Wednesday, August 12, 2026
Plan Commission Regular Meeting Agenda

PUBLIC NOTICE - in accordance with the applicable statutes of the state of Illinois and Ordinances of the Village of Wheeling, notice is hereby given that the Regular Meeting of the Wheeling Plan Commission will be held in the Board Room, Wheeling Village Hall, 2 Community Boulevard, Wheeling, Illinois, at 6:30 PM, during which meeting it is anticipated there will be discussion and consideration of and, if so determined, action upon the matters contained in the following agenda:

1. **Call to Order**
2. **Pledge of Allegiance**
3. **Roll Call**
4. **Changes to the Agenda**
5. **Citizen Concerns and Comments**
6. **Consent Items**
7. **Items for Review**

   A. Docket No. PSV26-0009, Request for a Variation to Permit a Reduction in the Minimum Required Setback Between an Accessory Structure and the Principal Structure from 10 Feet to 3 Feet for U.S. Tsubaki Holdings, Inc. (301 Marquardt Drive) - **PUBLIC HEARING**

   B. Docket PV26-0010, Request for a Variation to Permit a Reduction in the Required Compensatory Storage Ratio from 1.5:1 to 1.1:1 for Sky Habour Group (1090 S. Milwaukee Avenue) - **PUBLIC HEARING**

   C. Docket No. PSU26-0006, Request for Special Use Approval to Permit a Tobacco Retail Establishment for Smoke It (48 W. Dundee Road) - **PUBLIC HEARING**

   D. Docket No. PSU26-0015, Request for Special Use Approval to Permit a Recreational and Instructional Facility for JYZ Dance (1053 Lake Cook Road) - **PUBLIC HEARING**

   E. Docket No. PSU26-0013, Request for Special Use Approval to Permit the Operation of a Heavy Motor Vehicle Repair Facility for Ramar Land Corporation (900 Chaddick Drive) - **PUBLIC HEARING**

   F. Docket No. PSPMIN26-0009, Request for Minor Site Plan and Appearance Approval for Proposed Site Improvements for Ramar Land Corporation (900 Chaddick Drive).

8. **Approval of Minutes**

   A. Approval of Minutes of the Regular Meeting of July 8, 2026 (including the Findings of Fact for Docket No's. PSU26-0011 and PSU26-0012).

9. **Other Business**
10. **Adjournment**

This meeting will be televised on channels 17 and 99. If you would like to attend a Village meeting but require an auxiliary aid such as a sign language interpreter, call 847-499-9085 AT LEAST 72 HOURS PRIOR TO THE MEETING. To view the full agenda packet, visit https://wheelingil.portal.civicclerk.com/.

MEMORANDUM

DATE: August 12, 2026
FROM: Marcy Knysz, Village Planner
SUBJECT: Docket No. PSV26-0009, Request for a Variation to Permit a Reduction in the Minimum Required Setback Between an Accessory Structure and the Principal Structure from 10 Feet to 3 Feet for U.S. Tsubaki Holdings, Inc. (301 Marquardt Drive) - **PUBLIC HEARING**
RECOMMENDED ACTION: **Recommend approval of Docket No. PV26-0009** granting a variation from Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19.10.070(b), Accessory Structures, and associated sections, to permit a reduction the minimum required setback between an accessory structure and the principal structure from 10 feet to 3 feet for U.S. Tsubaki Holdings, Inc., located at 301 Marquardt Drive in accordance with the Project Description Letter prepared by Bob Bertog, dated 7/1/2026; Pergola Drawings prepared by Poligon, dated 11/16/2016; Plat of Survey Showing Setback; and subject to the following condition:

1. Any landscaping removed or damaged as a result of the pergola installation shall be replaced with plant materials of equivalent size and quality, subject to review and approval by the Community Development Department.

EXECUTIVE SUMMARY

Docket No. PV26-0009: Bertog Landscape Company (625 Wheeling Road) on behalf of U.S. Tsubaki Holdings, Inc. (301 Marquardt Drive), property owner, is seeking a variation to permit a reduction in the minimum required setback between an accessory structure and the principal structure from 10 feet to 3 feet, for the property located at 301 Marquardt Drive, as required in Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19.10.070(b), Accessory Structures, and associated sections.

GENERAL PROPERTY INFORMATION

Petitioner: Bertog Landscape Company on behalf of U.S. Tsubaki Holdings, Inc.

Location: 301 Marquardt Drive

Building size: 101,156 sq. ft

Property size: 4.66 acres

Neighboring Property Land Use(s):
North: Industrial (across Marquardt Drive)
East, West, South: Industrial

Existing Use of Property: Industrial Building (U.S. Tsubaki)

Existing Zoning: I-3, General Industrial

Comprehensive Plan Designation: Industrial

Zoning History:

- Docket No. AC93-5, site plan approval for a wall mounted sign for U.S. Tsubaki

SUMMARY OF REQUEST

Bertog Landscape Company, on behalf of U.S. Tsubaki Holdings, Inc., is requesting a variation to reduce the minimum required setback between an accessory structure and the principal structure from 10 feet to 3 feet for the property located at 301 Marquardt Drive. The requested variation is associated with the construction of a steel pergola to provide a shaded outdoor seating area for employees during work breaks.

VARIANCE

A variation is to grant relief from the literal requirements of the zoning ordinance when unique circumstances, applicable to the property, deprive it from enjoying privileges commonly enjoyed by other properties in the same zoning district. After review of the Standards summarized in this staff report, the Commission must find beyond a reasonable doubt that all of the standards are met.

U.S. Tsubaki has hired Bertog Landscape Company to install a pre-manufactured steel pergola on the east side of the building to provide a shaded outdoor seating area for employees during work breaks. As shown on the plat of survey (attached), there is limited area on the subject site that would provide a convenient location for the shade pergola relative to employee access. As a result, the proposed installation location would provide a minimum separation of 3' from the principal building, where a minimum separation of 10' is required.

Standards for Variation: Following are the petitioner's responses to the standards for variation for the variance request. (Any staff comments follow the petitioner's response)

1. **State how the particular physical surroundings, shape, or topographical condition of the specific property involved would result in a practical difficulty or particular hardship upon or for the owner, lessee or occupant, as distinguished from a mere inconvenience, if the strict letter of the regulations were carried out.**

   Petitioner: The east side of the building has an employee entrance and an existing patio where employees take their breaks and eat their lunch. This area is where the Covered Pergola is to be built to give the employees shade from the sun and shelter from rain.

   Staff: The subject property is fully developed with an existing building, parking lot, and site improvements that limit suitable locations for the proposed employee break area. Requiring the minimum 10' setback for accessory structures would conflict with the existing site layout.

2. **Indicate how the hardship is due to unique circumstances that do not generally apply to the other properties or uses.**

   Petitioner: There is a parking lot directly to the east and there is no room for the pergola to be moved into the parking area. The existing patio and side employee door is where employees have their breaks.

   Staff: The request is due to the layout of the existing property and site constraints, which limit placement of accessory structures. These circumstances are unique to the subject property.

3. **Describe how the alleged difficulty or hardship has not been created by any person presently having an interest in the property.**

   Petitioner: A couple of years ago, US Tsubaki was asked to remove the shade trees that lined the building and gave the employees shade, because the airport and flight path of the airplanes is directly East of them. US. Tsubaki agreed and removed all of the trees and now the employees have no shade or shelter from the sun or the elements.

   Staff: The existing building and site layout were established prior to the current request. The need for the variation results from the existing site configuration and was not created by the current owner.

4. **State how the property in question cannot yield a reasonable return if permitted to be used only**

under the conditions allowed by the regulations in that zone.

Petitioner: The employees will have no shelter from the sun or rain for their breaks or lunch.

Staff: The property can yield a reasonable return without the requested variation. However, the proposed pergola represents a minor site improvement intended to enhance employee welfare and does not adversely affect the surrounding properties.

5. **State how the granting of the variation will not alter the essential character of the locality.**

   Petitioner: The variation would only add to the beautification of the property, creating a pleasing structure and employee gathering area on the side of the commercial building.

   Staff: The proposed steel pergola is an accessory structure compatible with the existing industrial development and will not alter the character of the surrounding area.

6. **Describe how the proposed variation will not impair an adequate supply of light and air to adjacent property, or substantially increase the congestion in the public streets, or increase the danger of fire, or endanger the public safety, or substantially diminish or impair property values within the neighborhood.**

   Petitioner: There will be no impact on other properties as the building is facing east and the parking lot is adjacent. There will be no electricity installed, therefore no light pollution, odor, noise, or traffic. The side door will not be compromised and all exits clear.

   Staff: The proposed pergola will not adversely affect light, air, traffic circulation, emergency access, public safety, or neighboring property values. Accordingly, the variation will not be detrimental to the public health, safety, or welfare.

STAFF REVIEW

Fire Department Review: No comments related to the Special Use.

Engineering Division Review: No comments related to the Special Use.

Staff Recommended Action: Staff recommends approval of the variance request subject to the following condition:

1. Any landscaping removed or damaged as a result of the pergola installation shall be replaced with plant materials of equivalent size and quality, subject to review and approval by the Community Development Department.

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If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of a variation, the appropriate motion would be to:

Recommend approval of Docket No. PV26-0009 granting a variation from Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19.10.070(b), Accessory Structures, and associated sections, to permit a reduction the minimum required setback between an accessory structure and the principal structure from 10 feet to 3 feet for U.S. Tsubaki Holdings, Inc., located at 301 Marquardt Drive in accordance with the Project Description Letter prepared by Bob Bertog, dated 7/1/2026; Pergola Drawings prepared by Poligon, dated 11/16/2016; Plat of Survey Showing Setback; and subject to the following condition:

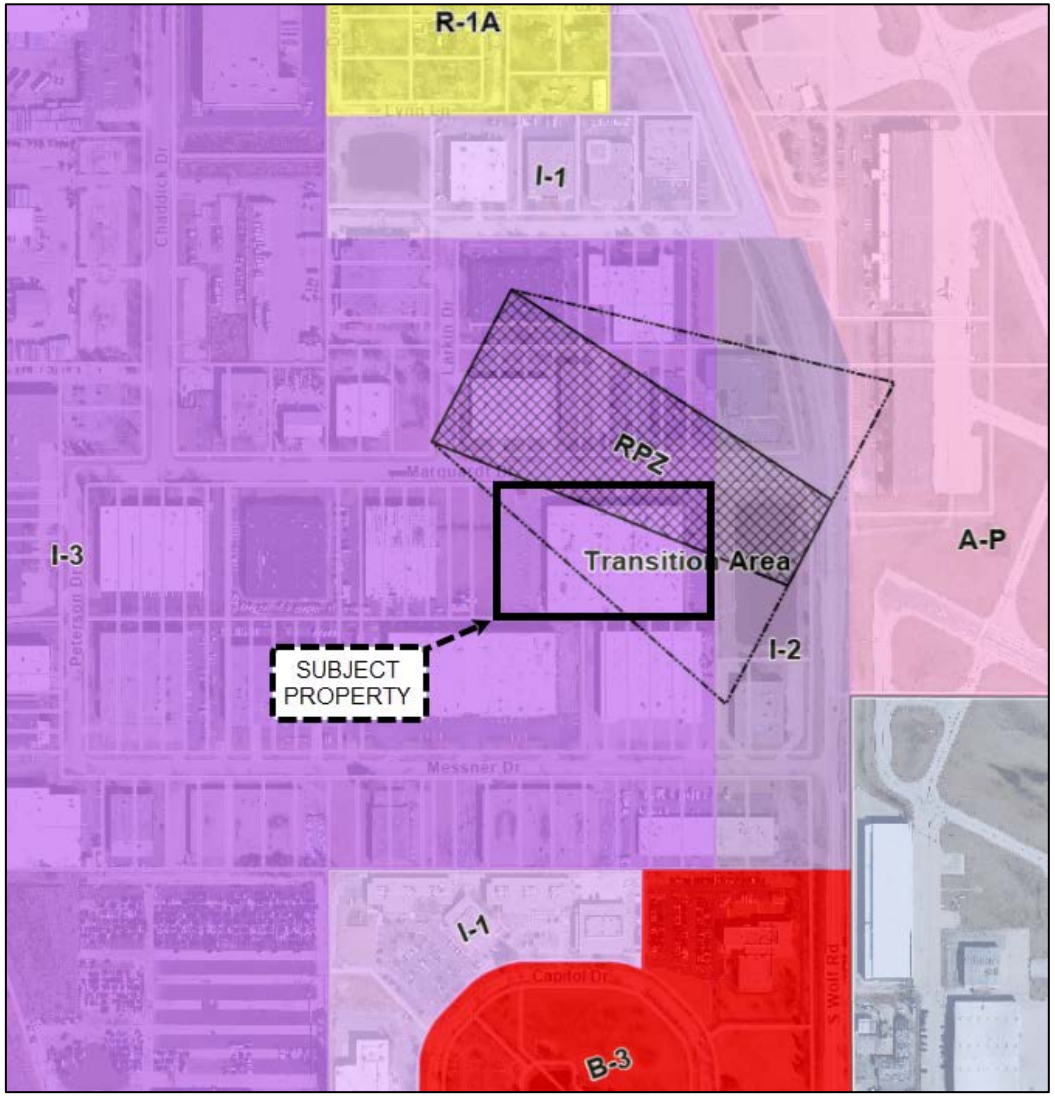
1. Any landscaping removed or damaged as a result of the pergola installation shall be replaced with plant materials of equivalent size and quality, subject to review and approval by the Community Development Department.

ATTACHMENTS:

Attachments to Staff Report (Staff)
Project Description Letter prepared by Bob Bertog, dated 7/1/2026

Pergola Drawings prepared by Poligon, dated 11/16/2016
Plat of Survey Showing Setback

LOCATION MAP



ZONING MAP

Project Location Facing South

BERTOG

July 1, 2026

Marcy Knysz
Village Planner
Village of Wheeling
2 Community Blvd.
Wheeling, IL 60090

Dear Marcy,

Thank you for reviewing our variance request. Bertog Landscape Company, based in Wheeling, is submitting this request on behalf of our client, U.S. Tsubaki, to allow a covered pergola to be installed within the 10-foot setback on the east side of the building.

U.S. Tsubaki, a leader in the roller chain and power transmission industry, has operated at this Wheeling location since 1979. The site employs 120 people, who work Monday–Friday, 6:00 AM–5:00 PM, each with a 15-minute break (or two if working overtime) and a half-hour lunch.

The proposed pergola would be built over an existing patio on the east side of the building that employees use during breaks and lunch. A few years ago, U.S. Tsubaki removed the mature shade trees along the east side of the building at the request of the adjacent airport, to maintain clearance for landing aircraft. Since then, employees have had no shade on that side of the building. To restore shelter from sun and rain, U.S. Tsubaki asked Bertog Landscape Company to construct a covered pergola over the existing patio. Bertog has contracted Craiger Custom Designs to build it, using a custom structure manufactured by Poligon.

Structure specifications (see attached drawings): the pergola measures 12' 3/16" x 24' 3/16", roof edge to roof edge, with a peak height of 11'7" and a 9' clearance on all four open sides. Footings are spaced 10' x 22' within the patio footprint.

Site measurements (per the attached plat of survey): The patio sits 3 feet from the building; three east-facing windows are set back 5'8" from the patio; and the patio is 11'11" from the north wall. Because of these dimensions, we are requesting a variance to build within 10 feet of the building.

This location is the only practical option, as it sits adjacent to the employees' side door, where breaks and lunches take place. Due to the current lack of shade, patio use is minimal except on the mildest days.

The pergola will have no negative impact on the property — no electricity will be installed, and the open sides allow for proper ventilation. It will also enhance the building's appearance.

Thank you for your consideration. Please contact me or Susan Ryba at 847-279-0028 with any questions.

Bob Bertog
President
Bertog Landscape Co.
625 Wheeling Road
Wheeling, IL 60090

Bertog Landscape Co
625 Wheeling Road

poligon®

A Division of PORTERCORP 4240 N. 136th AVE HOLLAND, MI 49424 (616) 888-3500

PROJECT NAME: US TSUBAKI

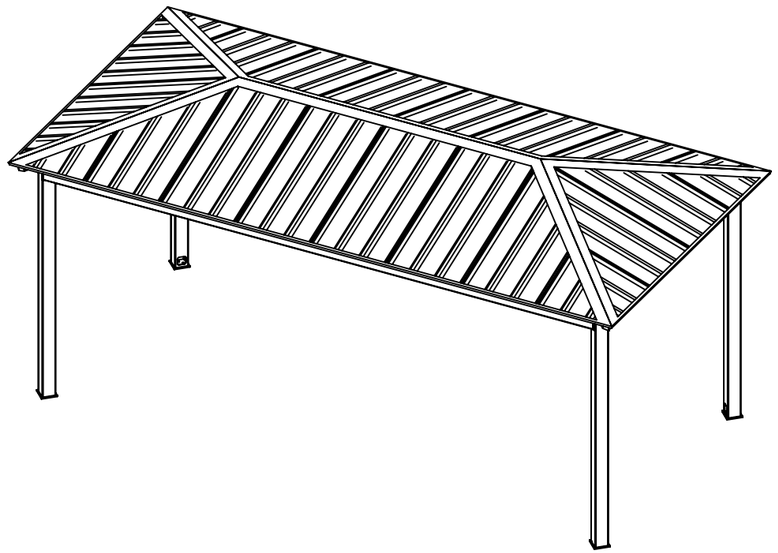
PROJECT LOCATION: WHEELING, IL

BUILDING TYPE: RAM 12X24

ROOF TYPE: MULTI-RIB

BUILDING NUMBER: P24006

ORDER NUMBER: 85930



DRAWING LIST:

SHEET NUMBER	DRAWING DESCRIPTION
CS	COVER SHEET
1	ARCHITECTURAL ELEVATIONS
2-2.1	ANCHOR AND FOOTING LAYOUT / DETAILS
3	STRUCTURAL FRAMING PLAN
4-4.1	FRAME CONNECTION DETAILS
5	ELECTRICAL VIEWS-N/A
6-6.2	ROOF LAYOUT
7-7.2	ROOF CONNECTION DETAILS

MANUFACTURER NOTES:

MATERIALS:

DESCRIPTION	ASTM DESIGNATION
TUBE STEEL	A500 (GRADE C)
SCHEDULE PIPE	A53 (GRADE B)
RMT PIPE	A519
LIGHT GAGE COLD FORMED	A1003 (GRADE 50)
CONNECTION PLATES	A572 (GRADE 50)
PURLIN FLANGE PLATES	A36
ROOF PANELS (STEEL)	A653
ANCHOR BOLTS	SEE SHEET 2.1

GENERAL NOTES:

1. PORTER CORP IS RESPONSIBLE ONLY FOR THE STRUCTURAL DESIGN OF THE STEEL STRUCTURE (AND FOUNDATION DESIGN IF APPLICABLE) IT SELLS TO THE BUILDER. PORTER CORP OR THEIR ENGINEER IS NOT THE DESIGN PROFESSIONAL OR ENGINEER OF RECORD FOR THE CONSTRUCTION PROJECT. PORTER CORP IS NOT RESPONSIBLE FOR THE DESIGN OF ANY COMPONENTS OR MATERIALS NOT SOLD BY IT OR THEIR INTERFACE AND CONNECTION WITH THE STEEL STRUCTURE.
2. UNLESS NOTED OTHERWISE, THIS STRUCTURE WAS DESIGNED TO ONLY SUPPORT WHAT IS SHOWN ON THESE DRAWINGS. POLIGON MUST BE CONTACTED IF ANYTHING ELSE IS TO BE ATTACHED TO THIS STRUCTURE (WALLS, COLUMN WRAPS, RAILINGS, ETC.) SO THE DESIGN OF THIS STRUCTURE CAN BE REVIEWED AND POSSIBLY REVISED.
3. THE ENGINEERING SEAL FOR THE STRUCTURE DETAILED IN THESE DRAWINGS IS ONLY VALID IF PORTER CORP DESIGNS AND FABRICATES THE STEEL COMPONENTS. FABRICATING THE STEEL COMPONENTS ELSEWHERE VOIDS THE ENGINEERING PROVIDED BY PORTER CORP.
4. UNLESS NOTED OTHERWISE, THIS STRUCTURE WAS DESIGNED ASSUMING A 20' SEPARATION BETWEEN ANY ADJACENT STRUCTURE WITH AN EAVE HEIGHT EQUAL TO OR GREATER THAN THE EAVE HEIGHT OF THIS STRUCTURE (SEE SNOW DESIGN DATA). IF THAT SEPARATION DOES NOT EXIST AND THE GROUND SNOW LOAD (PG) IS GREATER THAN 0 PSF, POLIGON MUST BE CONTACTED SO THE DESIGN OF THIS STRUCTURE CAN BE REVIEWED AND POSSIBLY REVISED.
5. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION MANUAL REFERENCED IN THE GOVERNING BUILDING CODE.
6. ALL WELDING IS PERFORMED BY AMERICAN WELDING SOCIETY (AWS) CERTIFIED WELDERS AND CONFORMS TO AWS D1.1 OR D1.3 AS REQUIRED.
7. PARTS SHOWN MAY BE UPGRADED DUE TO STANDARDIZED FABRICATION. REFER TO THE SHIPPING BILL OF MATERIALS AND FINAL INSTALLATION INSTRUCTIONS INCLUDED WITH THE STRUCTURE FOR POSSIBLE SUBSTITUTIONS AND IMPROVEMENTS.
8. FOR PROPER FIELD INSTALLATION OF THE BUILDING IT IS RECOMMENDED THAT THE PRIMARY FRAME INSTALLER AND THE ROOF INSTALLER HAVE A MINIMUM FIVE (5) YEARS DOCUMENTED EXPERIENCE INSTALLING THIS TYPE OF PRODUCT.
9. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING BRACING, SHORING, LAYDOWN AND PROTECTION OF CONSTRUCTION MATERIALS, ETC. TEMPORARY SHORING AND BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. FOR PROPER FIELD INSTALLATION OF THE BUILDING IT IS RECOMMENDED THAT ELECTRIC WIRING, IF REQUIRED, BE RUN THROUGH THE STRUCTURAL MEMBERS BEFORE THE BUILDING IS ERECTED.
11. MAKING HOLES, CUTS OR MODIFICATIONS TO THE STRUCTURAL STEEL MEMBERS IS NOT PERMITTED IN THE FIELD WITHOUT SPECIFIC APPROVAL OF POLIGON.

CERTIFICATES:

MIAMI-DADE COUNTY CERTIFICATE OF COMPETENCY NO. 25-0730.11
PCI (POWDER COATING INSTITUTE) 4000 CERTIFIED

FABRICATOR APPROVALS:

CITY OF PHOENIX, AZ APPROVED FABRICATOR #C08-2010
CITY OF LOS ANGELES, CA APPROVED FABRICATOR #FB01596
CITY OF RIVERSIDE, CA APPROVED FABRICATOR #SF_000042
CITY OF HOUSTON, TX APPROVED FABRICATOR #470
CLARK COUNTY, NV APPROVED FABRICATOR #264
STATE OF UTAH APPROVED FABRICATOR 02008-14
AISC APPROVED FABRICATOR C-00026910
AWS CERTIFIED WELDING FABRICATOR #240707F

DESIGN CRITERIA:

GENERAL:
2021 INTERNATIONAL BUILDING CODE
RISK CATEGORY: II

DEAD LOAD:
ROOF DEAD LOAD: 2 PSF
FRAME DEAD LOAD: SELF WEIGHT

LIVE LOAD:
ROOF LIVE LOAD: 20 PSF

SNOW DESIGN DATA:
GROUND SNOW LOAD (Pg): 25 PSF
FLAT ROOF SNOW LOAD (Pf): 21 PSF
SNOW EXPOSURE FACTOR (Ce): 1.0
SNOW LOAD IMPORTANCE FACTOR (Is): 1.0
THERMAL FACTOR (Ct): 1.2
ROOF SLOPE FACTOR (Cs): 1.0
DRIFT SURCHARGE LOAD (Pd): 101.8 PSF
WIDTH OF SNOW DRIFT (w): 35.39 FT
MINIMUM HORIZONTAL SEPARATION DISTANCE (s): 0 FT

WIND DESIGN DATA:
BASIC WIND SPEED (V): 110 MPH
ALLOWABLE STRESS DESIGN WIND SPEED (Vasd): 85 MPH
GUST EFFECT FACTOR (G): 0.85
INTERNAL PRESSURE COEFFICIENT (GCpi): 0
WIND EXPOSURE: C

SEISMIC DESIGN DATA:
STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
SEISMIC IMPORTANCE FACTOR (Ie): 1.0
SEISMIC DESIGN CATEGORY: B
SEISMIC SITE CLASS: D DEFAULT
SHORT SPECTRAL RESPONSE (Ss): 0.32
1-SEC SPECTRAL RESPONSE (S1): 0.08
DESIGN SHORT SPECTRAL RESPONSE (SDS): 0.33
DESIGN 1-SEC SPECTRAL RESPONSE (SD1): 0.13
SEISMIC RESPONSE COEFFICIENT (Cs): 0.11
RESPONSE MODIFICATION COEFFICIENT (R): 3.00
EQUIVALENT LATERAL FORCE PROCEDURE
SEE CALCULATIONS FOR ADDITIONAL DATA

ADDITIONAL CRITERIA:
NONE

LICENSED STRUCTURAL ENGINEER
JOSHUA T HOST
081.008001
STATE OF ILLINOIS
DATE: 05/18/2026
EXPIRES: 11/30/2026

IF THESE DRAWINGS ARE SEALED, THE SEAL APPLIES ONLY TO BUILDING COMPONENTS DETAILED WITHIN THESE DRAWINGS AND SUPPLIED BY PORTER CORP AS WELL AS THE FOUNDATION DESIGN, IF APPLICABLE.

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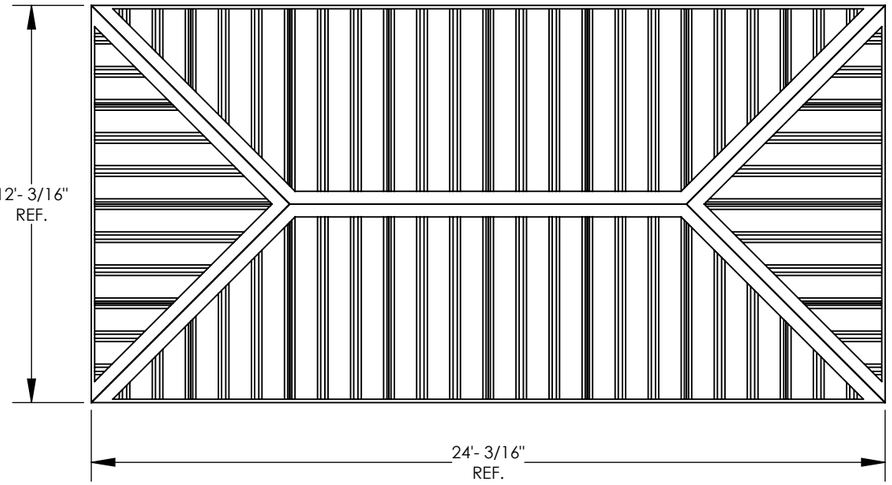
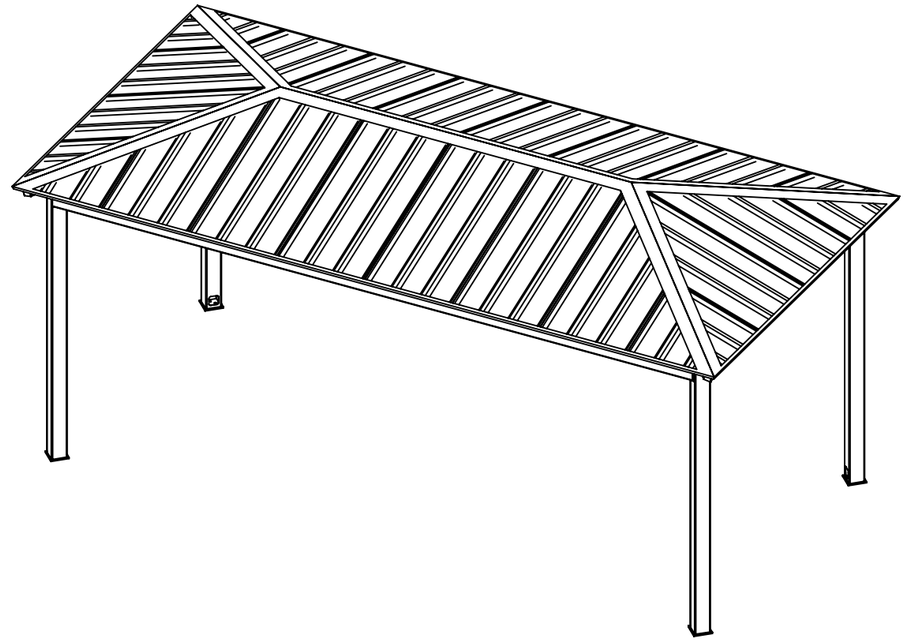
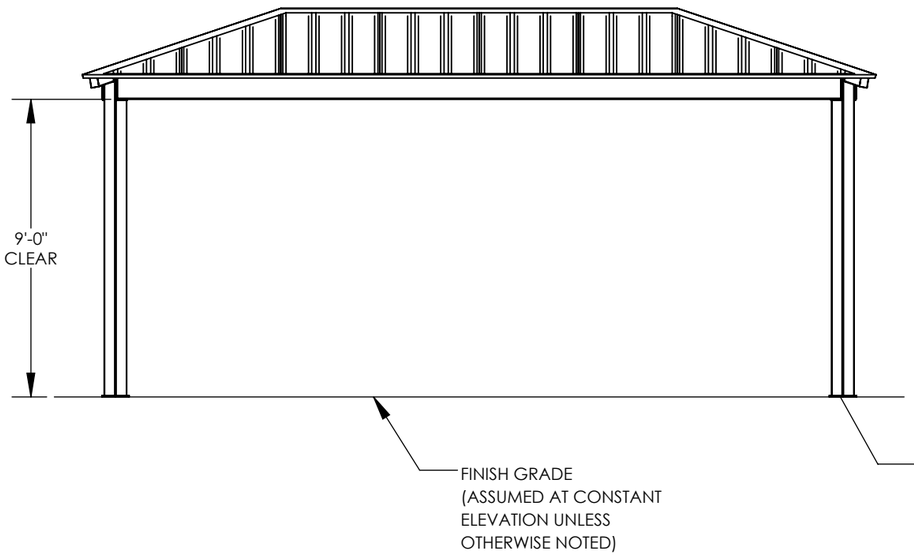
WWW.POLIGON.COM
MAIN: (616) 888-3500
FIELD SUPPORT: (616) 888-3504
SUPPORT@PORTERCORP.COM

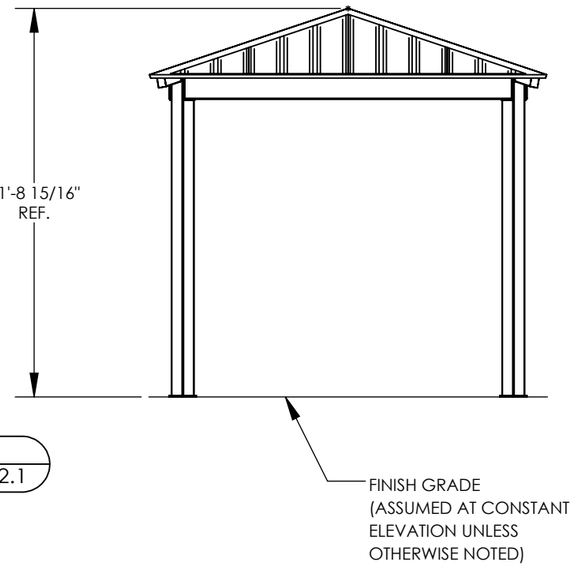
PRINT DATE: 5/12/2026
DRAWN BY: max.macdermaid
SCALE: 1:64
REV LEVEL: A
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: COVER SHEET
SHEET CS







1
SHEET 2.1



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FIELD SUPPORT: (616) 888-3504

