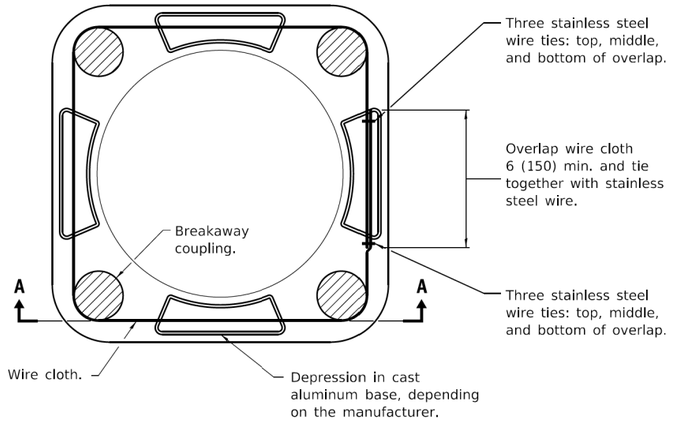
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**BURNING BUSH LANE STREET LIGHTING VILLAGE OF MOUNT PROSPECT, ILLINOIS**

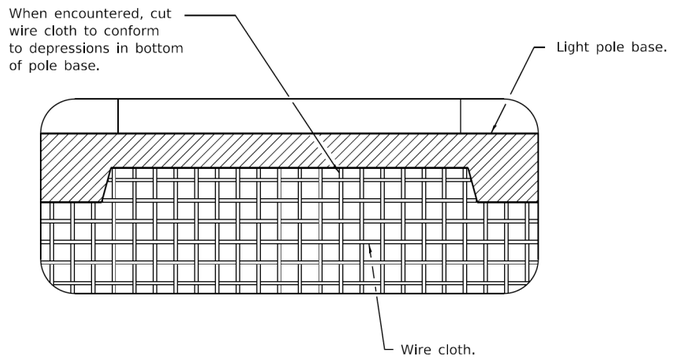
**LIGHTING DETALS**

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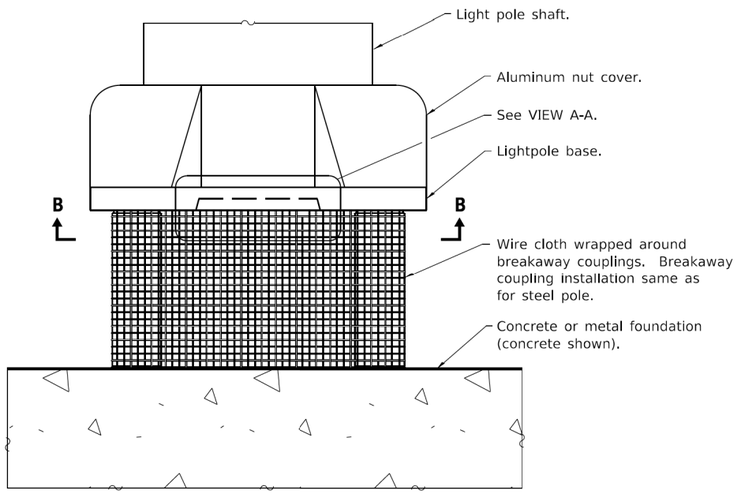
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| | | COOK | 14 | 3 |
| | | CONTRACT NO. | | |
| | | ILLINOIS | FED. AID PROJECT | |




**VIEW B-B**




**VIEW A-A**




## BREAKAWAY COUPLINGS FOR ALUMINUM POLES

(Provide pole base skirt around wire cloth when required.)

## GENERAL NOTES

See light pole standard for details not shown.

Use largest transformer base bolt circle possible.

Transformer bases shall not be installed on metal foundations.

Washers on top of pole base shall cover the entire bolt slot.

See Standard 836001 for Light Pole Foundation.

Wire cloth shall be stainless steel, have a maximum opening of ¼ (6), and have a minimum wire size of AWG No. 16 (1.6).

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2018
ENGINEER OF PRELIMINARY ENGINEERING

APPROVED January 1, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12

# BREAKAWAY DEVICES

(Sheet 2 of 2)

**STANDARD 838001-01**

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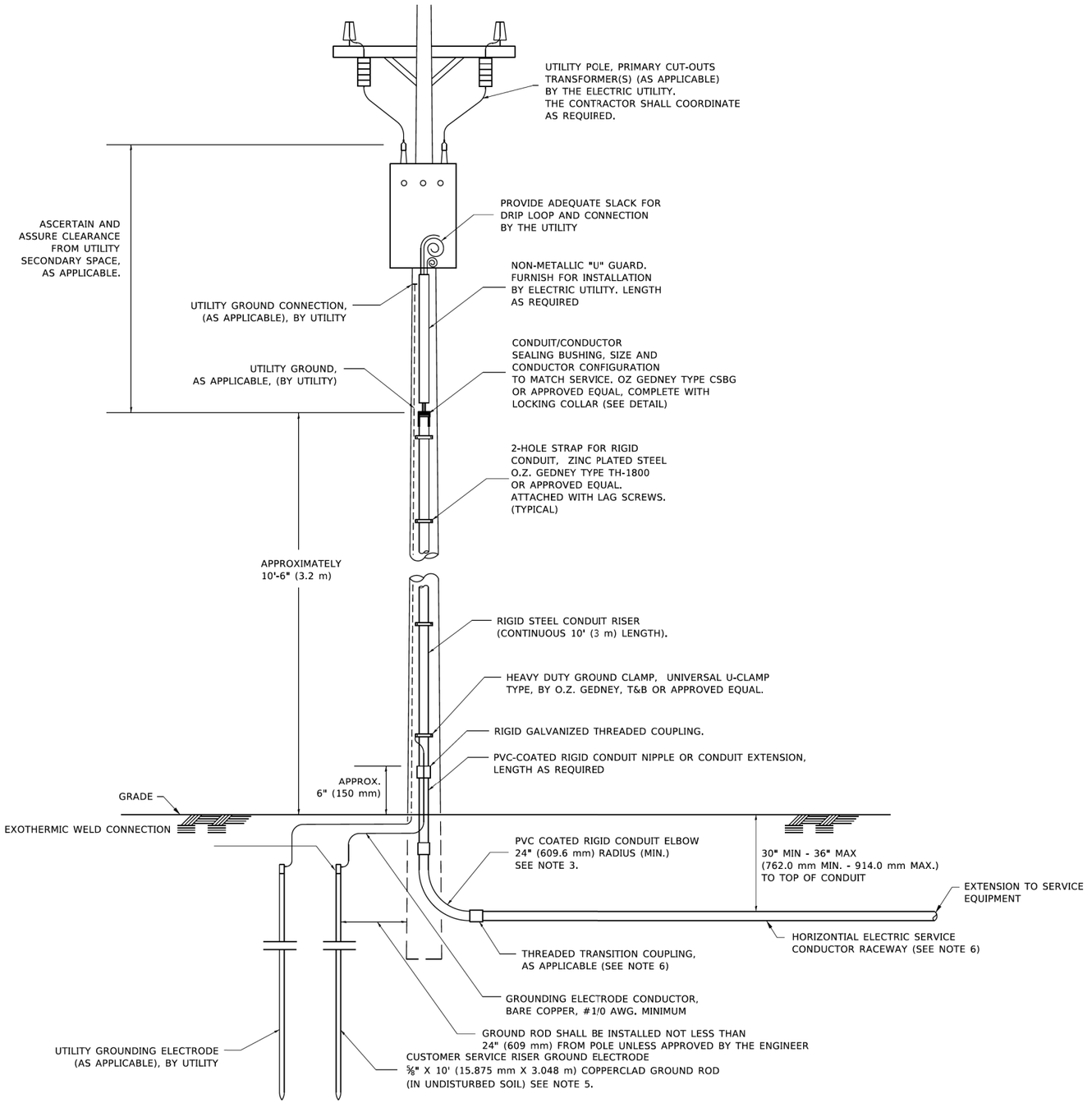
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| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**LIGHTING DETAILS**

SCALE: N.T.S. | SHEET 2 OF 9 SHEETS | STA. | TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| | ILLINOIS | FED. AID PROJECT | | |

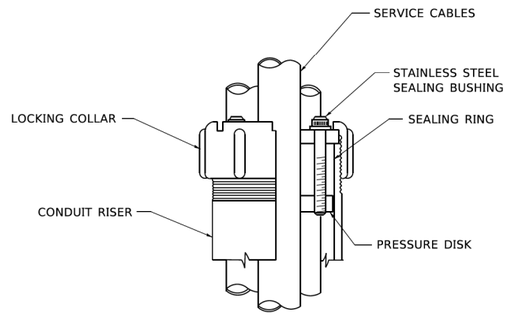



## APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

## NOTES

1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.




**SEALING BUSHING DETAIL**

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**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**ELECTRIC SERVICE INSTALLATION**
**AERIAL, REMOTE DISCONNECT**

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| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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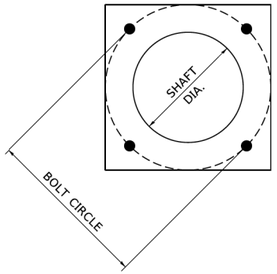
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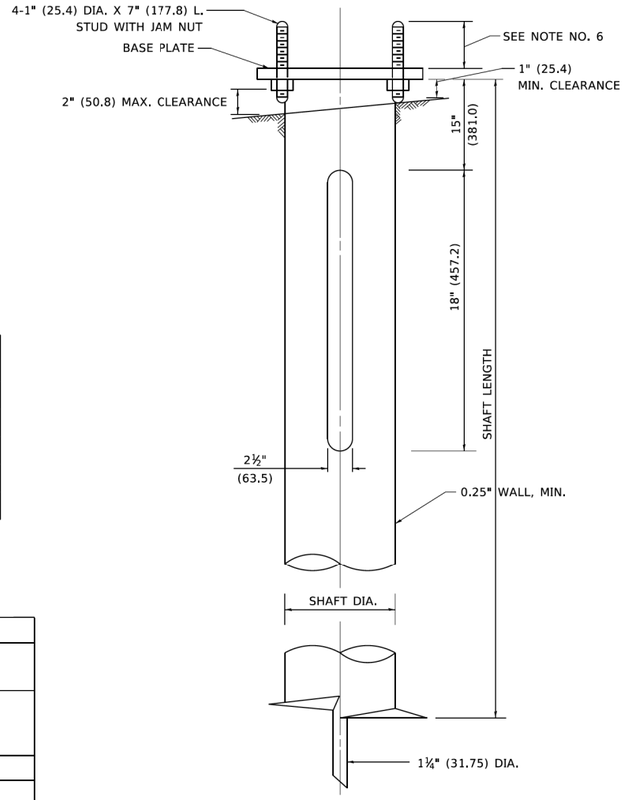
**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**LIGHTING DETALS**

SCALE: N.T.S. | SHEET 3 OF 9 SHEETS | STA. | TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| | | COOK | 14 | 5 |
| | | CONTRACT NO. | | |
| | | ILLINOIS FED. AID PROJECT | | |




## HELIX FOUNDATION SIZE

| POLE MOUNTING HEIGHT | BOLT CIRCLE | SHAFT DIAMETER | SHAFT LENGTH | BASEPLATE |
|---|---|---|---|---|
| 30 FT. | 11½" | 8⅝" | 6 FT. | 12"x12"x1" |
| 31 FT.-35 FT. | 11½" | 8⅝" | 6 FT. | 12"x12"x1" |
| 36 FT.-40FT. | 15" | 8⅝" | 6 FT. | 15"x15"x1¼" |
| 41 FT.-45 FT. | 15" | 8⅝" | 6 FT. | 15"x15"x1¼" |
| 46 FT.-50 FT. | 15" | 10" | 8 FT. | 15"x15"x1¼" |

## METAL HELIX FOUNDATION MATERIALS

| ITEM | MATERIAL REQUIREMENT |
|---|---|
| BASEPLATE | AASHTO M 270M, GRADE 36 (M270M, GRADE 250) |
| SHAFT | ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM) |
| HELIX SCREW | AASHTO M 183 (ASTM A 635) |
| PILOT POINT | AASHTO M 270 (ASTM A 575) |
| ANCHOR RODS/STUDS | AASHTO M 314 (ASTM F 1554) |
| HEXAGON NUTS | AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H |
| WASHERS | AASHTO M 293 (ASTM F 436) |

## NOTES

1. ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
3. ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1#4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
4. THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
5. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
6. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
7. ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
8. METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDTION IS NOT ALLOWED.
9. THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
10. THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS (± 1° ) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC (± 0.188) TO THE SHAFT AXIS.
11. THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC (± 0.125) AND IN LINE (± 2° ).
12. THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.