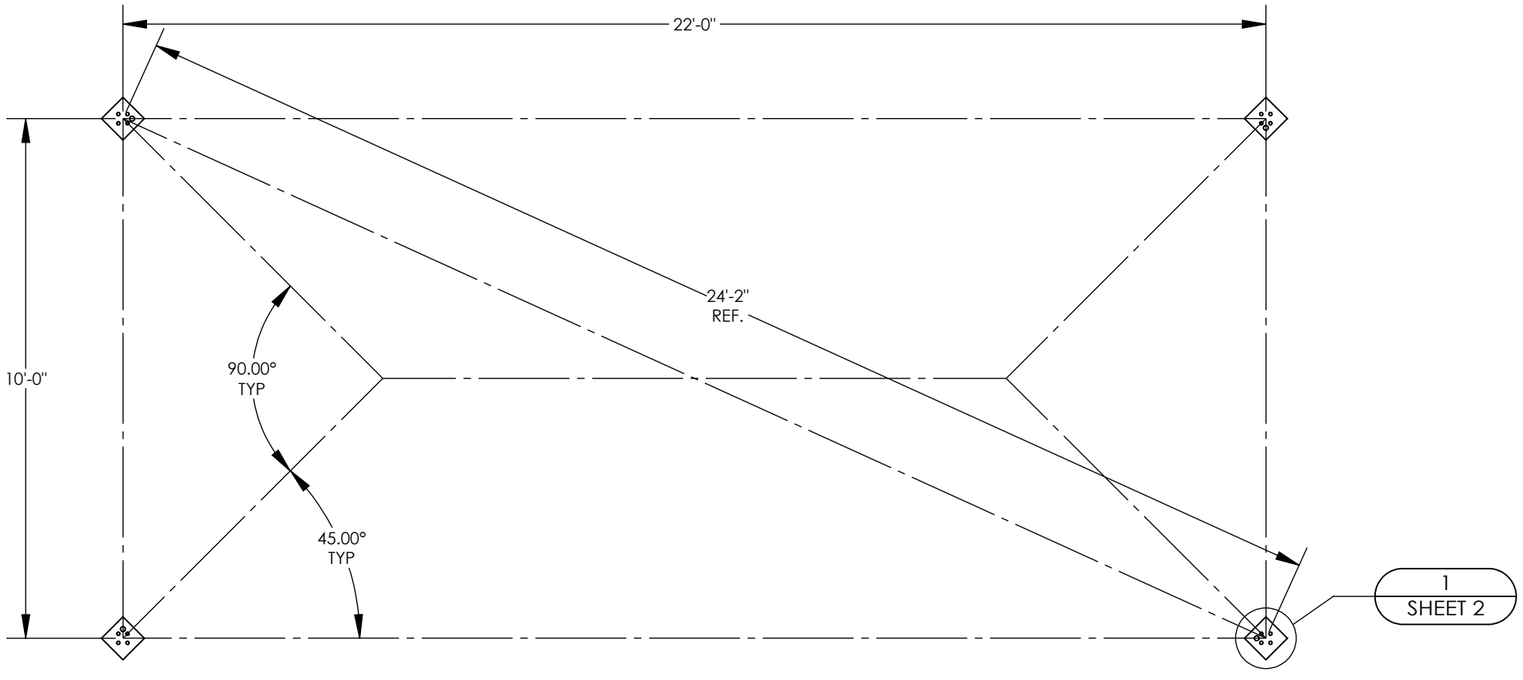
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006
DRAWN BY: max.macdermaid
REV LEVEL: A
PRINT DATE: 5/12/2026
SCALE: 1:55

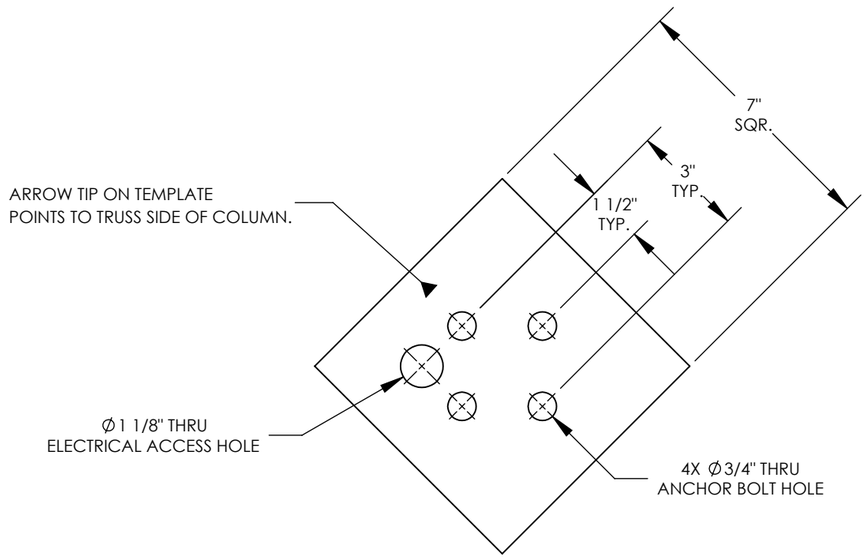
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ARCHITECTURAL ELEVATIONS

SHEET
1

ANCHOR AND FOOTING LAYOUT NOTES:

1. ANCHORS MUST BE CENTERED IN FOOTINGS
2. FOOTINGS MUST BE TURNED TO ALIGN WITH COLUMN AND TRUSS CENTERLINE.





1/2 ANCHOR BOLT PATTERN
BASE PLATE THICKNESS: 1/2"

LICENSED STRUCTURAL ENGINEER
JOSHUA T HOST
081.008001
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DATE: 05/18/2026
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PRINT DATE: 5/12/2026
SCALE: 1:35
DRAWN BY: max.macdermaid
REV LEVEL: A
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006

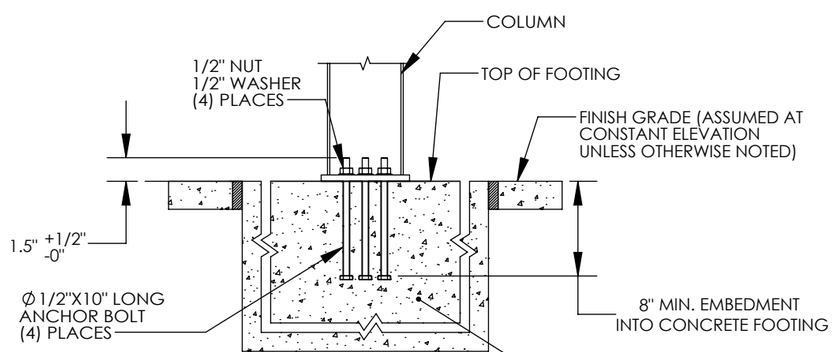
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ANCHOR AND FOOTING LAYOUT

SHEET
2

FOOTING DESIGN NOT BY POLIGON

ANCHOR BOLT NOTES - INTERNAL (ANCHOR BOLTS LOCATED WITHIN COLUMN):

1. ANCHOR BOLTS SHALL BE ASTM A307 (GRADE A) MATERIAL UNLESS OTHERWISE NOTED.
2. ANCHOR BOLTS SHALL BE EITHER "HEADED" OR "THREADED WITH NUT" AS DEFINED IN THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.
3. HOOKED ANCHOR BOLTS ARE NOT ACCEPTABLE.
4. ACCURATE ANCHOR BOLT PLACEMENT IS CRITICAL. TO ENSURE THE ANCHOR BOLT LAYOUT MEETS THE DIMENSIONS REQUIRED ON THE DRAWINGS, SURVEY (OR MEASURE) THE LOCATION OF ALL ANCHOR BOLTS PRIOR TO POURING THE FOOTINGS. AN ADDITIONAL SURVEY (OR MEASUREMENT) SHOULD BE MADE AFTER THE FOOTINGS ARE POURED TO CONFIRM THE ANCHOR BOLTS DID NOT SHIFT DURING THE CONCRETE POUR.
5. THE MANUFACTURER STRONGLY RECOMMENDS USING ANCHOR BOLT TEMPLATES BECAUSE THEY SIGNIFICANTLY IMPROVE THE ACCURACY OF ANCHOR BOLT PLACEMENT. AN ANCHOR BOLT TEMPLATE IS PROVIDED WITH ANY ANCHOR BOLT KIT PURCHASED.
6. IF OUTSIDE CONSULTING ENGINEERS ARE DESIGNING THE FOUNDATIONS FOR THIS STRUCTURE, THEY MUST REFER TO THE MANUFACTURER'S CALCULATIONS FOR MINIMUM CONCRETE PROPERTIES (COMPRESSIVE STRENGTH, EDGE DISTANCE, ETC.) REQUIRED FOR THE ANCHOR BOLT DESIGN.
7. ELECTRICAL ACCESS HOLE IS ALWAYS LOCATED IN THE COLUMN BASE PLATE AS SHOWN. BE SURE TO KEEP THE ANCHOR BOLT TEMPLATE PROPERLY ORIENTED WHEN ELECTRICAL ACCESS TO THE COLUMN IS REQUIRED. TEMPLATE MUST BE REMOVED BEFORE INSTALLING COLUMNS.
8. THE CALCULATIONS FOR THIS STRUCTURE ASSUME A PINNED COLUMN BASE.
9. THE FOLLOWING ADHESIVE ANCHORS MAY BE SUBSTITUTED FOR THE CAST-IN-PLACE ANCHOR BOLTS:
   -HILTI HIT-HY 200 (A OR R) V3 ADHESIVE WITH Ø 1/2" HAS-E ROD WITH 6" EFFECTIVE EMBEDMENT.
   CONTRACTOR SHALL FOLLOW ALL INSTALLATION SPECIFICATIONS AND REQUIREMENTS OF ANCHOR MANUFACTURER.



1/1 ANCHOR BOLT DETAIL

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081.008001
STATE OF ILLINOIS
DATE: 05/18/2026
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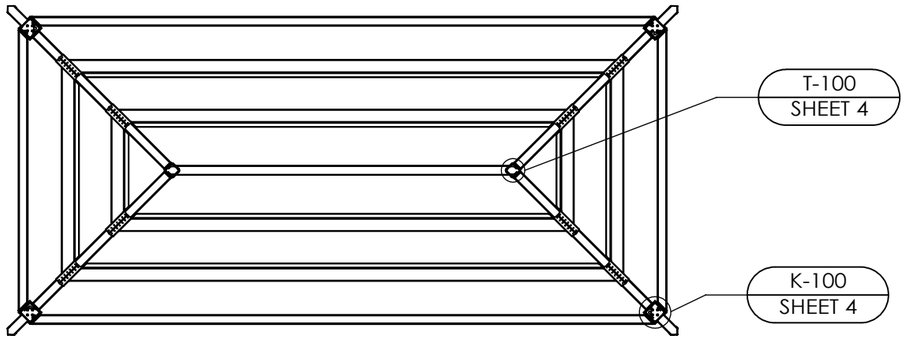
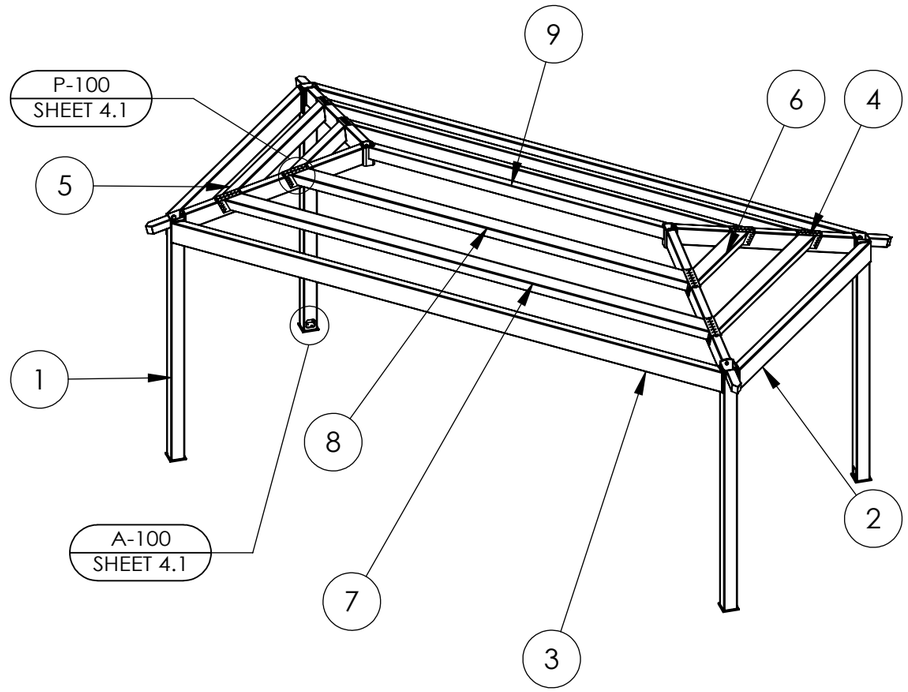
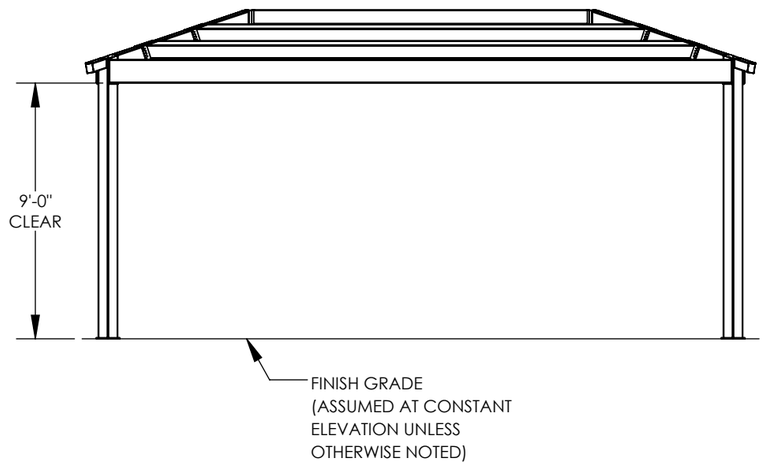
REV LEVEL: A
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ANCHOR AND FOOTING DETAILS
SHEET 2.1







ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL SIZE	WEIGHT
9	1	-	RIDGE BEAM ASM	HSS6"X4"X1/8"	137.20
8	2	-	SIDE PURLIN 2 ASM	HSS6"X6"X3/16"	225.71
7	2	-	SIDE PURLIN 1 ASM	HSS6"X6"X3/16"	276.19
6	2	-	END PURLIN 2 ASM	HSS6"X6"X3/16"	52.49
5	2	-	END PURLIN 1 ASM	HSS6"X6"X3/16"	102.97
4	4	-	TRUSS 1 ASM	HSS8"X4"X3/16"	103.46
3	2	-	SIDE TENSION MEMBER 1 ASM	HSS10"X4"X3/16"	381.29
2	2	-	END TENSION MEMBER 1 ASM	HSS10"X4"X3/16"	177.63
1	4	-	COLUMN 1 ASM	HSS6"X6"X3/16"	172.24

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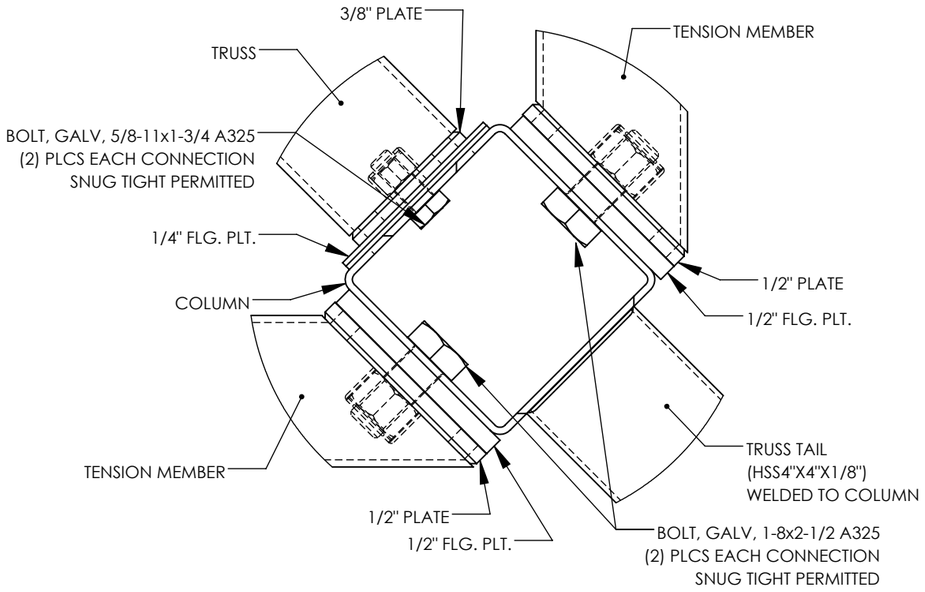
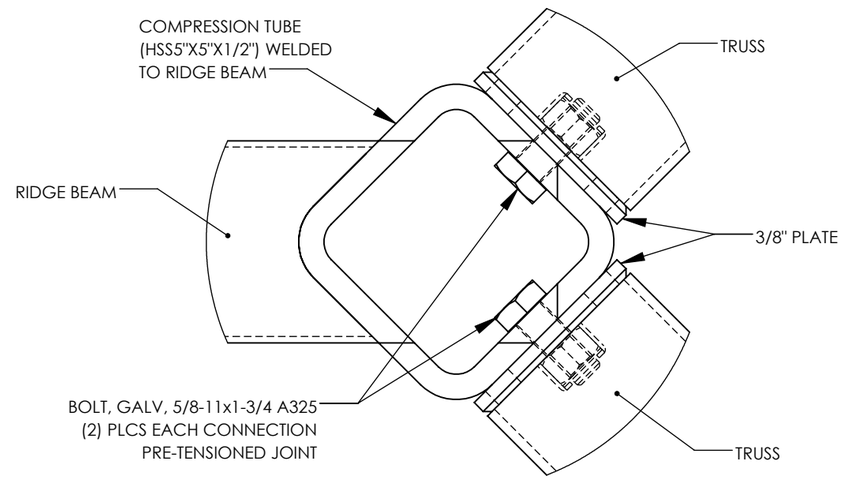
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: STRUCTURAL FRAMING PLAN
SHEET 3

NOTE:
SEE UC-100 FOR U-CLIP INSTALLATION



COLUMN CONNECTIONS	K-100

NOTE:
COVER PLATE
ATTACHED WITH POP RIVETS
(1P2903) (1) PER CLEAT
AT BOTTOM OF CONNECTION



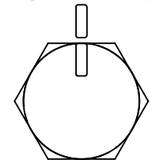
COMPRESSION MEMBER CONNECTION	T-100

TURN-OF-NUT PRETENSIONING METHOD:

THESE STEPS ILLUSTRATE THE REQUIREMENTS OUTLINED IN THE AISC SPECIFICATION. THE ROTATION INDICATED IS ACCURATE FOR MOST BOLT DIAMETERS AND LENGTHS BUT IT IS THE RESPONSIBILITY OF THE INSTALLER TO MEET AISC REQUIREMENTS.

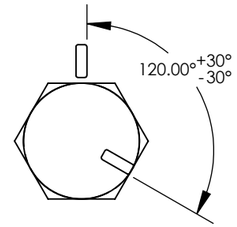
STEP ONE:

AFTER SNUG TIGHT, MATCH MARK PLATE



STEP TWO:

THEN TURN BOLT/NUT PAST SNUG TIGHT 1/3 TURN



CONNECTION NOTES:

1. ALL BOLTS SHOWN ON THESE DRAWINGS ARE ASTM F3125 (A325 TYPE 1) HIGH STRENGTH BOLTS (UNO) AND SHALL BE HOT DIPPED GALVANIZED PER ASTM F2329.
2. HIGH STRENGTH NUTS SHALL CONFORM TO ASTM A563 AND SHALL BE GALVANIZED PER ASTM F2329.
3. HIGH STRENGTH WASHERS SHALL CONFORM TO ASTM F436 AND SHALL BE GALVANIZED PER ASTM F2329.
4. UNLESS A SNUG-TIGHT JOINT IS PERMITTED IN THE CONNECTION DETAIL, ALL BOLTS ARE TO BE INSTALLED BY ONE OF THE FOLLOWING PRETENSIONING METHODS AS SPECIFIED IN THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", SECTION 8:
   A. TURN-OF-NUT PRETENSIONING
5. THE SNUG-TIGHT CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
6. ANCHOR BOLTS NEED NOT BE TIGHTENED PAST SNUG-TIGHT.
7. WHEN INSTALLING BOLTS REFER TO SECTIONS 8.1 AND 8.2 OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR GUIDANCE.
8. LOCAL JURISDICTIONS MAY REQUIRE AN INSPECTOR TO BE PRESENT TO WITNESS HARDWARE INSTALLATION AND INDEPENDENT TESTING. INSPECTION REQUIREMENTS SHOULD BE VERIFIED BY INSTALLER PRIOR TO STEEL ERECTION.
9. ERECTION OF THE FRAMING MEMBERS WILL REQUIRE THE MAIN COLUMNS TO BE PLUMB SQUARE AND TIGHTENED TO THE TRUSSES AND/OR TENSION MEMBERS BEFORE INSTALLING THE PURLINS. PURLINS, IF REQUIRED, MUST BE AS SHOWN IN FRAMING PLAN.
10. TEMPORARY SHORING OR BRACING SHALL BE USED TO COMPACT THE JOINTS UNTIL THE CONNECTED PLIES ARE IN FIRM CONTACT PRIOR TO PRETENSIONING.
11. ALL BOLTS MUST BE LUBRICATED WITH WAX TO ASSIST IN PROPER TIGHTENING. TO LUBRICATE A BOLT IN THE FIELD, APPLY THE WAX STICK DOWN THE LENGTH OF THE BOLT'S THREADS.
12. TO PREVENT RUST STAINING OF FINISH, ALL METAL SHAVINGS MUST BE REMOVED AFTER INSTALLATION. ENSURE NO SHAVING ARE TRAPPED BETWEEN MATING SURFACES.
13. TOUCH-UP PAINT MUST BE APPLIED TO ALL EXPOSED FASTENERS. PERIODIC TOUCH-UP AT THESE CONNECTIONS IS REQUIRED.
14. ENSURE FRAME MEMBERS WITH DRAIN HOLES NEAR THE ENDS OF TUBES ARE INSTALLED FACING UP UNLESS SPECIFIED IN THE FRAME CONNECTION DETAILS.

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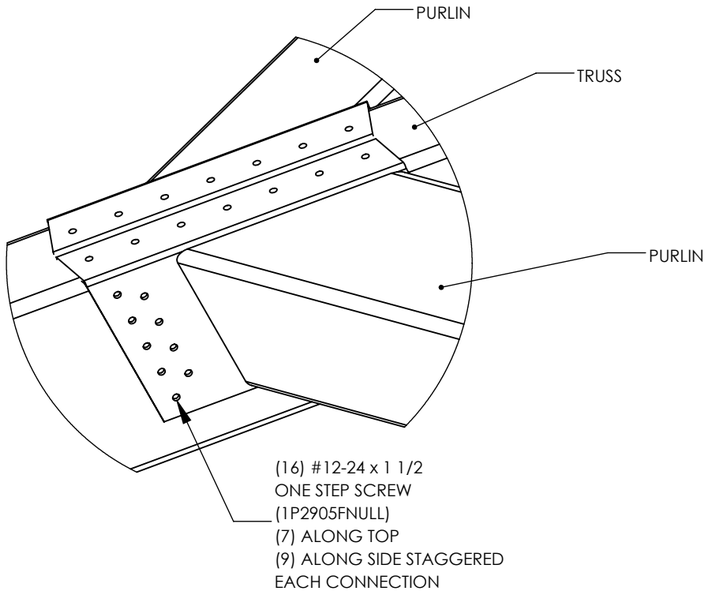
CAD MODEL: P24006

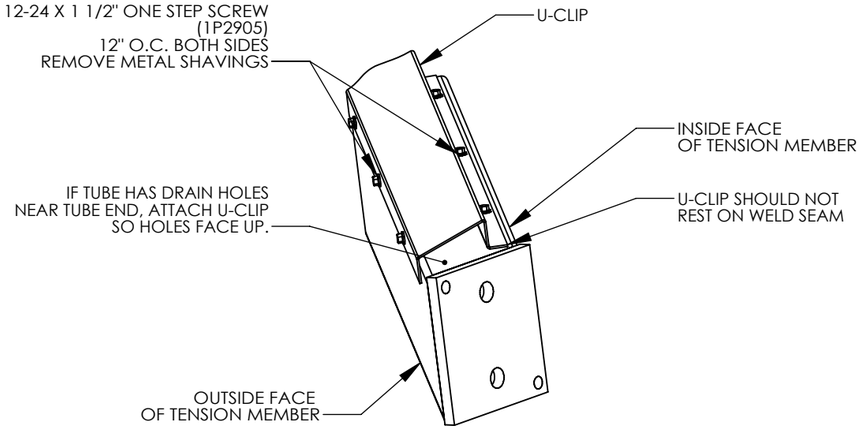
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: FRAME CONNECTION DETAILS

SHEET
4

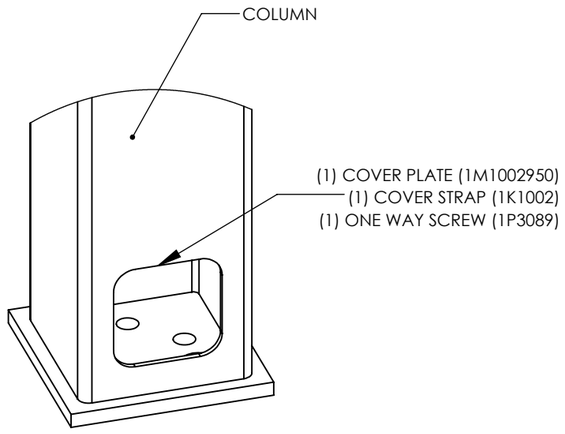


PURLIN CONNECTION | P-100

NOTE:
U-CLIP MUST BE ATTACHED TO TENSION MEMBER AS SHOWN PRIOR TO BUILDING ASSEMBLY.



U-CLIP CONNECTION | UC-100



ANCHOR ACCESS COVER PLATE | A-100

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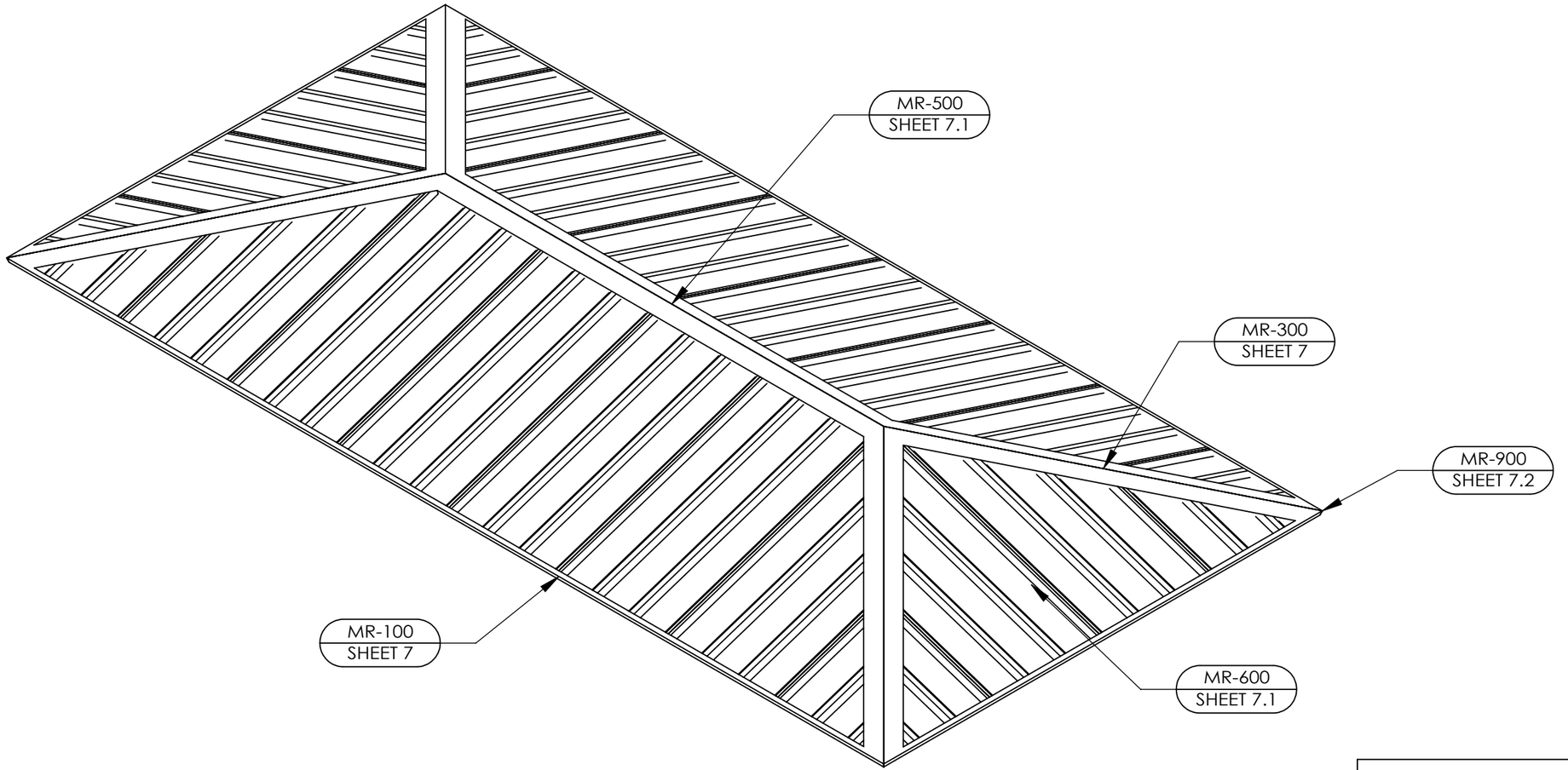
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006

PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: FRAME CONNECTION DETAILS

SHEET
4.1



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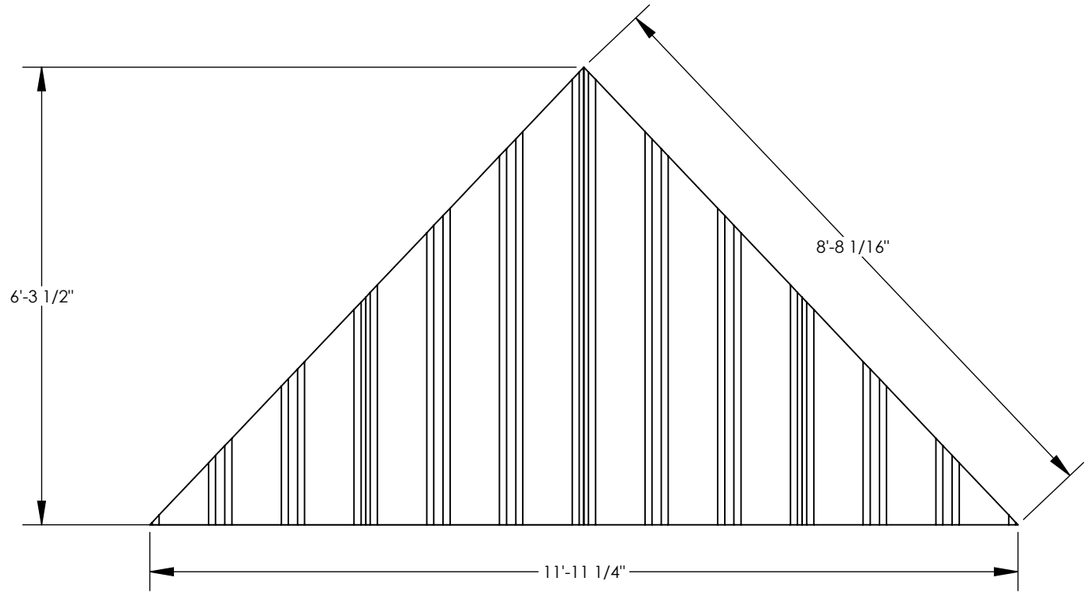
ORDER NO: 85930
REV LEVEL: A
SCALE: 1:30
CAD MODEL: P24006

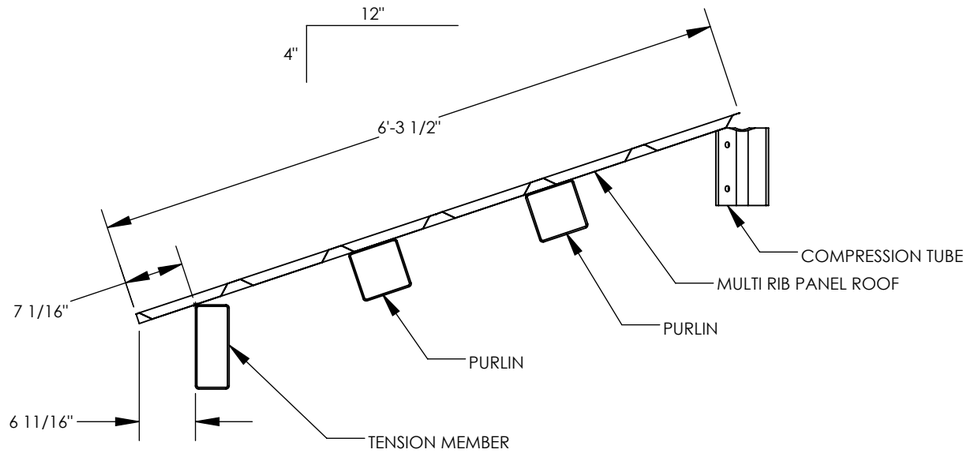
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ROOF OVERVIEW

SHEET
6



MULTI-RIB NOTES:

1. THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE SYSTEMS. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. THE DETAILS MAY REQUIRE CHANGES OR REVISIONS DUE TO FIELD CONDITIONS.
2. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.
3. THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE HIMSELF/HERSELF WITH ALL ERECTION INSTRUCTIONS BEFORE STARTING WORK.
4. THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.
5. FLASHING AND TRIM SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ANY EXPOSED FASTENERS EQUALLY SPACED FOR THE BEST APPEARANCE.
6. SEALANT SHALL BE FIELD APPLIED ON DRY, CLEAN SURFACES. SOME FIELD CUTTING AND FITTING OF PANELS AND FLASHING IS TO BE EXPECTED BY THE ERECTOR AND MINOR FIELD CORRECTIONS ARE A PART OF NORMAL ERECTION WORK.
7. WORKMANSHIP SHALL BE OF THE BEST INDUSTRY STANDARDS AND INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN.
8. METAL SHAVINGS FROM DRILLING OR INSTALLATION OF ROOF FASTENERS MUST BE CAREFULLY REMOVED FROM THE ROOF BY BRUSHING OR SWEEPING AT THE END OF EACH DAY DURING INSTALLATION. SHAVINGS LEFT ON THE ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH.



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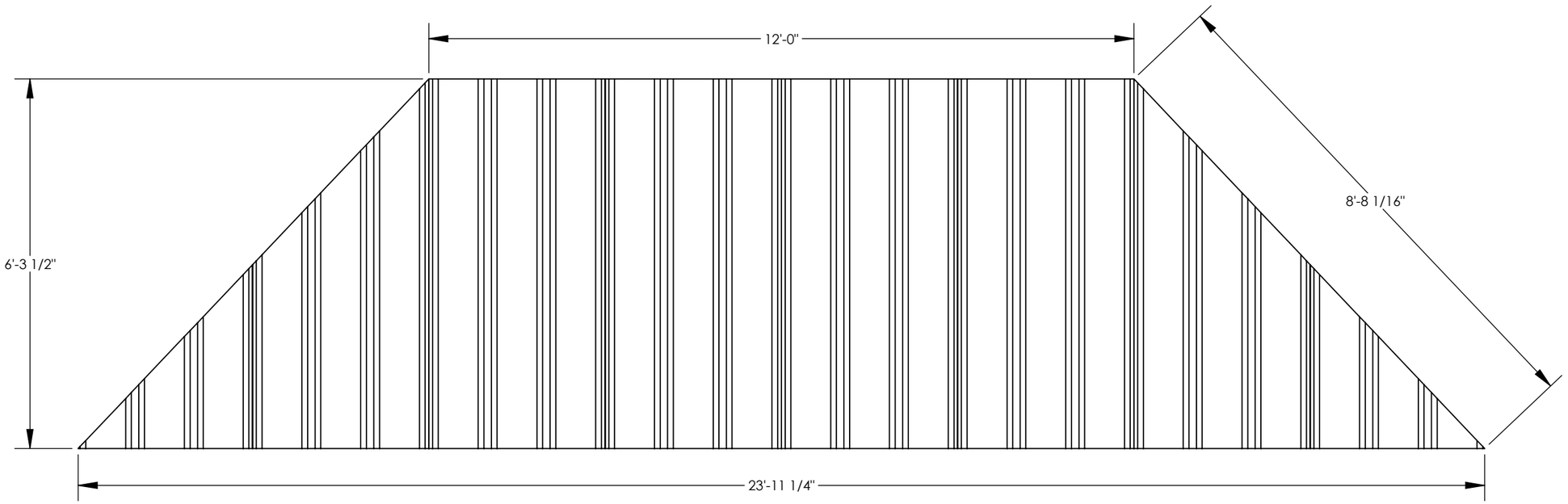
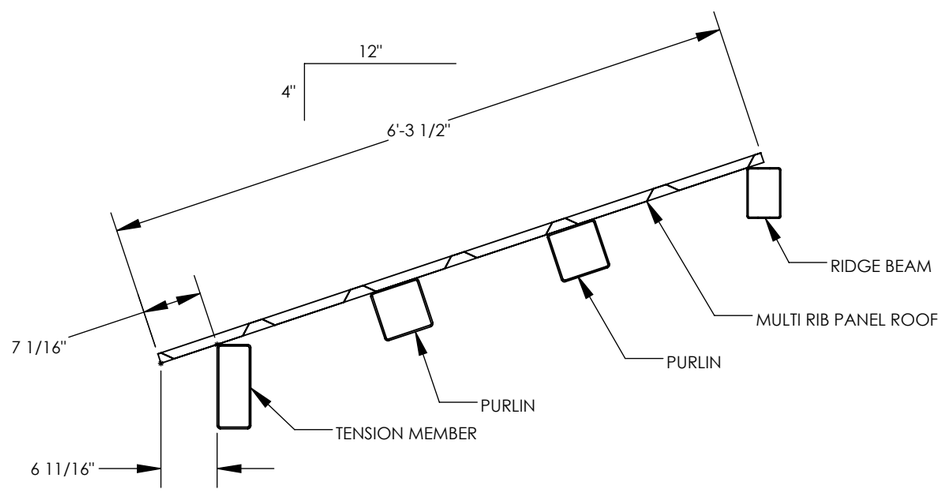
CAD MODEL: P24006

PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ROOF LAYOUT

SHEET
6.1





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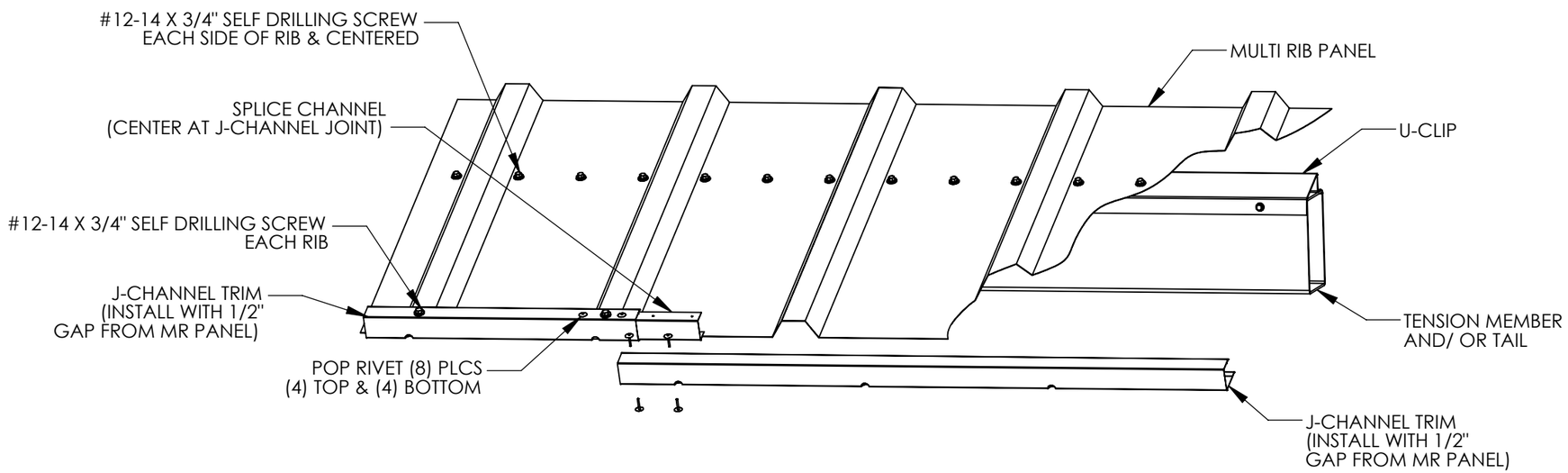
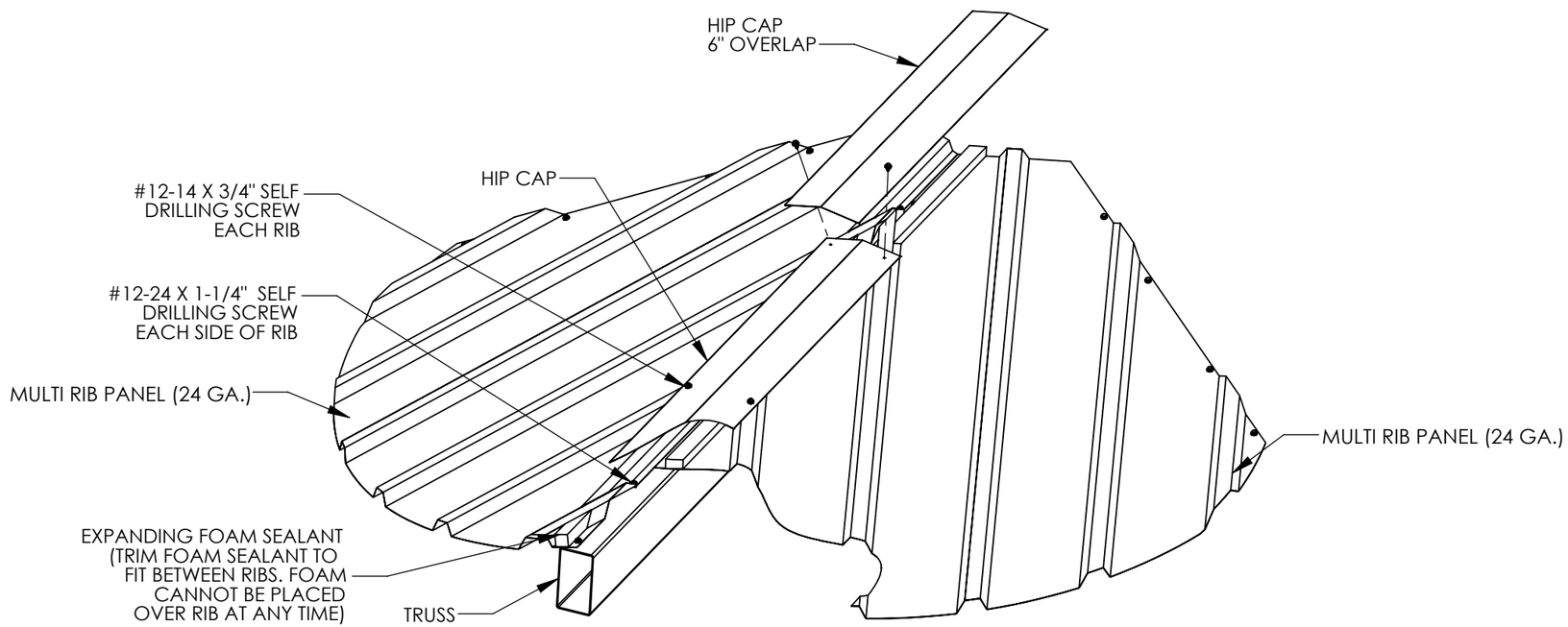
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ROOF LAYOUT
SHEET 6.2



2024A

EAVE DETAIL

MR-100



2023A

TRUSS DETAIL

MR-300

PART DESCRIPTIONS:

#12-14x3/4" SELF DRILLING SCREW.

#12-24x1 1/4" SELF DRILLING SCREW.

1/8" POP RIVET.

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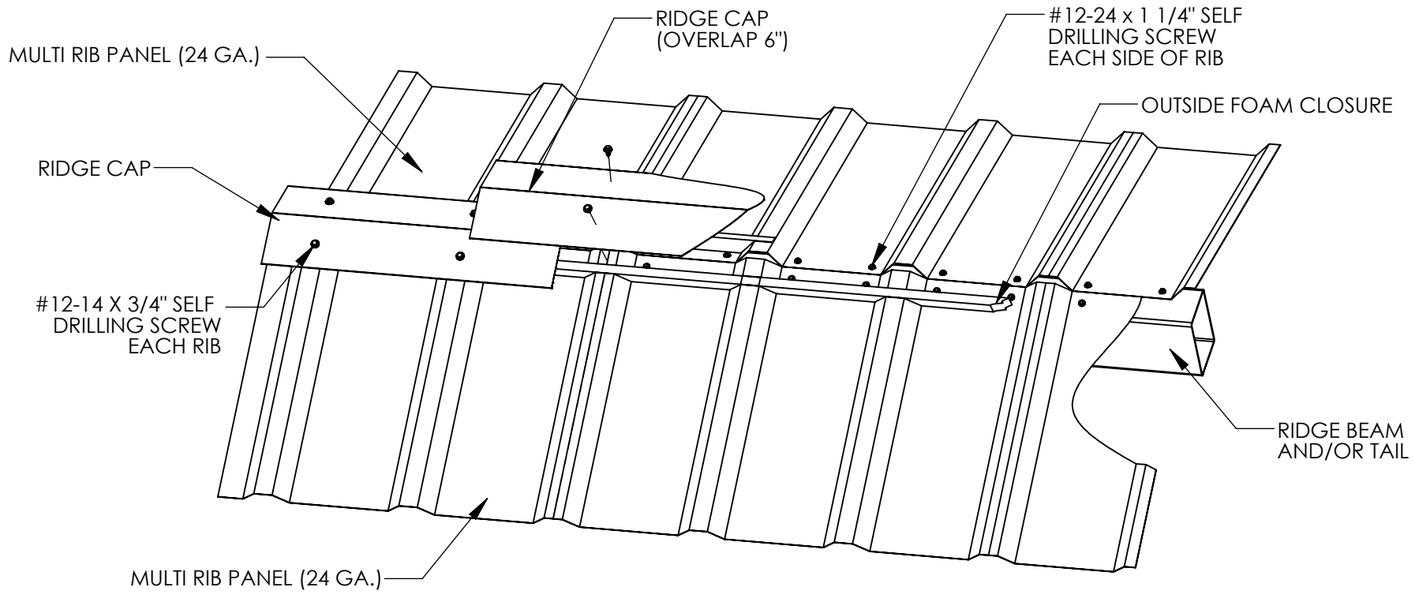
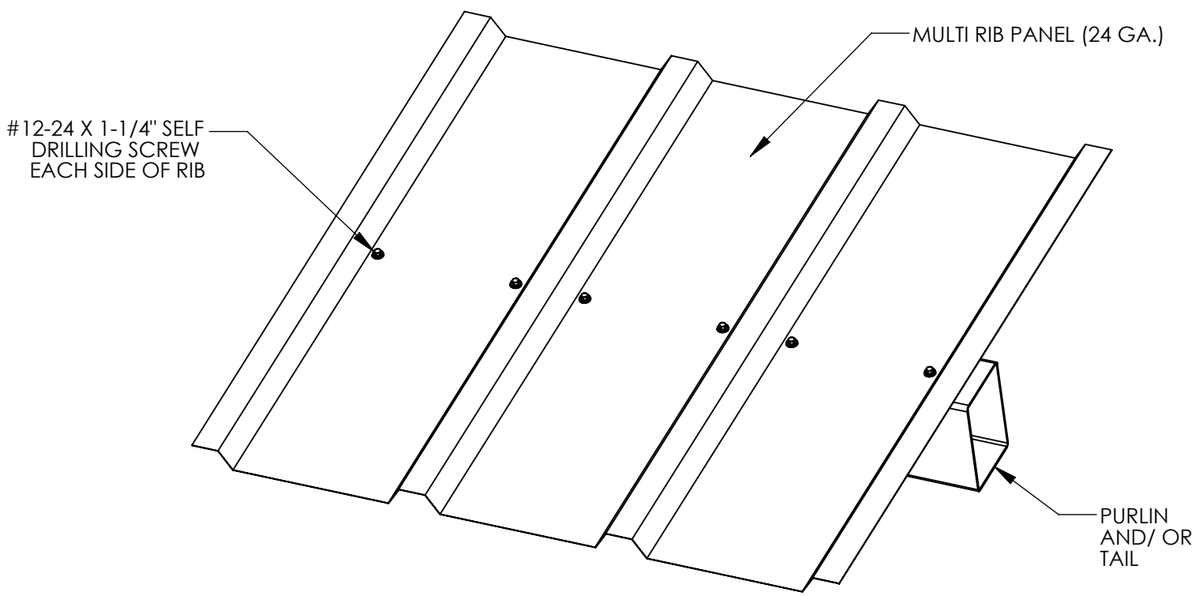
ORDER NO: 85930
CAD MODEL: P24006
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ROOF CONNECTION DETAILS
SHEET 7



2023A | RIDGE DETAIL | MR-500



2022A | PURLIN DETAIL | MR-600

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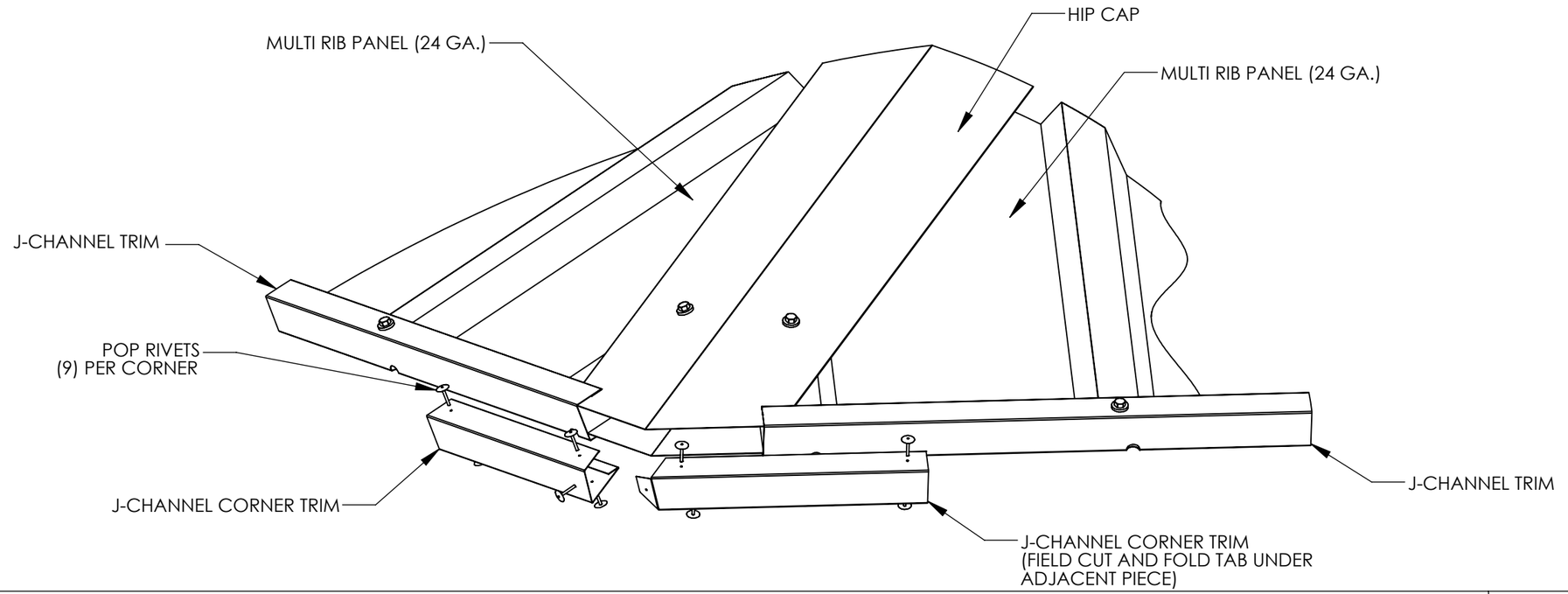
DRAWN BY: max.macdermaid
REV LEVEL: A
CREATION DATE: 11/16/2016
ORDER NO: 85930
CAD MODEL: P24006
PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ROOF CONNECTION DETAILS
SHEET 7.1



2022A

CORNER DETAIL

MR-900

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ORDER NO: 85930
CAD MODEL: P24006

PROJECT: US TSUBAKI
PROJECT LOCATION: WHEELING, IL
DRAWING: ROOF CONNECTION DETAILS

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SHEET
7.2

PLAT OF SURVEY

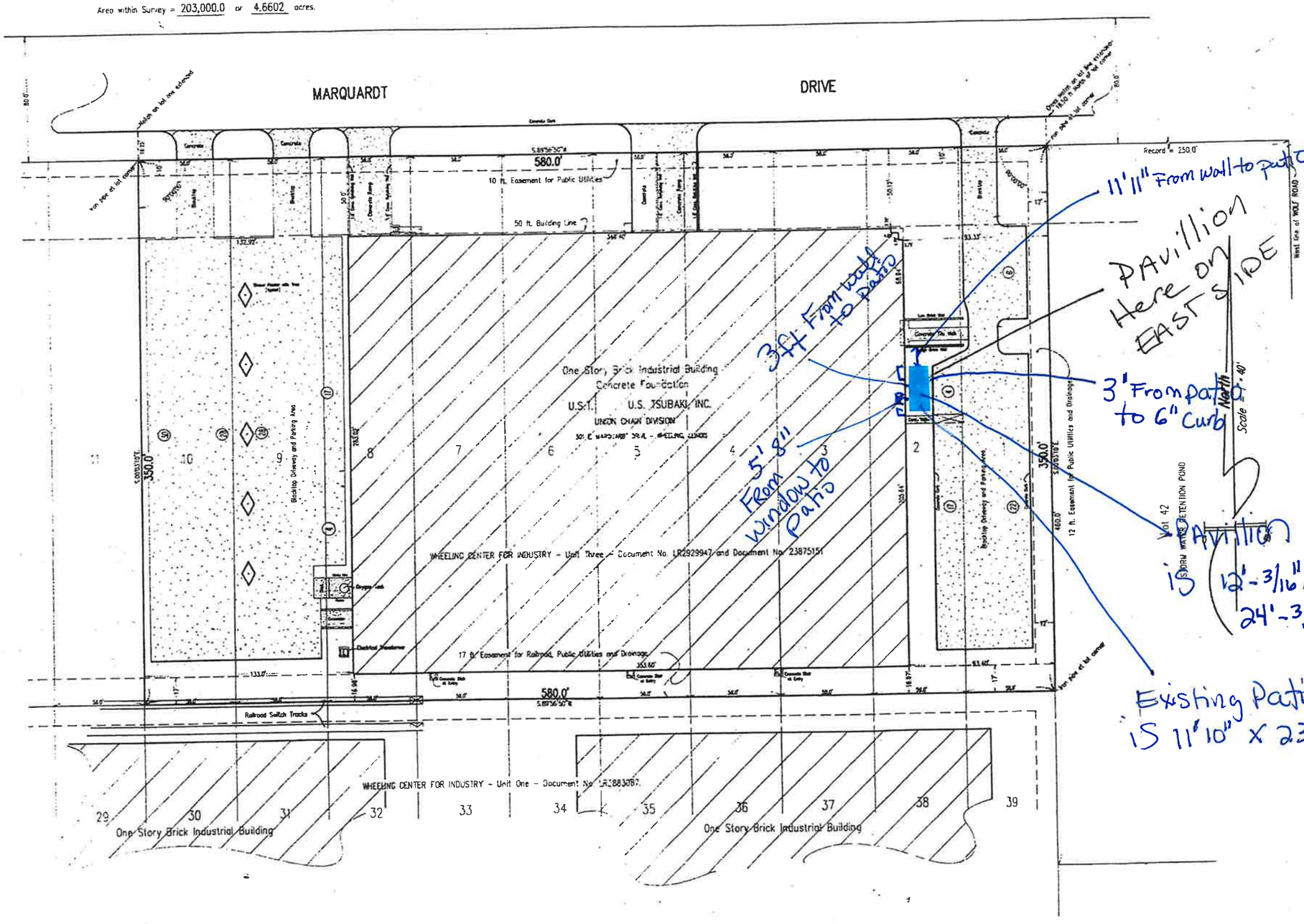
— BY —

GEORGE D. HARKER & ASSOCIATES
REGISTERED LAND SURVEYORS
1500 WOODLAND AVENUE • PARK RIDGE, ILLINOIS 60068
PHONE: (312) RO-3-6066

Legal Description:

Lots 1 through 10, both inclusive, in WHEELING CENTER FOR INDUSTRY, Unit No. 3, being a subdivision in the Northeast 1/4 and the Southeast 1/4 of Section 14, Township 42 North, Range 11 East of the 3rd Principal Meridian, according to the plat thereof recorded April 4, 1977 as Document No. 23875151 and registered in the Office of the Registrar of Titles of Cook County, Illinois on April 4, 1977 as Document No. LR2929947.

Area within Survey = 203,000.0 or 4.6602 acres.



State of Illinois } ss.
County of Cook }

I, GEORGE D. HARKER, a Registered Land Surveyor, do hereby certify that I have surveyed the property described hereon and that the plat hereon drawn is a correct representation of said survey.

Park Ridge, Illinois. Dated this ____ day of February A.D. 19 88

Registered Land Surveyor

STATE OF ILLINOIS — GEORGE D. HARKER No. 1519 — LAND SURVEYOR

SCALE: 1 inch equals 40 feet

Distances are marked in feet and decimal parts thereof.

Building lines and easements, if any, shown hereon are building lines and easements shown on the recorded subdivision plat. Consult local authorities for building lines established by local ordinances.

Please check Legal Description with Deed; also compare all points before building and report ANY DISCREPANCY IMMEDIATELY.

ORDERED BY: U.S.T. U.S. TSUBAKI, INC.

ORDERED FOR:

FIELD BOOK: File. PAGE

ORDER NO. 890118.

Please use this Order No. in future reference to this survey.

MEMORANDUM

DATE: August 12, 2026
FROM: Kyle Goetzelmann, Village Engineer
SUBJECT: Docket PV26-0010, Request for a Variation to Permit a Reduction in the Required Compensatory Storage Ratio from 1.5:1 to 1.1:1 for Sky Habour Group (1090 S. Milwaukee Avenue) - **PUBLIC HEARING**
RECOMMENDED ACTION: **Recommend approval of Docket No. PV26-0010** granting a variation from Title 22, Floodplain Regulations, of the Wheeling Municipal Code, Chapter 22.14.080, Compensatory Storage, and associated sections, to permit a reduction in the compensatory storage ratio from 1.5:1 to 1:1 for the Sky Harbour Group development, located at 1090 S. Milwaukee Avenue in accordance with the Project Narrative Letter prepared by Cook Engineering Group, last revised 7/17/2026; Storm Water Narrative prepared by Cook Engineering Group, last revised 7/30/2026; Variation Standards prepared by Cook Engineering Group, last revised 7/17/2026; Overall Site Plan prepared by Cook Engineering Group, last revised 6/19/2026; and subject to the following condition:

1. Approval of the variance is specifically tied to the Sky Harbour development and is not a blanket variation approval for future developments within Chicago Executive Airport.

EXECUTIVE SUMMARY

Docket No. PV26-0010: Sky Harbour Group (136 Tower Road, Suite 205, White Plains, NY 10604), lessee, requests a variation to permit a reduction in the compensatory storage ratio from 1.5:1 to 1.1:1 associated with the development of the property located at 1090 S. Milwaukee Avenue, as required in Title 22, Floodplain Regulations, of the Wheeling Municipal Code, Chapter 22.14.080, Compensatory Storage, and associated sections.

GENERAL PROPERTY INFORMATION

Petitioner: Sky Harbour Group (136 Tower Road, Suite 205, White Plains, NY 10604)

Location: 1090 S. Milwaukee Avenue (approximate location)

Property size: 405.71 acres (total acreage of Chicago Executive Airport) / 28.84 acres (total development area) / 4.98 acres (total development area in the Village of Wheeling).

Neighboring Property Land Use(s):
North: Industrial/Residential
West: Industrial/Residential
South: Industrial/Residential
East: Forest Preserve

Existing Use of Property: Airport

Existing Zoning: A-P (Airport District)

Comprehensive Plan Designation: Transportation and Utilities

Zoning History: None

SUMMARY OF REQUEST

The Sky Harbour Group is requesting a variance to reduce the compensatory storage requirements of Title 22 from the required 1.5:1 to a ratio of 1.1:1. The request is associated with a proposed private aircraft hangar development at Chicago Executive Airport, predominantly within the City of Prospect Heights.

VARIANCE ANALYSIS

Sky Harbour Group (the applicant) is requesting a variance to reduce the compensatory storage requirements of Title 22 – Floodplain Regulations, from the required ratio of 1.5:1 to a ratio of 1.1:1. The variance request is related to a stormwater detention area associated with their proposed 9 aircraft hangar development, along with associated airplane taxiway(s), parking pads, and vehicle parking generally located at 1090 S. Milwaukee Avenue. The subject property is located within the Chicago Executive Airport, along Milwaukee Avenue, approximately 2,300' north of Willow Road. The vast majority of the proposed Sky Harbour development is located witin the City of Prospect Heights, excepting one hangar unit and a strormwater detention facility subject to this variance request. As a result, the City of Prospect Heights will be serving as the lead muncipality for development review and permitting.
Sky Harbour Group has submitted a project narrative, storm water narrative, variation standards, and overall site plan in suport of their request.

In order to understand the impacts of the variation request, it helps to know the history of our floodplain ordinance. The Village historically participates in the Community Rating System (CRS) of the National Flood Insurance Program (NFIP) that rewards communities that invoke regulations that exceed typical minimum floodplain requirements. The Village is currently rated as class 6 which residents that are required to have flood insurance receive a 20% reduction in their policy costs. The rating of a community to determine the classification is based on a point system for the various flood program activities that a community participates in. The current compensatory storage ratio of 1.5 to 1 does generate additional points toward the Village's lower CRS rating, reducing flood insurance premiums. In past discussions with the state of Illinois CRS coordinator for the Village, granting a variation to the floodplain ordinance relative to compensatory storage will not cause an immediate impact on the Village's total CRS points, however granting multiple variations to a specific program activity would indicate that the Village is not meeting the intent of the CRS program and may no longer be given credit for the activity. The Village does not frequently consider requests for variations to the floodplain regulations due to this potential impact on CRS points, but a careful case by case approach, including appropriate counsel with the state coordinator, is a prudent method for consideration.

The purpose of Title 22 of the Wheeling Municipal Code is to maintain the Village's eligibility in the National Flood Insurance Program; to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources.

The proposed Sky Harbour development is met with restrictions that aren't experienced on other developments. The Federal Aviation Administration (FAA) has geometric limitations for storm water holding facilities adjacent to runways and taxiways. Basins have to maintain offsets from this infrastructure and maintain maximum sideslopes as not to present a hazard to any planes that may depart the runways or taxiway. These geometric restrictions combined with the location of the floodplain onsite make obtimizing flood plain storage impractical which is the basis for this variation request. It is important to understand that this variation would not eliminate floodplain storage. The floodplain storage on site will still exceed the fill provided by the development offering a net benefit over the undeveloped site.

Pursuant to the Village Code, compensatory storage is required for all fill in the 100-year flood zone (special flood hazard area). All floodplain storage lost is required to be compensated for at a ratio of 1.5:1 (cut:fill). The petitioner's request would reduce but not eliminate the compensatory storage requirement. If granted the variation the subject parcel would be required to provide compensatory storage at a ratio of 1.1:1. This ratio represents 1.1 cubic yards of storage for every 1 cubic yard of fill provided in the flood zone. This ratio has been adopted by the Metropolitan Water Reclamation District of Greater Chicagoland (MWRDGC) through their watershed management ordinance.

Standards for Variation: Following are the petitioner's responses to the standards for variation for the variance request. (Any staff comments follow the petitioner's response)

1. **The development activity cannot be located outside of the SFHA.**

   Petitioner: Due to existing site topography, regulatory base flood elevation per Zone AE floodplain established per FEMA FIRM Panel 17031C0207J with an effective date 8/19/2008, existing airport layout, future airport layout, FAA separation requirements for hangar layout meeting Building Restriction Line (BRL), Taxiway Safety Area (TSA), Taxiway Object Free Area (TOFA), Taxilane Object Free Area (TLOFA) and aircraft visibility from the Air Traffic Control Tower, the development activity is constrained and required to be located within the current Special Flood Hazard Area (SFHA). Site rate control (detention) and volume control (water quality) per MWRD Watershed Management Ordinance (WMO) as amended January 9, 2025 need to be met which include additional stormwater requirements based on updated Bulletin 75 rainfall data in addition to compensatory storage requirements. All future site development will be in accordance with the current MWRD WMO.

   Staff: The development area is largely within the special flood hazard area. Any practical development proposal would be located within the special flood hazard area.

2. An exceptional hardship would result if the variance were not granted.

Petitioner: A hardship would be exceptional due to limited areas for development outside of the SFHA on the PWK site based on current site topography. Also, the existing site topography is extremely flat with limited areas available for compensatory storage outside of existing hangar aprons, taxiways and runways along with limited site depth between the 10-year and 100-year base flood elevations of 638.0 and 640.1, respectively.

Staff: The airport has limited area onsite for which compensatory storage can be provided in a functional way.

3. The relief requested is the minimum necessary.

Petitioner: The relief required will meet the minimum requirements per MWRD for compensatory storage and shall be required for any fill, structure, or other material above grade in the floodplain that temporarily or permanently displaces floodplain storage volume. Due to extremely flat site topography required for an airport use, the compensatory storage locations are limited to be provided in the same Des Plaines River watershed in areas the airport property currently controls. Compensatory storage is confined contiguous to the development site and adjacent locations on the PWK property that would not impact airport operations or various FAA requirements for TSA, TOFA and FLOFA.

Staff: The relief sought would be provided at a ratio that still provides floodplain storage. In that regard the relief is the minimum necessary and still adheres to the Metropolitan Water Reclamation District's Watershed Management Ordinance.

4. There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance.

Petitioner: The development will provide no additional threat to public health, safety, beneficial stream uses and functions, especially to aquatic habitat, or creation of a nuisance to the Des Plaines River located downstream of the development site. All site discharges to the Des Plaines River will not change. Site detention and compensatory storage are be provided in the same location on-site (intermingled) provided that the respective required storage volumes for each category are fully met. Due to the size of the watershed flooding source (Des Plaines River) and time of concentrations between floodplain watershed for and on-site detention varies significantly for peak storage elevation. The reduction in compensatory storage from 1.5 :1 to 1.1:1 and expanded site detention requirements will not increase base flood elevations upstream or downstream of the airport property. With flows leaving the development site in the same location along the east side of S. Milwaukee Ave. and providing no modifications to the existing outlet control structure, both the flows and velocity through the existing conveyance system will not increase.

Staff: The requested change would still result in a net increase in storm water storage post development which will benefit the adjacent watershed.

6. There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to stream beds and banks, roads, utilities, or other public

facilities.

Petitioner: No additional public expense will be required for flood protection. In addition to meeting the MWRD compensatory storage requirements at 1.1:1 for the volume storage lost to the 100-year base flood elevation, all future buildings will have a finished floor flood protection elevation 2.0 feet above the 100-year regulatory base flood elevation meets MWRD requirements exceed the Village of Wheeling requirement of 1.0 foot. The design flood protection elevation of the future hangars will be set 2.5 feet above the 100-year base flood elevation per City of Prospect Heights minimum standards. Both restricted flows and velocities leaving site through the existing conveyance system will not increase and will change downstream stream bed or banks.