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**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**LIGHT POLE FOUNDATION, METAL**

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| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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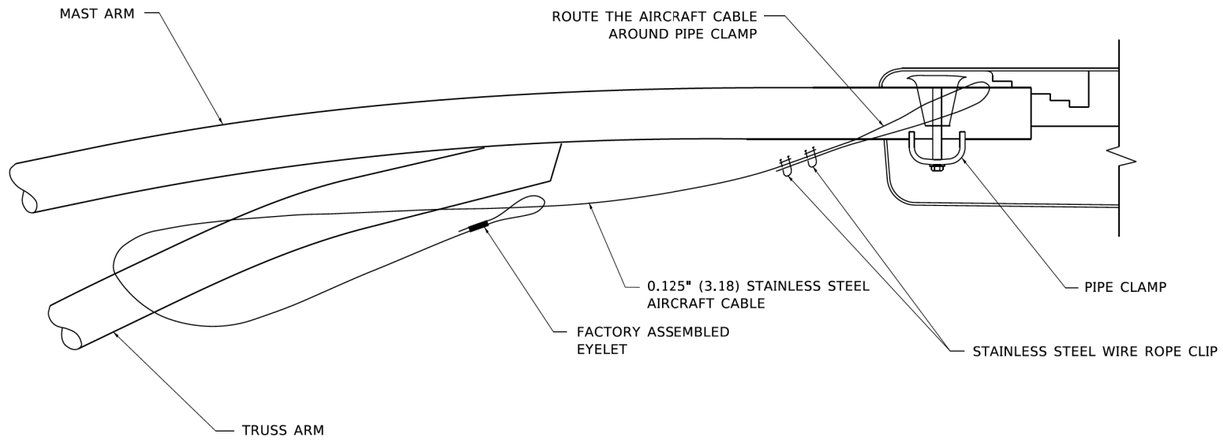
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**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**LIGHTING DETALS**

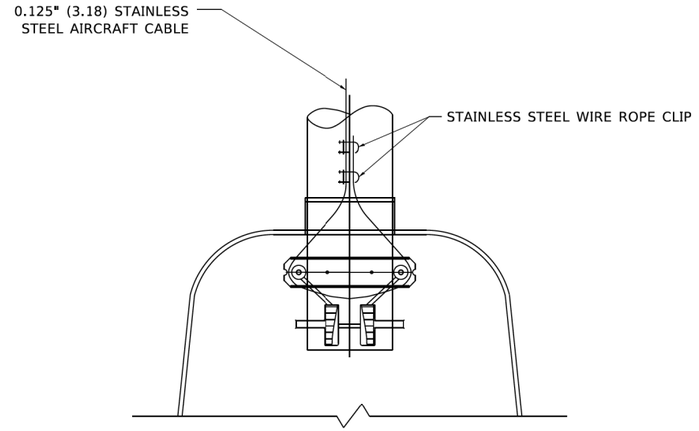
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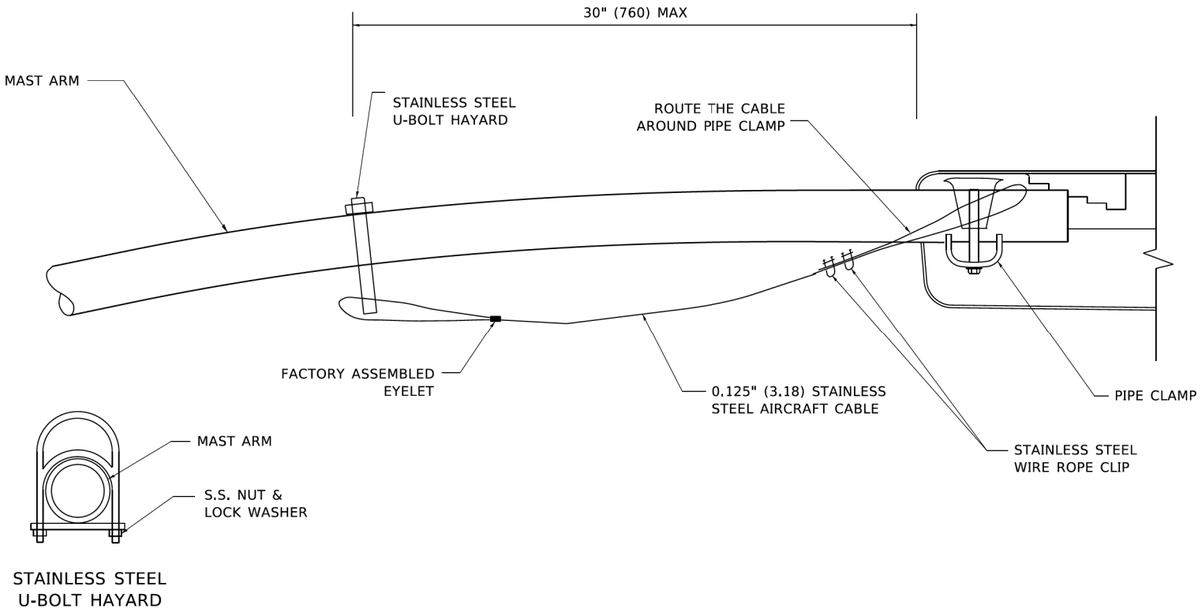
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**SIDE VIEW (TRUSS ARM)**
**N.T.S.**




**BOTTOM VIEW**
**N.T.S.**




**SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)**
**N.T.S.**

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

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**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**LUMINAIRE SAFETY CABLE ASSEMBLY**

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| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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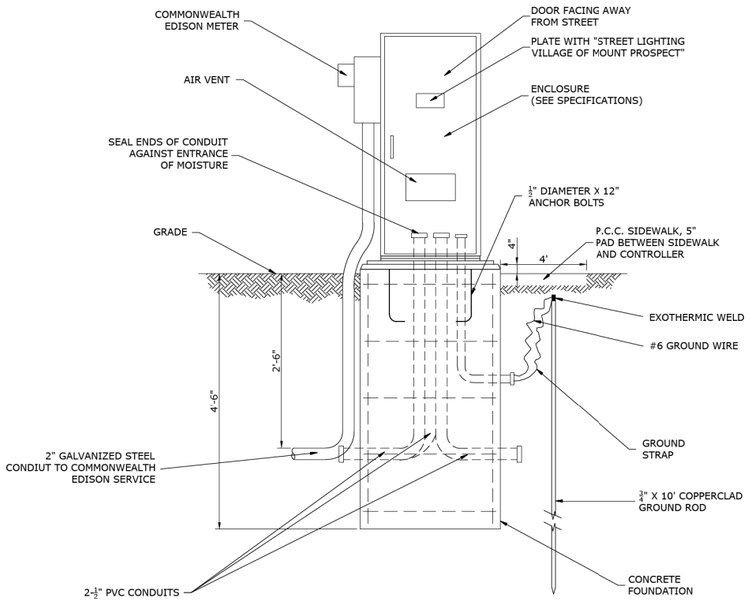
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| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**LIGHTING DETALS**

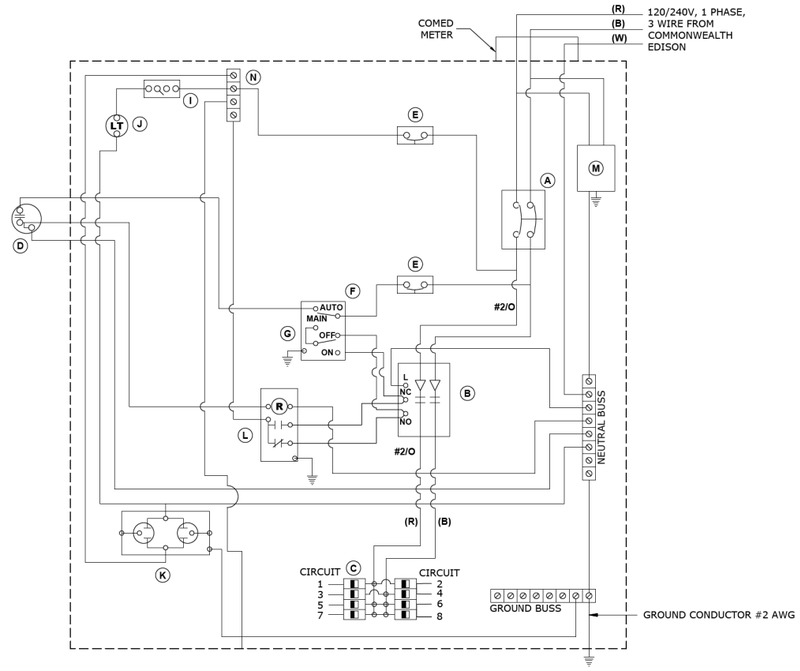
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| | | COOK | 14 | 7 |
| | | CONTRACT NO. | | |
| | ILLINOIS FED. AID PROJECT | | | |




ELEVATION

## LIGHTING CONTROLLER & FOUNDATION




## DEVICE SCHEDULE

| | QUANTITY | DESCRIPTION |
|---|---|---|
| A | 1 | 100 AMP CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 2-POLE, SINGLE THROW, 600V FRAME, NON-INTERCHANGABLE TRIP, BOLT ON TYPE. |
| B | 1 | 100 AMP, ELECTRICALLY OPERATED AND MECHANICALLY HELD LIGHTING CONTRACTOR, 2-POLE, 600 VOLT WITH 120 V COIL |
| C | 8 | 120/240 VOLT 1 PHASE PANEL BOARD WITH 100 AMP COPPER MAINS SINGLE POLE, 30 AMP, 120 VOLT BOLT ON BRANCH CIRCUIT BREAKERS |
| D | 1 | PHOTO-ELECTRIC CELL, 120 VOLT, MOUNTED ON NEAREST LIGHT POLE |
| E | 2 | THERMAL MAGNETIC, MOLDED CASE CIRCUIT BREAKER, 1 POLE, 15 AMP, 120 VOLT BOLT ON TYPE |
| F | 1 | CONTROL SWITCH, MOMENTARY CONTACT, SPDT, 15 AMP, 120 VOLT |
| G | 1 | CONTROL SWITCH, TOGGLE TYPE, SPDT, 20 AMP, 120 VOLT SPECIAL GRADE |
| I | 1 | MICRO SWITCH (MOUNTED WITH ACTUATOR TO SWITCH WHEN DOOR IS O²EN) 120 VOLT, 20 AMP |
| J | 1 | LED LIGHT FIXTURE VAPOR TIGHT WITH GLOBE, GUARD, AND MOUNTING BOX |
| K | 1 | 120 VOLT, 20 AMP RECEPTACLE, SPECIFICATION GRADE IN NEMA 5-15R WEATHER PROOF BOX WITH FLAP-TYPE COVER. OUTLET TO BE GFI-TYPE. |
| L | 1 | POWER RELAY WITH 25 AMP CONTACTS RATED FOR CONTRACTOR INRUSH CURRENT - 120 VOLT COIL |
| M | 1 | SURGE ARRESTOR, 5 WIRE EDCO "4803 OR EQUAL |
| N | 1 | TERMINAL BLOCK, 120 VOLT, 50 AMP MAXIMUM WITH NUMBER OF TERMINALS AS INDICATED |

NOTES:

1. ALL CIRCUIT BREAKERS SHALL HAVE AN INTERRUPT RATING OF 18,000 AMPS
2. UL LISTED DEVICES/COMPONENTS SHALL BE USED
3. NO SPLICES OF WIRES IN CABINET
4. CONTROL WIRE TO BE #12 MTW
5. POWER WIRE SHALL BE RATED RHH/RHW 600 VOLTS OF SIZE INDICATED
6. LIGHTING CONTROLLER SHALL BE SERVICE ENTRANCE RATED
7. PANEL SHALL BE DEAD FRONT TO ALLOW OPERATION OF HOA SWITCH

## LIGHTING CONTROLLER WIRING DIAGRAM

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|---|---|---|
| USER NAME = Personal | DESIGNED - AM | REVISED - |
| | DRAWN - DTJ | REVISED - |
| | CHECKED - JMV | REVISED - |
| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - |

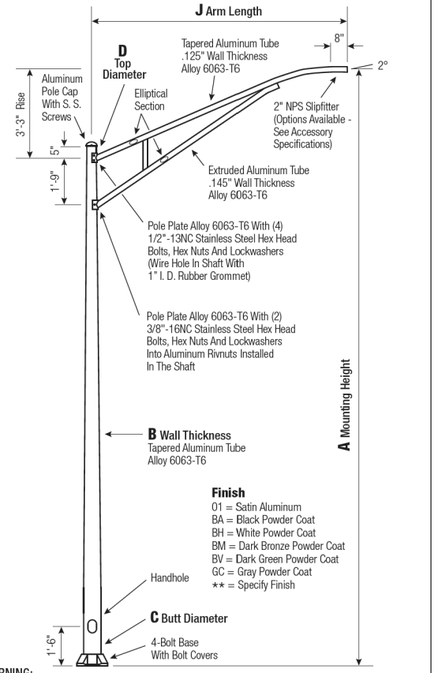
**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**LIGHTING DETALS**