Staff: The reduction in compensatory storage will allow development, which will ultimately provide additional storm water detention. This additional detention in combination with the increased flood storage will make the development a net benefit for flood relief.

7. The provisions of Sections 22.14.070 and 22.18.060 shall still be met.

Petitioner: The provisions of subsections 22.14.070 include both a Conditional Letter of Map Revision (CLOMR) issued June 18, 2026 and will follow with a Letter of Map Revision (LOMR) post-construction. Section and 22.18.060 (floodway does not exist within development site) will be met.

Staff: An approved CLOMR has been provided to the Village and a LOMR will be expected prior to occupancy.

8. The activity is not in a regulatory floodway.

Petitioner: All proposed development activities are located outside of the regulatory floodway.

Staff: No additional comments.

10. The applicant's circumstances are unique and do not establish a pattern inconsistent with the intent of the NFIP.

Petitioner: Due to the character, location of the project and type of development, limitations of existing site topography for an airport use confined by limited open space availability on subject site for compensatory storage locations and FAA requirements for TSA, TOFA and FLOFA , the variance request is unique and not a general problem within the Village of Wheeling corporate limits.

Staff: The FAA has stricter requirements for water storage areas which limit their locations within an airport. This makes the request unique and doesn't establish a pattern inconsistent with the intent of the NFIP.

11. The granting of the variance will not alter the essential character of the area involved including existing stream uses.

Petitioner: The existing character will not be altered for the proposed development and the future land use will be consistent with what is currently located on the PWK airport site. Both restricted flows and velocities leaving site will not alter the existing stream uses.

Staff: No additional comments.

12. All other state and federal permits or waivers have been obtained.

Petitioner: All other state and federal permits will be obtained (i.e. FEMA and MWRD)

Staff: No additional comments.

STAFF REVIEW

Engineering Division Review: No comments related to the variance request.

Staff Recommended Action: After careful review, due to the location of this property, restrictions for onsite basin construction due to FAA requirements, and the fact that specific water conveyance infrastructure is immediately available leading directly to the Des Plaines River with little or no effect on Village residents or businesses, it appears that this variation request is rational and would substantially meet all of the objectives of Title 22 and not impose undue negative impacts to Village residents. Staff recommends approval of the variance request subject to the following condition:

1. Approval of the variance is specifically tied to the Sky Harbour development and is not a blanket variation

approval for future developments within Chicago Executive Airport.

****

If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of a variation, the appropriate motion would be to:

Recommend approval of Docket No. PV26-0010 granting a variation from Title 22, Floodplain Regulations, of the Wheeling Municipal Code, Chapter 22.14.080, Compensatory Storage, and associated sections, to permit a reduction in the compensatory storage ratio from 1.5:1 to 1:1 for the Sky Harbour Group development, located at 1090 S. Milwaukee Avenue in accordance with the Project Narrative Letter prepared by Cook Engineering Group, last revised 7/17/2026; Storm Water Narrative prepared by Cook Engineering Group, last revised 7/30/2026; Variation Standards prepared by Cook Engineering Group, last revised 7/17/2026; Overall Site Plan prepared by Cook Engineering Group, last revised 6/19/2026; and subject to the following condition:

1. Approval of the variance is specifically tied to the Sky Harbour development and is not a blanket variation approval for future developments within Chicago Executive Airport.

ATTACHMENTS:
Attachments to Staff Report (Staff)
Project Narrative Letter prepared by Cook Engineering Group, last revised 7/17/2026
Storm Water Narrative prepared by Cook Engineering Group, last revised 7/30/2026
Variation Standards prepared by Cook Engineering Group, last revised 7/17/2026
Overall Site Plan prepared by Cook Engineering Group, last revised 6/19/2026
Overall Development Plan prepared by Cook Engineering Group, dated 6/19/20026

GISConsortium | Proposed Sky Harbour Development Site

0 450 900 ft

Print Date: 8/6/2026

Notes

Disclaimer: The GIS Consortium and MGP Inc. are not liable for any use, misuse, modification or disclosure of any map provided under applicable law. This map is for general information purposes only. Although the information is believed to be generally accurate, errors may exist and the user should independently confirm for accuracy. The map does not constitute a regulatory determination and is not a base for engineering design. A Registered Land Surveyor should be consulted to determine precise location boundaries on the ground.

GISConsortium

1090 S Milwaukee Avenue

0 200 400 ft

Print Date: 8/6/2026

Notes

Proposed Sky Harbour Development Site

Disclaimer: The GIS Consortium and MGP Inc. are not liable for any use, misuse, modification or disclosure of any map provided under applicable law. This map is for general information purposes only. Although the information is believed to be generally accurate, errors may exist and the user should independently confirm for accuracy. The map does not constitute a regulatory determination and is not a base for engineering design. A Registered Land Surveyor should be consulted to determine precise location boundaries on the ground.

Project Narrative
for
PWK Home Base Campus
1089-1097 S. Milwaukee Ave. (IL Rte 21)
Wheeling, Cook County, IL 60090

July 17, 2026

Mr. David Annin
Sky Harbour, LLC
136 Tower Road, Suite 205
White Plaines, NY 10604

COOK ENGINEERING GROUP
Civil Engineering & Land Development Consulting

26316 Mapleview Drive • Plainfield, IL 60585 • Tel: (815) 577-1707 • Fax: (815) 577-2595

1. INTRODUCTION

Nine (9) new aircraft hangars are proposed on a development site located within a portion of the Chicago Executive Airport property, at 1089-1097 South Milwaukee Avenue (IL Rte 21) in Wheeling, Illinois. Construction will occur in two phases, and the hangars will house up to 56 corporate aircraft.

This narrative examines the project description, site operations, projected trip generation and development parking. The trip generations for the proposed development will be compared with those for the existing site use.

2. PROJECT LOCATION & DESCRIPTION

The project development site is located in the southeast quadrant of Chicago Executive Airport (PWK), fronting South Milwaukee Avenue (IL Rte 21) in Prospect Heights, Illinois. A portion of the development site is located in the Village of Wheeling, as the corporate limit line crosses the north corner of the development site. The property is zoned B-3 (General Service) within the City of Prospect Heights and A-P (Airport District) within the Village of Wheeling.

The project development site is approximately 16.5 acres and overlaps the following PINs: 03-13-400-013, 03-13-400-020, 03-13-400-030, 03-13-400-050, and 03-13-301-023. The hangar development is part of the Airport Layout Plan (ALP) improvements identified in the Master Drainage Plan for PWK, which was prepared to address stormwater management under current Metropolitan Water Reclamation District (MWRD) regulations and local municipal standards.

A portions of the existing project site was previously home to a 140-room hotel and approximately 5,000 sf GFA restaurant that has recently been demolished. Figure 1 below presents an aerial image of the nearby vicinity with the project site highlighted in red. The site is accessed via two (2) full access driveways off South Milwaukee Avenue (IL Rte 21). The south existing driveway is a shared full access with the office building to the south of the development site. The nearest intersection south of the south driveway is with Palatine Road and is signalized. The nearest intersection north of the north driveway is with Tower Drive and is unsignalized.

As part of the site development, the north access will be closed off. The development will maintain the existing full access driveway along north line of existing office building fronting S. Milwaukee Ave. An access easement and connection will be provided for the neighbor to the south to maintain their current traffic circulation pattern.

Figure 1: Site Location (Image from Google Earth)

3. SITE OPERATIONS

The proposed development includes the construction of nine (9) aircraft hangars over two (2) phases with the first phase of construction including the southerly five (5) hangars. All hangars will be used to house corporate aircraft. The expected operations are described below:

- This is a home base operation, meaning that only aircraft served are the ones assigned to the hangars. The site will not serve transient aircraft, such as planes making deliveries of goods or general commercial aircraft.
- The business does not operate on a typical 9a-5p schedule, rather the buildings are access controlled and accessible 24/7.

- Based on employee data from similar corporate aircraft campuses, the following employee projections are:
    - Two pilots per aircraft — 100% of aircraft
    - One mechanic per aircraft — 50% of aircraft
    - One scheduled guest/admin/flight attendant — 50% of aircraft
- Not all tenants or employees will be on the property every day.
- The nature of this type of business is that two pilots arrive for a trip and may not leave the property until several days later when they return with the aircraft.
- Time of day traffic tendencies for the site are as follows:
    - 30 percent of trips to the site occur between the hours of 5:00 AM to 9:00 AM. This will be considered the morning peak hour.
    - 30 percent of trips to the site occur between the hours of 4:00 PM to 8:00 PM. This will be considered the evening peak hour.

4. TRIP GENERATION

The existing development site was previously home to a 140-room hotel and approximately 5,000 sf GFA restaurant. Based on ITE trip generation calculations, a hotel (ITE Land Use Code 310) generates approximately 8.16 trips per room for a weekday, 0.53 morning peak hour trips, and 0.60 evening peak hour trips. A Fast Casual Restaurant (ITE Land Use Code 930) generates 97.14 weekday trips per 1,000 sf GFA, 1.43 morning peak hour trips per 1,000 sf GFA, and 12.55 evening peak hour trips per 1,000 sf GFA. This results in a total of 1,629 weekday, 83 morning peak hour, and 147 evening peak hour trips generated by the existing site development hotel and restaurant.

The trip generation for the corporate aircraft hangars is unique and data is not available in the *Trip Generation Manual* (the closest ITE land use code is 021, *Commercial Airport*, which covers the airport as a whole and only includes one study). Therefore, a custom trip generation was created considering the number of aircraft, the average number of employees per aircraft, and the time-of-day traffic tendencies. The resulting trip generation estimates are summarized in Table 1.

The trip generation calculations show that the proposed development is projected to generate up to 168 weekday, 51 morning peak hour, and up to 51 evening peak hour trips. Based on these calculations, the change in use for the proposed development provides a minimum reduction of 1,461 weekday, 32 morning peak hour, and 93 evening peak hour trips. This is a worst-case trip generation scenario, where 100 percent of the jets are active on a given day. The hangars are typically expected to have approximately 60 percent of jets active at one time; therefore, ***actual trip generation would be lower than what is shown in Table1*.**

TABLE 1						
Existing Conditions						
Hotel (ITE Land Use Code 310)						
Total Guest Rooms	Weekday Trips per room	AM Peak Hour Trips per Room	PM Peak Hour Trips per Room	Weekday Trips	AM Peak Hour Trips	PM Peak Hour Trips
140	8.16	0.53	0.60	1,143	75	84
Fast Casual Restaurant (ITE Land Use Code 930)						
Total GFA	Weekday Trips per 1,000 sf GFA	AM Peak Hour Trips per 1,000 sf GFA	PM Peak Hour Trips per 1,000 sf GFA	Weekday Trips	AM Peak Hour Trips	PM Peak Hour Trips
5,000	97.14	1.43	12.55	486	8	63
			Existing Conditions Total:	**1,629**	**83**	**147**
Proposed Conditions						
Aircraft Hangars (9 hangars)						
Number of Hangars	Number of Aircraft per Hangar	Total Jets for All Phases	People per Jet (Vehicle Trips)	Weekday Trips	AM Peak Hour Trips (30%)	PM Peak Hour Trips (30%)
7	*varies*	56	3	**168**	**51**	**51**
			Total Reduction in Trips:	**1,461**	**32**	**96**

Similar Facilities

A review of similar aircraft facilities was conducted to compare the projected operations of the PWK hangars with currently active hangars. Table 2 below shows the comparison between active corporate aircraft activity at hangars in Nashville and Miami, compared to the projected activity for the seven new hangars proposed at PWK.

Operations	PWK (Chicago Exec.)	BNA (Nashville)	OPF (Miami)
Trips/Aircraft/Week	1.33	1.43	0.45
# of Operational Weeks/Year	52	52	52
Departure Operations/Aircraft/Year	69	75	24
Arrival Operations/Aircraft/Year	69	75	24
Total Operations/Aircraft/Year	138	150	48
Hangars/Campus	9	9	12
Total Aircraft	56	27	24
Total Operations/Campus/Year	7,728	4,050	1,152
Total Operations/Campus/Month	644	338	96

Table 2. Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 12th Edition, 2025

The operations comparison shows that the projected nine (9) corporate aircraft hangars will perform similarly to the operations at the Nashville campus. The data from the existing campuses show that Nashville operates fewer than two trips per aircraft per week, while Miami operates fewer than one trip per aircraft per week. The trip generation summary shown in Table 1 assumes that all jets operate every day, which would be a worst-case scenario. ***Based on the current operations at similar corporate aircraft hangars, the trip generation estimates for a typical day are expected to be lower than what is shown in Table 1.***

5. PARKING

As shown on **Figure 1**, the previous hotel and restaurant use required an abundance of parking. The existing parking lot provided a total of 203 parking spaces, including 8 handicap stalls.

The Village of Wheeling Code of Ordinances Title 19, Chapter 11 specifies the required number of off-street vehicle parking spaces for various zoning classifications. Section 19.11.010 – Off Street Parking Table 19.11.010(e)(1)(c) shows that a Transportation uses, general, the number of required spaced is as determined by plan commission.

As such, the current site plan is reflective of historical parking space requirements on similar Sky Harbour projects at other locations. The current Siteplan shows a total of 116 parking spaces including 9 handicap stalls, for up to 56 aircraft. ***The proposed development is reflective of a reduction in 87 parking spaces from existing conditions.***

6. CONCLUSION

Based on the change in use, the proposed development is not projected to increase turning movements through the single full access off S. Milwaukee Ave. Therefore, the construction and occupancy of the proposed development is not expected to create significant impacts to the transportation system.

In addition, the most recent site plan shows a total of 116 parking spaces for up to 56 aircraft, which is a reasonable projection based on comparable hangar projects completed by Sky Harbour in the past.

Project Stormwater Narrative
for
PWK Home Base Campus
1089-1097 S. Milwaukee Ave.
Wheeling, Cook County, IL 60090

March 27, 2026
REVISED July 30, 2026

Mr. David Annin
Sky Harbour, LLC
136 Tower Road, Suite 205
White Plaines, NY 10604

COOK ENGINEERING GROUP
Civil Engineering & Land Development Consulting

I, Michael D. Cook, a registered Professional Engineer in the State of Illinois, hereby certifies this Project Stormwater Narrative was performed under my personal direction.

LICENSED PROFESSIONAL ENGINEER
MICHAEL COOK
062-052101
STATE OF ILLINOIS

Illinois Professional Engineer 062-052101
EXPIRES 11-30-2027

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EXHIBITS

Exhibit 1 – Aerial Imagery

Exhibit 2 – FEMA FIRMette

Exhibit 3 – NRCS Web Soil Survey

Exhibit 4 – MWRD Pre-Application Meeting Minutes

Appendices

Appendix 1 – Flood Insurance Study

Appendix 2 – Preliminary Geotechnical Report

Appendix 3 – Stormwater Calculations

Appendix 4 – Village of Wheeling Standards for Variation Responses

1. PROJECT OVERVIEW

Sky Harbour, LLC has engaged Cook Engineering Group, PC, to provide civil engineering and stormwater management consulting and design services for a proposed aircraft hangar development at Chicago Executive Airport (PWK). The nine (9) hangar PWK Home Base Campus development will occur within the airport's existing property ownership limits at 1089-1097 S. Milwaukee Ave., which spans approximately 417 acres under joint jurisdiction of the City of Prospect Heights and Village of Wheeling. The development site is located west of S Milwaukee Ave, just south of Taxilane Charlie and east of Taxiway Echo.

The PWK Home Base Campus site development area overlaps the municipal boundary line and is zoned B-3 Special Use (General Service District) within the City of Prospect Heights and A-P (Airport District) within the Village of Wheeling. These zoning classifications support aviation-related uses and associated services, aligning with the airport's operational needs and long-term development plans. As part of the PWK Home Base Campus development, the municipal boundary line will be slightly adjusted to work around the proposed building footprints so each hangar will lie completely within one municipality or the other.

The proposed hangar development is part of the Airport Layout Plan (ALP) anticipated improvements as identified in the Master Drainage Study prepared by Primera Engineers, Manhard Consulting and CERA Solutions in June, 2025. The goal of the Master Drainage Study was to address stormwater management requirements throughout the airport under current Metropolitan Water Reclamation District (MWRD) regulations and local municipal standards. The Master Drainage Study emphasized mitigating increased impervious areas from new hangars, taxiways, and associated infrastructure through updated stormwater storage and conveyance systems for both the North and South Basin drainage areas. These improvements will aim to prevent adverse impacts on surrounding communities and downstream waterways, particularly the Des Plaines River, which influences airport drainage during high-volume rain events.

The proposed site work includes:

- Phased construction of nine (9) aircraft hangar buildings with associated aprons and taxiway connections, including a Fuel Farm to be designed by others.
- Grading and utility improvements that will be integrated with the airport's existing infrastructure. Proposed PWK Home Base Campus lease area will be elevated out of the floodplain, meeting FEMA requirements utilizing a CLOMR-F and LOMR-F permitting process.
- Compliance with MWRD Watershed Management Ordinance (WMO) for stormwater management and flood protection areas, as well as local municipal standards for Prospect Heights and Wheeling.
- Coordination with the airport's long-term drainage strategy and future development plans, including the realignment of Taxiway Echo in the near future, to be designed and permitted separately from the PWK Home Base Campus development.

By leveraging the Master Drainage Study as a guiding document, this project will ensure compliance with FAA safety standards, local development regulations, stormwater management, and flood protection requirements. The design will incorporate sustainable practices such as at grade detention, infiltration facilities to meet volume control, and water quality structures while maintaining operational efficiency for the airport.

1.1 Existing Site Conditions

The PWK Home Base Campus project site is currently developed and serves as an active portion of Chicago Executive Airport (PWK), primarily functioning as an aircraft tie-down area with adjacent taxiway and runway pavement. This area represents one of the lowest elevations within the airport property and acts as a critical drainage point for the South Basin drainage area. Refer to **Exhibit 1 – Aerial Imagery** for an overview of the site location.

Stormwater runoff from the PWK South Basin drainage area is directed toward this low area, where it is collected and conveyed through the airport's private storm sewer network. The system includes reinforced concrete storm sewer pipes and infield detention areas designed to manage both stormwater and compensatory flood storage. From this location, stormwater is discharged through a restricted outlet control structure, then east beneath S. Milwaukee Avenue, and ultimately discharges into the Des Plaines River. Restrictor plates within the outlet control structure regulate the release rate to prevent downstream flooding and maintain compliance with Metropolitan Water Reclamation District (MWRD) requirements.

The site lies within the Des Plaines River watershed and is subject to regional floodplain influences. Portions of the airport property, including this development area, are located within the 100-year floodplain as delineated by FEMA and discussed in the Master Drainage Study; refer to **Exhibit 2 – FEMA FIRMette**. Floodplain elevations range from approximately 640.0 at the south end of the airport property to 640.2 feet NAVD88 at the north end of the property along Wheeling Ditch per FEMA Flood Insurance Study 17031CV001J completed on September 10, 2021, pertinent pages included herein as **Appendix 1 – Flood Insurance Study**. Based on the Flood Profile provided, a BFE of 640.1 has been established for the PWK Home Base Campus development site. Historical flooding events have demonstrated backflow conditions from the Des Plaines River into the airport's infield storage areas during major storm events.

Since vegetation at the airport is limited to turf grass, no wetlands are present on the development site. Underlying soils in this area consist primarily of loamy Orthents, classified as Hydrologic Soil Group C, which limits infiltration potential and reinforces the need for engineered stormwater management solutions, **Exhibit 3 - NRCS Web Soil Survey** is included herein. A preliminary geotechnical report is included herein for reference as **Appendix 2**. Based on these preliminary findings, a conservative seasonally high groundwater level (SHGL) of 630.0 has been used for site design.

Existing stormwater storage and conveyance facilities within the airport property are designed to meet detention, compensatory storage, and volume control requirements under previously issued MWRD permits, but future development requires updates to comply with the latest Watershed Management Ordinance standards.

1.2 Proposed Site Conditions

The proposed development includes the construction of nine (9) aircraft hangars, associated paving, site utilities, at-grade stormwater detention and compensatory storage areas, and underground VCBMP facilities. Additional compensatory storage areas will be provided in other various locations within the airport ownership area. The development will utilize the existing driveway access from S. Milwaukee Ave.

The proposed hangar buildings will be serviced with water and sanitary sewer via main extensions to service the development. The existing onsite sewer is owned and maintained by PWK, and discharges to a 69-inch MWRD interceptor that flows south along the west side of the ownership area and S. Wolf Rd. As part of the proposed development site work, the existing private sanitary sewer will be rerouted from the south around the development to maintain service to the existing buildings to the south and provide services to each proposed hangar building. Illinois EPA Water Pollution Control Permitting will be completed as required upon issuance of the MWRD permit since MWRD is the governing Waste Treatment Works owner per Section 7 of the IEPA WPC form.

A proposed water extension will be looped through the development area with an 8-inch private watermain, which will connect at two (2) locations to an existing 8-inch private main north of the PWK Home Base Campus along Tower Drive. To minimize airport disturbance, the 8-inch main will be directionally bored under Taxilane Charlie within a 16-inch steel encasement pipe. Multiple water services will branch off this loop to provide domestic and fire services to each hangar. The 8-inch looped main will be privately owned and will be located within a public watermain easement, which will be granted to the Village of Wheeling for access and maintenance. The proposed watermain extension will be permitted as required through Illinois EPA and the Village of Wheeling.

As part of the site development and permitting process, a Conditional Letter of Map Revision based on Fill (CLOMR-F) is being requested from FEMA. This will bring the PWK Home Base Campus site development and lease area out of the floodplain. Upon completion of mass grading to meet the CLOMR-approved elevation, a LOMR-F will be submitted to FEMA to attain final Certificate of Occupancy from the municipalities.

2. STORMWATER MANAGEMENT DESIGN

2.1 Applicable Stormwater Management Design Parameters

Stormwater management for the proposed hangar development shall comply with the latest **Metropolitan Water Reclamation District (MWRD) Watershed Management Ordinance (WMO)**, local municipal regulations, and the airport's Master Drainage Study. A Pre-Application Meeting was held with representatives from MWRD on November 10, 2025, to discuss relevant site design parameters. Minutes from that meeting have been included herein as **Exhibit 4 – MWRD Pre-Application Meeting Minutes**.

Detention Requirements:

- Detention calculations will utilize the **MWRD Legacy Schedule D methodology**, updated to reflect **Bulletin 75 rainfall data** (revised from TP-40).
- All detention displaced by proposed fills must be replaced, and additional storage provided to satisfy updated rainfall requirements.
- Areas not contiguous with the site development but used only for floodplain compensatory storage do not count toward the total development site area and therefore do not qualify as site detention area calculations using Legacy D MWRD stormwater permit requirements.
- The actual design release rate of **32.86 cfs** for the South Basin Tributary Area, as established per MWRD Permit 2025-0060 issued 05/23/2025, will be used for Legacy D stormwater calculations for proposed development.
- Site Development detention high water level (HWL) elevation is 638.00 (NAVD 88) which matches the 10-year BFE per regulatory Cook County FIS Study for the Des Plaines River
- The 638.00 (NAVD 88) elevation represents the maximum detention storage level for Legacy D MWRD stormwater volume calculations for Site Development.
- No changes are proposed to existing outlet control structure adjacent to S Milwaukee Ave since the South Basin drainage area is not changing and existing detention HWL will remain at 638.00 (NAVD 88)

Compensatory Storage Requirements:

- All fill within the regulatory floodplain must be offset with compensatory storage at a **minimum ratio of 1.1:1 for the entire 0–100-year Base Flood Elevation (BFE) range**.
- Maintain at least **1:1 ratio for each of the 0–10-year and 10–100-year floodplain volume windows**.
- If the 10-100 year BFE storage only meets a 1:1 ratio, the 0-10 year BFE storage must be provided at a higher ratio to achieve the overall 1.1:1 ratio as required by MWRD.
- Site detention and 0-10 year BFE compensatory volumes can be combined, provided that respective storage volumes are fully met.

- Floodplain compensatory storage on the north side of Wheeling Ditch is acceptable due to the location being on same ownership property, even though it is not contiguous to the site development area.
- Flood Protection Elevation (FPE) will be required at BFE plus 2.5′ of freeboard (640.1 + 2.5 = 642.6).

Volume Control Requirements:

- Provide retention for the first inch of runoff from all new impervious surfaces in accordance with MWRD WMO.
- Volume control facilities must be designed to avoid wildlife attractants and comply with FAA safety standards (e.g., infiltration trenches, bioretention, permeable pavement).

Additional Considerations:

- Design shall integrate with the airport's existing storm sewer network and drainage basins so as not to create negative impacts upstream or downstream.
- Future improvements must maintain compliance with FAA Advisory Circular AC 150/5320-5D for airfield drainage.

2.2 Stormwater Detention Design Summary

Detention calculations for the proposed PWK Home Base Campus development will be performed using the **Metropolitan Water Reclamation District (MWRD) Watershed Management Ordinance (WMO) Legacy Schedule D methodology**, updated to incorporate the latest **Bulletin 75 rainfall data**, which supersedes the older TP-40. This approach ensures compliance with current regional stormwater management standards and reflects the increased rainfall intensities.

The overall disturbed development area for this project is approximately **28.84 acres**. Based on this area, the required detention volume calculated using Bulletin 75 rainfall data is **9.51 acre-feet**, while the volume required under the older TP-40 rainfall data is **5.43 acre-feet**. Since the project involves filling **19.01 acre-feet** of existing detention storage, the total detention volume required to be provided for the development is the sum of the filled volume plus the difference between the Bulletin 75 and TP-40 volumes, resulting in a total detention requirement of **23.09 acre-feet**. No modifications to existing outlet restrictors are proposed, and the 100-year high water level (HWL) will remain at elevation **638.00 feet** NAVD88, consistent with the existing conditions and the Master Drainage Study. **Stormwater Calculations** have been provided herein as **Appendix 3**.

In addition to the stormwater detention required by the WMO, the proposed development also meets WMO Volume Control requirements. Since the project proposes a large amount of impervious surface, the volume control solutions have been broken down to meet requirements for each respective area. For the north and south hangars, office buildings, and employee parking, underground modular storage with stone subgrade infiltration volume control facilities area proposed. The roof drains from the proposed buildings will discharge below grade into the underground facilities and infiltrate

through the system and stone subgrade to underdrains provided at the downstream side of the systems. In large storm events, the underground systems will fill up and overflow via a series of 15-inch diameter overflow pipes which are either tied into downstream large diameter storm sewer or discharge at grade directly into the surface detention storage basin.

For the centrally located concrete apron area, concerns arise regarding the potential runoff of airplane deicing fluids and minor petroleum products. For these reasons, flow through Volume Control practices have been incorporated into the design through inclusion of water quality units such as the ADS Arcadia Hydrodynamic Separator. The apron area has been divided into two drainage areas with a water quality unit provided at the downstream end of each storm sewer run before discharging into the dry detention basins.

The total required detention volume will be provided through a combination of on-site dry detention basins and the proposed volume control facilities. The design will ensure that stormwater discharge rates do not exceed pre-development conditions, thereby mitigating downstream flooding risks and complying with all applicable regulatory requirements. A summary of rate and volume control requirements and how they are being met is as follows:

TABLE 1: STORMWATER DETENTION / VOLUME CONTROL SUMMARY	
DETENTION SUMMARY	
DEVELOPMENT AREA	28.84 AC
BULLETIN 75 DETENTION VOLUME REQUIRED	9.51 AC-FT
LESS TP 40 DETENTION VOLUME REQUIRED	5.43 AC-FT
PLUS EXISTING DETENTION TO BE FILLED	19.01 AC-FT
TOTAL DETENTION REQUIRED	**23.09 AC-FT**
COMINGLED DETENTION PROVIDED	27.70 AC-FT
VOLUME CONTROL SUMMARY	
NORTH HANGAR AREA VOLUME CONTROL REQUIRED	**0.433 AC-FT**
NORTH SITE VOLUME CONTROL PROVIDED	0.450 AC-FT
SOUTH HANGAR AREA VOLUME CONTROL REQUIRED	**0.352 AC-FT**
SOUTH SITE VOLUME CONTROL PROVIDED	0.362 AC-FT
TOTAL VOLUME CONTROL PROVIDED (RETENTION BASED PRACTICE)	0.811 AC-FT
TOTAL RATE CONTROL PROVIDED IN VOLUME CONTROL FACILITY	0.343 AC-FT
TOTAL RATE CONTROL / DETENTION PROVIDED	**28.05 AC-FT**

2.3 Floodplain Compensatory Storage Analysis and Design Summary

The proposed PWK Home Base Campus development and lease area is located entirely within the regulatory floodplain. Since the development is proposing to elevate the lease area outside of the floodplain, a large volume of fill is required in the floodplain, triggering compensatory storage requirements governed by MWRD, the City of Prospect Heights, and the Village of Wheeling. Although both municipalities require a 1.5:1 compensatory storage ratio, the project has requested variances from these requirements, and the site has been designed to meet the MWRD ratio requirement of 1.1:1. This will alleviate the great hardship the development would incur if required to provide the higher volume.

In order to meet the 1.1:1 compensatory storage volume requirement, the project design utilizes various other vacant areas throughout the airport property ownership, including areas along the north side of Wheeling Drainage Ditch in the North Drainage area of the airport and in the South Drainage area along the south property line adjacent to the Palatine Frontage Road and around the existing Public Viewing Area. Proposed grading and drainage improvements in these areas make up for the remaining compensatory storage required. A summary of volumes provided within each compensatory storage and detention volume area is included herein as **Appendix 3 – Stormwater Calculations**.

TABLE 2: FLOODPLAIN FILL / COMPENSATORY STORAGE SUMMARY			
FLOODPLAIN FILL		**COMPENSATORY STORAGE PROVIDED**	
0-10 YEAR BFE FILL	0 AC-FT	0-10 YEAR BFE CUT	9.09 AC-FT
10-100 YEAR BFE FILL	25.56 AC-FT	10-100 YEAR BFE CUT	26.18 AC-FT
TOTAL FILL	**25.56 AC-FT**	**TOTAL CUT**	**35.27 AC-FT**

2.4 Compensatory Storage Hydraulic Equivalency

Compensatory storage for the PWK Home Base Campus development is being provided within the same Des Plaines River watershed and entirely on Chicago Executive Airport property. The proposed compensatory storage areas include storage within the development area, storage south of the development within the airfield, storage directly north of Wheeling Ditch near the northeast corner of the airport property, and additional storage adjacent to Wheeling Ditch north of Hintz Road on vacant airport property. These areas are part of the same regional floodplain system because Wheeling Ditch is influenced by backwater conditions from the Des Plaines River during flood events.

The applicable base flood elevation varies slightly across the airport property, with a BFE of 640.00 at the southern compensatory storage area, 640.10 at the development area, and 640.20 at the northern compensatory storage areas. This 0.20-foot variation is consistent with the flood profile across the project limits and does not indicate a separate floodplain system. Since the compensatory storage areas are located within the same watershed, under the same airport ownership, and hydraulically

connected through the Des Plaines River/Wheeling Ditch floodplain system, the proposed compensatory storage is considered hydraulically equivalent to the floodplain fill associated with the development.

2.5 Storm Sewer Design Summary

The proposed storm sewer system was designed using **InfoDrainage (2027.0)** and evaluated for the **10-year, 1-hour storm event** in accordance with local stormwater management requirements. Due to the complexity of the storm sewer network within and adjacent to the proposed stormwater storage facility, system performance was evaluated using an **SCS Dynamic simulation** rather than a simplified Rational Method approach. This approach was used to account for differences in peak flow timing between the on-site drainage areas and upstream tributary areas.

On-site runoff parameters were assigned using the **SCS Curve Number** method based on post-development land cover, with a curve number of **98 for impervious areas** and **74 for pervious areas**. These parameters were applied within InfoDrainage to develop composite runoff characteristics for each tributary drainage area. A **time of concentration (Tc) of 10 minutes** was assumed for on-site drainage to provide conservative flow estimates. Upstream inflow hydrographs were taken from the SSA model completed as part of the Master Drainage Study and incorporated into the storm sewer analysis to reflect contributing off-site flows. The upstream hydrographs are provided in **Appendix 3 – Stormwater Calculations**.

Rainfall inputs were based on **Bulletin 75 rainfall data**, and hydraulic grade line (HGL) and energy grade line (EGL) elevations were calculated throughout the proposed storm sewer system. The analysis indicates that the HGL is generally contained within the storm sewer pipes for the design event. Limited locations within the proposed detention basin area show the HGL above the structure rim, which is expected because this portion of the system is intended to surcharge and back up into the proposed basin during larger storm events. Detailed sub-catchment delineations, hydrologic parameters, upstream hydrographs, and storm sewer sizing results are provided in **Appendix 3 – Stormwater Calculations**.

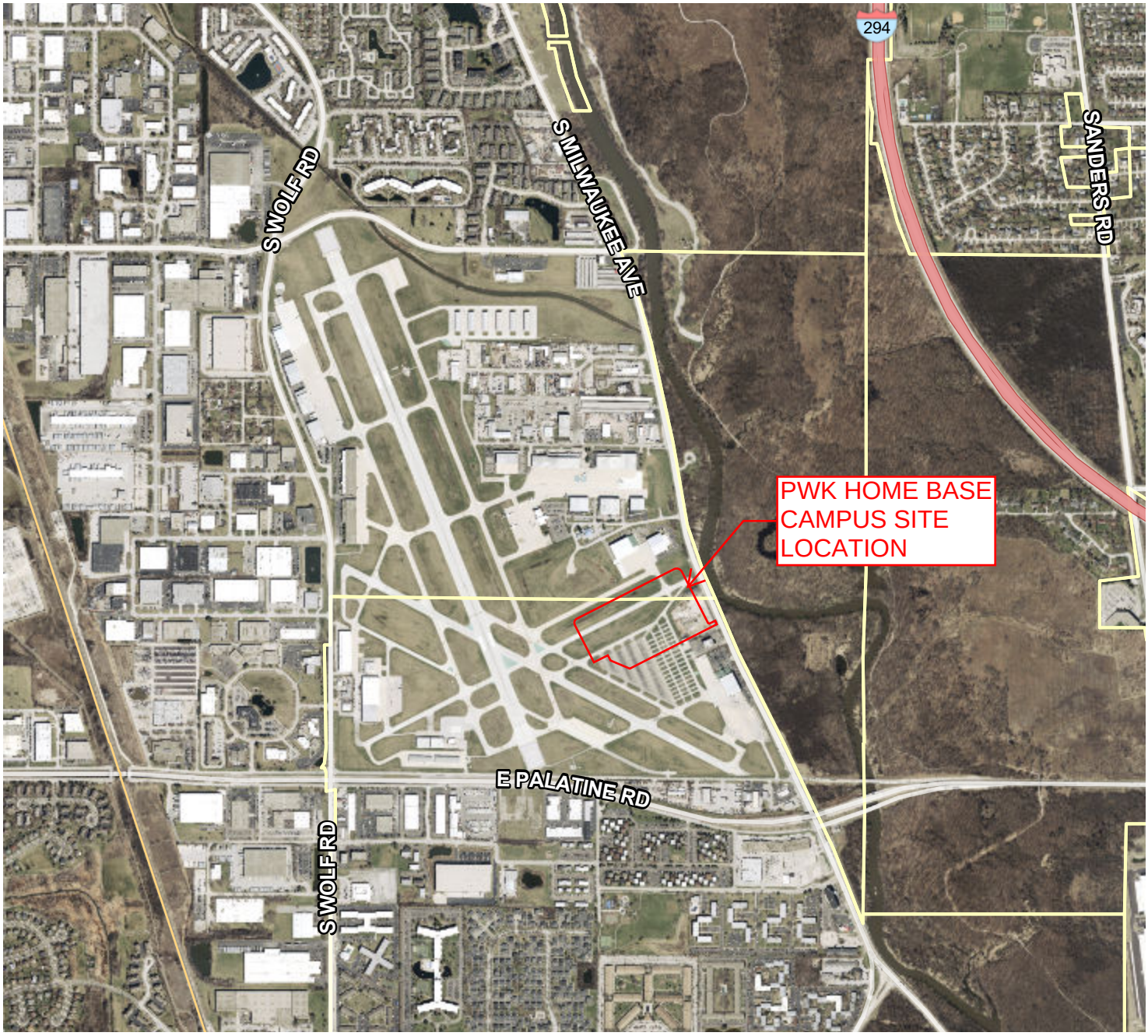
3. CONCLUSION

In conclusion, the proposed Sky Harbour PWK Home Base Campus development was designed in accordance to the criteria set forth by the City of Prospect Heights, Village of Wheeling, and MWRD to ensure the proposed project will not create any adverse impacts on downstream neighboring properties. Site runoff will be reduced from its existing condition with the proposed stormwater management system. Formal permitting will take place with both the City of Prospect Heights, Village of Wheeling and MWRD, as well as other various agencies as required.

EXHIBIT 1
AERIAL IMAGERY

CookViewer

Cook County Parcel Viewer



0 0.2 0.4 0.8 Miles

N

Map generated from CookViewer, Cook County's Parcel Viewer application maintained by the Bureau of Technology's GIS Division. For parcel and property identification number (PIN) questions, contact the Cook County Clerk's Office. For property detail and assessment questions, contact the Cook County Assessor's Office. For property tax bill questions, contact the Cook County Treasurer.

Cook County Bureau of Technology – GIS Division. Cook County Clerk. Cook County Assessor.

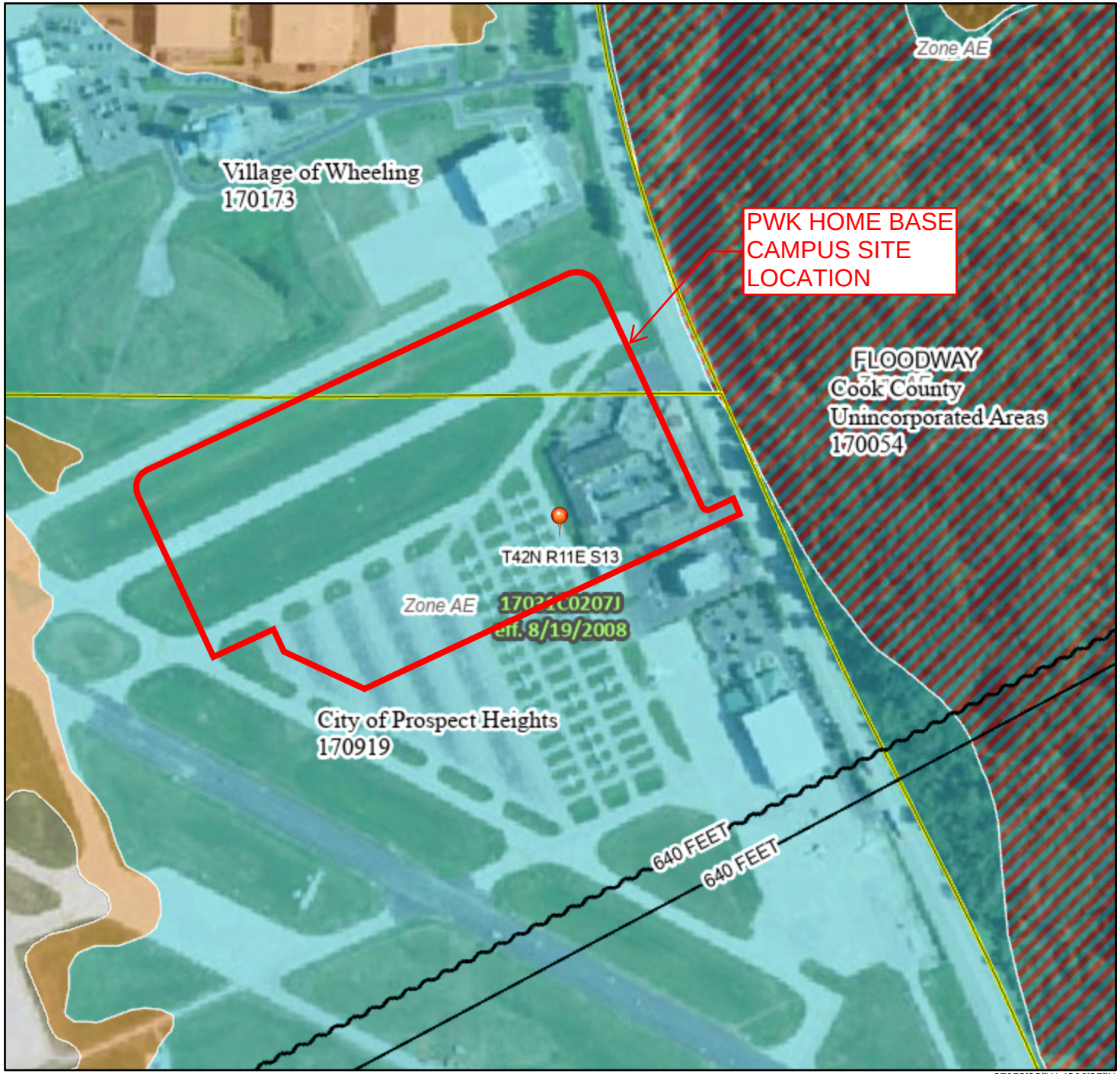
Map Created: 3/9/2026

EXHIBIT 2
FEMA FIRMette

National Flood Hazard Layer FIRMette

FEMA

87°54'W 42°7'2"N



87°53'23"W 42°6'35"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

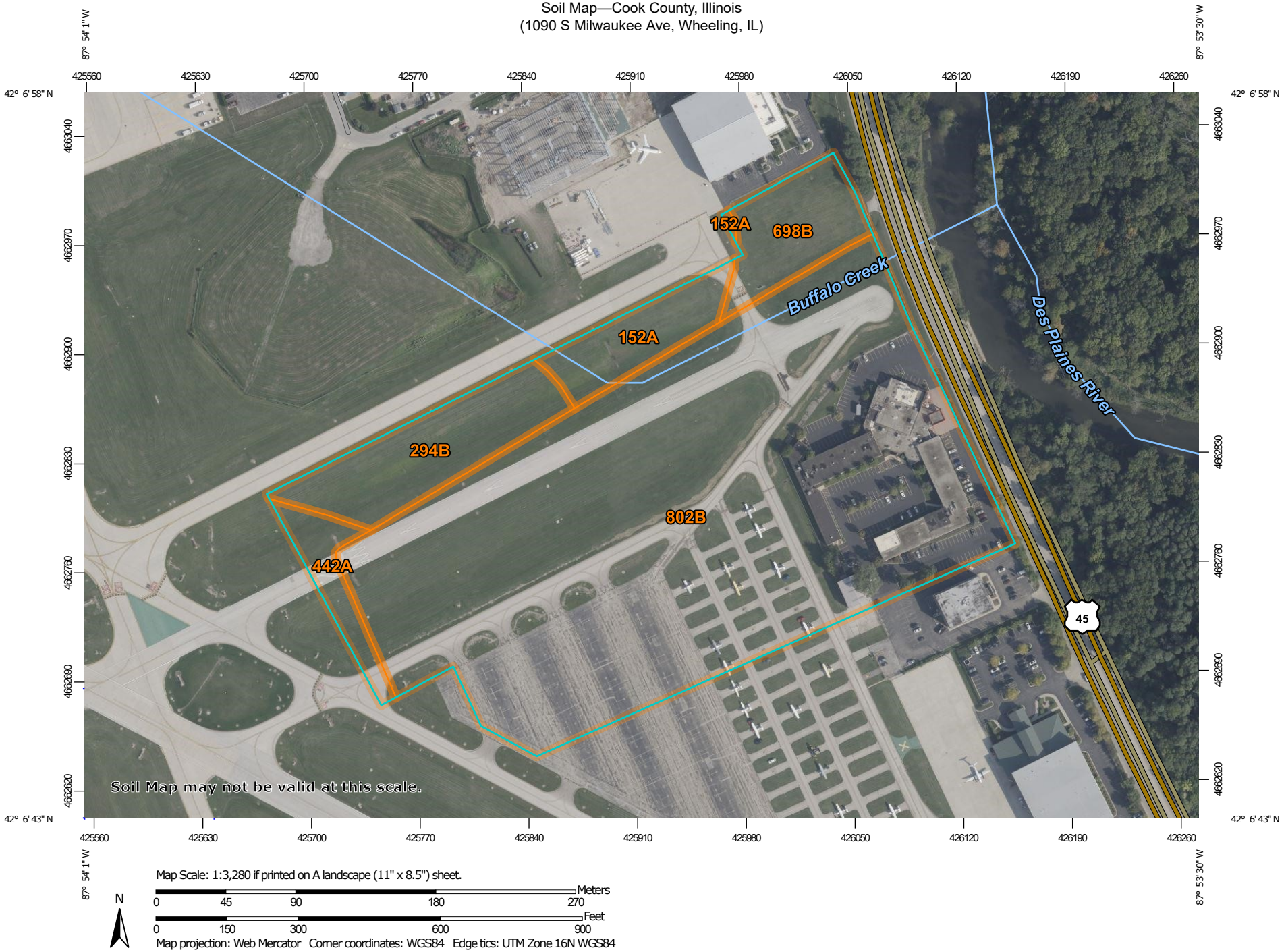
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/8/2025 at 10:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

EXHIBIT 3
NRCS WEB SOIL SURVEY

Soil Map—Cook County, Illinois
(1090 S Milwaukee Ave, Wheeling, IL)



Map Scale: 1:3,280 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 19, Aug 31, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
152A	Drummer silty clay loam, 0 to 2 percent slopes	1.1	4.7%
294B	Symerton silt loam, 2 to 5 percent slopes	2.0	8.4%
442A	Mundelein silt loam, 0 to 2 percent slopes	0.7	2.9%
698B	Grays silt loam, 2 to 4 percent slopes	1.3	5.5%
802B	Orthents, loamy, 1 to 6 percent slopes	18.7	78.5%
Totals for Area of Interest		**23.8**	**100.0%**

EXHIBIT 4
MWRD PRE-APPLICATION MEETING MINUTES

COOK ENGINEERING GROUP
Civil Engineering & Land Development Consulting

MWRD Pre-Application Meeting
PWK Chicago Executive Airport (Sky Harbour Development)

Microsoft Teams Meeting Minutes

November 10, 2025, 1:30pm

Attendees:

- Emily Hoffmann (CEG)
- Michael Cook (CEG)
- Garret Cook (CEG)
- Daniel Feltes (MWRD)
- Stephen Kaszonyi (MWRD)
- Jeremiah Campion (MWRD)
- David Annin (Sky Harbour)

1. Non-Contiguous Areas

- Areas not contiguous with the Site Development but used only for floodplain compensatory storage do not count toward the total development site area and therefore do not qualify as site detention area calculations using Legacy D MWRD stormwater permit requirements.

2. Site Detention Release Rate and HWL Elevation

- Actual Design Release Rate: 32.86 cfs as established per MWRD Permit 2025-0060 for South Basin Tributary Area issued 5/23/2025 will be used for Legacy D stormwater calculations
- Site Development detention high water level (HWL) elevation is 638.00 (**NAVD88**) which matches the 10-year BFE per regulatory Cook County FIS Study for the Des Plaines River
- This 638.00 (NAVD 88) elevation represents the maximum detention storage level for Legacy D MWRD stormwater volume calculations for Site Development
- Legacy D Permit Requirements can be used to calculate stormwater volumes for PWK South Basin Drainage Subarea with current Bulletin 75 rainfall data
- No changes are proposed to existing outlet structure adjacent to Milwaukee Ave. since south tributary drainage area is not changing and existing detention HWL will remain at 638.00 (NAVD 88)

3. Coordination with MWRD on Compensatory Storage North of Wheeling Ditch

- **Dan Feltes and Stephen Kaszonyi** confirmed that floodplain compensatory storage on the north side of Wheeling Ditch would be acceptable due to location being on same ownership property even though not contiguous to site development area
- A Hydraulic Equivalency Narrative must be submitted to document this condition

4. Floodplain and Detention Elevations

Elevations (NAVD88)	Function
0.0–638.0	Detention & Floodplain Compensatory Storage 0-10 yr BFE elevation
638.0–640.0 to 640.2 (100-yr BFE varies)	Floodplain Compensatory Storage 10-100 yr BFE elevation

- 100-yr BFE per Cook County FIS varies from 640.2 (NAVD 88) along north side of airport site along Wheeling Ditch to 640.0 (NAVD 88) along proposed south offsite area for future compensatory storage.
- Wheeling Ditch 100-yr BFE in location along Hintz Rd. in vicinity of future compensatory storage is based on backwater from Des Plaines River per Cook County FIS
- Compensatory Storage Ratios:
    - Minimum 1:1 ratio for both 0–10 and 10–100 year BFE storage.
    - MWRD requires compensatory storage at a 1.1:1 ratio for the 0-100 yr BFE. Prospect Heights and Wheeling require a 1.5:1 overall ratio for the 0–100 yr BFE. The excavation volume shall be at least equal to one and one-half (1.5) times the volume of storage lost due to the fill or structure. All flood plain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation.
    - If the 10–100 year BFE storage only meets a 1:1 ratio, the 0–10 yr BFE storage must be provided at a higher ratio to achieve the overall 1.5:1 requirement from the municipalities.
- Site detention and 0-10 yr BFE compensatory volumes can be combined, provided that respective storage volumes are fully met.

5. Volume Control Requirements

- No exemptions are available; on-site volume control will be required by MWRD.
- Recommended Volume Control Methods:
    - Aggregate (septic-type) underground aggregate stone void system using a porosity value of 0.36 per MWRD regulations
    - Incorporate volume control within parking areas using permeable pavers and aggregate stone subbase.
    - Create a tiered dry stormwater basin to store additional volume control within the basin and stone subgrade layer up to elevation 638.00 (at or below the 10-yr BFE and site stormwater HWL)

6. Trade-Off Detention for Stery Trucking Parking Facility

- Detention was not provided for the development of the Stery Trucking site located south of Palatine Rd. and was deferred to any future development
- MWRD stated the required detention volume must be provided as part of the next major PWK airport development (Sky Harbour)
- MWRD to provide issued Permit #2020-103 for this location to review calculations

APPENDIX 1
FLOOD INSURANCE STUDY

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 12

COOK COUNTY, ILLINOIS

AND INCORPORATED AREAS

*See Table 1: Listing of NFIP Jurisdictions for a complete listing of the communities represented in this Flood Insurance Study Report.

REVISED:

September 10, 2021

FLOOD INSURANCE STUDY NUMBER
17031CV001J
Version Number 2.4.3.0

FEMA

Table 23: Floodway Data (continued)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[2]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Des Plaines River (continued)								
AV	314,553	1,534	13,860	0.5	627.9	627.9	628.0	0.1
AW	318,629	461	4,676	1.4	628.2	628.2	628.3	0.1
AX	320,341	228	2,354	2.8	628.5	628.5	628.6	0.1
AY	323,673	947	7,533	0.8	629.1	629.1	629.2	0.1
AZ	328,305	748	6,204	1.0	629.8	629.8	629.9	0.1
BA	332,993	842	6,633	0.9	630.5	630.5	630.6	0.1
BB	336,017	1,700	13,998	0.4	631.0	631.0	631.1	0.1
BC	339,117	1,213	7,980	0.8	631.3	631.3	631.4	0.1
BD	341,505	1,192	3,753	1.7	631.8	631.8	631.9	0.1
BE	345,365	797	6,251	1.0	632.8	632.8	632.9	0.1
BF	349,147	945	6,081	1.0	633.7	633.7	633.8	0.1
BG	354,577	2,620	25,225	0.2	634.9	634.9	635.0	0.1
BH	358,572	1,300	6,741	0.9	635.6	635.6	635.7	0.1
BI	360,822	1,730	6,047	1.0	635.8	635.8	635.9	0.1
BJ	363,741	692	5,925	1.0	636.5	636.5	636.6	0.1
BK	366,841	1,096	4,605	1.3	637.0	637.0	637.1	0.1
BL	370,741	844	5,783	1.1	637.7	637.7	637.8	0.1
BM	374,100	1,179	10,441	0.6	638.2	638.2	638.3	0.1
BN	377,900	1,377	8,544	0.7	638.6	638.6	638.7	0.1
BO	382,336	1,470	9,656	0.6	639.3	639.3	639.4	0.1
BP	385,886	1,405	8,018	0.8	640.0	640.0	640.1	0.1
BQ	389,586	1,892	5,612	1.1	640.2	640.2	640.3	0.1
BR	392,706	484	3,324	1.9	640.9	640.9	641.0	0.1
BS	396,576	1,026	3,849	1.6	641.9	641.9	642.0	0.1
BT	400,508	543	3,902	1.6	643.3	643.3	643.4	0.1

640.1

[2]Feet above mouth

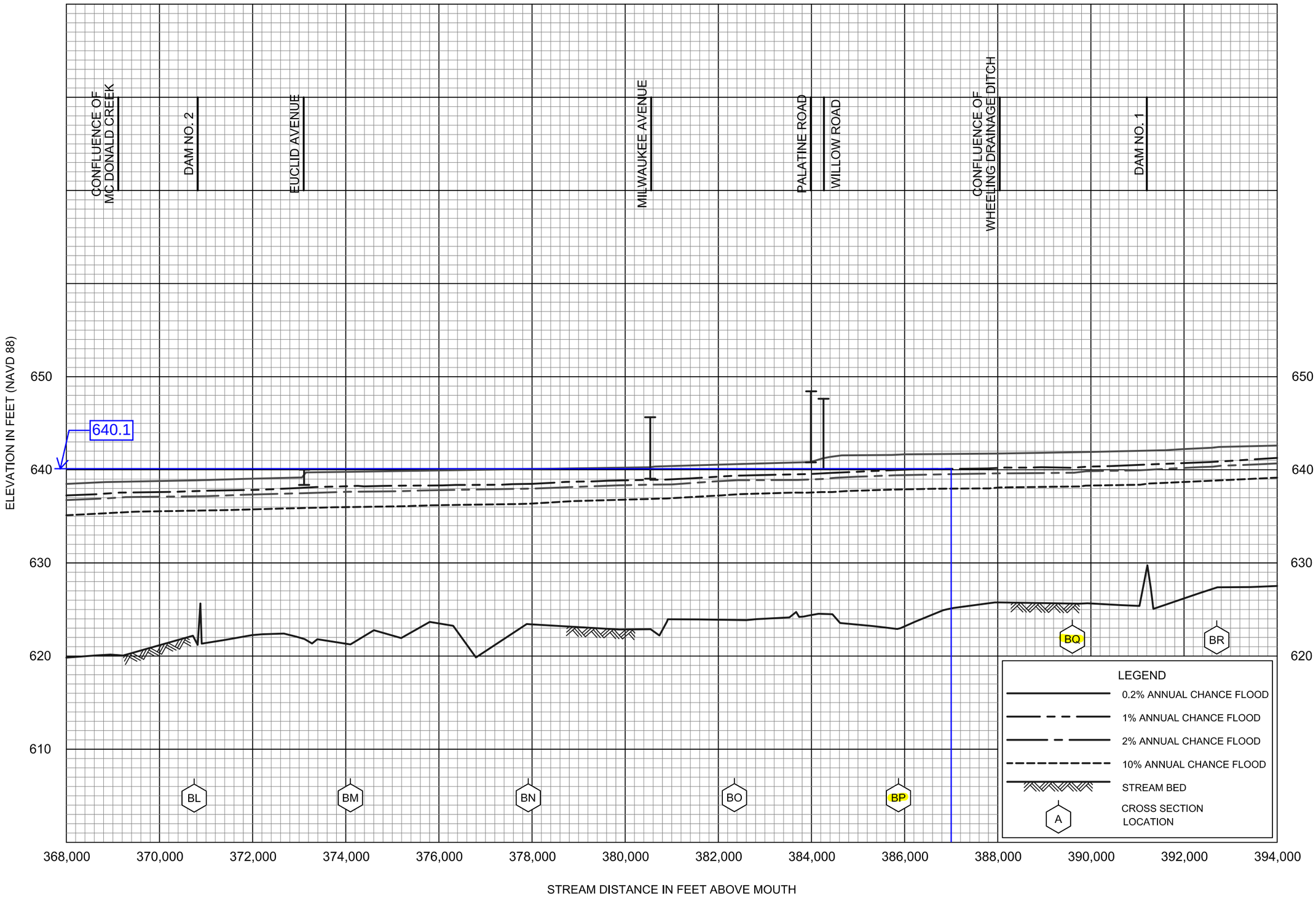
TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

DES PLAINES RIVER



FLOOD PROFILES

DES PLAINES RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

COOK COUNTY, IL

AND INCORPORATED AREAS

119P

APPENDIX 2
PRELIMINARY GEOTECHNICAL REPORT

July 20, 2026

Mr. David Annin
Director of Development
Sky Harbor Group
136 Tower Road, Suite 205
White Plains, NY 10604

Subject: Geotechnical Engineering Report
Chicago Executive Airport
Home Base Campus – Additional Borings
1089-1097 S Milwaukee Avenue
Wheeling, IL 60090
GEOCON Project No. 26-G0857

Dear Mr. Annin:

Pursuant to our proposal for geotechnical engineering services, we have completed subsurface exploration and geotechnical analyses for the above referenced project. This Geotechnical Engineering Report includes our findings and recommendations for the proposed project referenced above.

GEOCON Professional Services, Inc. (GEOCON) appreciates the opportunity to be of service during this phase of the project. If there are any questions or comments you may have regarding the contents of this report, or if we may be of any further service, please contact us at your convenience.

Sincerely,

GEOCON Professional Services, LLC.

Kenneth K. Rippy, PE
Senior Geotechnical Engineer

Luke Szot, EIT
Project Engineer

GEOTECHNICAL ENGINEERING REPORT

Chicago Executive Airport
Home Base Campus – Additional Borings
1089-1097 S Milwaukee Avenue
Wheeling, Illinois 60090

Prepared for:
Mr. David Annin
Director of Development
Sky Harbor Group
136 Tower Road, Suite 205
White Plains, NY 10604

Prepared by:
GEOCON Professional Services, LLC.
22774 Citation Road, Unit A
Frankfort, Illinois 60423

July 20, 2026

GEOCON Project No. 26-G0857

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GEOTECHNICAL ENGINEERING REPORT

Chicago Executive Airport
Home Base Campus – Additional Borings
1089-1097 S Milwaukee Avenue
Wheeling, Illinois 60090

INTRODUCTION

This report presents the results of a subsurface exploration for the proposed hangar buildings at the Chicago Executive Airport in Wheeling, Illinois. The purpose of this report was to determine and evaluate the subsurface conditions existing at the subject site, and to establish related geotechnical parameters to be utilized for the economical design and construction of the foundations for this project.

Authorization to perform this subsurface exploration and analysis was provided in the form of acceptance of GEOCON Proposal No 26-P573, May 27, 2026. The above-mentioned document described the project scope and contained general conditions for performance of the work.

PRELIMINARY GEOTECHNICAL REPORT

GEOCON prepared a previous geotechnical report, No. 25-G0618, for this project, dated May 27, 2025. The previous report was based on a preliminary phase of drilling, including performance of 14 soil borings widely spaced across the site. The preliminary report should be considered in conjunction with the results provided herein.

SITE AND PROJECT DESCRIPTION

The subject site is located at the Chicago Executive Airport at the referenced address in Wheeling, Illinois. It is currently developed with asphalt and concrete airport runways, two detention areas situated north of the runways, and the former Ramada Hotel at the northeast corner that was recently demolished. The site is relatively flat, with existing grades ranging from approximately elevation El. 636 feet to El. 637 feet, except for the detention areas located between the taxiways, the bottoms of which are near elevation El. 630 feet.

The proposed development includes the construction of a new Home Base Campus featuring eight hangar buildings and one fuel farm building. Each structure will be a single-story, slab-on-grade warehouse type structure with steel framing and metal veneer. While specific building loads have not been provided, they are anticipated to be light to moderate with estimated maximum column loads on the order of 100 kips. The hangar buildings will each contain office space as well as a staging area. The proposed finished floor elevations for the office and hangars will be El. 643.27 feet and El. 642.60 feet, respectively. Based on the proposed FFE, substantial mass grading will be required, with fill placement generally around 6 feet across most of the site and up to 12 feet within the existing detention areas.

Other site improvements will include new parking and pavement areas around the Home Base Campus, curb cut modifications to Milwaukee Avenue at the east end of the site, and the construction of four new detention areas along the north end of the site near Hintz Road, just south of the new hangars, and at the south end of the site near Palatine Frontage Road.

SUBSURFACE EXPLORATION

The scope of the exploration, including the number, location, and depth of the borings, was determined by the client in consultation with GEOCON. Forty-two (42) borings were advanced for the project at the approximate locations shown on the Boring Location Diagram included in the Appendix. Twelve (12) building borings were extended to a depth of 30 feet, five (5) pond borings were extended to a depth of

20 feet, twenty-one (21) soil borings for proposed pavement areas and ponds were extended to a depth of 15 feet, and four (4) site borings were extended to a depth of 10 feet below the present grade.

The boring locations were staked in the field by GEOCON prior to drilling, and surface elevations noted on the logs were estimated from the grading plan provided by the client. After completion of the borings, the holes were backfilled with soil cuttings and patched with like materials as encountered at the boring.

For safety reasons, the boreholes were not allowed to remain open and precluded the collection of delayed water readings.

Drilling and Sampling Procedures

The soil borings were performed with an ATV-drill rig equipped with a rotary head. Conventional, continuous flight, hollow-stem augers were used to advance the borings with representative samples obtained in each boring employing split-barrel sampling techniques in accordance with ASTM Procedure D-1586. Soil samples were secured at 2.5-foot intervals.

The Standard Penetration Test (SPT) is defined as the number of blows required to advance a 2-inch O.D., split-barrel sampler a distance of one foot by a 140-pound hammer falling 30 inches, commonly described as the N-value. These sampler resistances provide a useful indication of the consistency or relative density of most soil deposits and are reported on the boring logs presented in the Appendix. Samples of cohesive soils obtained from the borings were tested with a calibrated hand penetrometer to aid in evaluating the soil strength characteristics. The result from this testing is tabulated on the boring logs.

Water level observations were made during drilling operations and upon completion and of the borings. This data is noted on boring logs and within the *Groundwater Conditions* section.

It should be noted that it is difficult to determine the stratigraphy of the upper 2 to 3 feet of the profile from soil borings due to the size of the bore hole, about 6 inches in diameter, and intermittent sample intervals. Further, the split spoon sampler tends to push through softer soils such as fill or topsoil, resulting in little or no sample recovery from these soils. It is recommended that shallow test pits be excavated to better define the exact depth of topsoil or fill if such information is required prior to construction.

Laboratory Tests

Additional characteristics of the foundation materials were determined in the laboratory to provide data on which to classify and estimate the engineering properties of the subsurface soil deposits encountered in the borings. All samples were visually classified by the geotechnical engineer according to the Unified Soil Classification System (ASTM D-2488). An explanation of the symbols used in this system is included in the Appendix.

Representative samples were tested in the laboratory to determine the natural moisture content of the soil. All moisture contents are expressed as a percentage of the dry weight of soil. Representative samples of the cohesive soils encountered in the borings were tested in the laboratory with a calibrated RIMAC spring tester to determine the approximate unconfined compressive strength of the soil samples.

The laboratory testing program selected for this project is intended to assist with determination of soil classification as well as strength and deformation characteristics of the subsurface soil deposits that will provide foundation support for the proposed structures. All laboratory testing was performed in general accordance with the respective ASTM Methods, as applicable, and the results are included on the boring

logs included in the Appendix. Unless notified to the contrary, all samples will be disposed of after one month.

SOIL CONDITIONS

The types of materials encountered at the test boring locations are described on the Soil Boring Logs. The lines delineating the changes in strata on the logs represent an approximate boundary between the various soil classifications. It must be recognized that the soil descriptions are considered representative for the specific test hole location, but the variations may occur between the sampling intervals and boring locations. A summary of the major soil profile components is described in the following paragraphs. A more detailed description and supporting data for each boring location can be found on the individual boring logs.

Hangars and Adjacent Pond (Borings B-15 to B-44)

Borings B-15 to B-44 were performed in developed areas of the airport and the surface was underlain by a layer of topsoil up to about 15 inches in thickness. Borings B-25, B-27, B-28, B-29, B-36, B-37, B-38, B-40, and B-43 were performed in paved areas and the pavement section consisted of about 4 inches of asphalt, except in B-27 which encountered about 12 inches of asphalt, and the HMA was underlain by 4 to 15 inches of aggregate base. Below the surficial materials, undocumented fill was encountered in all borings except B-19 and B-28. **Table 1** below shows the approximate depths of fill encountered at each soil boring location. The fill stratum was predominantly comprised of sandy clay fill or clay fill mixed with topsoil, gravel, or non-native materials consisting of concrete, brick fragments, or glass. Samples of the fill exhibited variable strength and moisture content. The clay fill was described as medium stiff to hard with unconfined compressive strengths ranging from 0.25 to 4.5 tsf and moisture contents ranging from 6.8 to 39.8 percent. The fill consisted of granular soil at B-33 and B-35 below a depth of 3 feet, and N-values recorded during sampling within the granular fill were also variable and ranged from 8 to 48 blows per foot.

The native soil was predominantly comprised of sandy clay, silty clay or lean clay with wet granular layers of sand or silt encountered in most boring locations. The native clay soils were described as very soft to hard with unconfined compressive strengths ranging from 0.2 to 10.0 tsf and moisture contents ranging from 10.9 to 28.6 percent. Comparatively softer native clay with unconfined compressive strengths less than or equal to 1.0 were encountered in B-2, B-6 and B-26; see the boring logs in the Appendix for further information. A seemingly isolated pocket of black clay was encountered in boring B-26 extending from about 8 to 11 feet below the present grade. This zone was described as medium stiff with an unconfined compressive strength of about 1.0 tsf and moisture and organic contents of about 39.8 percent and 7.1 percent, respectively. The sand and silt layers interbedded within the clay strata had variable N values ranging from 3 to 100 blows per foot and these layers were generally saturated with groundwater.

North Ponds (Borings B-45 to B-49 & B-50 to B-52)

Borings B-45 to B-49 and borings B-50 to B-52 were drilled for two separate detention ponds located near Hintz Road in previously developed green spaces along the northern perimeter of the site. Boring B-50 encountered topsoil over asphalt pavement extending to a depth of about 4 inches and underlain by aggregate base about 5 inches thick and up to about 9 inches of topsoil in the remaining soil borings. Below the surficial materials, undocumented fill was encountered in all borings except B-46 and B-49. **Table 1** below shows the approximate depths of fill encountered at each soil boring location. The fill stratum was predominantly comprised of sandy clay fill or clay fill mixed with topsoil, gravel or brick fragments, with variable strength and moisture content. More specifically, the clay fill was described as

medium stiff to hard with unconfined compressive strengths ranging from 1.25 to 4.5 tsf and moisture contents ranging from 8.4 to 25 percent.