SCALE: N.T.S. | SHEET 6 OF 9 SHEETS | STA. | TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 14 | 8 |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |

# RTA — Round Tapered Aluminum Pole with Arms — Single Truss — 4-Bolt Base




**Finish**
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

**WARNING:**
*Do not install light pole without luminaire.* *Satin Aluminum or Powder Coated Finish per Customer Specification.*

| A Mtg. Ht. | B Wall Thickness | C Butt Diameter | J Arm Length | Lum. Weight | Maximum EPA 90 | 100 | 110 | 120 | 130 | Old Cat. Number | Catalog Number |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.188" | 8 | 10' | 40 | 3.6 | 2.8 | 2.4 | 1.8 | 1.4 | 31-198 | RTA25D8B4T1A-** |

| C Butt Dia. | D Top Dia. | F Bolt Cir. Dia. | G Base Sq. | H Bolt Proj. | I Bolt Size |
|---|---|---|---|---|---|
| 8 | 4.5 | 11 - 12 | 11.25 | 2.75 | 1 x 36 x 4 |

*Dimensions in Inches*

| Customer Name: | | |
|---|---|---|
| Project: | Location: | |
| Notes: | | Quantity: |

**10' ARM**

RTA25D8B4T1A - ____
CATALOG NUMBER FINISH

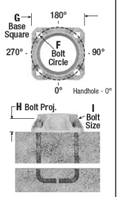
**Pole**
*Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.*

**Base Style**
*4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.*



**Handhole**
*Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.*

**Anchorage**
*Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.*



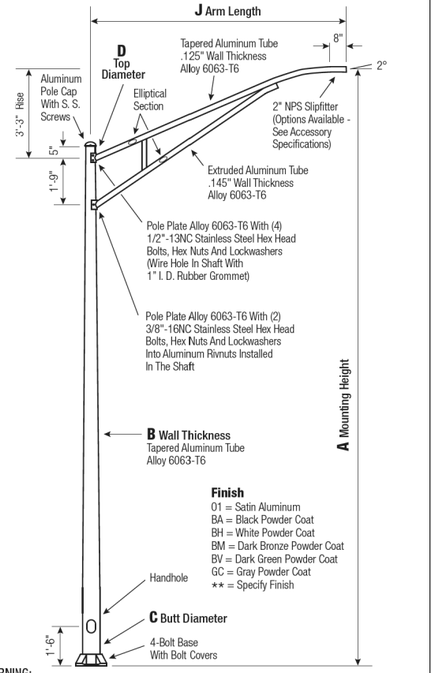

**Vibration Damper**
*When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.*



**EPA Notes:** *Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.*


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26252 Hillman Highway
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800.368.7171
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# RTA — Round Tapered Aluminum Pole with Arms — Single Truss — 4-Bolt Base




**Finish**
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

**WARNING:**
*Do not install light pole without luminaire.* *Satin Aluminum or Powder Coated Finish per Customer Specification.*

| A Mtg. Ht. | B Wall Thickness | C Butt Diameter | J Arm Length | Lum. Weight | Maximum EPA 90 | 100 | 110 | 120 | 130 | Old Cat. Number | Catalog Number |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.188" | 8 | 12' | 40 | 3.8 | 2.8 | 2.5 | 1.8 | 1.4 | 31-199 | RTA25D8B4T1C-** |

| C Butt Dia. | D Top Dia. | F Bolt Cir. Dia. | G Base Sq. | H Bolt Proj. | I Bolt Size |
|---|---|---|---|---|---|
| 8 | 4.5 | 11 - 12 | 11.25 | 2.75 | 1 x 36 x 4 |

*Dimensions in Inches*

| Customer Name: | | |
|---|---|---|
| Project: | Location: | |
| Notes: | | Quantity: |

**12' ARM**

RTA25D8B4T1C - ____
CATALOG NUMBER FINISH

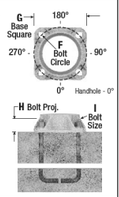
**Pole**
*Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.*

**Base Style**
*4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.*



**Handhole**
*Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.*

**Anchorage**
*Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.*



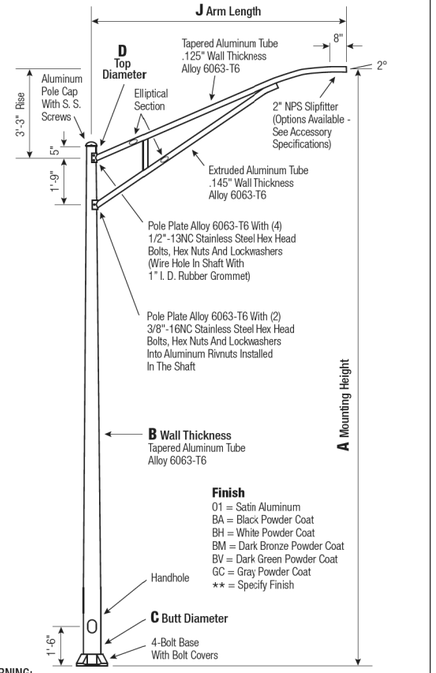

**Vibration Damper**
*When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.*



**EPA Notes:** *Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.*


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Abingdon, VA 24210
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www.hapco.com


# RTA — Round Tapered Aluminum Pole with Arms — Single Truss — 4-Bolt Base




**Finish**
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

**WARNING:**
*Do not install light pole without luminaire.* *Satin Aluminum or Powder Coated Finish per Customer Specification.*

| A Mtg. Ht. | B Wall Thickness | C Butt Diameter | J Arm Length | Lum. Weight | Maximum EPA 90 | 100 | 110 | 120 | 130 | Old Cat. Number | Catalog Number |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.219" | 8 | 15' | 40 | 2.8 | 1.9 | 1.6 | 1.1 | 0.6 | 31-214 | RTA25E8B4T1E-** |

| C Butt Dia. | D Top Dia. | F Bolt Cir. Dia. | G Base Sq. | H Bolt Proj. | I Bolt Size |
|---|---|---|---|---|---|
| 8 | 4.5 | 11 - 12 | 11.25 | 2.75 | 1 x 36 x 4 |

*Dimensions in Inches*

| Customer Name: | | |
|---|---|---|
| Project: | Location: | |
| Notes: | | Quantity: |

**15' ARM**

RTA25E8B4T1E - ____
CATALOG NUMBER FINISH

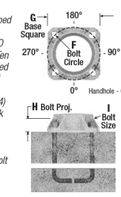
**Pole**
*Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.*

**Base Style**
*4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.*



**Handhole**
*Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.*

**Anchorage**
*Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.*




**Vibration Damper**
*When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.*



**EPA Notes:** *Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.*


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| | | | |
|---|---|---|---|
| USER NAME = Personal | DESIGNED - AM | REVISED - | |
| | DRAWN - DTJ | REVISED - | |
| | CHECKED - JMV | REVISED - | |
| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**LIGHTING DETAILS**

SCALE: N.T.S. | SHEET 7 OF 9 SHEETS | STA. | TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 14 | 9 |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |

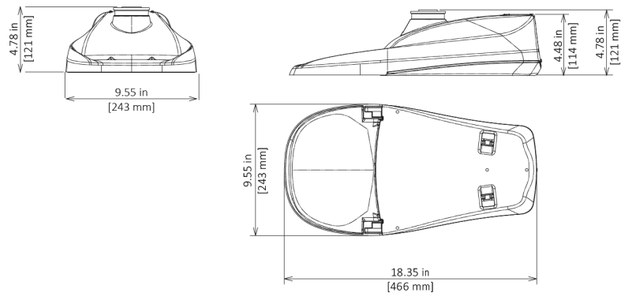
LEOTEK®

Project
Type
Catalog No.

# ComfortView™
## Neighborhood LED Streetlight (CV)

### Luminaire Data

**Weight** 8lbs [3.6kg]
**EPA** 0.39 ft²




### Ordering Information
Sample Catalog No. CV1-H-MV-40K-2R-GY-045-FOC

| Product | LED Code | Voltage | Color Temperature | Distribution | Finish[1] | Output Code[2] | Options |
|---|---|---|---|---|---|---|---|
| **CV1** | **H** | **MV** 120-277V<br>**HV** 347-480V | **22K** 2200K<br>**27K** 2700K<br>**30K** 3000K<br>**40K** 4000K | **2R** Type 2<br>**3R** Type 3 | **GY** Gray<br>**DB** Dark Bronze<br>**BK** Black | **025**<br>**030**<br>**035**<br>**040**<br>**045**<br>Midblock **050**<br>**055**<br>**060**<br>Intersection **070**<br>**075**<br>**080** | **FOC**[3] Fixed Output Code<br>**LPCR** Less Photocontrol Receptacle<br>**PCR7**[4] ANSI 7-wire Photo-control Receptacle<br>**PCR7-CR**[5] Control Ready 7-wire PC Receptacle<br>**WL** Utility Wattage Label<br>**4B** 4-Bolt Mounting Bracket<br>**RWG** Rubber Wildlife Guard<br>**SWTB** Straight Wire Terminal Block<br>**BBL** Bubble Level<br>**CF**[6] Coastal Paint Finish |

Notes:
1 Gray, Black, and Dark Bronze standard. Consult factory for other finishes.
2 Specified output code is the factory set lumen performance. Field adjustable is standard via an eight-position output selector. Refer to output data table on this spec sheet. An illustration of the output selector and its label is shown on page 2. Consult factory if special output setting is required.
3 Non-field adjustable, fixed lumen output. Specify required output code. Not available with PCR7-CR option.
4 Includes output selector that enables field adjustability of light levels. Includes connectors to allow easy upgrade of wireless dimming via PCR7. Wireless node by others.
5 Control-ready wired at factory for wireless node dimming (node by others). Output selector not included in the fixture. Not able to adjust above specified drive current.
6 Specify the CF Option for coastal installation. See warranty for details.
7 Flush mounted Cul-de-Sac Shield cuts light off at 1 times the mounting height behind the luminaire, 1¼ in front, and 2¼ times the mounting height laterally.
8 Flush mounted Front Side Shield cuts light off at approximately 1½ times the mounting height in front of the luminaire (street side) and 2¼ times the mounting height laterally.
9 Flush mounted House Side Shield cuts light off at 1 times the mounting height behind the luminaire and 2¼ times the mounting height laterally.
10 80 Degree Cutoff Shield mitigates high angle glare above 80 degrees from nadir and cuts light off at 1½ times the mounting height behind and 2⅓ times the mounting height laterally.
11 Specify Color (GY, DB, BK)
12 Specify MV (120-277V) or HV (347-480V).

| Accessories* | |
|---|---|
| **CSSCV**[7] | Cul-De-Sac Side Shield, Snap-On* |
| **FSSCV**[8] | Front Side Shield, Snap-On* |
| **HSSCV**[9] | House Side Shield, Snap-On* |
| **VHCS**[10] | 80 Degree Cutoff Shield, Grey* |
| **PTB**[11] | Pole Top Tenon Horizontal Arm Bracket |
| **PTB2**[11] | Pole Top Tenon Horizontal Arm Bracket (2@180°) |
| **RPB**[11] | Round Pole Horizontal Arm Bracket |
| **SPB**[11] | Square Pole Horizontal Arm Bracket |
| **WB**[11] | Wall Horizontal Arm Bracket |
| **LLPC**[12] | Long-Life Twist Lock Photocontrol |
| **SC** | Twist Lock Shorting Cap |
| **BSK** | Bird Deterrent Spider Kit |

*Accessories are ordered separately and not to be included in the catalog number. For factory installed HSSCV, CSSCV, FSSCV and VHCS specify as option in luminaire catalog number. HSSCV, CSSCV, FSSCV can be installed without a tool, but a tool is required for removal. 80 Degree Cutoff Shield (VHCS) requires a Phillips head screwdriver for installation.

*

*2700 and 3000K ComfortView fixtures are certified as Community Friendly Lighting Equipment by the Smart Outdoor Lighting Alliance (SOLA).

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### Performance Data[1]
All data nominal. IES files for all CCTs available at leotek.com.

| Product | Color Temperature (CCT) | Output Code | Dial Selection | System Wattage (W) | Delivered Lumens (Lm)[2] | Efficacy (Lm/W) | Field Adjustable Output Range |
|---|---|---|---|---|---|---|---|
| CV1-H | 2200 (22K) | 020 | 1 | 19 | 2087 | 110 | |
| | | 025 | 2 | 24 | 2693 | 112 | |
| | | 030 | 3 | 29 | 3224 | 111 | |
| | | 040 | 4 | 34 | 3876 | 114 | |
| | | 043 | 5 | 38 | 4222 | 111 | |
| | | 045 | 6 | 43 | 4653 | 108 | |
| | | 050 | 7 | 48 | 5101 | 106 | |
| | | 065 | 8 | 66 | 6722 | 102 | |
| | 2700K (27K) | 025 | 1 | 19 | 2242 | 118 | |
| | | 030 | 2 | 24 | 2892 | 120 | |
| | | 035 | 3 | 29 | 3463 | 119 | |
| | | 040 | 4 | 34 | 4163 | 122 | |
| | | 045 | 5 | 38 | 4535 | 119 | |
| | | 050 | 6 | 43 | 4998 | 116 | Midblock |
| | | 055 | 7 | 48 | 5479 | 114 | |
| | | 070 | 8 | 66 | 7220 | 110 | Intersection |
| | 3000K (30K) | 025 | 1 | 19 | 2412 | 127 | |
| | | 030 | 2 | 24 | 3073 | 128 | |
| | | 035 | 3 | 29 | 3676 | 127 | |
| | | 045 | 4 | 35 | 4423 | 128 | |
| | | 050 | 5 | 38 | 4777 | 126 | |
| | | 055 | 6 | 45 | 5561 | 124 | |
| | | 060 | 7 | 49 | 5800 | 118 | |
| | | 075 | 8 | 67 | 7722 | 115 | |
| | 4000K (40K) | 025 | 1 | 19 | 2675 | 139 | |
| | | 035 | 2 | 24 | 3294 | 137 | |
| | | 040 | 3 | 29 | 3930 | 136 | |
| | | 045 | 4 | 34 | 4561 | 134 | |
| | | 050 | 5 | 38 | 5059 | 133 | |
| | | 055 | 6 | 43 | 5594 | 130 | |
| | | 060 | 7 | 48 | 6147 | 128 | |
| | | 080 | 8 | 67 | 8227 | 123 | |

Notes:
1 Data shown above is for type 2 optic. For type 3 optic, consult IES files for specific data at Leotek.com
2 Nominal lumens. Normal tolerance ± 10% due to factors including LED bin variance, and ambient temperatures.

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MODEL: Default
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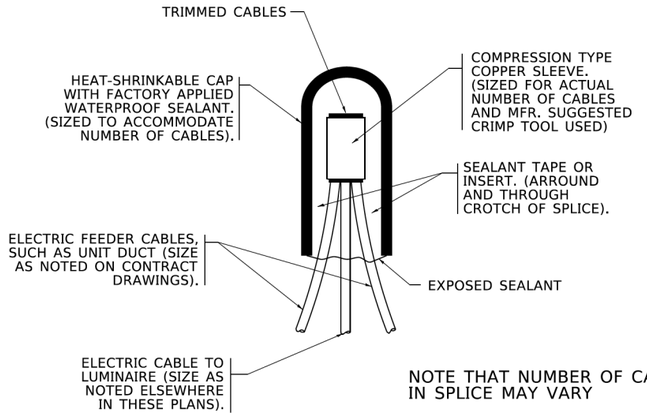
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| | CHECKED - JMV | REVISED - |
| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

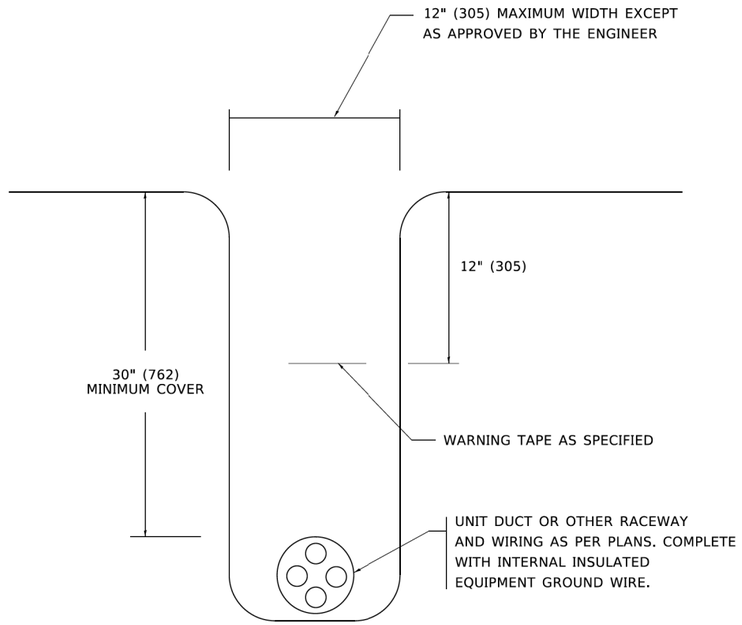
**LIGHTING DETALS**

SCALE: N.T.S. | SHEET 8 OF 9 SHEETS | STA. | TO STA.

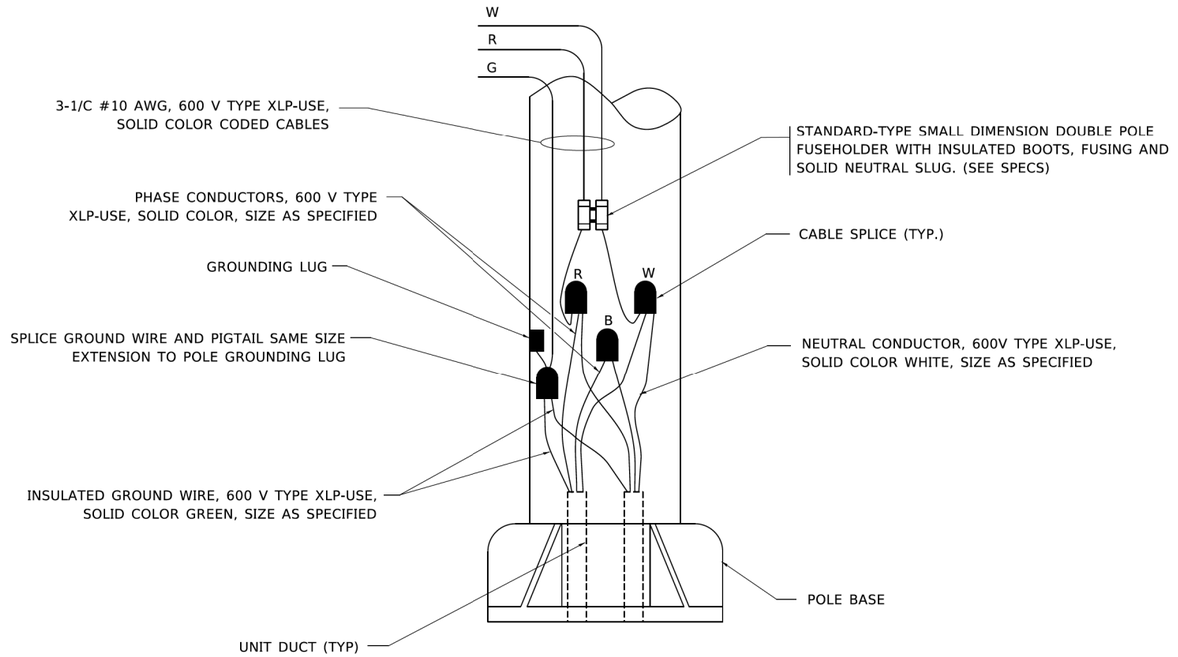
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 14 | 10 |
| | | CONTRACT NO. | | |
| | | ILLINOIS | FED. AID PROJECT | |




**TYPICAL SPLICE DETAIL**
**N.T.S.**




**TYPICAL WIRING IN TRENCH DETAIL**
**N.T.S.**



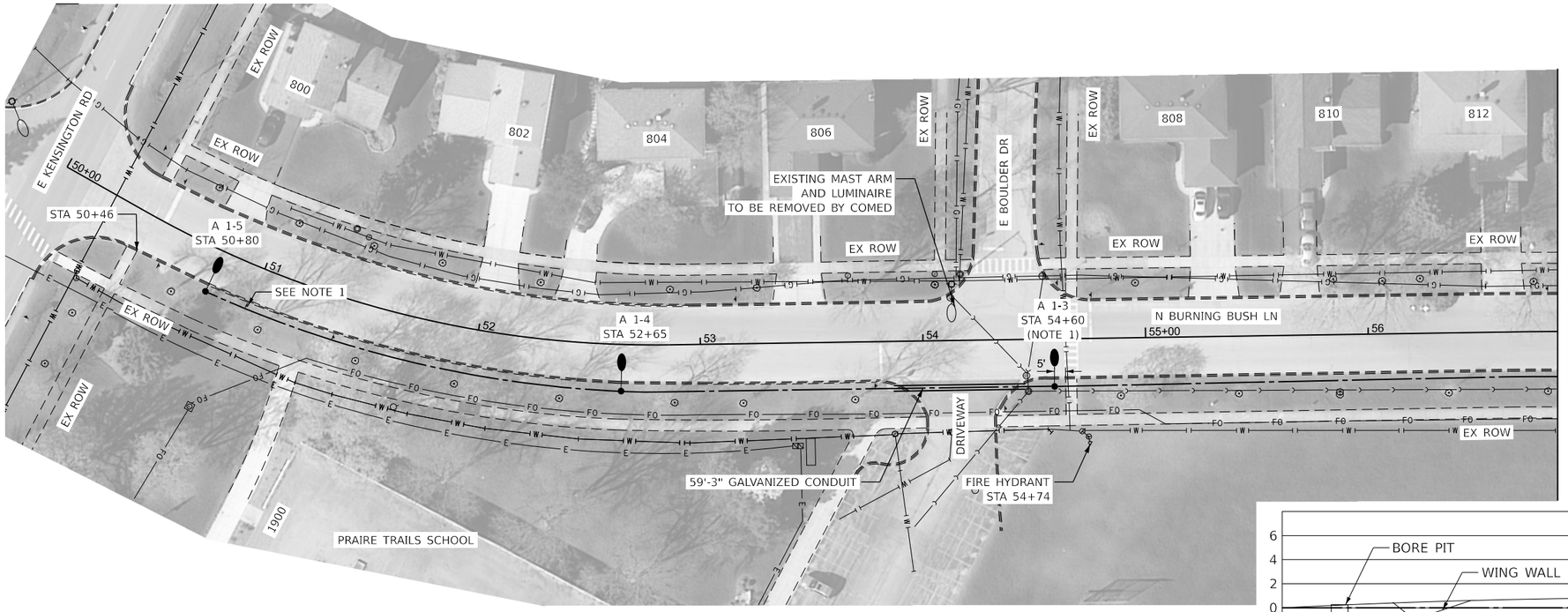

**POLE WIRING DETAIL**
**N.T.S.**

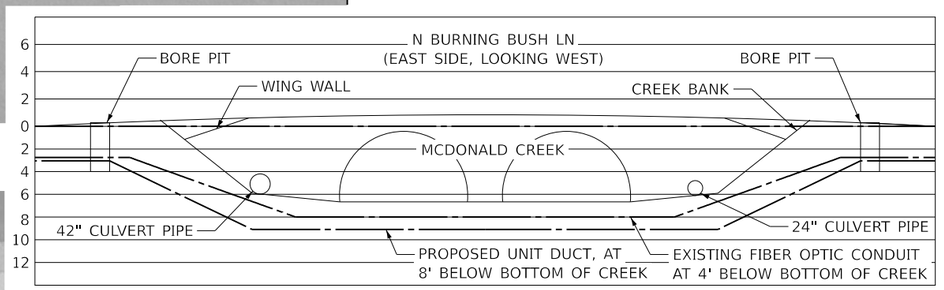
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| | | DRAWN - | REVISED - | | | | | | | |
| | PLOT SCALE = 50.0000 ' / in. | CHECKED - | REVISED - | | | | BE-702 | CONTRACT NO. | | |
| | PLOT DATE = 3/2/2020 | DATE - 08/08/2003 | REVISED - | | SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA. | | | ILLINOIS | FED. AID PROJECT | |

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|---|---|---|---|---|---|---|---|---|
| CiorbaGroup 10125 W Higgins Road Suite 600, Chicago, IL 60131 \| 773.775.1009 \| www.ciorba.com | USER NAME = Personal | DESIGNED - AM | REVISED - | BURNING BUSH LANE STREET LIGHTING VILLAGE OF MOUNT PROSPECT, ILLINOIS | LIGHTING DETALS | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | DRAWN - DTJ | REVISED - | | | | | COOK | 14 | 11 |
| | | CHECKED - JMV | REVISED - | | | | | CONTRACT NO. | | |
| | PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | | SCALE: N.T.S. SHEET 9 OF 9 SHEETS STA. TO STA. | | | ILLINOIS | FED. AID PROJECT | |