The native soil was predominantly comprised of sandy clay, silty clay or lean clay with wet granular layers of sand or silt encountered in most boring locations. The native clay soils were described as very medium stiff to hard with unconfined compressive strengths ranging from 0.75 to 4.6 tsf and moisture contents ranging from 7.3 to 22.0 percent. The sand and silt layers interbedded within the clay strata had variable N values ranging from 8 to 66 blows per foot and these layers were generally saturated with groundwater.

South Pond (Borings B-53 to B-56)

Borings B-53 to B-56 were drilled for a separate detention pond located near Palatine Frontage Road in previously developed green spaces along the southern perimeter of the site. The borings were performed within a green space in a developed area of the airport, and the surface was underlain by a layer of topsoil up to about 6 inches in thickness. Below the surficial materials, undocumented fill was encountered in all borings. **Table 1** below shows the approximate depths of fill encountered at each soil boring location. The fill stratum was predominantly comprised of sandy clay fill or clay fill mixed with topsoil, gravel or brick fragments, with variable strength and moisture content. More specifically, the clay fill was described as soft to very stiff with unconfined compressive strengths ranging from 0.5 to 2.4 tsf and moisture contents ranging from 12.4 to 28 percent.

The native soil was predominantly comprised of lean clay with wet granular layers of sand or silt encountered in most boring locations. The native clay soils were described as very medium stiff to hard with unconfined compressive strengths ranging from 0.75 to 6.7 tsf and moisture contents ranging from 7.3 to 22.0 percent. The sand and silt layers interbedded within the clay strata had variable N values ranging from 3 to 57 blows per foot and these layers were generally saturated with groundwater.

TABLE 1: Approximate Elevation and Depth of Fill Material Encountered at each Soil Boring.

Boring No.	Ground El. (ft.)	Native El. (ft.)	Depth of Fill (ft.)		Boring No.	Ground El. (ft.)	Native El. (ft.)	Depth of Fill (ft.)
B-15	635	632	3		B-36	637	632	5
B-16	634	629	5		B-37	637	632	5
B-17	635	630	5		B-38	636	633	3
B-18	634	631	3		B-39	637	634	3
B-19	636	635	1		B-40	636	633	3
B-20	633	630	3		B-41	637	634	3
B-21	634	626	8		B-42	638	632	6
B-22	637	632	5		B-43	637	631	6
B-23	634	629	5		B-44	637	634	3
B-24	634	626	8		B-45	639	631	8
B-25	638	633	5		B-46	643	642	1
B-26	634	629	5		B-47	643	640	3
B-27	635	630	5		B-48	644	641	3
B-28	637	636	1		B-49	644	643	1
B-29	637	629	8		B-50	637	629	8
B-30	636	633	3		B-51	639	634	5
B-31	637	629	8		B-52	639	631	8
B-32	638	635	3		B-53	636	631	5
B-33	640	632	8		B-54	638	630	8
B-34	640	637	3		B-55	638	633	5
B-35	638	630	8		B-56	637	634	3

GROUNDWATER CONDITIONS

At the time of drilling, borehole groundwater was encountered at all boring locations except B-15, B-18, B-19, B-21, B-24, B-50, B-51, B-55, and B-56 at depths ranging from 3 to 19 feet below ground surface, which generally corresponded with the silt and sand layers interstratified within the predominantly clay strata. The presence of shallow perched water at this site should be anticipated, especially after periods of increased precipitation or areas adjacent to utility trenches.

It should be noted that due to the relatively limited stabilization times under which the water levels measurements were made, these observed groundwater level readings may not indicate the long term groundwater level for the site. In addition, groundwater levels fluctuate over time and are influenced by seasonal precipitation and varying permeability characteristics of the subsurface soils.

Estimated Seasonal High Groundwater Elevation

The estimated seasonal high groundwater elevation (ESHGWE) is the subsurface drainage, or the highest level at which the soil has historically been saturated with groundwater. Saturated soils often have decreased strength and are not suitable for infiltration practices. It is important to note that it is difficult to determine ESHWT within the fill layers due to the lack of natural mottling and color present within the fill. **Table 2** contains additional groundwater information and approximate ESHGWE elevations.

TABLE 2: Groundwater Readings and Estimated Seasonal High Groundwater Elevation

Boring No.	Depth of Groundwater (ft.)	Approx. Groundwater El. (ft.)	Elevation of ESHGWE (ft.)		Boring No.	Depth of Groundwater (ft.)	Approx. Groundwater El. (ft.)	Elevation of ESHGWE (ft.)
B-15	Dry	N/A	625		B-36	10	627	632
B-16	8	626	626		B-37	8	629	629
B-17	8	627	627		B-38	5	629	630
B-18	Dry	N/A	626		B-39	3	633	633
B-19	Dry	N/A	628		B-40	8	628	628
B-20	8	625	625		B-41	5	632	632
B-21	Dry	N/A	624		B-42	6	632	632
B-22	6	631	632		B-43	4	633	633
B-23	9	625	625		B-44	6	631	631
B-24	Dry	N/A	626		B-45	17	622	631
B-25	8	630	630		B-46	18	625	630
B-26	8	626	626		B-47	16	627	630
B-27	8	627	627		B-48	15	629	636
B-28	10	627	627		B-49	18	625	636
B-29	10	627	629		B-50	Dry	N/A	629
B-30	10	626	626		B-51	Dry	N/A	631
B-31	8	629	629		B-52	11	628	631
B-32	7	631	631		B-53	8	628	628
B-33	8	632	632		B-54	8	630	630
B-34	13	627	632		B-55	Dry	N/A	630
B-35	8	628	630		B-56	Dry	N/A	628

ENGINEERING RECOMMENDATIONS

Site Preparation and Mass Grading

The site has been subjected to previous development which resulted in the presence of undocumented fill. Based on the variability in unconfined compressive strength and moisture content of samples of the fill, and presence of organics, the undocumented fill is not suitable for support of the raised grade fill or new hangar structures, including the floor slabs and foundations. Site preparation within the building footprints and within a distance of about 10 feet around the perimeter of the buildings should consist of removing the undocumented fill and any remnants of former structures, sorting out any fill with excessive organics or demolition debris and replacing the suitable borrow material under density control. **As a matter of reference, the estimated depth of undocumented fill that will require removal and reworking is summarized in Table 1, above.**

Prior to replacement of suitable borrow material, the base of the excavation should be evaluated by a representative of the Geotechnical Engineer to verify the subgrade is firm and suitable for support of the backfill, and ultimately, the raised grade fill and hangar structures. Any areas of native subgrade that are determined to be unsuitable for support of the new fill should be undercut and stabilized with IDOT CA-1 crushed aggregate. The suitable borrow material should be placed in lifts and compacted to a minimum density of 95 percent of the materials Modified Dry Density (MDD) in accordance with ASTM D 1557.

Conventional ground improvement such as rammed aggregate piers could be considered for this project rather than removal and replacement of the existing undocumented fill. With removal and replacement, the quantity of soil that requires removal is difficult to accurately estimate as is the quantity of unsuitable (unusable) material that will be encountered. In addition, these earthwork operations are best conducted during favorable, dry weather due to the recompaction requirements. The benefit of rammed aggregate piers is the work can be performed during inclement weather without encountering significant delays and the cost to perform the work can be more accurately defined during the planning stages. Rammed aggregate piers or similar ground improvement alternatives are performed by specialty ground improvement contractors on a design build basis. GEOCON would be happy to assist the design team with obtaining coat proposals from specialty foundation contractors capable of performing the work.

Where the undocumented fill is absent from the subgrade, the surficial topsoil should be stripped and stockpiled for later reuse. After the topsoil is stripped, it is recommended that the exposed **native subgrade soil** be thoroughly disked and recompacted and density tests performed to verify the subgrade meets the minimum density requirement of 95% of the material's Modified Dry Density (MDD) determined in accordance with ASTM D-1557. Areas that do not meet the minimum density requirement, or experience rutting or pumping due to equipment loading, should be improved by scarification, air drying and recompaction, or by subgrade improvement methods such as undercutting the softer soils and replacing with suitable compacted aggregate fill consisting of CA-1 capped with CA-6. After the subgrade soils meet the minimum density requirement and are firm and unyielding, deemed suitable for support of the slabs and pavements, low areas may then be raised to the planned subgrade elevation with suitable, properly compacted fill as described in the following section.

As mass grading operations progress, the existing subgrade soils will be susceptible to disturbance from precipitation, construction traffic, and vibrations. Care should be taken to avoid disturbance of the subgrade soil and construction traffic over prepared subgrades should be avoided. If the subgrade soils become disturbed during construction, they should be scarified and recompacted or otherwise stabilized prior to placing new site grading fill or granular subbase material.

Mass grading and earthwork operations should be observed and evaluated on a full-time basis by a representative of the geotechnical engineer.

Controlled Compacted Fill

It is recommended that fill materials used for structural support in the building areas consist of well-graded granular soils or lean clay, free of organic matter or other deleterious material. All structural fill should be placed on firm subgrades as described in the previous Section of the report, and the fill should be placed in lifts and properly compacted. All newly placed fill should be placed in 9 inch or less loose lifts and compacted to at least 95 percent of the maximum dry density as determined by ASTM D-1557 (Modified Proctor) method of test. The fill should be placed within +/- 2 percent of the optimum moisture content value determined by laboratory Proctor testing.

Backfill placed in utility excavations or against foundation walls should consist of a granular material such IDOT CA-6 or CA-7 crushed limestone aggregate. Proper placement and compaction of backfill in these areas is considered essential to reduce the potential for distress of overlying pavements, floor slabs and footings. The placement of backfill against unsupported walls may induce movement, particularly where the backfill is placed on one side of the wall to a higher elevation than the backfill on the other side. Small, hand-operated compactors should be used in confined areas.

The site should be graded to promote runoff of surface water to minimize ponding of precipitation on the prepared subgrades, or in excavations. If the subgrade becomes saturated, or becomes deteriorated from repeated construction traffic, the affected material should be removed, and these materials should be disked and recompacted or undercut and replaced with suitable fill prior to further construction in those areas.

GEOCON recommends that the evaluation of the subgrade and selection of fill materials for various applications should be done in consultation with the geotechnical engineer, and placement of fill for structural applications be monitored and tested by a representative of the geotechnical engineer.

Foundations

Based on the soil conditions encountered during the subsurface investigation, spread footings may be used to support the planned structures. Spread footing foundations may be placed directly on the **native** stiff to hard clay soils, or on **reworked controlled compacted fill** extending to suitable bearing soils, or on subgrades that have been subjected to **ground improvement**. Spread footings can be designed for a net allowable bearing pressure of 3,000 pounds per square foot (psf). The net allowable soil bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation.

Field observation of the foundation subgrade soil should be performed by a representative of the geotechnical engineer at the time of construction. At a minimum, the foundation observation and testing program should include visual inspection of the foundation excavations prior to concrete placement, to verify material type and confirm that any loose or otherwise disturbed soil has been removed from the excavation. Dynamic Cone Penetrometer (DCP) and hand penetrometer testing should be performed to verify that the natural clay soils present within the influence zone of the foundations exhibits a minimum Q_u of 1.5 tsf.

Unsuitable or lower strength bearing soils present within the influence zone of the foundation systems that do not meet the minimum strength requirements described above should be removed and replaced with select granular material, consisting of IDOT CA-1 crushed limestone aggregate capped off with a minimum of 6 inches of CA-6 or equivalent. Fill materials placed below the foundations should extend a

minimum of 8 inches beyond the edge of the footings for each foot of fill placed. Controlled Low Strength Material (CLSM) would provide a viable option to backfill the undercuts, in which case the excavation widths would only need to be widened by 1-foot on each side of the foundation.

It is generally recommended that exterior footings be placed at a minimum depth of 4 feet below the finished grade for frost protection purposes. All footings should be protected from the effects of frost if construction is carried out during winter months.

To avoid disproportionately small footing sizes, it is recommended that continuous footings have a minimum dimension of 18 inches and isolated footings have a minimum dimension of 24 inches. A one-third increase in allowable design bearing pressure could be used in designing footings for added temporary live loads such as those due to wind gusts or seismic activity.

Foundation Settlement

The results of the field and laboratory testing were used to estimate settlement of the proposed foundations. Correlations between physical soil index properties such as moisture content, Standard Penetration N-values, and compressibility parameters, were used in the analysis. It is our opinion that foundation settlement will be within tolerable limits (less than 1 inch) provided the recommended design and construction criteria are followed. It is recommended that the construction of foundations be monitored and tested by a representative of the geotechnical engineer.

Seismic Considerations

The maximum depth of soil exploration for this project was 20 feet below ground surface. Based on the data obtained from the borings within this depth, and knowledge of the area geology, a Seismic Site Classification of "D" appears feasible for this site, in general accordance with the 2021 Edition of the IBC. The following tables contain Site Coefficients and Seismic Design Parameters for the project:

TABLE 3: Values for Short Time Periods

Site Class	S_s	F_a	S_{MS}	S_{DS}
D	0.115g	1.6	0.18g	0.12g

S_s: The maximum considered earthquake ground motion for a short time period at the project area is 11.5% (0.115g) based on Figure 1613.2.1(2) from the IBC code.
F_a: The site coefficient for short time periods from Table 1613.2.3(1) from the IBC code.
S_{MS}: Maximum considered earthquake spectral response accelerations for short time periods.
S_{DS}: Five percent damped design spectral response accelerations for short time periods.

TABLE 4: Values for 1-Second Periods

Site Class	S_1	F_v	S_{M1}	S_{D1}
D	0.065g	2.4	0.16g	0.10g

S_1: The maximum considered earthquake ground motion for a 1-second time period at the project area is 6.5% (0.065g) based on Figure 1613.2.1(4) from the IBC code.
F_V: The site coefficient for 1-second time periods from Table 1613.2.3(2) from the IBC code.
S_{M1}: Maximum considered earthquake spectral response accelerations for 1-second time periods.
S_{D1}: Five percent damped design spectral response accelerations for 1-second time periods.

Lateral Loads

Resistance to lateral loads can be computed as the sum of the passive earth pressure against the soil adjacent to the foundation and the frictional resistance at the base of the foundation. The passive pressure can be computed using the coefficients shown in Table 4, below. For shallow foundations, a coefficient of friction of 0.45 may be used for compacted granular material and 0.35 for foundations supported on clay. For the purposes of resisting lateral loads, passive resistance in the frost zone should be neglected due to potential strength loss during freeze thaw cycles. The capacities provided above are ultimate values, and it is recommended that an appropriate factor of safety be used to arrive at allowable values of lateral resistances.

Below grade walls should be designed to resist lateral earth pressures from the backfill soils. Lateral earth pressures that act on walls vary depending on several factors, including structural wall design, character of fixity and condition and type of wall backfill. Walls are typically designed for one of two conditions: free-standing cantilever, which assumes slight wall rotation or deflection, and "at-rest", which assumes no wall rotation or deflection.

The following table provides the recommended minimum lateral earth pressures for design of below grade walls.

TABLE 5: Lateral Earth Pressure Coefficients

Earth Pressure Condition	Lateral Earth Pressure Coefficient	Equivalent Fluid Pressure* (pcf)	Surcharge Pressure (psf)	Earth Pressure** (psf)
Active (Ka)	Granular: 0.33	40	0.33 (q)	40 (z)
At-Rest (Ko)	Granular: 0.5	60	0.5 (q)	60 (z)
Passive (Kp)	Granular: 3.0	360	--	--

**Assumes soil backfill unit weight of 120 pcf.*

*** Where (q) is a uniform surcharge load applied at the top of the wall (such as additional overburden above the top of the wall), and (z) is the depth to the point of action of the lateral pressure.*

The values in the above table do not include factors of safety, which should be applied to passive pressures that are relied on to resist applied loads. The surcharge pressure should be used to estimate lateral loads imposed on the walls from materials, overburden soils, structures, equipment, traffic loads and construction equipment located within a horizontal distance from the wall equal to the depth of the wall below grade. Potential surcharge loads for the life of the wall should be accounted for in the wall design.

If a permanent drainage system is not included in the design, hydrostatic pressures should be included in the wall design. For combined hydrostatic and lateral earth forces, equivalent fluid pressures of 81 and 91 pcf should be used for the active and at-rest conditions, respectively.

Floor Slabs-on-Grade

Floor slab subgrades should be prepared during mass grading in accordance with the recommendations presented in previous sections of this report. It is anticipated that some amount of time will pass

between mass grading and final preparation of the floor slab subgrade, any areas that experience deterioration from weather or repeated construction traffic should be repaired by disking and recompaction, or by undercutting and replacement with suitable backfill.

Beneath slab-on-grade areas, a minimum of 6 inches of aggregate is recommended for fine grading and to provide a capillary cut-off. Floor slabs should be isolated from walls and foundations to minimize the risk of cracking due to differential movements between the walls and the floor slab.

Slabs should be at least nominally reinforced with steel welded wire mesh to help reduce cracking and maintain the structural integrity of the slab. Slab reinforcement, joint layout and concrete slab thickness design should be performed by a qualified structural engineer with consideration given to the expected higher loading associated with the expected use of the building, drainage, and subgrade conditions.

The floor slab subgrade and aggregate base materials should be placed and compacted to a minimum of 95 percent of the Modified Proctor test (ASTM D-1557) maximum dry density. Floor slabs can be designed using a vertical modulus of subgrade reaction of 125 pounds per cubic inch (pci).

Detention Areas

The proposed detention ponds are planned to be constructed just south of the new hangars (B-36 – B-44), along the north side of East Hintz Road between South Wolf Road and South Milwaukee Avenue (B-45 – B-49), near the corner of East Hintz Road and South Milwaukee Avenue (B-50 – B-52), and at the south end of the property near Palatine Frontage Road (B-53 – B-56). The subsurface conditions at these borings consisted of a layer of sandy clay fill with variable organics and occasional debris near the surface, and predominantly clayey soils extending from below the fill to variable depths with interbedded sandy strata. The upper fill zone, consisting predominantly of dark brown to black sandy clay fill, was generally very soft to hard with moisture contents ranging between about 8.4 to 28 percent and organic content between 2.3 and 6.8 percent.

It is anticipated that the soils excavated from the detention areas could be reused across the site as structural fill. Moisture conditioning should be anticipated for the soils due to the moderate to high moisture contents of the sandy clay fill and native sand and clayey soils. The moisture conditioning may include disking and drying, or more likely, some type of chemical treatment such as cement stabilization will be required to render these soils suitable for re-use as controlled compacted fill. Dewatering may be necessary if groundwater is present at the bottom of the excavation of the pond.

FAARFIELD Pavement Design and Pavement Subgrade Preparation

Shannon and Wilson, Inc. was retained to perform the analysis and design of the associated pavement sections. Please refer to their report and exhibits provided in **Appendix II.** Subgrade preparation in pavement areas should be performed in accordance with the recommendations provided in Appendix II.

CONSTRUCTION CONSIDERATIONS

Groundwater Control

Groundwater and surface water infiltration may be encountered during excavation of the foundations and utilities, especially if construction occurs during or after periods of increased precipitation. It is anticipated that dewatering can be accomplished using a series of sump pumps and pits to dewater the excavations for the greater portion of the site, but more extensive dewatering may be required for deeper excavations where water bearing sand layers are encountered. All sumps should be properly filtered to avoid pumping soil fines.

When designing site drainage patterns, site runoff should be diverted away from the foundations and directed towards on-site detention areas, or storm sewer systems. Such measures reduce the potential for softening and possible erosion of the foundation and pavement subgrade soils. It is especially important that water not be allowed to collect next to the building foundations.

Excavations

All excavations should comply with the requirements of OSHA 29CFR, Part 1926, Subpart P, "Excavations," regarding excavation and trench safety, as well as other applicable codes. This document states that excavation safety is the sole responsibility of the contractor and accordingly reference to this OSHA requirement should be included in the project specifications. Excavation slopes shall in no case be steeper than those specified by OSHA, and all excavations should be monitored by a competent person, as defined by the OSHA standard. Appropriate shoring or sloping techniques should be used to prevent cave-ins.

Excavations near existing foundations, pavements or utilities should be made with caution as disturbance within foundation influence zones that support adjacent structures could result in excessive settlement. If the proposed construction will extend into the influence zone of the existing foundations, a shoring or underpinning system may be required to protect or support the adjacent structures.

GENERAL COMMENTS

This geotechnical exploration and foundation analysis has been conducted to aid in the evaluation of the foundation conditions on the subject site. The recommendations presented herein are based on the available soil information obtained and the design information provided. Any changes in the soil conditions encountered during construction, design, or building locations should be brought to the attention of the soils engineer to determine if modifications in the recommendations are required. The final design plans and specifications should also be reviewed by the soils engineer to determine that the recommendations presented herein have been interpreted and implemented as intended. It is recommended that the earthwork and foundation operations be monitored by the Geotechnical Engineer, to test and evaluate the bearing capacities, and the selection, placement and compaction of controlled fills.

This geotechnical study has been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations, and opinions contained herein have been promulgated in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology. No other representations, expressed or implied, and no warranty or guarantee is included or intended in this report.

APPENDIX I

Site Vicinity Map
Boring Location Diagram
Soil Boring Logs
General Notes

APPENDIX II

Laboratory Test Results

APPENDIX III

FAARFIELD Pavement Design

APPENDIX I

GEOCON PROFESSIONAL SERVICES
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BORING LOCATION DIAGRAM
Chicago Executive Airport
Home Base Campus – Additional Borings
1089-1097 South Milwaukee Avenue
Wheeling, Illinois 60090

PROJECT NO. 26-G0857

DATE: July 2026

Schedule of Soil Borings

B-16, B-17, B-19, B-21, B-23, B-24, and B-28 to B-33: **30-ft**.

B-15, B-18, B-20, B-22, B-25, B-26, B-27, and B-34 to B-44: **15-ft.**

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BORING LOCATION DIAGRAM
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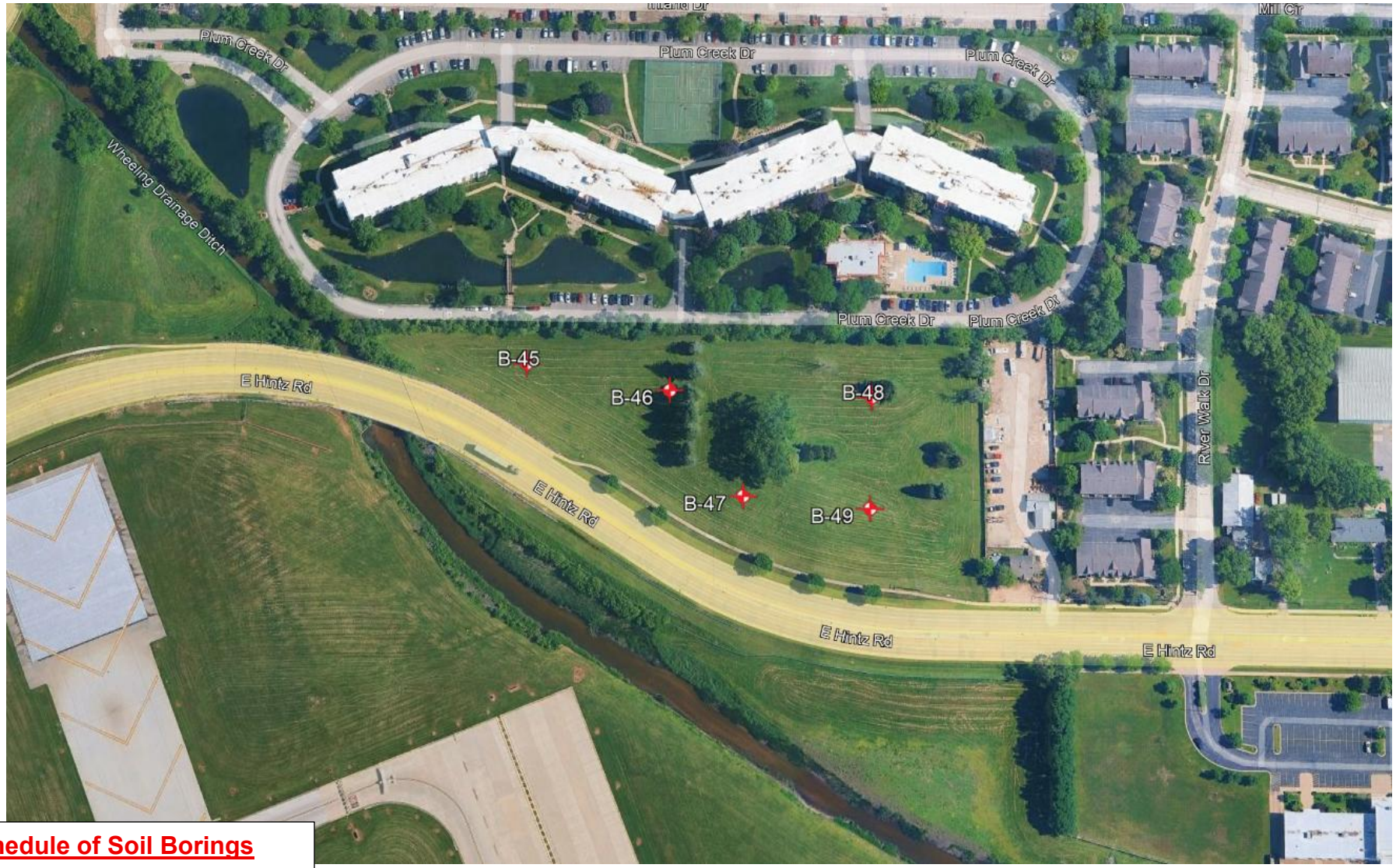
1089-1097 South Milwaukee Avenue
Wheeling, Illinois 60090

PROJECT NO. 26-G0857

DATE: July 2026



Schedule of Soil Borings

B-45 to B-49: **20-ft**.

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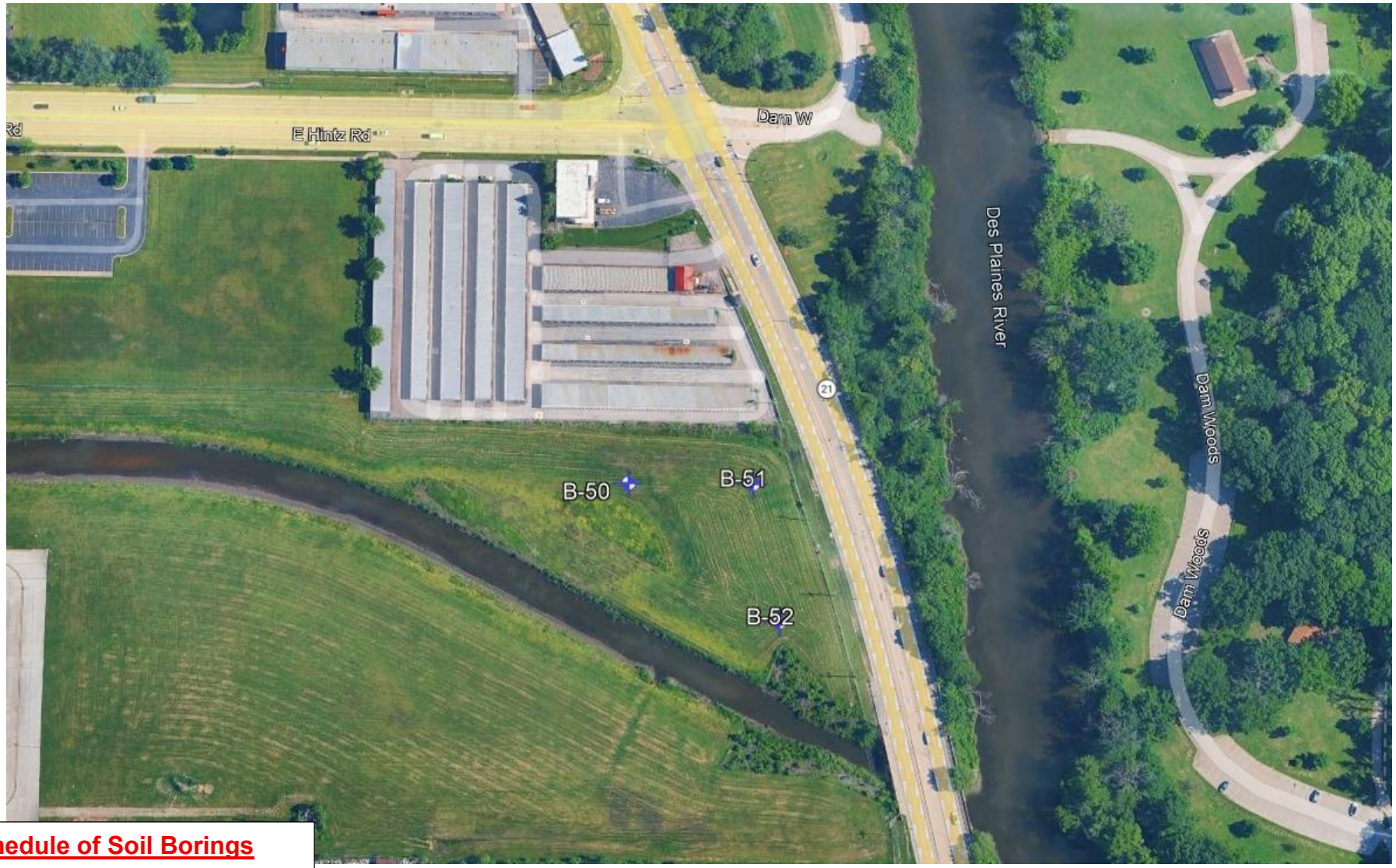
Wheeling, Illinois 60090

PROJECT NO. 26-G0857

DATE: July 2026



Schedule of Soil Borings

B-50, B-51, B-52: **15-ft**.

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BORING LOCATION DIAGRAM
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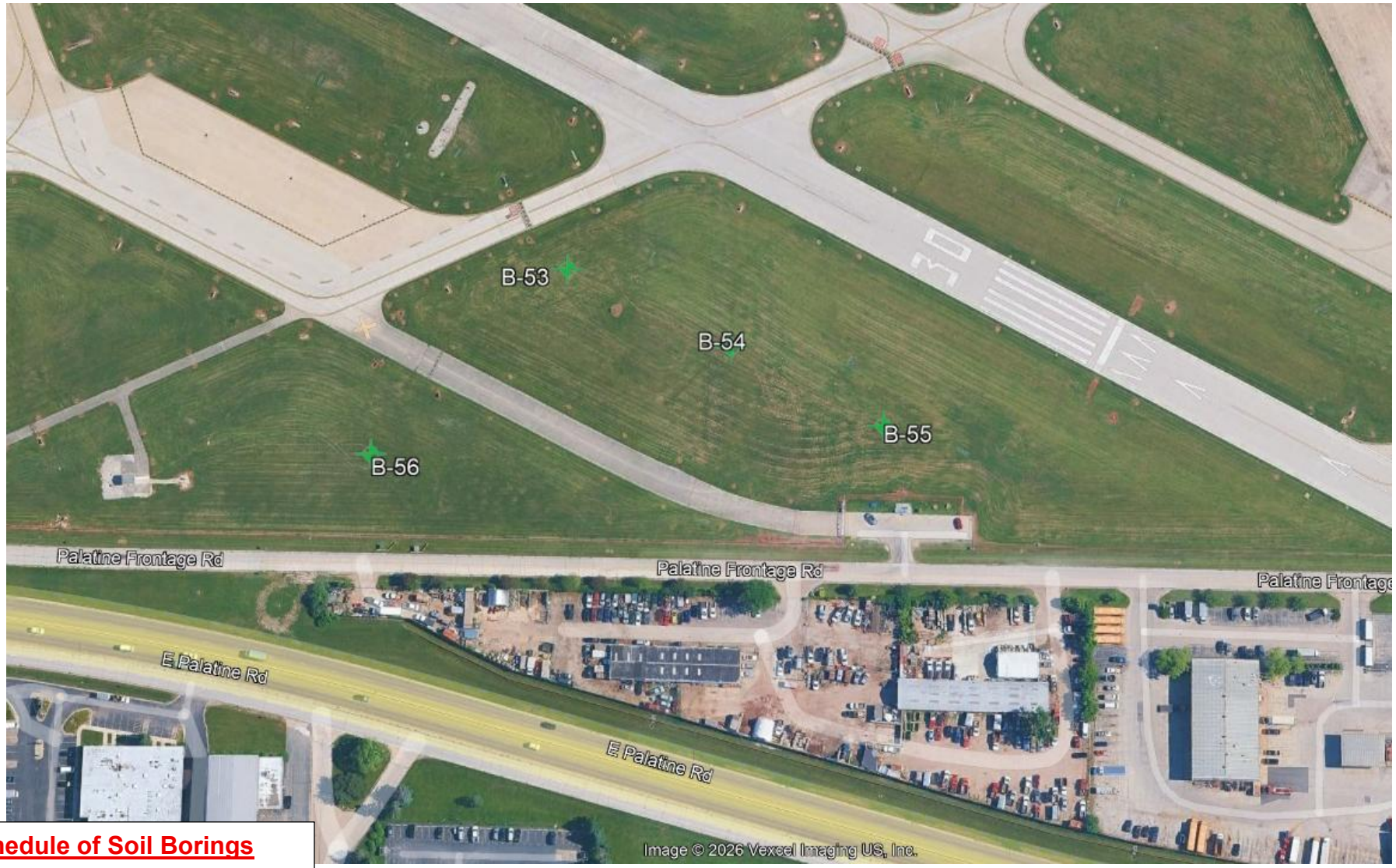
PROJECT NO. 26-G0857

DATE: July 2026



Schedule of Soil Borings

B-53 to B-56: **10-ft**.