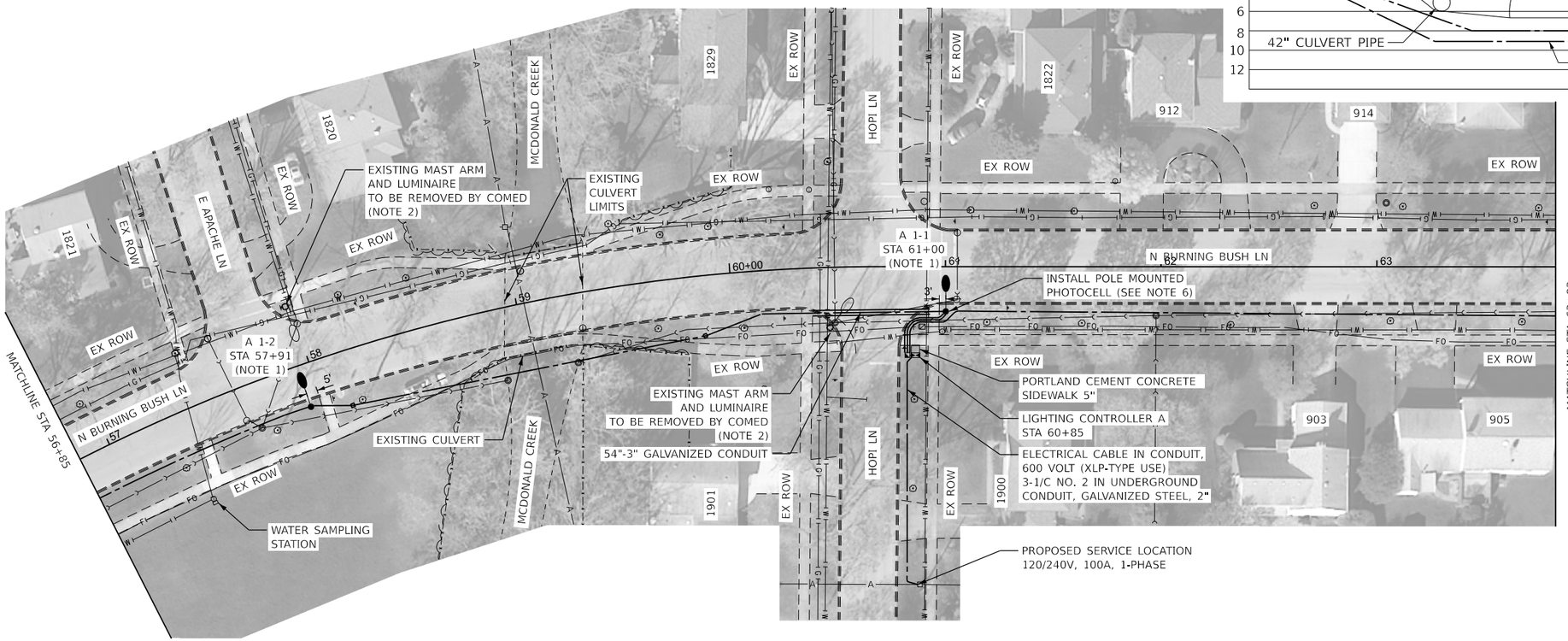




## BORE PROFILE

## LEGEND

- EXISTING LIGHT POLE AND LUMINAIRE
- EXISTING MAST ARM AND LUMINAIRE MOUNTED ON UTILITY POLE
- EXISTING MAST ARM AND LUMINAIRE TO BE REMOVED
- LIGHT STANDARD, 25 FT. M.H., 10 FT. CLAMP-ON MAST ARM, LED LUMINAIRE ON LIGHT POLE FOUDATION, METAL
- PROPOSED HANDHOLE
- PROPOSED LIGHTING CONTROLLER
- PROPOSED UNIT DUCT WITH 2-1/C No. 6 & 1-1/C No. 8 GROUND, 600V (XLP-TYPE USE), 1" DIA. OR AS NOTED
- PROPOSED RIGID GALVANIZED STEEL CONDUIT

CONTROLLER IDENTIFICATION (TYP.)
CIRCUIT NUMBER (TYP.)
A1-1 — POLE NUMBER (TYP.)




## NOTES

1. VILLAGE TO RELOCATE EXISTING STREET SIGNS FROM SIGN POSTS TO PROPOSED LIGHT POLES.
2. VILLAGE TO RELOCATE EXISTING STREET SIGNS FROM EXISTING WOOD LIGHT POLES TO SIGN POSTS.
2. OFFSET LIGHTING UNITS NEAR DRIVEWAYS TO MAINTAIN 6 FEET FROM EDGE OF DRIVEWAY TO EDGE OF FOUNDATION UNLESS NOTED OTHERWISE.
3. LIGHTING UNIT SETBACK SHALL BE 3 FEET FROM FACE OF CURB TO CENTER OF FOUNDATION UNLESS NOTED OTHERWISE.
4. LUMINAIRES AT MID-BLOCK LOCATIONS SHALL HAVE OUTPUT CODE 050 AND LUMINAIRES AT INTERSECTIONS SHALL HAVE OUTPUT CODE 070.
5. WATERMAIN LOCATION SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
6. POLE MOUNTED PHOTOCELL, 3-1/C #10 CABLE AND 1" DUCT INCLUDED IN THE COST OF LIGHTING CONTROLLER.

0 30 60'
GRAPHIC SCALE

MODEL: Default
FILE NAME: c:\pw-cogtprod\dms6040700220007.01-Border-Plan.dgn

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8725 W Higgins Road, Suite 600, Chicago, IL 60631 | 773.775.4509 | www.ciorba.com

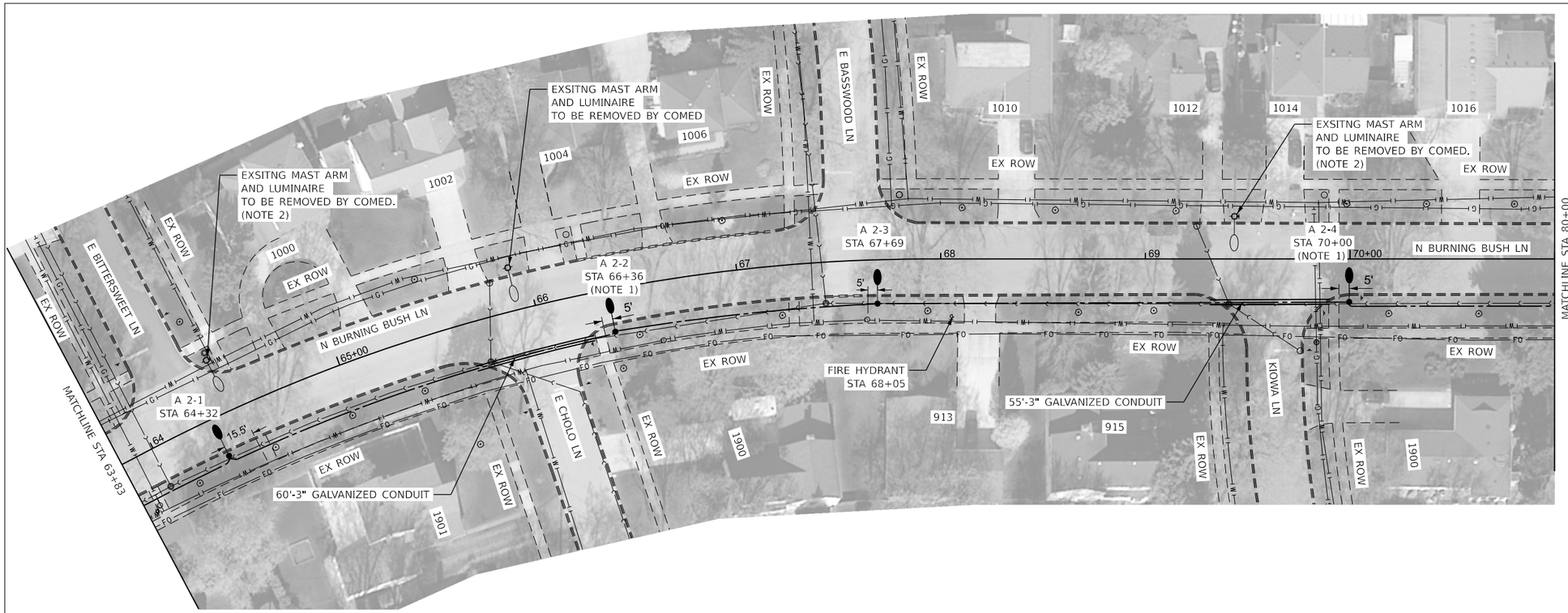
| | | | |
|---|---|---|---|
| USER NAME = Personal | DESIGNED - AM | REVISED - | |
| | DRAWN - DTJ | REVISED - | |
| | CHECKED - JMV | REVISED - | |
| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**PROPOSED LIGHTING PLAN**

SCALE: 1"=30' | SHEET 1 OF 2 SHEETS | STA. 49+74.99 TO STA. 63+94.99

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 14 | 12 |
| | | CONTRACT NO. | | |
| | ILLINOIS FED. AID PROJECT | | | |




## NOTES

1. VILLAGE TO RELOCATE EXISTING STREET SIGNS FROM SIGN POSTS TO PROPOSED LIGHT POLES.
2. VILLAGE TO RELOCATE EXISTING STREET SIGNS FROM EXISTING WOOD LIGHT POLES TO SIGN POSTS.
3. OFFSET LIGHTING UNITS NEAR DRIVEWAYS TO MAINTAIN 6 FEET FROM EDGE OF DRIVEWAY TO EDGE OF FOUNDATION UNLESS NOTED OTHERWISE.
4. LIGHTING UNIT SETBACK SHALL BE 3 FEET FROM FACE OF CURB TO CENTER OF FOUNDATION UNLESS NOTED OTHERWISE.
5. LUMINAIRES AT MID-BLOCK LOCATIONS SHALL HAVE OUTPUT CODE 050 AND LUMINAIRES AT INTERSECTIONS SHALL HAVE OUTPUT CODE 070.
6. WATERMAIN LOCATION SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.

## LEGEND

- EXISTING LIGHT POLE AND LUMINAIRE
- EXISTING MAST ARM AND LUMINAIRE MOUNTED ON UTILITY POLE
- EXISTING MAST ARM AND LUMINAIRE TO BE REMOVED
- LIGHT STANDARD, 25 FT. M.H., 10 FT. CLAMP-ON MAST ARM, LED LUMINAIRE ON LIGHT POLE FOUDATION, METAL
- PROPOSED HANDHOLE
- PROPOSED LIGHTING CONTROLLER
- PROPOSED UNIT DUCT WITH 2-1/C No. 6 & 1-1/C No. 8 GROUND, 600V (XLP-TYPE USE), 1" DIA. OR AS NOTED
- PROPOSED RIGID GALVANIZED STEEL CONDUIT
- CONTROLLER IDENTIFICATION (TYP.)
- CIRCUIT NUMBER (TYP.)
- A1-1 POLE NUMBER (TYP.)

GRAPHIC SCALE 0 30 60'