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1089-1097 South Milwaukee Avenue
Wheeling, Illinois 60090

PROJECT NO. 26-G0857

DATE: July 2026

BORING NO. B-15

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	634.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments very stiff	SS 1	33	5-5-8 (13)	2.75		23.8		5.9			
	632.0		brown to gray LEAN CLAY trace gravel, sand moist medium stiff to very stiff Noted: brown sand seam	SS 2	56	4-6-5 (11)	0.75		14.0					
5				SS 3	67	4-7-9 (16)	4.0		17.3					
				SS 4	56	7-7-9 (16)	1.75		17.5					
10	625.0		gray SILTY CLAY trace gravel moist stiff	SS 5	78	5-6-7 (13)	1.5		17.0					
	622.0		gray LEAN CLAY trace gravel moist very stiff	SS 6	100	3-3-4 (7)	2.0	2.1	13.7					
15	620.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 635 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Ground Water Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Dry Upon Completion, Cave at 5 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-16

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/10/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	633.3		9" TOPSOIL											
			brown SANDY CLAY FILL trace gravel moist medium stiff	SS 1	44	9-7-7 (14)	0.75		13.4					
5	629.0			SS 2	67	4-6-7 (13)	0.5		20.3					
			gray LEAN CLAY trace gravel moist hard	SS 3	78	4-6-13 (19)	4.5+	4.8	20.7					
	626.0		gray SILTY SAND moist medium dense	SS 4	100	5-7-9 (16)			16.7					
10	624.0		gray SILT moist medium dense	SS 5	100	8-7-6 (13)			13.0					
	621.0		gray LEAN CLAY trace gravel moist very stiff	SS 6	100	3-3-6 (9)	2.0		16.0					
15														
	617.0		gray GRAVELY SAND wet medium dense to very dense	SS 7	17	7-14-11 (25)			16.3					
20														
				SS 8	0	15-10-12 (22)								
25														
				SS 9	17	15-37-26 (63)								
30	604.0		Bottom of borehole at 30.0 feet.											

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 634 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 8.00 ft / Elev 626.00 ft
- **AT END OF DRILLING** 8.00 ft / Elev 626.00 ft
- **AFTER DRILLING** 8.00 ft / Elev 626.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-17

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	634.5		6" TOPSOIL											
			dark brown to black SANDY CLAY trace gravel moist very stiff	SS 1	17	4-4-4 (8)	2.5		17.8					
	632.0		brown SANDY CLAY FILL trace gravel moist very stiff	SS 2	28	3-2-2 (4)	2.0		18.5					
5	630.0		gray LEAN CLAY trace gravel moist very stiff	SS 3	67	5-7-9 (16)	2.5		26.7					
	627.0		gray SILTY SAND trace gravel wet medium dense	SS 4	56	6-7-11 (18)			17.8					
10				SS 5	100	8-10-13 (23)			13.2					
	622.0		gray LEAN CLAY trace gravel moist stiff to hard	SS 6	67	6-5-5 (10)	1.0		14.5					
15														
				SS 7	100	6-9-14 (23)	4.5+	7.2	13.4					
20														
				SS 8	89	5-10-13 (23)	4.5+	8.4	13.7					
25														
				SS 9	67	10-16-24 (40)	4.5+	8.9	14.3					
30	605.0		Bottom of borehole at 30.0 feet.											

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 635 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING 8.00 ft / Elev 627.00 ft

AT END OF DRILLING 8.00 ft / Elev 627.00 ft

AFTER DRILLING --- Cave at 7 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-18

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	633.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist very stiff	SS 1	56	3-3-4 (7)	2.5	2.8	16.2					
	631.0		brown to gray POORLY GRADED SAND trace gravel, clay moist to wet loose to medium dense	SS 2	78	3-3-4 (7)			8.4					
5				SS 3	56	4-5-7 (12)			16.3					
	626.0		gray LEAN CLAY trace gravel moist stiff to very stiff	SS 4	78	5-4-5 (9)	2.0	2.0	20.6					
10				SS 5	67	2-3-5 (8)	1.75	1.8	14.8					
15	619.0			SS 6	100	5-7-9 (16)	2.0	2.2	17.2					

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 634 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Ground Water Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Dry Upon Completion

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-19

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	635.5		6" TOPSOIL											
			brown to gray LEAN CLAY trace gravel moist very stiff to hard	SS 1	33	3-3-3 (6)	3.0		12.7					
5				SS 2	67	3-4-5 (9)	4.5		19.7					
				SS 3	22	4-7-8 (15)	3.5		15.7					
	628.0		gray LEAN CLAY trace gravel moist stiff to hard	SS 4	89	5-8-8 (16)	3.0	3.2	10.9					
10				SS 5	100	3-3-4 (7)	1.5	1.6	13.3					
				SS 6	100	3-3-4 (7)	1.0	1.2	14.2					
15														
				SS 7	100	4-6-10 (16)	2.75	3.0	16.0					
20														
				SS 8	100	6-7-12 (19)	4.5+	6.5	13.2					
25														
				SS 9	100	8-19-22 (41)	4.5		12.6					
30	606.0		Bottom of borehole at 30.0 feet.											

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 636 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Ground Water Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Dry Upon Completion, Cave at 23 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-20

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	632.3		9" TOPSOIL											
			brown to gray SANDY CLAY FILL trace gravel moist stiff	SS 1	78	2-3-3 (6)	1.5		18.9					
	630.0		gray LEAN CLAY trace gravel moist very stiff	SS 2	89	4-4-7 (11)	3.5		19.9					
5	628.0		gray SILTY CLAY trace gravel moist very stiff	SS 3	78	2-4-7 (11)	3.0	3.2	13.0					
	625.0	▼	gray LEAN CLAY trace gravel moist stiff to hard	SS 4	100	2-3-4 (7)	1.5	1.6	14.1					
10				SS 5	100	3-4-7 (11)	3.5	3.4	13.5					
				SS 6	100	5-6-8 (14)	4.5+	5.6	14.4					
15	618.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 633 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 8.00 ft / Elev 625.00 ft

▼ **AT END OF DRILLING** 8.00 ft / Elev 625.00 ft

AFTER DRILLING --- Cave at 10 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-21

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/10/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	633.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments, glass moist stiff to very stiff	SS 1	33	5-5-7 (12)	2.5		11.9		5.8			
				SS 2	17	3-3-4 (7)	3.5		16.7		3.4			
5				SS 3	22	2-2-3 (5)	1.0		25.6		5.7			
	626.0													
			brown LEAN CLAY trace gravel moist stiff	SS 4	78	2-2-3 (5)	1.5		20.5			25	17	8
10	624.0													
			gray LEAN CLAY trace gravel moist stiff to very stiff	SS 5	100	3-3-4 (7)	1.5		13.1					
				SS 6	100	3-3-4 (7)	4.0	3.8	14.9					
15														
	617.0													
			gray SILT moist dense to very dense	SS 7	100	15-18-22 (40)			9.4					
20														
				SS 8	100	12-16-21 (37)			13.9					
25														
				SS 9	100	17-35-49 (84)			13.0					
30	604.0													

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 634 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Groundwater Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Cave at 10 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-22

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.5		6" TOPSOIL											
			brown to gray SANDY CLAY FILL trace gravel moist very stiff	SS 1	67	5-5-8 (13)	3.5		13.7					
				SS 2	78	10-8-4 (12)	2.75		12.3					
5	632.0		gray LEAN CLAY trace gravel moist very stiff											
				SS 3	100	4-7-8 (15)	3.5	3.6	17.4					
	629.0		gray SILT trace gravel moist medium dense											
				SS 4	100	7-9-10 (19)			14.8					
10	627.0		gray LEAN CLAY trace gravel moist stiff to very stiff											
				SS 5	100	7-7-9 (16)	2.0	2.4	16.0					
			Noted: gray sand seam, wet											
				SS 6	56	4-5-6 (11)	1.5	1.6	13.2					
15	622.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING 6.00 ft / Elev 631.00 ft

AT END OF DRILLING 6.00 ft / Elev 631.00 ft

AFTER DRILLING --- Cave at 5 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-23

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	633.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist stiff	SS 1	67	2-3-5 (8)	1.75	1.9	21.8		2.9			
5	629.0			SS 2	67	3-4-6 (10)	1.5		21.7		3.0			
			brown to gray LEAN CLAY trace gravel moist vey stiff to hard	SS 3	100	3-6-9 (15)	4.5		19.5					
10	624.0		Noted: gray sand seam, wet	SS 4	100	4-7-8 (15)	3.0	2.7	18.5					
			gray SILTY CLAY trace gravel moist medium stiff to very stiff	SS 5	100	4-8-9 (17)	3.0		12.4					
15				SS 6	100	2-3-5 (8)	0.75	0.9	16.1					
	617.0													
			gray LEAN CLAY trace gravel moist stiff to hard	SS 7	100	6-10-14 (24)	4.5	4.9	13.6					
20														
25				SS 8	89	4-5-7 (12)	2.0	1.8	15.4					
30	604.0		Noted: gray sand seam, wet	SS 9	100	9-12-10 (22)	4.5		13.3					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 634 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING 9.00 ft / Elev 625.00 ft

AT END OF DRILLING 9.00 ft / Elev 625.00 ft

AFTER DRILLING --- Cave at 7 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-24

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	633.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist very stiff	SS 1	17	6-7-7 (14)	3.5		16.2		4.7			
				SS 2	17	4-5-5 (10)	2.5		20.8		8.5			
5				SS 3	22	2-2-3 (5)	2.5		24.3		1.4			
	626.0		brown to gray LEAN CLAY trace gravel moist stiff to very stiff	SS 4	67	2-2-2 (4)	1.0	1.0	28.6					
10				SS 5	100	3-3-4 (7)	2.0		16.6					
				SS 6	78	4-4-6 (10)	3.5	3.6	14.4					
15	617.0		gray SILT moist dense to very dense											
				SS 7	78	20-26-26 (52)			12.4					
20														
				SS 8	44	15-20-23 (43)			13.8					
25														
				SS 9	100	19-25-50/1"			13.2					
30	604.0		Bottom of borehole at 30.0 feet.											

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 634 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Groundwater Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Cave at 19 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-25

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	637.7		4" ASPHALT											
	637.3		4" SAND AND GRAVEL FILL											
			dark brown to black SANDY CLAY FILL trace gravel moist medium stiff	SS 1	50	3-4-4 (8)	0.75		15.6					
	635.0		gray GRAVEL FILL moist medium dense	SS 2	22	6-10-10 (20)								
5	633.0		brown to gray SILTY SAND trace gravel moist to wet medium dense	SS 3	67	4-7-6 (13)			12.4					
				SS 4	56	10-12-8 (20)			11.3					
10				SS 5	0	10-18-9 (27)								
	625.0		gray LEAN CLAY trace gravel moist hard	SS 6	83	4-8-9 (17)	4.5+	4.7	12.2					
15	623.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 638 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 8.00 ft / Elev 630.00 ft
- **AT END OF DRILLING** 8.00 ft / Elev 630.00 ft
- **AFTER DRILLING** 8.00 ft / Elev 630.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-26

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	633.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist very stiff to hard	SS 1	28	5-3-5 (8)	4.5		16.0		6.3			
				SS 2	11	3-2-3 (5)	2.5		15.0		6.4			
5	629.0		brown to gray SILTY CLAY trace gravel, root fragments moist medium stiff											
				SS 3	33	2-2-4 (6)	0.75		22.4					
	626.0		▼											
			black CLAY trace gravel moist medium stiff	SS 4	67	1-1-1 (2)	1.0	1.0	39.8		7.1			
10														
	623.0													
			dark gray to gray LEAN CLAY trace gravel moist medium stiff	SS 5	89	2-2-3 (5)	0.5	0.6	20.8					
				SS 6	100	3-4-4 (8)	1.0	1.0	13.6					
15	619.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 634 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 8.00 ft / Elev 626.00 ft

▼ **AT END OF DRILLING** 8.00 ft / Elev 626.00 ft

AFTER DRILLING --- Cave at 4 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-27

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	634.0		12" ASPHALT											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist soft	SS 1	33	2-1-2 (3)	0.5		20.9		5.7			
	632.0		brown SANDY CLAY FILL trace gravel moist stiff	SS 2	56	2-2-2 (4)	1.5		15.8					
5	630.0		brown to gray LEAN CLAY trace gravel moist medium stiff	SS 3	89	2-3-3 (6)	0.5	0.5	26.7					
	627.0		brown to gray CLAYEY SAND trace gravel wet loose	SS 4	67	2-3-5 (8)			17.4					
10	625.0		gray LEAN CLAY trace gravel moist stiff to very stiff	SS 5	89	5-5-6 (11)	3.25	3.0	13.6					
				SS 6	89	2-3-5 (8)	1.25	1.4	14.4					
15	620.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 635 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 8.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 8.00 ft / Elev 627.00 ft
- **AFTER DRILLING** 8.00 ft / Elev 627.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-28

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.7		4" ASPHALT											
	636.0		8" SAND AND GRAVEL FILL											
			brown POORLY GRADED SAND trace gravel, clay moist loose to medium dense	SS 1	89	6-10-12 (22)			8.0					
5				SS 2	100	4-3-4 (7)			17.6					
	631.0		brown to gray LEAN CLAY trace gravel, sand moist hard	SS 3	67	4-4-4 (8)	4.5+	5.8	25.4					
10	627.0	▽		SS 4	100	6-4-3 (7)	4.25	4.2	18.6					
			gray SILT wet medium dense	SS 5	89	4-8-4 (12)			19.4					
	624.0	▼	gray LEAN CLAY trace gravel moist very stiff	SS 6	100	6-8-8 (16)	2.5	2.5	13.4					
15	620.0		gray POORLY GRADED SAND with gravel wet medium dense	SS 7	100	5-11-12 (23)			13.4					
20	615.0		gray LEAN CLAY trace gravel moist hard	SS 8	100	6-8-16 (24)	4.5+	10.0	13.1					
25														
30	607.0			SS 9	100	6-6-10 (16)	4.5+	6.4	13.7					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 10.00 ft / Elev 627.00 ft

▼ **AT END OF DRILLING** 13.00 ft / Elev 624.00 ft

▼ **AFTER DRILLING** 13.00 ft / Elev 624.00 ft Cave at 20

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-29

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.7		4" ASPHALT											
	636.0		8" SAND AND GRAVEL FILL											
			brown and gray SANDY CLAY FILL trace gravel, root fragments moist medium stiff to stiff	SS 1	100	4-2-5 (7)	0.5	0.8	21.4					
5				SS 2	100	1-3-3 (6)	1.5		15.8					
				SS 3	100	1-8-10 (18)	1.0	1.0	19.6					
	629.0		gray LEAN CLAY trace gravel											
10	627.0		moist very stiff	SS 4	100	3-5-7 (12)	2.5	2.5	20.4					
			gray SILT wet	SS 5	83	6-6-13 (19)			19.1					
	624.0		medium dense gray LEAN CLAY trace gravel	SS 6	100	3-7-7 (14)	1.5	1.8	14.7					
15			moist stiff											
	620.0		gray SILT wet											
20			medium dense to dense	SS 7	22	7-10-20 (30)			16.1					
25				SS 8	100	4-20-25 (45)			23.5					
	610.0		gray LEAN CLAY trace gravel											
30	607.0		moist hard	SS 9	100	8-12-14 (26)	4.5+	6.4	12.4					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 10.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 17.00 ft / Elev 620.00 ft
- **AFTER DRILLING** 17.00 ft / Elev 620.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-30

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	635.5		6" TOPSOIL											
			brown SANDY CLAY FILL trace gravel moist	SS 1	100	1-3-3 (6)	3.5		16.1					
	633.0		very stiff											
5			brown SILTY SAND moist loose	SS 2	100	2-2-3 (5)			23.6					
	630.0		brown to gray POORLY GRADED SAND trace gravel, clay moist to wet medium dense to very dense	SS 3	67	2-7-12 (19)			10.0					
10				SS 4	72	4-17-18 (35)			12.0					
				SS 5	100	15-45-30 (75)			12.7					
15				SS 6	56	8-8-8 (16)			17.7					
	619.0		gray LEAN CLAY trace gravel moist very stiff to hard											
20				SS 7	100	8-10-17 (27)	4.5+	5.2	15.2					
25				SS 8	78	6-8-14 (22)	3.5	3.4	14.8					
30	606.0			SS 9	100	12-14-20 (34)	4.5+	7.0	14.1					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 636 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 10.00 ft / Elev 626.00 ft
- **AT END OF DRILLING** 10.00 ft / Elev 626.00 ft
- **AFTER DRILLING** 10.00 ft / Elev 626.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-31

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.5	6" TOPSOIL											
		brown to black SANDY CLAY FILL trace gravel moist soft to medium stiff	SS 1	39	3-4-5 (9)	1.0		20.3		3.8			
5			SS 2	89	2-2-2 (4)	0.5	0.3	18.8					
			SS 3	56	3-4-5 (9)	0.25		19.7					
	629.0												
		gray LEAN CLAY trace gravel moist hard	SS 4	56	4-6-8 (14)	4.5+	6.6	15.0					
10	627.0												
		gray SILT trace gravel wet medium dense	SS 5	78	8-10-12 (22)			13.9					
			SS 6	56	4-7-4 (11)			18.7					
15													
	620.0												
		gray LEAN CLAY trace gravel moist stiff to hard	SS 7	100	4-5-8 (13)	1.5	1.8	13.9					
20													
			SS 8	44	10-11-14 (25)	4.5+	7.0	13.3					
25													
	610.0												
		gray SILTY CLAY trace gravel moist hard	SS 9	78	10-12-15 (27)	4.5+	5.2	16.1					
30	607.0												

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 10.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 8.00 ft / Elev 629.00 ft
- **AFTER DRILLING** 8.00 ft / Elev 629.00 ft Cave at 9 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

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22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-32

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	637.3		9" TOPSOIL											
			brown to dark brown SANDY CLAY FILL trace gravel moist	SS 1	100	1-2-1 (3)	0.5		20.3					
	635.0		soft											
5			brown POORLY GRADED SAND trace gravel moist to wet	SS 2	78	2-3-8 (11)			13.8					
			medium dense	SS 3	100	9-12-13 (25)			12.1					
	630.0		gray LEAN CLAY trace gravel											
10	628.0		moist	SS 4	100	4-9-9 (18)	3.0		13.1					
			very stiff gray SILTY SAND trace gravel	SS 5	100	3-8-14 (22)			19.9					
	625.0		wet medium dense											
15			gray SILT wet	SS 6	100	6-6-7 (13)			22.7					
	621.0		medium dense gray LEAN CLAY trace gravel											
20			moist very stiff to hard	SS 7	100	4-10-9 (19)	2.5	2.6	13.5					
25				SS 8	100	4-7-7 (14)	4.5+	5.7	14.5					
	611.0		gray SILTY CLAY trace gravel											
30	608.0		moist hard	SS 9	100	6-6-11 (17)	4.5+	9.2	14.9					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 638 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 7.00 ft / Elev 631.00 ft
- **AT END OF DRILLING** 7.00 ft / Elev 631.00 ft
- **AFTER DRILLING** 7.00 ft / Elev 631.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-33

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	639.5		6" SAND AND GRAVEL FILL											
			brown SILTY SAND FILL trace gravel moist	SS 1	44	5-4-4 (8)			7.6					
	637.0		loose											
5			dark brown to brown SANDY CLAY FILL trace gravel, root fragments moist medium stiff to stiff	SS 2	44	2-3-3 (6)	0.5		20.8					
				SS 3	100	7-7-7 (14)	1.5		15.4					
	632.0		▼											
			brown to gray POORLY GRADED SAND trace gravel wet	SS 4	100	9-9-12 (21)			11.2					
10	630.0		medium dense											
			gray LEAN CLAY trace gravel moist	SS 5	100	8-10-13 (23)	3.0	3.1	21.1					
	627.0		very stiff											
15			gray SILT wet dense	SS 6	100	7-21-15 (36)			16.1					
	623.0		gray LEAN CLAY trace gravel moist hard	SS 7	100	3-6-9 (15)	4.5+	4.6	13.0					
20														
	617.0		gray SILT wet dense to very dense	SS 8	78	8-19-25 (44)			13.8					
25														
				SS 9	100	11-53-47 (100)			13.1					
30	610.0													

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 640 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- ▽ **AT TIME OF DRILLING** 8.00 ft / Elev 632.00 ft
- ▼ **AT END OF DRILLING** 8.00 ft / Elev 632.00 ft
- ▼ **AFTER DRILLING** 8.00 ft / Elev 632.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-34

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	639.7		4" SAND AND GRAVEL FILL											
			brown to gray SANDY CLAY FILL trace gravel moist soft	SS 1	44	3-2-3 (5)	0.5		12.5					
	637.0		brown LEAN CLAY trace gravel moist very stiff to hard	SS 2	0	3-2-3 (5)	3.5	3.5	16.8					
5				SS 3	89	4-6-7 (13)	4.5+	5.4	17.9					
	632.0		gray LEAN CLAY trace gravel moist very stiff	SS 4	100	6-10-12 (22)	3.5	3.6	18.9					
10				SS 5	100	8-12-11 (23)	3.0	2.9	15.1					
	627.0		gray SILT wet medium dense	SS 6	100	5-7-8 (15)								
15	625.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 640 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 13.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 13.00 ft / Elev 627.00 ft
- **AFTER DRILLING** 13.00 ft / Elev 627.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-35

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	637.5		6" SAND AND GRAVEL FILL											
			brown CLAYEY SAND FILL with gravel moist loose to dense	SS 1	17	8-5-9 (14)			12.6					
				SS 2	56	2-2-6 (8)			12.8					
5				SS 3	28	7-25-23 (48)			6.8					
	630.0		▽											
			gray LEAN CLAY trace gravel moist stiff to very stiff	SS 4	44	4-8-9 (17)	1.5		15.7					
10			▼	SS 5	78	5-8-12 (20)	3.5	3.4	16.4					
	625.0													
			gray SILTY CLAY with sand trace gravel moist very stiff	SS 6	100	11-15-15 (30)	2.0	2.2	17.9			18	14	4
15	623.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 638 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 8.00 ft / Elev 630.00 ft

▼ **AT END OF DRILLING** 10.00 ft / Elev 628.00 ft

▼ **AFTER DRILLING** 10.00 ft / Elev 628.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

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22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-36

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.7		4" ASPHALT											
	636.3		5" SAND AND GRAVEL FILL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist stiff to very stiff	SS 1	33	3-8-9 (17)	1.0		18.1		2.3			
				SS 2	78	6-5-6 (11)	3.0		14.6		6.8			
5	632.0		gray LEAN CLAY trace gravel moist medium stiff	SS 3	78	3-3-2 (5)	1.0		32.7					
				SS 4	89	3-3-5 (8)	1.0	0.9	27.5					
10	627.0		gray POORLY GRADED SAND trace gravel wet medium dense	SS 5	67	4-8-11 (19)			19.2					
				SS 6	50	4-6-6 (12)			16.0					
15	622.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 10.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 10.00 ft / Elev 627.00 ft
- **AFTER DRILLING** 10.00 ft / Elev 627.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-37

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.7		4" ASPHALT											
	636.3		5" SAND AND GRAVEL FILL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist medium stiff to very stiff	SS 1	50	3-6-6 (12)	3.0		11.3					
				SS 2	33	2-2-2 (4)	1.0		19.1					
5	632.0		brown LEAN CLAY trace gravel moist medium stiff Noted: sand seam, wet	SS 3	44	2-4-7 (11)	0.75		18.5					
				SS 4	67	5-5-3 (8)	1.5		14.1					
10	627.0		gray SILT wet medium dense	SS 5	78	6-10-8 (18)			14.7					
	624.0		gray LEAN CLAY trace gravel moist stiff	SS 6	100	3-3-4 (7)	2.0	2.0	11.9					
15	622.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 10.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 8.00 ft / Elev 629.00 ft
- **AFTER DRILLING** 8.00 ft / Elev 629.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-38

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/11/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	635.7		4" ASPHALT											
	635.0		8" SAND AND GRAVEL FILL											
			brown to gray SANDY CLAY FILL trace gravel moist very stiff	SS 1	100	4-6-8 (14)	2.5	2.6	15.3					
	633.0		brown LEAN CLAY trace gravel moist stiff	SS 2	89	4-4-8 (12)	1.25	1.2	22.9					
5			▽ Noted: brown sand seam, wet											
	630.0		gray LEAN CLAY trace gravel moist very stiff to hard	SS 3	100	4-8-10 (18)	3.0	3.4	26.2					
				SS 4	100	6-8-9 (17)	4.5+	7.0	18.9					
10				SS 5	100	3-4-4 (8)	2.5	2.6	20.4					
	623.0		gray POORLY GRADED SAND trace gravel wet	SS 6	100	4-10-11 (21)			18.7					
15	621.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 636 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 5.00 ft / Elev 631.00 ft

▼ **AT END OF DRILLING** 7.00 ft / Elev 629.00 ft

▼ **AFTER DRILLING** 7.00 ft / Elev 629.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-39

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.5		6" TOPSOIL											
			brown SANDY CLAY FILL trace gravel moist very soft	SS 1	78	2-1-1 (2)		0.2	23.8					
	634.0		brown POORLY GRADED SAND trace gravel wet very stiff	SS 2	89	2-4-5 (9)			16.2					
5				SS 3	89	8-15-12 (27)			9.6					
				SS 4	11	1-2-2 (4)			19.1					
10	627.0		gray LEAN CLAY trace gravel moist very loose to medium dense	SS 5	100	4-3-3 (6)	4.0	4.0	15.2					
				SS 6	44	4-8-8 (16)	2.5		14.4					
15	622.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 3.00 ft / Elev 634.00 ft
- **AT END OF DRILLING** 4.00 ft / Elev 633.00 ft
- **AFTER DRILLING** 4.00 ft / Elev 633.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-40

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	635.7		4" ASPHALT											
	635.3		5" SAND AND GRAVEL FILL											
			dark brown to black SANDY CLAY FILL trace gravel moist very stiff	SS 1	33	6-7-9 (16)	2.0	2.0	13.0					
	633.0		brown SILTY SAND trace clay moist loose	SS 2	67	3-5-5 (10)			16.7					
5	631.0		brown to gray LEAN CLAY trace gravel moist stiff to very stiff	SS 3	78	3-4-5 (9)	2.5	2.6	26.8					
				SS 4	67	5-5-5 (10)	1.5		23.4					
10	626.0		gray POORLY GRADED SAND trace gravel wet medium dense	SS 5	39	5-7-10 (17)			24.6					
				SS 6	28	3-7-8 (15)			25.8					
15	621.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 636 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 10.00 ft / Elev 626.00 ft
- **AT END OF DRILLING** 8.00 ft / Elev 628.00 ft
- **AFTER DRILLING** 8.00 ft / Elev 628.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-41

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.5		6" TOPSOIL											
			dark brown to brown SANDY CLAY FILL trace gravel moist stiff	SS 1	78	2-4-4 (8)	1.0	1.4	23.4					
	634.0		brown CLAYEY SAND trace gravel wet very loose to medium dense	SS 2	67	1-1-1 (2)			26.0			23	13	10
5				SS 3	89	4-8-11 (19)			15.4					
	629.0		gray LEAN CLAY trace gravel moist very stiff to hard	SS 4	100	7-4-4 (8)	4.5+	5.6	18.3					
10				SS 5	67	38-26-16 (42)			16.3					
			Noted: large obstruction or boulder											
15	622.0			SS 6	78	8-9-7 (16)	2.0	2.0	20.8					

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 5.00 ft / Elev 632.00 ft
- **AT END OF DRILLING** 5.00 ft / Elev 632.00 ft
- **AFTER DRILLING** 5.00 ft / Elev 632.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-42

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	637.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist very soft to medium dense	SS 1	100	3-3-4 (7)	1.0		17.5		2.5			
				SS 2	78	2-1-1 (2)	0.25		24.7					
5	632.0		brown SILTY SAND trace gravel wet very loose	SS 3	67	WH-1-1 (2)			22.0					
	630.0		gray LEAN CLAY trace gravel moist stiff to very stiff	SS 4	100	2-1-3 (4)	2.5	2.6	17.2					
10				SS 5	100	8-5-12 (17)	1.0		20.9					
				SS 6	94	8-14-11 (25)	3.5	3.8	18.5					
15	623.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 638 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 6.00 ft / Elev 632.00 ft
- **AT END OF DRILLING** 6.00 ft / Elev 632.00 ft
- **AFTER DRILLING** 6.00 ft / Elev 632.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-43

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.7		4" ASPHALT											
	636.3		5" SAND AND GRAVEL FILL											
			dark brown to brown SANDY CLAY FILL trace gravel moist medium stiff to stiff	SS 1	44	3-4-4 (8)	2.0	1.9	18.6					
				SS 2	100	3-3-4 (7)	0.5		20.2					
5	631.0		gray LEAN CLAY trace gravel moist stiff	SS 3	100	2-3-4 (7)	1.5	1.3	22.0					
	629.0		gray SILT wet medium dense	SS 4	11	4-6-10 (16)			23.0					
10				SS 5	83	6-11-11 (22)			20.1					
				SS 6	89	7-11-12 (23)			17.6					
15	622.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 4.00 ft / Elev 633.00 ft
- **AT END OF DRILLING** 4.00 ft / Elev 633.00 ft
- **AFTER DRILLING** 4.00 ft / Elev 633.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

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22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-44

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/12/26 **LOGGED BY** RA/NO **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.5		6" TOPSOIL											
			dark brown to brown SANDY CLAY FILL trace gravel moist stiff	SS 1	100	2-2-3 (5)	1.5	1.5	18.5					
	634.0		brown to gray SILTY SAND trace gravel moist to wet loose to medium dense	SS 2	67	3-4-4 (8)			20.6					
5				SS 3	78	8-10-11 (21)			9.7					
	629.0		gray LEAN CLAY trace gravel moist very stiff to hard	SS 4	94	4-4-8 (12)	4.0	4.3	21.3					
10				SS 5	78	2-4-8 (12)	2.5		21.2					
	624.0		gray SILT wet medium dense	SS 6	100	4-13-14 (27)			14.4					
15	622.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 6.00 ft / Elev 631.00 ft
- **AT END OF DRILLING** 6.00 ft / Elev 631.00 ft
- **AFTER DRILLING** 6.00 ft / Elev 631.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-45

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	638.3		9" TOPSOIL											
			dark brown to black SANDY CLAY FILL trave gravel, root fragments moist stiff	SS 1	28	5-5-6 (11)	2.0		18.9		5.3			
				SS 2	22	2-3-3 (6)	1.5		18.7		5.7			
5				SS 3	0	2-2-3 (5)								
	631.0		gray LEAN CLAY trace gravel moist stiff to hard	SS 4	100	5-8-10 (18)	4.5	4.5	18.1					
10				SS 5	100	4-6-8 (14)	2.5	2.7	13.3					
				SS 6	100	4-5-6 (11)	1.5	1.8	13.4					
15														
	622.0		gray SILT wet very dense											
				SS 7	0	34-41-25 (66)								
20	619.0		Bottom of borehole at 20.0 feet.											

COMPLETION DEPTH 20 ft **GROUND ELEVATION** 639 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 17.00 ft / Elev 622.00 ft
- **AT END OF DRILLING** 17.00 ft / Elev 622.00 ft
- **AFTER DRILLING** 17.00 ft / Elev 622.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-46

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	642.5		6" TOPSOIL											
			brown CLAYEY SAND trace gravel, root fragments moist loose to medium dense	SS 1	22	4-4-4 (8)			9.7					
				SS 2	56	9-13-16 (29)			8.5			24	16	8
5	638.0		brown to gray LEAN CLAY trace gravel moist very stiff to hard	SS 3	33	4-7-8 (15)	2.75	2.8	7.3					
				SS 4	67	4-6-7 (13)	4.5+	4.8	15.1					
10				SS 5	78	3-5-6 (11)	4.5+	4.6	15.5					
				SS 6	100	3-4-9 (13)	3.75	3.8	17.0					
15														
	626.0		gray SILTY CLAYEY SAND trace gravel moist very stiff											
				SS 7	78	4-9-10 (19)	2.0	2.3	13.6			18	13	5
20	623.0		Bottom of borehole at 20.0 feet.											

COMPLETION DEPTH 20 ft **GROUND ELEVATION** 643 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 18.00 ft / Elev 625.00 ft
- **AT END OF DRILLING** 18.00 ft / Elev 625.00 ft
- **AFTER DRILLING** 18.00 ft / Elev 625.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-47

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	642.3		8" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist very stiff	SS 1	28	6-6-6 (12)	3.0		12.9		4.0			
	640.0		brown POORLY GRADED SAND trace gravel moist	SS 2	39	6-9-9 (18)			7.3					
5	638.0		medium dense brown to gray LEAN CLAY trace gravel moist stiff to very stiff	SS 3	78	3-4-6 (10)	2.5		12.1					
				SS 4	78	3-4-7 (11)	3.0	3.3	16.0					
10				SS 5	100	4-6-9 (15)	3.0	3.0	15.7					
				SS 6	100	4-13-15 (28)			11.5					
15			▼											
				SS 7	61	5-5-4 (9)	1.5	1.7	13.5					
20	623.0		Bottom of borehole at 20.0 feet.											