MODEL: Default
FILE NAME: c:\pw~cgi\prod\dms60\407\0022007.01-Border-Plan.dgn

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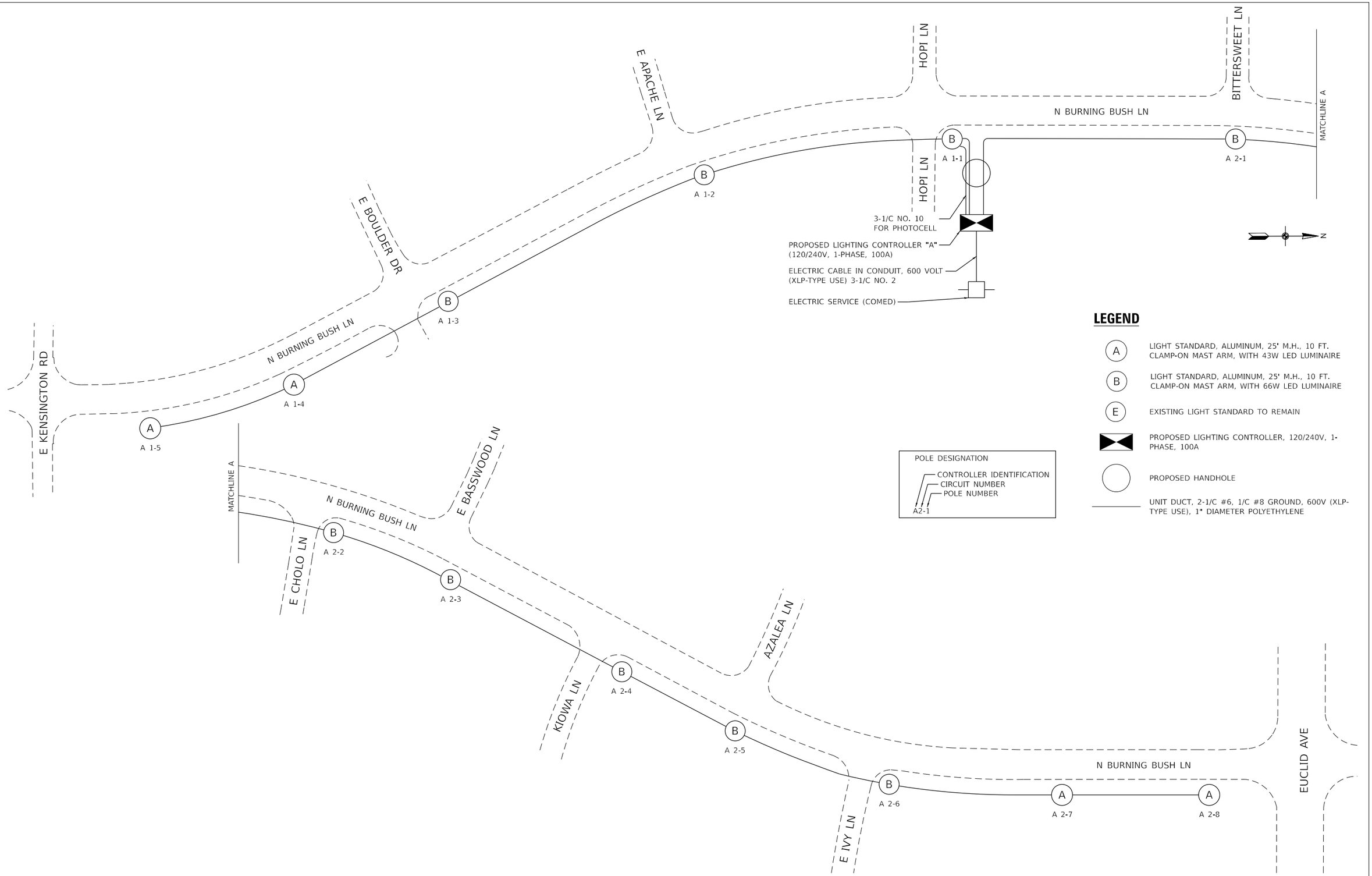
| | | |
|---|---|---|
| USER NAME = Personal | DESIGNED - AM | REVISED - |
| | DRAWN - DTJ | REVISED - |
| | CHECKED - JMV | REVISED - |
| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**PROPOSED LIGHTING PLAN**

SCALE: 1"=30' | SHEET 2 OF 2 SHEETS | STA. 63+94.99 | TO STA. 78+14.98

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 14 | 13 |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




MODEL: Default
FILE NAME: c:\pw-cgi\prod\dms60407\00220007.01-Border-Plan.dgn

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| | | | |
|---|---|---|---|
| USER NAME = Personal | DESIGNED - AM | REVISED - | |
| | DRAWN - DTJ | REVISED - | |
| | CHECKED - JMV | REVISED - | |
| PLOT DATE = 9/10/2025 | DATE - 8/14/2015 | REVISED - | |

**BURNING BUSH LANE**
**STREET LIGHTING**
**VILLAGE OF MOUNT PROSPECT, ILLINOIS**

**SINGLE LINE DIAGRAM**

SCALE: N.T.S. | SHEET OF SHEETS | STA. | TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | COOK | 14 | 14 |
| | | CONTRACT NO. | | |
| | | ILLINOIS | FED. AID PROJECT | |

# BID FORM

**Burning Bush Lane Street Lighting**
Village of Mount Prospect

FROM: Utility Dynamics Corporation

23 Commerce Drive, Oswego, IL 60543
(hereinafter called "Bidder")

TO: Office of the Village
Manager, 3rd Floor 50 South
Emerson Street
Mount Prospect, Illinois 60056
(hereinafter called "Village" or "Village of Mount Prospect")

**Bid For: "Burning Bush Lane Street Lighting"**

The bidders have familiarized themselves with the work and probable work conditions required under this Bid affecting the cost of the work and with the Bid Documents which include:

- Notice to Bidders Table of Contents Instructions for Bidders
- General Conditions and Special Provisions Specifications
- Bid Form
- Affidavit – Bid Certification Form Bid Security
- Bid Sheet
- Other materials or standards provided or noted by the Village Contract Document
- Performance Bond Form
- Labor and Materials Payment Bond Form

Therefore, the Bidder hereby proposes to furnish all supervision, technical personnel, labor, materials, tools appurtenances, equipment, and services (including all utility and transportation services) required to construct and complete the Work, all in accordance with the above listed documents.

Bidder agrees to perform all of the Work and provide the equipment and materials described in the Bid Documents, as follows:

**Bidder has bid on all items and has provided a price for all items.**

The Bidder acknowledges that it is responsible for verification of all pipe sizes and depths prior to the ordering of materials.

The Bidder will complete and provide all labor, equipment, materials and mobilization (if applicable) to perform the Work as incidental to the fixed item price for each item proposed.

In submitting this bid, the Bidder understands that the Village of Mount Prospect reserves the right to add to or subtract from the estimated quantities.

The Village of Mount Prospect intends to award one (1) contract (if at all) for the items bid. If written notice of award of this bid is mailed, emailed or otherwise delivered to the Bidder at any time before this bid is withdrawn, the Bidder agrees to execute and deliver the contract in the prescribed form and furnish payment and performance bonds, or letter of credit, and the insurance certificates required by the Bid Documents to the Village within ten (10) days after receipt.

The Bidder, and as successful bidder/Contractor upon award of the Contract understands and agrees to the following:

1) The Contractor agrees to provide all Work and items and material to the Village as noted in the Bid Documents and comply with the requirements of the Bid Documents.

2) The Contractor agrees to comply with all applicable state and federal laws, rules and regulations, and county and municipal ordinances, as described in the General Conditions.

All Addenda pertaining to this project shall be acknowledged by the Bidder in the spaces provided below:

| Addendum No. | Addendum Date | Acknowledgement by Bidder or Authorized Representative | Date Acknowledged |
|---|---|---|---|
| | | | |
| | | | |

Failure to acknowledge receipt, as provided above, may be considered sufficient grounds for disqualification of the bidder and rejection of his/her bid submittal. A record of all Addenda and copies of same will be available to all qualified bidders from the Village of Mount Prospect Public Works Department, 1700 West Central Road, Mount Prospect, Illinois two (2) days prior to the letting. It shall be the bidder's responsibility to become fully advised of all Addenda prior to submitting its bid.

Upon award of the contract the Village will send Notice of Award to the successful bidder, The bidder must then execute the contract and provide the required bonds or letter of credit and certificate of insurance to the Village within ten (10) days. The Village will then issue a written Notice to Proceed, which starts the performance period and the contractor then has ten (10) days to commence work. Work shall begin no later than November 10, 2025. The contractor shall reach substantial completion of all underground work and restoration December 11, 2025, with **10 working days for the installation of the light poles, mast arms, luminaires, controller and all final wiring and testing after delivery of all items to the Contractor**. Final completion shall be fourteen (14) consecutive days after substantial completion. Failure to complete the work in the designated time frame may result in the Director of Public Works withholding compensation due the contractor for failure to complete the said work in the designated time frame, calling the bonds, or taking such other action as may be available.

Security in the sum of ten (10%) percent of the amount bid in form of (check one):
__✓__Bid Bond ____Certified Check _____Bank Cashier's Check is attached hereto in accordance with the "Instructions for Bidders".

This Bid Submittal contains the following:

1) Bid Form
2) Affidavit – Bid Certification Form
3) Bid Security
4) Bid Sheet(s)

Respectfully submitted:

Name of Firm/Bidder: Utility Dynamics Corporation

By: Joseph B. Spencer (Signature)

Title: President

Date: September 29, 2025

Contact Information:

Official Address: Utility Dynamics Corporation
23 Commerce Drive
Oswego, IL 60543

Telephone: (630)554-1722

Email: contact@utilitydynamicscorp.com

# AFFIDAVIT – BID CERTIFICATION FORM

**Burning Bush Lane Street Lighting**

Village of Mount Prospect

**Bidder**:

Company/Firm Name: Utility Dynamics Corporation

Address: 23 Commerce Drive, Oswego, IL 60543

As a condition of entering into a contract with the Village of Mount Prospect, and under oath and penalty of perjury and possible termination of contract rights and debarment, the undersigned, Joseph B. Spencer, being first duly sworn on oath, deposes and states that he or she is President (sole owner, partner, joint ventured, President, Secretary, etc.) of Utility Dynamics Corporation and has the authority to make all (*Name of Company*) certifications required by this affidavit.

Section I **Non Collusion**

The undersigned certifies that this bid is genuine and not collusive or a sham, that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any person, to fix the bid price element of this bid, or of that of any other bidder, or to secure any advantage against any other bidder or any person interested in the proposed contract.

Section II **Bid Rigging and Rotating**

The undersigned further states that Utility Dynamics Corporation
*(Name of Company)*
is not barred from bidding or contracting as a result of a conviction for violations of state laws prohibiting bid rigging or bid rotating or any similar offense of any state of the United States, as provided in Sections 33E-3 and 33E-4 of the Illinois Criminal Code, 720 ILCS 5/33E-3, 33E-4.

Section III **Drug Free Workplace**

The undersigned further states that Utility Dynamics Corporation
*(Name of Company)*
provides a drug free workplace pursuant to the Drug Free Workplace Act, 30 ILCS 580/1, et seq., and has, to the extent not covered by a collective bargaining that deals with the subject of the Substance Abuse Prevention in Public Works Projects Act, 820 ILCS 265/1 et seq., a substance abuse prevention program that meets or exceeds these requirements of that Act.

Section IV **Tax Payment**

The undersigned further states that Utility Dynamics Corporation is
*(Name of Company)*
not delinquent in payment of any taxes to the Illinois Department of Revenue, in accordance with Illinois Compiled Statues, 65 ILCS 5/11-42.1. The undersigned understands that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition voids the contract and allows the municipality to recover all amounts paid to the individual or entity under the contract in civil action.

## Page 2 - AFFIDAVIT – BID CERTIFICATION FORM

Section V **Sexual Harassment Policy**

Pursuant to Section 2-105(A) of the Illinois Human Rights Act, 775 ILCS 5/2-105 (A), every party to a public contract must:

"Have written sexual harassment policies that shall include, at a mini-mum, the following information: (I) the illegality of sexual harassment; (II) the definition of sexual harassment under State law; (III) a description of sexual harassment, utilizing examples; (IV) the vendor's internal complaint process including penalties; (V) the legal recourse, investigative and complaint process available through the Department (of Human Rights) and the Commission (Human Rights Commission); (VI) directions on how to contact the Department and Commission; and (VII) protection against retaliation as provided by Section 6-101 of the Act. (Illinois Human Rights Act)."

A "public contract" includes: ...every contract to which the State, any of its political subdivisions or any municipal corporation is a party." 775 ILCS 5/1-103 (M) (2002),

The undersigned further states that Utility Dynamics Corporation has
*(Name of Company)*
a written sexual harassment policy in place in full compliance with 775 ILCS 5/2-105 (A) (4).

It is expressly understood the foregoing statements and representations and promises are made as a condition to the right of the bidder to receive payment under any award made under the terms and provisions of this bid.

The undersigned certifies that all information contained in this Affidavit is true and correct.

Signed by: _____ Title: President
Signature

Name Printed: Joseph B. Spencer

Signed and sworn to before me this 29th day of September, 2025. My commission expires:

_____
Notary Public

OFFICIAL SEAL
CHRISTIE M MADAY
Commission No. 839310
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 08/22/2028

# BID SECURITY

**Burning Bush Lane Street Lighting**

Village of Mount Prospect

Included with this bid is a bank cashier's check, certified check or bid bond in the amount of 10% OF TOTAL BID, being ten percent (10%) of the total amount bid by_____, the Bidder, in favor of the Village of Mount Prospect. It is hereby agreed that, should Bidder be awarded the Work contemplated under this bid and fail or refuse to execute a contract for said Work, or to provide the required payment and performance bonds, or letter of credit, and certificate of insurance, then this security, in the amount stipulated above, shall be forfeited and may be retained by the Village of Mount Prospect as liquidated damages and not as a penalty. All bids to remain firm for a period of ninety (90) days after bid opening date.

SUBMITTED THIS 29th DAY OF September, 2025

**SEAL** (if corporation)

Utility Dynamics Corporation

**Bidder:**

Joseph B. Spencer, President

**Bidder's Agent and Agent's Title:**

President

**Title**

Note: If bidder is a partnership, the bid must be signed by at least two of the partners.

Note: If bidder is a corporation, the bid must be signed by an authorized officer of the corporation, attested and sealed by the secretary or other authorized officer.

If a corporation, note here the state of incorporation:

Incorporated under the laws of the State of Illinois.

# BID SHEET

## Burning Bush Lane Street Lighting

Village of Mount Prospect

**(TO BE FILLED OUT BY THE CONTRACTOR/BIDDER)**

**The Bidder will complete pricing for all items (#1-18)** to provide all labor, equipment, materials and mobilization (if applicable) to perform this work. The fixed item price given is to **be all inclusive**.

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | TOTAL |
|---|---|---|---|---|---|
| 1 | UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" | FOOT | 120 | $ 40.00 | $ 4,800.00 |
| 2 | UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" | FOOT | 276 | $ 48.00 | $13,248.00 |
| 3 | UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE | FOOT | 2,915 | $ 25.00 | $72,875.00 |
| 4 | ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE), 1/C NO. 2 | FOOT | 495 | $ 6.00 | $ 2,970.00 |
| 5 | LIGHT STANDARD, ALUMINUM, 25 FT. M.H., 10 FT. CLAMP-ON MAST ARM, LED LUMINAIRE | EACH | 11 | $ 4,200.00 | $46,200.00 |
| 6 | LIGHT STANDARD, ALUMINUM, 25 FT. M.H., 12 FT. CLAMP-ON MAST ARM, LED LUMINAIRE | EACH | 1 | $ 4,300.00 | $ 4,300.00 |
| 7 | LIGHT STANDARD, ALUMINUM, 25 FT. M.H., 15 FT. CLAMP-ON MAST ARM, LED LUMINAIRE | EACH | 1 | $ 4,400.00 | $ 4,400.00 |
| 8 | ELECTRIC UTILITY SERVICE CONNECTION (COMED) | EACH | 1 | $ 5,000.00 | $ 5,000.00 |
| 9 | ELECTRIC SERVICE INSTALLATION | EACH | 1 | $ 2 ,000.00 | $ 2,000.00 |
| 10 | LIGHTING CONTROLLER | EACH | 1 | $14,000.00 | $14,000.00 |
| 11 | BREAKAWAY DEVICE WITH ALUMINUM SKIRT | EACH | 13 | $ 1,280.00 | $16,640.00 |
| 12 | LIGHT POLE FOUNDATION, METAL, 11" BOLT CIRCLE, 8-5/8" X 6' | EACH | 13 | $ 1,050.00 | $13,650.00 |
| 13 | TREE PROTECTION FENCE | FOOT | 500 | $ 10.00 | $ 5,000.00 |
| 14 | COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT | FOOT | 10 | $ 100.00 | $ 1,000.00 |
| 15 | TRAFFIC CONTROL AND PROTECTION | L SUM | 1 | $ 5,000.00 | $ 5,000.00 |
| 16 | ELECTRICAL HANDHOLE | EACH | 1 | $ 1,000.00 | $ 1,000.00 |

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | TOTAL |
|---|---|---|---|---|---|
| 17 | CLASS D PATCHES, SPECIAL | SQ YD | 5 | $ 1,000.00 | $ 5,000.00 |
| 18 | MAINTENANCE BOND (24-MONTH) | L SUM | 1 | $ 2,000.00 | $ 2,000.00 |
| | | | | TOTAL FOR ITEMS (1-18): | $219,083.00 |

**Utility Dynamics Corporation**
**Bidder Qualifications**

**Permanent Place of Business:**
23 Commerce Drive
Oswego, IL 60543
(630)554-1722

Utility Dynamics Corporation has been an an outside electrical contractor since 1971. We have completed numerous lighting projects for various municipalities.
We have also completed numerous projects for the Village of Mount Prospect over the last 16 years.

| Completed Similar Projects | |
|---|---|
| **Customer** | **Project Name** |
| Village of Mt. Prospect | Burning Bush Ln. St. Ltg. |
| H. Linden & Sons | Burlington Ave. Ltg.-Western Springs |
| Village of Rosemont | Mannheim-Lunt St. Ltg. |

| Projects Currently Under Contract | |
|---|---|
| **Customer** | **Project Name** |
| Illinois Tollway | RR-25-9304 |
| Village of Bellwood | Washington Blvd. St. Ltg. |
| Everlast Blacktop | Chain 'O Lakes |
| City of Morris | IL Rt 47 Lighting |

Mt. Prospect
Lighting Projects

| Job ID | Job Name | Customer Name | Location | Project Type | Contact/Phone # | Contract Date | Contract Value |
|---|---|---|---|---|---|---|---|
| 2358 | WILLOW, CYPRESS & FROST LTG. | Village of Mt. Prospect<br>50 Mt.<br>S. Emerson St.<br>Prospect, IL 60056 | MT. PROSPECT, IL | Lighting | Jeff Meindl<br>847-870-5640 | 5/18/2018 | $117,077.00 |
| 2498 | Randview Highlands St. Ltg. | Village of Mount Prospect<br>50 Mount<br>South Emerson St.<br>Prospect, IL 60056 | Mt. Prospect, IL | Lighting | Donna Brown<br>847-875-5478 | 7/8/2019 | $131,380.67 |
| 2802 | lonnquist blvd st lt improvements | Village of Mount Prospect<br>50 Mount<br>S. Emerson St<br>Prospect, IL 60056 | Mt. Prospect, IL | Street Lighting | Casey Botterman<br>847-870-5640 | 8/24/2021 | $109,495.00 |
| 2916 | Seminole Ln. Street Lighting | Village of Mount Prospect<br>50 Mount<br>S. Emerson St<br>Prospect, IL 60056 | Mt. Prospect, IL | Street Lighting | Donna Brown<br>847-875-5478 | 7/21/2022 | $243,009.00 |
| 3319 | Burning Bush Ln. Street Lighting | Village of Mount Prospect<br>50 Mount<br>S. Emerson St<br>Prospect, IL 60056 | Mt. Prospect, IL | Street Lighting | Donna Brown<br>847-875-5478 | 9/9/2024 | $182,438.00 |

# UTILITY DYNAMICS CORPORATION

23 COMMERCE DRIVE
OSWEGO, ILLINOIS 60543
e-mail: contact@utilitydynamicscorp.com

PHONE:
(630) 554-1722
FAX (630) 554-1195


ELECTRICAL CONTRACTORS • OVERHEAD LINE CONSTRUCTION • UNDERGROUND DISTRIBUTION SYSTEMS

## FINANCIAL REFERENCES FOR UTILITY DYNAMICS CORPORATION

Chris Rossi
Merrill Lynch
110 N. Wacker Drive
Chicago, IL 60606
(312)696-7587

Mike Tomaszewski
Byline Bank
820 Church St.
Evanston, IL
(847)733-7400

Don Burke
HUB International
55 East Jackson Blvd.
14th Floor
Chicago, IL 60604
(630)468-5618

# UTILITY DYNAMICS CORPORATION

23 COMMERCE DRIVE
OSWEGO, ILLINOIS 60543
e-mail: contact@utilitydynamicscorp.com

PHONE:
(630) 554-1722
FAX (630) 554-1195


ELECTRICAL CONTRACTORS • OVERHEAD LINE CONSTRUCTION • UNDERGROUND DISTRIBUTION SYSTEMS

## QUALIFICATION REFERENCES FOR UTILITY DYNAMICS CORPORATION

Gerry Hennelly
Christopher B. Burke Engineering
9575 W. Higgins
Suite #600
Rosemont, IL 60018
(847)823-0500

Joe Schag III
City of Aurora
44 East Downer Place
Aurora, IL 60507
(630)768-6577

Donna Brown
Village of Mount Prospect
50 S. Emerson St.
Mount Prospect, IL 60056
(847)392-6000

# Document A310™ – 2010

**Conforms with The American Institute of Architects AIA Document 310**

## *Bid Bond*

**CONTRACTOR:**
*(Name, legal status and address)*

Utility Dynamics Corporation
23 Commerce Drive
Oswego, IL 60543

**SURETY:**
*(Name, legal status and principal place of business)*

Western Surety Company
151 N. Franklin Street
Chicago, IL 60606
**Mailing Address for Notices**

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

**OWNER:**
*(Name, legal status and address)*

Village of Mount Prospect
50 South Emerson Street
Mount Prospect, IL 60056

**BOND AMOUNT:** $ 10% Ten Percent of Amount Bid

**PROJECT:**
*(Name, location or address, and Project number, if any)*

Burning Bush Lane Street Lighting

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 29th day of September, 2025

Kristie Mackey
*(Witness)*

Jennifer McComb
*(Witness)* Jennifer McComb

Utility Dynamics Corporation
*(Principal)* *(Seal)*

By: Joseph B. Spencer, President
*(Title)*

Western Surety Company
*(Surety)* *(Seal)*

By: Martin Moss
*(Title)* Martin Moss Attorney-in-Fact

WESTERN SURETY COMPANY CORPORATE SEAL SOUTH DAKOTA

S-0054/AS 8/10

State of Illinois

County of DuPage

## SURETY ACKNOWLEDGEMENT (ATTORNEY-IN-FACT)

I, Jennifer Jean McComb Notary Public of DuPage County, in the State of Illinois ,

do hereby certify that Martin Moss Attorney-in-Fact, of the Western Surety Company

who is personally known to me to be the same person whose

name is subscribed to the foregoing instrument, appeared before me this day in person, and

acknowledged that he signed, sealed and delivered said instrument, for and on behalf of the

Western Surety Company for the uses and purposes therein set forth.

Given under my hand and notarial seal at my office in the City of Downers Grove in

said County, this 29th day of September , 2025 .

OFFICIAL SEAL
JENNIFER JEAN MCCOMB
Notary Public, State of Illinois
Commission No. 1016885
My Commission Expires
September 09, 2029

Notary Public Jennifer Jean McComb

My Commission expires: September 9, 2029

# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

**Know All Men By These Presents,** That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Martin Moss , Individually**
of Downers Grove, IL , its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

**- In Unlimited Amounts –**

**Surety Bond No:** Bid Bond
**Principal:** Utility Dynamics Corporation
**Obligee:** Village of Mount Prospect

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the shareholders of the corporation.

**In Witness Whereof,** WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 10th day of January, 2024.

WESTERN SURETY COMPANY

Larry Kasten, Vice President

State of South Dakota }
County of Minnehaha } ss

On this 10th day of January, 2024, before me personally came Larry Kasten, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
March 2, 2026

M. BENT
NOTARY PUBLIC
SOUTH DAKOTA

M. Bent, Notary Public

### CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law and Resolutions of the corporation printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 29th day of September , 2025.

WESTERN SURETY COMPANY

Paula Kolsrud, Assistant Secretary

### Authorizing By-Laws and Resolutions

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above Bylaw to execute power of attorneys on behalf of Western Surety Company.

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED, That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

**Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.**

Form F4280-6-2023

***Burning Bush Lane Lighting***
***Kensington Rd to Euclid Ave***
***Village of Mount Prospect***
***Bid Opening: September 29, 2025***
***Bid Tabulation***

| | | | | **Engineer's Estimate** | | **Utility Dynamics Corp.** 23 Commerce Dr. Oswego, IL 60543 | | **Integral Power Atlantic, LLC** 2658 Corporate Pkwy Algonquin, IL 60102 | | **Powerlink Electric, LLC** 400 Corporate Woods Pkwy Vernon Hills, IL 60061 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Item Description | Unit | Quantity | Unit Cost | Total Cost | Unit Cost | Total Cost | Unit Cost | Total Cost | Unit Cost | Total Cost |
| 1. | Underground Conduit, Galvanized Steet, 2" | Foot | 120 | $ 45.00 | $ 5,400.00 | $ 40.00 | $ 4,800.00 | $ 54.25 | $ 6,510.00 | $ 43.91 | $ 5,269.20 |
| 2. | Underground Conduit, Galvanized Steet, 3" | Foot | 276 | $ 50.00 | $ 13,800.00 | $ 48.00 | $ 13,248.00 | $ 61.51 | $ 16,976.76 | $ 62.82 | $ 17,338.32 |
| 3. | Unit Duct, 600V, 2-1/C No.6, 1/C No.8 Ground, (XLP-TYPE Use), 1" Dia. Polyethylene | Foot | 2,915 | $ 25.00 | $ 72,875.00 | $ 25.00 | $ 72,875.00 | $ 19.85 | $ 57,862.75 | $ 24.58 | $ 71,650.70 |
| 4. | Electric Cable in Conduit, 600V (XLP TYPE Use), 1/C No.2 | Foot | 495 | $ 7.00 | $ 3,465.00 | $ 6.00 | $ 2,970.00 | $ 10.86 | $ 5,375.70 | $ 8.06 | $ 3,989.70 |
| 5. | Light Standard, Aluminum, 25 ft. M.H., 10 ft Clamp-On Mast Arm, LED Luminaire | Each | 11 | $ 5,000.00 | $ 55,000.00 | $ 4,200.00 | $ 46,200.00 | $ 3,462.92 | $ 38,092.12 | $ 4,206.18 | $ 46,267.98 |
| 6. | Light Standard, Aluminum, 25 ft. M.H., 12 ft Clamp-On Mast Arm, LED Luminaire | Each | 1 | $ 5,100.00 | $ 5,100.00 | $ 4,300.00 | $ 4,300.00 | $ 3,546.87 | $ 3,546.87 | $ 4,290.13 | $ 4,290.13 |
| 7. | Light Standard, Aluminum, 25 ft. M.H., 15 ft Clamp-On Mast Arm, LED Luminaire | Each | 1 | $ 5,200.00 | $ 5,200.00 | $ 4,400.00 | $ 4,400.00 | $ 3,689.47 | $ 3,689.47 | $ 4,432.73 | $ 4,432.73 |
| 8. | Electric Utility Service Connection (ComEd) | Each | 1 | $ 5,000.00 | $ 5,000.00 | $ 5,000.00 | $ 5,000.00 | $ 2,827.71 | $ 2,827.71 | $ 5,000.00 | $ 5,000.00 |
| 9. | Electric Service Installation | Each | 1 | $ 3,000.00 | $ 3,000.00 | $ 2,000.00 | $ 2,000.00 | $ 5,000.00 | $ 5,000.00 | $ 6,097.52 | $ 6,097.52 |
| 10. | Lighting Controller | Each | 1 | $ 18,500.00 | $ 18,500.00 | $ 14,000.00 | $ 14,000.00 | $ 15,673.93 | $ 15,673.93 | $ 20,170.29 | $ 20,170.29 |
| 11. | Breakaway Device with Aluminum Skirt | Each | 13 | $ 1,750.00 | $ 22,750.00 | $ 1,280.00 | $ 16,640.00 | $ 1,390.62 | $ 18,078.06 | $ 1,227.78 | $ 15,961.14 |
| 12. | Light Pole Foundation, Metal, 11" Bolt Circle, 8-5/8" x 6' | Each | 13 | $ 1,250.00 | $ 16,250.00 | $ 1,050.00 | $ 13,650.00 | $ 1,144.70 | $ 14,881.10 | $ 1,592.96 | $ 20,708.48 |
| 13. | Tree Protection Fence | Foot | 500 | $ 15.00 | $ 7,500.00 | $ 10.00 | $ 5,000.00 | $ 18.30 | $ 9,150.00 | $ 13.23 | $ 6,615.00 |
| 14. | Combination Concrete Curb and Gutter Removal and Replacement | Foot | 10 | $ 150.00 | $ 1,500.00 | $ 100.00 | $ 1,000.00 | $ 757.53 | $ 7,575.30 | $ 302.03 | $ 3,020.30 |
| 15. | Traffic Control and Protection | LSum | 1 | $ 5,000.00 | $ 5,000.00 | $ 5,000.00 | $ 5,000.00 | $ 3,000.64 | $ 3,000.64 | $ 6,731.28 | $ 6,731.28 |
| 16. | Electric Handhole | Each | 1 | $ 1,200.00 | $ 1,200.00 | $ 1,000.00 | $ 1,000.00 | $ 1,293.32 | $ 1,293.32 | $ 1,472.63 | $ 1,472.63 |
| 17. | Class D Patches, Special | SqYd | 5 | $ 500.00 | $ 2,500.00 | $ 1,000.00 | $ 5,000.00 | $ 1,256.16 | $ 6,280.80 | $ 696.57 | $ 3,482.85 |
| 18. | Maintenance Bond | LSum | 1 | $ 2,000.00 | $ 2,000.00 | $ 2,000.00 | $ 2,000.00 | $ 10,000.00 | $ 10,000.00 | $ 2,500.00 | $ 2,500.00 |
| | | | | | | | | | | | |
| | | | | | **$ 246,040.00** | | **$ 219,083.00** | | **$ 225,814.53** | | **$ 244,998.25** |

**Residential Street Lighting Program**
**Priority Matrix**

3/26/2025

| | | | max points | 25 | 20 | 15 | 10 | 10 | 5 | 5 | 5 | 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Street | From | To | Classification | ADT | Sidewalk | Schools | Length/ Intersection | Multi-Family Units | Parks | Churches | Other Ped Generators | Bike Route | **Score** | **Rank** |
| Gregory Street* | Waterman Avenue | Elmhurst Road (IL 83) | Collector | 9.10 | 2.00 | 7.50 | 7.57 | 0.00 | 5.00 | 0.00 | 0.00 | 5.00 | 36.17 | **1** |
| Busse Avenue* | Main Street (IL 83) | Owen Street | Collector | 5.50 | 0.00 | 7.50 | 7.95 | 0.00 | 2.50 | 2.50 | 3.57 | 5.00 | 34.52 | **2** |
| Burning Bush Lane | Euclid Avenue | Kensington Road | Collector | 9.16 | 0.00 | 7.50 | 9.16 | 0.00 | 2.50 | 0.00 | 0.00 | 5.00 | 33.32 | **3** |
| Meier Road | Lincoln Street | Golf Road | Collector | 13.61 | 1.00 | 0.00 | 8.63 | 0.00 | 0.00 | 5.00 | 0.00 | 5.00 | 33.24 | **4** |
| Prospect Avenue | Main Street (IL 83) | Mount Prospect Road | Collector | 14.14 | 0.00 | 0.00 | 3.21 | 10.00 | 0.00 | 0.00 | 5.00 | 0.00 | 32.35 | **5** |
| Westgate Road | Euclid Avenue | Kensington Road | Collector | 4.32 | 20.00 | 0.00 | 7.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 31.87 | **6** |
| William Street | Prospect Avenue | Golf Road | Collector | 6.98 | 1.00 | 0.00 | 2.31 | 8.00 | 5.00 | 2.50 | 0.71 | 5.00 | 31.51 | **7** |
| Gregory Street | Elmhurst Road (IL 83) | Owen Street | Collector | 4.84 | 0.00 | 7.50 | 7.97 | 0.00 | 2.50 | 2.50 | 0.00 | 5.00 | 30.31 | **8** |
| Lincoln Street | western Village limits | Busse Road | Collector | 11.61 | 2.00 | 0.00 | 8.93 | 0.00 | 2.50 | 0.00 | 0.00 | 5.00 | 30.04 | **9** |
| Emerson Street | Northwest Highway | Golf Road | Collector | 10.16 | 0.00 | 0.00 | 5.78 | 0.00 | 2.50 | 2.50 | 2.14 | 5.00 | 28.08 | **10** |
| Council Trail | Elmhurst Road (IL 83) | Marina Drive | Collector | 7.68 | 0.00 | 7.50 | 7.67 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 27.85 | **11** |
| Lonnquist Boulevard | Busse Road | Elmhurst Road (IL 83) | Collector | 9.16 | 2.00 | 0.00 | 7.14 | 0.00 | 2.50 | 0.00 | 0.00 | 5.00 | 25.80 | **12** |
| Briarwood Drive | entire subdivision | | Local | 3.98 | 19.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.43 | 0.00 | 24.41 | **13** |
| Highland Street | Elmhurst Road (IL 83) | Rand Road | Collector | 5.42 | 0.00 | 0.00 | 8.29 | 6.00 | 0.00 | 0.00 | 2.86 | 0.00 | 22.57 | **14** |
| Council Trail | Seegwun Avenue | Elmhurst Road (IL 83) | Collector | 6.46 | 0.00 | 0.00 | 7.28 | 0.00 | 2.50 | 0.00 | 0.00 | 5.00 | 21.24 | **15** |
| Greenwood Drive | Wheeling Road | Wolf Road | Collector | 2.71 | 8.00 | 0.00 | 4.91 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 20.62 | **16** |
| Elmhurst Avenue | Prospect Avenue | Lincoln Street | Collector | 4.97 | 0.00 | 7.50 | 5.53 | 0.00 | 0.00 | 2.50 | 0.00 | 0.00 | 20.51 | **17** |
| Burning Bush Lane | Seminole Lane | Camp McDonald Road | Collector | 6.02 | 3.00 | 0.00 | 6.44 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 20.46 | **18** |
| Prospect Avenue | Central Road | Main Street (IL 83) | Collector | 10.99 | 0.00 | 0.00 | 7.42 | 0.00 | 0.00 | 0.00 | 1.43 | 0.00 | 19.84 | **19** |
| Isabella Street | Owen Street | Rand Road | Collector | 9.95 | 0.00 | 0.00 | 9.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 19.43 | **20** |
| Lonnquist Boulevard | Elmhurst Road (IL 83) | Emerson Street | Collector | 7.33 | 0.00 | 0.00 | 6.54 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 18.87 | **21** |
| Wego Trail | Central Road | Lincoln Street | Collector | 4.19 | 0.00 | 0.00 | 6.41 | 0.00 | 2.50 | 0.00 | 0.00 | 5.00 | 18.10 | **22** |
| Owen Street | Central Road | Northwest Highway | Collector | 2.88 | 0.00 | 0.00 | 5.60 | 0.00 | 2.50 | 0.00 | 1.43 | 5.00 | 17.41 | **23** |
| Lincoln Street | Main Street (IL 83) | Emerson Street | Collector | 6.02 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.02 | **24** |
| Owen Street | Gregory Street | Central Road | Collector | 4.71 | 0.00 | 0.00 | 3.55 | 0.00 | 2.50 | 0.00 | 0.00 | 5.00 | 15.77 | **25** |
| Fairview Avenue | Kensington Road | Northwest Highway | Collector | 5.67 | 0.00 | 7.50 | 1.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.02 | **26** |
| Highland Street | Forest Avenue | Elmhurst Road (IL 83) | Collector | 6.02 | 0.00 | 0.00 | 8.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.36 | **27** |
| Seegwun Avenue | Lincoln Street | Golf Road | Collector | 4.45 | 0.00 | 0.00 | 1.63 | 0.00 | 2.50 | 0.00 | 0.71 | 5.00 | 14.30 | **28** |
| Elmhurst Avenue | Kensington Road | Central Road | Collector | 7.50 | 1.00 | 0.00 | 0.81 | 0.00 | 0.00 | 2.50 | 0.71 | 0.00 | 12.53 | **29** |
| Lincoln Street | Busse Road | Elmhurst Road (IL 83) | Collector | 15.10 | 5.00 | 15.00 | 6.60 | 0.00 | 0.00 | 2.50 | 0.71 | 5.00 | 49.91 | *** |
| Cottonwood Drive | Busse Road | Linneman Road | Collector | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | *** |
| Burning Bush Lane | Camp McDonald Road | Euclid Avenue | Collector | | | | | | | | | | | **complete** |
| Business Center Drive | Rand Road | Feehanville Drive | Collector | | | | | | | | | | | **complete** |
| Emerson Street | Central Road | Northwest Highway | Collector | | | | | | | | | | | **complete** |
| Feehanville Drive | Business Center Drive | Wolf Road | Collector | | | | | | | | | | | **complete** |
| Hunt Club Road | Golf Road | Huntington Commons Road | Collector | | | | | | | | | | | **complete** |
| Huntington Commons Road | Linneman Road | Elmhurst Road (IL 83) | Collector | | | | | | | | | | | **complete** |
| Linneman Road | Golf Road | Church Road | Collector | | | | | | | | | | | **complete** |
| Linneman Road | Willow Lane | Dempster Street | Collector | | | | | | | | | | | **complete** |
| Linneman Road | Dempster Street | Algonquin Road | Collector | | | | | | | | | | | **complete** |
| Lonnquist Boulevard | Meier Road | Busse Road | Collector | | | | | | | | | | | **complete** |
| Schoenbeck Road | Camp McDonald Road | Rand Road | Collector | | | | | | | | | | | **complete** |
| Seminole Lane | western Village limits | River Road | Collector | | | | | | | | | | | **complete** |
| Westgate Road | Wildwood Lane | Central Road | Collector | | | | | | | | | | | **complete** |
| Wheeling Road | Euclid Avenue | Kensington Road | Collector | | | | | | | | | | | **complete** |
| Wheeling Road | Kensington Road | Business Center Drive | Collector | | | | | | | | | | | **complete** |
| Willow Lane | western Village limits | Busse Road | Collector | | | | | | | | | | | **complete** |
| Willow Lane | Busse Road | Church Road | Collector | | | | | | | | | | | **complete** |

*on hold due to other planned work

*** street has complete ComEd lighting system; low priority

# Item Cover Page

| | |
|---|---|
| **Subject** | **As submitted** |
| Meeting | October 28, 2025 - SPECIAL MEETING - AMENDED 10-27-2028 OF THE MOUNT PROSPECT VILLAGE BOARD |
| Fiscal Impact (Y/N) | |
| Dollar Amount | |
| Budget Source | |
| Category | VILLAGE MANAGER'S REPORT |
| Type | Presentation |

**Information**

**Discussion**

**Alternatives**

**Staff Recommendation**

**Attachments**

None