COMPLETION DEPTH 20 ft **GROUND ELEVATION** 643 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 16.00 ft / Elev 627.00 ft
- **AT END OF DRILLING** 16.00 ft / Elev 627.00 ft
- **AFTER DRILLING** 16.00 ft / Elev 627.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-48

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	643.3		9" TOPSOIL											
			dark brown to black SANDY CLAY trace gravel, root fragments moist stiff	SS 1	28	6-5-4 (9)	2.0		13.6		2.6			
	641.0		brown POORLY GRADED SAND trace gravel moist medium dense	SS 2	33	4-6-6 (12)			6.6					
5				SS 3	44	5-5-6 (11)			14.1					
	636.0		gray LEAN CLAY trace gravel moist very stiff	SS 4	72	4-4-5 (9)	3.0	3.1	15.4					
10				SS 5	61	3-5-6 (11)	2.5	2.8	16.9					
				SS 6	94	4-5-6 (11)	2.5	2.5	22.0					
15		▼												
	627.0	▽	gray SILT wet dense											
20	624.0			SS 7	100	17-24-20 (44)			10.5					

Bottom of borehole at 20.0 feet.

COMPLETION DEPTH 20 ft **GROUND ELEVATION** 644 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 17.00 ft / Elev 627.00 ft

▼ **AT END OF DRILLING** 15.00 ft / Elev 629.00 ft

▼ **AFTER DRILLING** 15.00 ft / Elev 629.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-49

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/8/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	643.3		9" TOPSOIL											
			brown POORLY GRADED SAND trace gravel moist to wet loose to medium dense	SS 1	56	6-6-6 (12)			5.1					
				SS 2	61	4-4-5 (9)			6.6					
5				SS 3	89	7-8-9 (17)			12.2					
	636.0		gray LEAN CLAY trace gravel moist very stiff	SS 4	72	4-3-4 (7)	3.0	3.0	15.1					
10				SS 5	72	4-4-5 (9)	3.5	3.5	15.5					
				SS 6	100	3-5-7 (12)	4.0	4.0	14.0					
15														
				SS 7	100	5-6-7 (13)	3.0	2.9	12.5					
20	624.0		Bottom of borehole at 20.0 feet.											

COMPLETION DEPTH 20 ft **GROUND ELEVATION** 644 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 18.50 ft / Elev 625.50 ft
- **AT END OF DRILLING** 18.50 ft / Elev 625.50 ft
- **AFTER DRILLING** 18.50 ft / Elev 625.50 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-50

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.8		2" TOPSOIL											
	636.5		2" ASPHALT											
	636.3		5" SAND AND GRAVEL FILL											
			dark brown to black SANDY CLAY FILL trace gravel, brick fragments, root fragments moist stiff	SS 1	17	10-9-10 (19)	1.25		8.4		5.4			
				SS 2	33	3-3-3 (6)	1.25		25.0		5.2			
5				SS 3	17	4-3-2 (5)	1.5		18.4		5.7			
	629.0		brown to gray LEAN CLAY trace gravel moist very stiff to hard	SS 4	83	3-4-4 (8)	4.0	4.3	18.2					
10				SS 5	67	3-5-6 (11)	3.0	3.3	18.8					
				SS 6	67	10-14-12 (26)	4.0	3.9	10.9					
15	622.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Groundwater Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Dry Upon Completion

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 7/20/26 10:40 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

BORING NO. B-51

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	638.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist very stiff to hard	SS 1	22	6-11-13 (24)	4.5		18.2		4.2			
				SS 2	44	4-7-9 (16)	3.0		22.5		5.8			
5	634.0		brown LEAN CLAY trace gravel moist medium stiff											
				SS 3	39	2-3-3 (6)	0.75		17.6					
	631.0		gray LEAN CLAY with sand trace gravel moist stiff to hard											
				SS 4	100	4-4-4 (8)	2.0	2.3	17.2			38	19	19
10														
				SS 5	44	4-6-9 (15)	1.5	1.6	19.0					
				SS 6	100	4-6-11 (17)	4.25	4.4	21.1					
15	624.0													

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 639 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Groundwater Observed

AT END OF DRILLING --- Dry Upon Completion

AFTER DRILLING --- Dry Upon Completion

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-52

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/9/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	638.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments, brick fragments moist very stiff	SS 1	22	8-11-13 (24)	3.5		16.6		4.6			
				SS 2	17	3-5-5 (10)	3.0		17.3		6.4			
5				SS 3	11	4-4-5 (9)	3.0		19.1		6.3			
	631.0		brown to gray LEAN CLAY trace gravel moist stiff to hard	SS 4	56	3-3-7 (10)	1.5		12.1					
10			▽	SS 5	100	4-7-10 (17)	4.0	4.3	15.8					
	626.0		▼ gray SILTY CLAY trace gravel moist stiff	SS 6	100	10-11-16 (27)	1.5	1.6	19.6					
15	624.0		Bottom of borehole at 15.0 feet.											

COMPLETION DEPTH 15 ft **GROUND ELEVATION** 639 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

▽ **AT TIME OF DRILLING** 11.00 ft / Elev 628.00 ft

▼ **AT END OF DRILLING** 13.00 ft / Elev 626.00 ft

▼ **AFTER DRILLING** 13.00 ft / Elev 626.00 ft

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-53

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/10/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	635.5		6" TOPSOIL											
			brown SILTY SAND FILL trace gravel moist medium dense	SS 1	33	5-6-7 (13)			12.4					
	633.0		brown to gray SANDY CLAY FILL trace gravel moist stiff	SS 2	56	3-2-1 (3)	1.5		14.0					
5	631.0		brown to gray POORLY GRADED SAND trace gravel moist to wet loose to medium dense	SS 3	67	2-3-4 (7)			15.2					
				SS 4	67	2-3-4 (7)			26.0					
10				SS 5	100	2-4-6 (10)			25.6					
				SS 6	100	2-4-8 (12)			25.1					
15	619.0		gray LEAN CLAY trace gravel moist very stiff	SS 7	56	4-5-7 (12)	3.5	4.0	15.2					
20	614.0		gray SILT wet dense	SS 8	100	14-18-16 (34)			12.7					
25	609.0		gray LEAN CLAY trace gravel moist hard	SS 9	100	5-8-11 (19)	4.5+	6.7	12.4					
30	606.0		Bottom of borehole at 30.0 feet.											

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 636 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

- **AT TIME OF DRILLING** 8.00 ft / Elev 628.00 ft
- **AT END OF DRILLING** 10.00 ft / Elev 626.00 ft
- **AFTER DRILLING** 10.00 ft / Elev 626.00 ft Cave at 16 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-54

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/10/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	637.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, brick fragments, root fragments moist soft to stiff	SS 1	67	4-5-5 (10)	1.5		19.2		5.0			
5				SS 2	56	5-5-6 (11)	2.0		28.0		5.5			
				SS 3	17	2-1-2 (3)	0.5		24.7		4.8			
	630.0		gray SILTY CLAYEY SAND wet loose											
10	628.0		gray LEAN CLAY trace gravel moist stiff to very stiff	SS 4	67	2-3-4 (7)			21.3			19	12	7
				SS 5	56	7-3-5 (8)	3.5	3.9	14.3					
15				SS 6	100	2-3-5 (8)	1.5	1.6	15.5					
20				SS 7	100	5-8-9 (17)	2.5	2.7	15.7					
25				SS 8	100	5-9-14 (23)	3.5	3.4	14.7					
	611.0		gray SILT wet very dense											
30	608.0			SS 9	100	15-27-30 (57)			15.2					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 638 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING 8.00 ft / Elev 630.00 ft

AT END OF DRILLING 8.00 ft / Elev 630.00 ft

AFTER DRILLING --- Cave at 6 feet

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. B-55

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/10/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	637.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist stiff	SS 1	44	3-4-4 (8)	1.5		14.0		4.2			
5	633.0			SS 2	56	2-3-2 (5)	1.0		20.8					
			brown to gray SILTY SAND moist very loose	SS 3	78	2-1-2 (3)			27.7					
	630.0		gray LEAN CLAY trace gravel moist stiff to hard	SS 4	100	3-5-5 (10)	4.0	4.0	25.0					
10				SS 5	100	3-4-5 (9)	2.5		20.9					
15				SS 6	100	3-3-4 (7)	1.5	1.7	14.0					
20				SS 7	100	6-8-9 (17)	4.5+	4.6	15.7					
25				SS 8	100	4-6-12 (18)	2.0	2.0	15.5					
30	608.0			SS 9	100	6-9-13 (22)	4.5+	9.2	12.5					

Bottom of borehole at 30.0 feet.

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 638 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Groundwater Observed

AT END OF DRILLING --- Cave at 16 feet

AFTER DRILLING --- Dry Upon Completion

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

22774 Citation Rd. Unit A Frankfort, IL 60423 Phone 815-806-9986

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BORING NO. B-56

GEOCON PROFESSIONAL SERVICES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

DATE COMPLETED 6/10/26 **LOGGED BY** RI/DY **DRILLING METHOD** 3.25 in. HSA

DEPTH (ft)	ELEVATION (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX
0	636.5		6" TOPSOIL											
			dark brown to black SANDY CLAY FILL trace gravel, root fragments moist	SS 1	28	3-8-9 (17)	2.5	2.4	18.8		2.8			
	634.0		very stiff											
5			brown to gray LEAN CLAY trace gravel moist stiff to hard	SS 2	78	3-6-6 (12)	2.5	2.5	14.2					
				SS 3	56	4-5-8 (13)	4.5		13.6					
10				SS 4	89	4-4-6 (10)	3.0	3.2	13.5					
				SS 5	67	2-4-4 (8)	1.25	1.4	14.0					
15				SS 6	100	3-3-4 (7)	2.0	2.0	14.0					
20				SS 7	100	3-6-7 (13)	4.5	4.4	14.5					
	614.0		gray SILT moist dense	SS 8	100	12-21-28 (49)			14.2					
25	610.0		gray LEAN CLAY trace gravel moist very stiff	SS 9	100	10-10-14 (24)	2.5	2.5	14.0					
30	607.0		Bottom of borehole at 30.0 feet.											

COMPLETION DEPTH 30 ft **GROUND ELEVATION** 637 ft

CAVE DEPTH ft **BACKFILL** Soil Cuttings

GROUND WATER LEVELS:

AT TIME OF DRILLING --- No Groundwater Observed

AT END OF DRILLING --- Cave at 15 feet

AFTER DRILLING --- Dry Upon Completion

NOTES

Groundwater measured at time of drilling may not be indicative of groundwater encountered during construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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GENERAL NOTES

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport|Home Base Campus|Add. Borings

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, IL 60090

SAMPLE IDENTIFICATION

Visual soil classifications are made in general accordance with the United Soil Classification System (USCS) on the basis of textural and particle size categorization, and various soil behavior characteristics. Visual classifications should be substantiated by appropriate laboratory testing when a more exact soil identification is required to satisfy specific project applications criteria.

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487-98)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	$C_u \geq 4$ AND $1 \leq C_c \leq 3$	GW	WELL-GRADED GRAVEL
			$C_u \geq 4$ AND/OR $1 \geq C_c \geq 3$	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	$C_u \geq 6$ AND $1 \leq C_c \leq 3$	SW	WELL-GRADED SAND
			$C_u \geq 6$ AND/OR $1 \geq Cc \geq 3$	SP	POORLY-GRADED SAND
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR MH	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

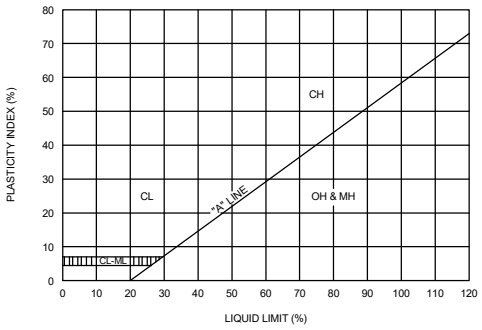
PROJECT LITHOLOGIC SYMBOLS (USCS)

- ASPHALT: Asphalt
- FILL: Fill (made ground)
- SC: USCS Clayey Sand
- SP: USCS Poorly-graded Sand
- CL: USCS Low Plasticity Clay
- GRAVEL FILL: Gravel Fill
- SC-SM: USCS Clayey Sand
- SPG: USCS Poorly-graded Gravelly Sand
- CL-ML: USCS Low Plasticity Silty Clay
- ML: USCS Silt
- SM: USCS Silty Sand
- TOPSOIL: Topsoil

PROJECT SAMPLE TYPES

- Split Spoon (SS)

PLASTICITY CHART



SOIL RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

NON-COHESIVE SOILS		COHESIVE SOILS		
RELATIVE DENSITY	N-VALUE*	CONSISTENCY	N-VALUE*	COMPRESSIVE STRENGTH (TSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 5	0.25 - 0.50
MEDIUM DENSE	10 - 30	MEDIUM STIFF	5 - 10	0.50 - 1.0
DENSE	30 - 50	STIFF	10 - 14	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	14 - 32	2.0 - 4.0
		HARD	OVER 32	OVER 4.0

* N-VALUE: NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

ABBREVIATIONS

SS	-	SPLIT-SPOON SAMPLE	LL	-	LIQUID LIMIT (%)
ST	-	SHELBY TUBE SAMPLE	PL	-	PLASTIC LIMT (%)
AU	-	AUGER SAMPLE	PI	-	PLASTIC INDEX (%)
MC	-	MOISTURE CONTENT (%)	NP	-	NON PLASTIC
-200	-	PERCENT PASSING NO. 200 SIEVE	DD	-	DRY DENSITY (PCF)
Qp	-	POCKET PENETROMETER (TSF)	DCP	-	DYNAMIC CONE PENETROMETER
Qu	-	UNCONFINED STRENGTH (TSF)	IBV	-	IMMEDIATE BEARING VALUE

GPS GEO GENERAL NOTES - OZ STD DATA TEMPLATE.GDT - 7/10/26 12:26 - K:\2 GEOTECHNICAL\2026\26-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

APPENDIX II

GRAIN SIZE DISTRIBUTION

GEOCON PROFESSIONAL SERVICES

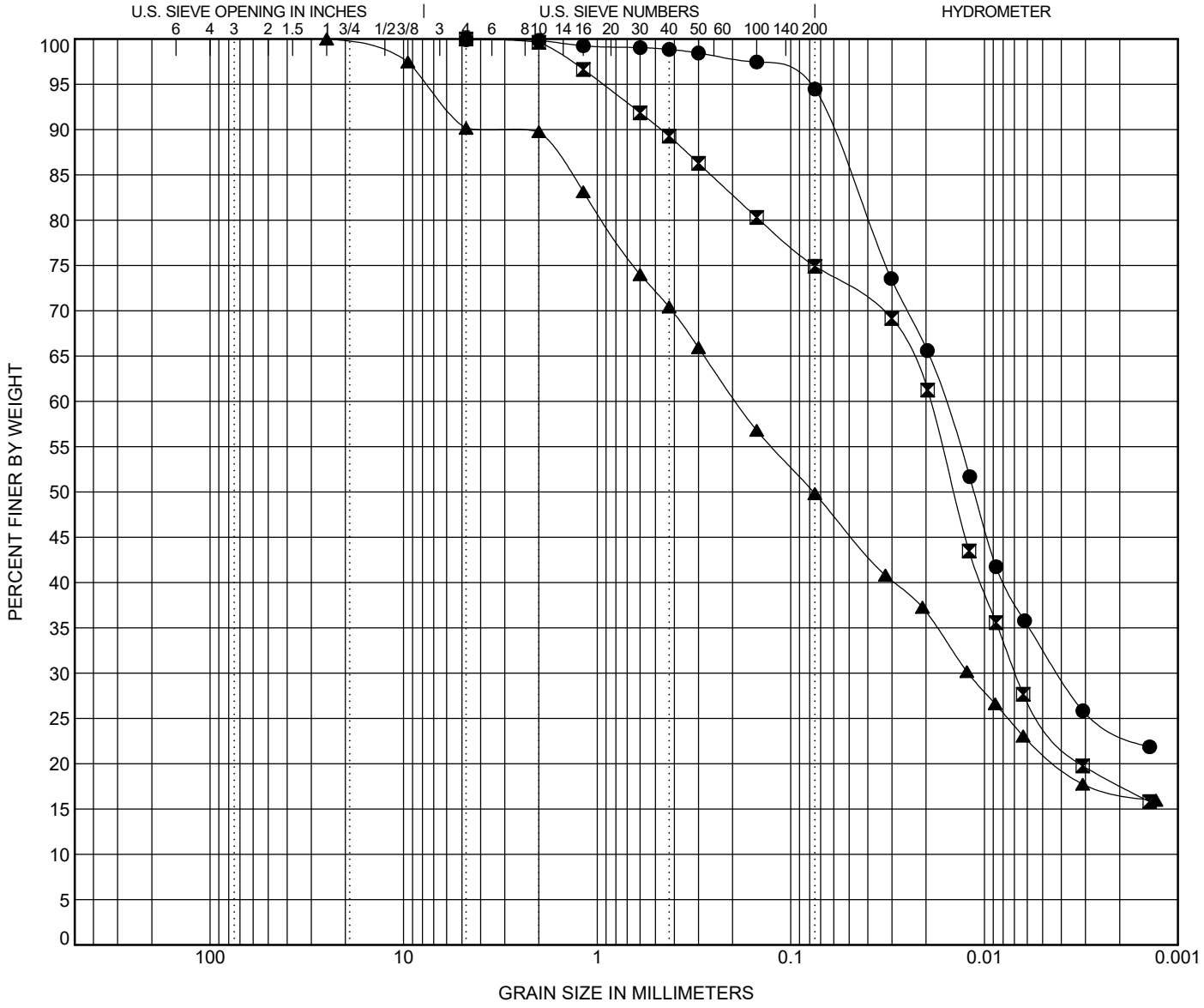
PRINT DATE 7/7/2026

CLIENT Sky Harbor Group

PROJECT NAME Chicago Executive Airport - Home Base Campus - Additional Bor

PROJECT NUMBER 26-G0857

PROJECT LOCATION 1089-1097 S Milwaukee Ave, Wheeling, Illinois 60090



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	B-21	8.5	LEAN CLAY(CL)	25	17	8		
⊠	B-35	13.5	SILTY CLAY with SAND(CL-ML)	18	14	4		
▲	B-46	18.5	SILTY, CLAYEY SAND(SC-SM)	18	13	5		

	BOREHOLE	DEPTH	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	B-21	8.5	4.75	0.016	0.011			5.4	61.8	32.7
⊠	B-35	13.5	4.75	0.019	0.014		0.0	25.1	49.8	25.1
▲	B-46	18.5	25	0.191	0.076		9.9	40.3	28.5	21.3

GRAIN SIZE - OZ STD DATA TEMPLATE.GDT - 7/7/26 13:45 - K:\2 GEOTECHNICAL\202626-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

GRAIN SIZE DISTRIBUTION

GEOCON PROFESSIONAL SERVICES

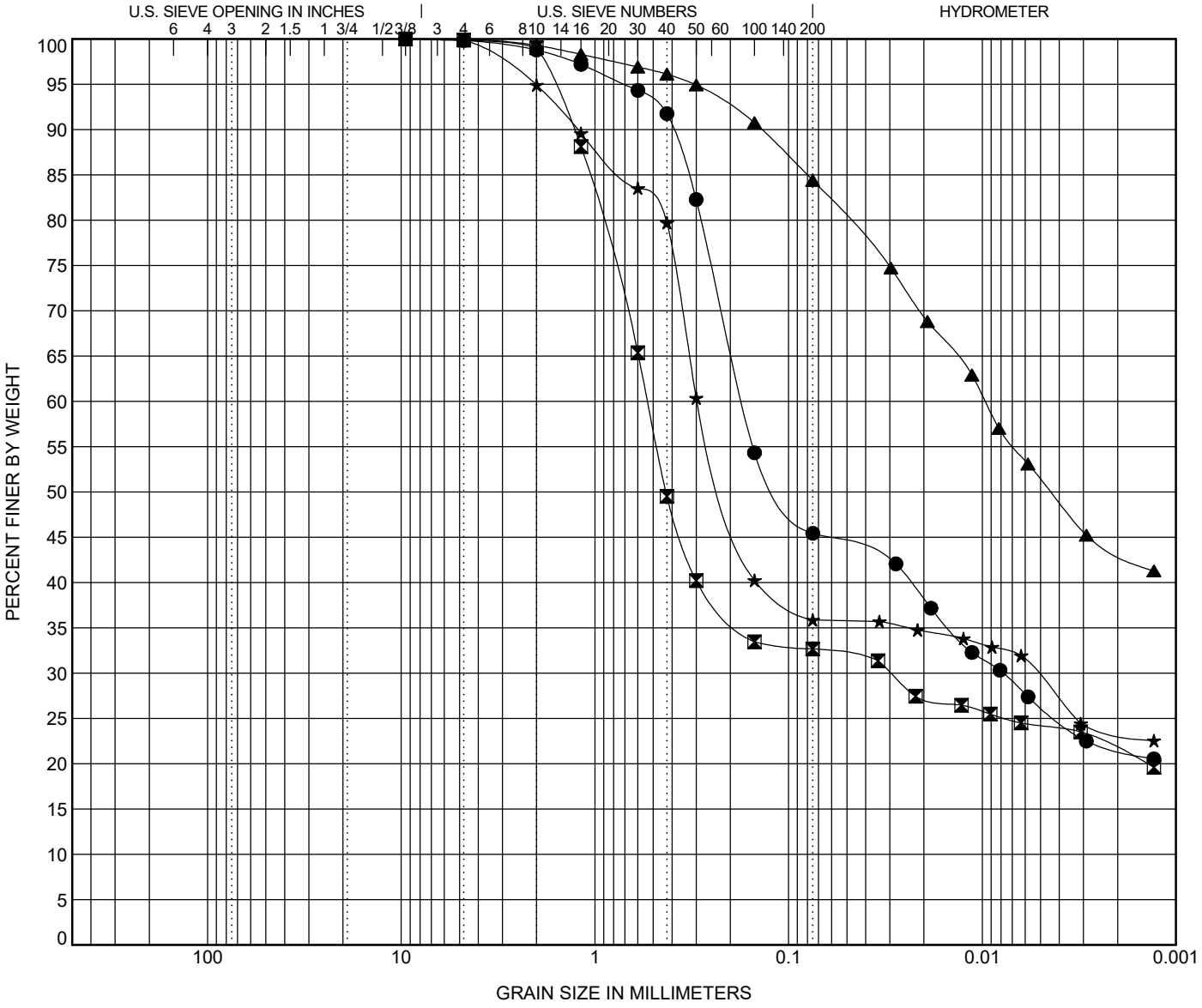
PRINT DATE 7/7/2026

CLIENT Sky Harbor Group

PROJECT NAME Chicago Executive Airport - Home Base Campus - Additional Bor

PROJECT NUMBER 26-G0857

PROJECT LOCATION 1089-1097 S Milwaukee Ave, Wheeling, Illinois 60090



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	B-41	3.5	CLAYEY SAND(SC)	23	13	10		
⊠	B-46	3.5	CLAYEY SAND(SC)	24	16	8		
▲	B-51	8.5	LEAN CLAY with SAND(CL)	38	19	19		
★	B-54	8.5	SILTY, CLAYEY SAND(SC-SM)	19	12	7		

	BOREHOLE	DEPTH	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	B-41	3.5	9.5	0.173	0.107		0.2	54.4	19.1	26.3
⊠	B-46	3.5	9.5	0.534	0.43		0.1	67.2	8.5	24.2
▲	B-51	8.5	9.5	0.01	0.004		0.0	15.6	33.0	51.4
★	B-54	8.5	9.5	0.296	0.21		0.1	64.0	6.4	29.5

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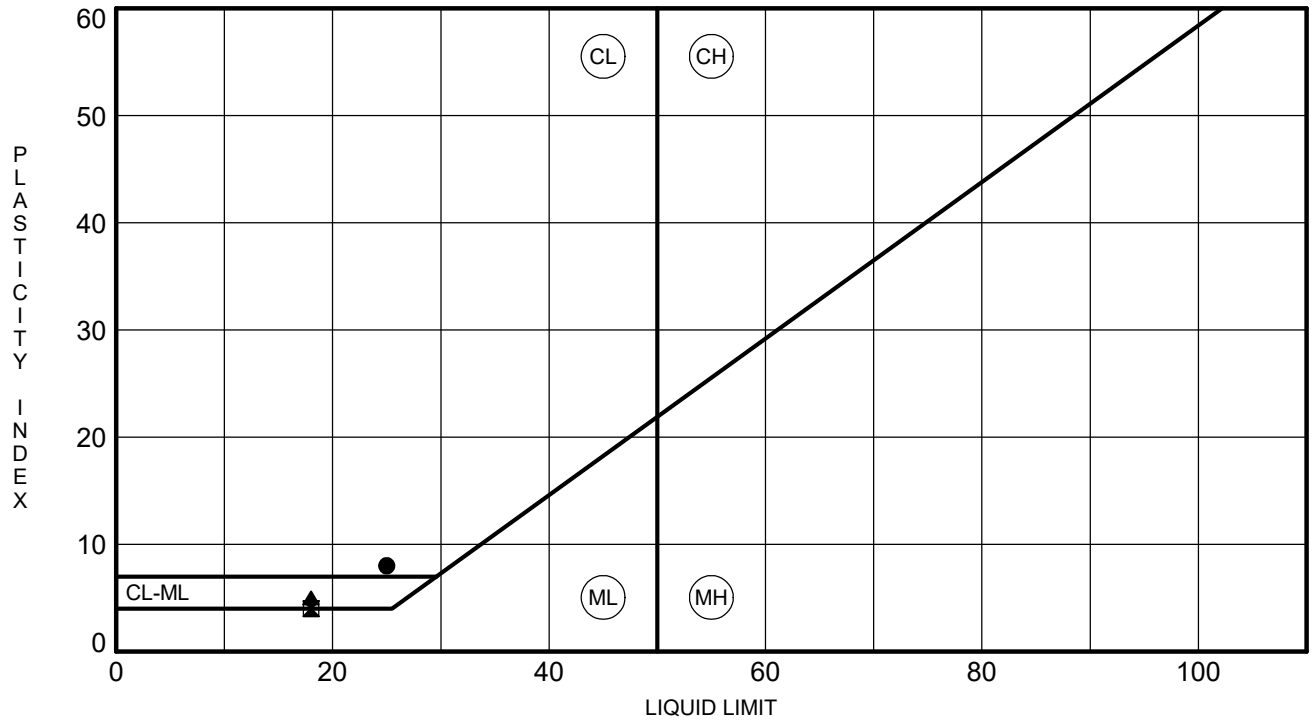
GRAIN SIZE - OZ STD DATA TEMPLATE.GDT - 7/7/26 13:44 - K:\2 GEOTECHNICAL\202626-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

ATTERBERG LIMITS RESULTS

PRINT DATE 7/7/2026

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport - Home Base Campus - Additional Bor

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, Illinois 60090



	BOREHOLE	DEPTH	LL	PL	PI	Fines	Classification
●	**B-21**	**8.5**	**25**	**17**	**8**	**94**	**LEAN CLAY(CL)**
⊠	**B-35**	**13.5**	**18**	**14**	**4**	**75**	**SILTY CLAY with SAND(CL-ML)**
▲	**B-46**	**18.5**	**18**	**13**	**5**	**50**	**SILTY, CLAYEY SAND(SC-SM)**

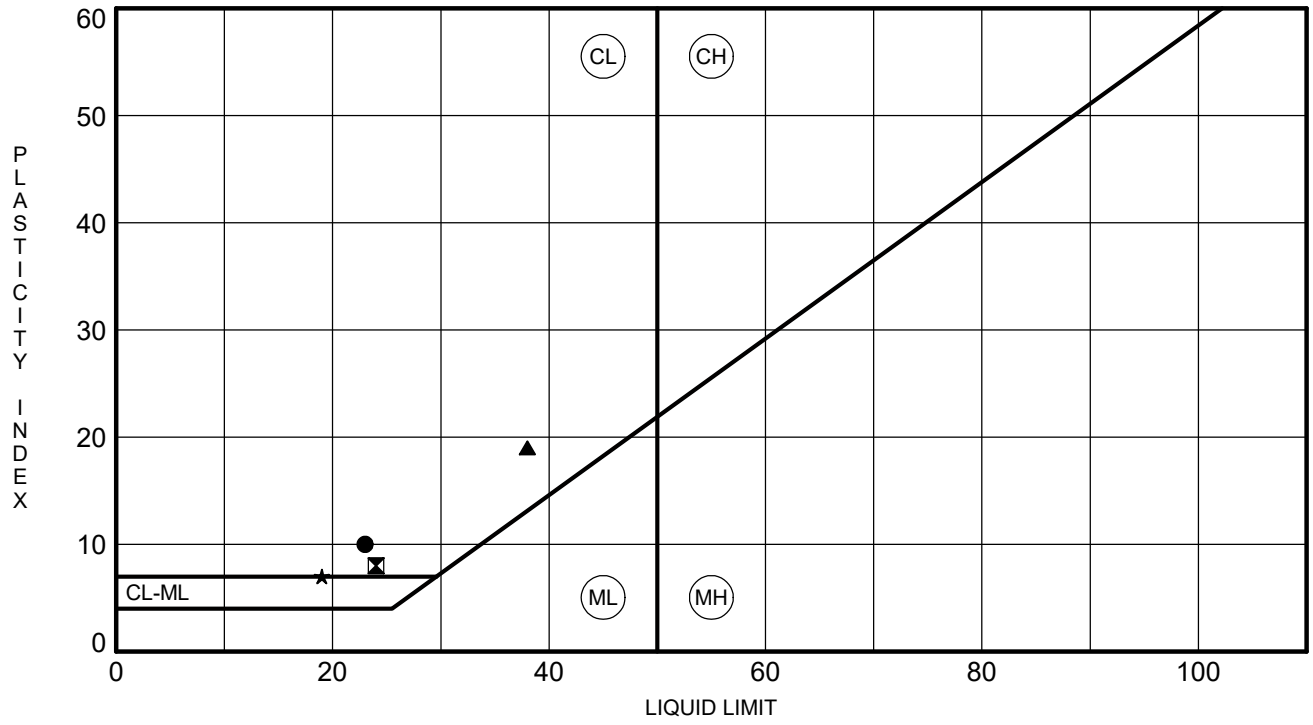
ATTERBERG LIMITS - OZ STD DATA TEMPLATE.GDT - 7/7/26 13:46 - K:\2 GEOTECHNICAL\202626-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

ATTERBERG LIMITS RESULTS

PRINT DATE 7/7/2026

CLIENT Sky Harbor Group **PROJECT NAME** Chicago Executive Airport - Home Base Campus - Additional Bor

PROJECT NUMBER 26-G0857 **PROJECT LOCATION** 1089-1097 S Milwaukee Ave, Wheeling, Illinois 60090



	BOREHOLE	DEPTH	LL	PL	PI	Fines	Classification
●	**B-41**	**3.5**	**23**	**13**	**10**	**45**	**CLAYEY SAND(SC)**
⊠	**B-46**	**3.5**	**24**	**16**	**8**	**33**	**CLAYEY SAND(SC)**
▲	**B-51**	**8.5**	**38**	**19**	**19**	**84**	**LEAN CLAY with SAND(CL)**
★	**B-54**	**8.5**	**19**	**12**	**7**	**36**	**SILTY, CLAYEY SAND(SC-SM)**

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ATTERBERG LIMITS - OZ STD DATA TEMPLATE.GDT - 7/7/26 13:46 - K:\2 GEOTECHNICAL\202626-G0857 GEO SKY HARBOR - CHICAGO EXECUTIVE AIRPORT ADDITIONAL BORINGS, WHEELING, IL\LAB\SKY HARBOR.GPJ

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192 Exchange Blvd • Glendale Heights, IL 60139 • Phone 630-855-8883
4836 Colt Road • Rockford, IL 61109 • Phone 815-873-0990

Compaction Test Report

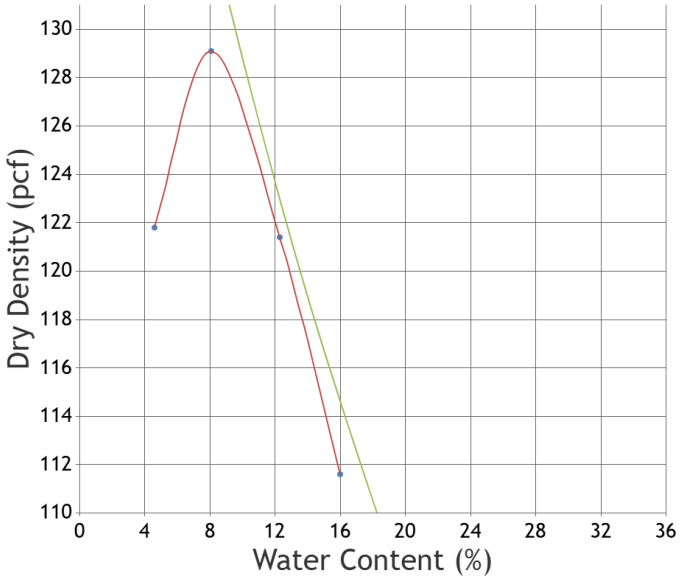
Test #:	260094-01	**Page:**	1 of 1
Report Date:		**Project #:**	26-G0857
Client:	Sky Harbor Group 136 Tower Rd, Suite 205 White Plains, NY 60090	**Project:**	Sky Harbor - Chicago Executive Airport Additional Borings, Wheeling, IL 1089-1097 S Milwaukee Ave. Wheeling, IL 60090

Test Information

Sample #:	260094		
Date Sampled:	07/07/2026	**Date Tested:**	07/07/2026
Test Specification:	ASTM D1557, Method A, Mechanical		
Preparation Method:	Dry		
Hammer Weight:	10.0 lbs	**Number of Layers:**	5
Hammer Drop:	18 in	**Blows per Layer:**	25
Elev/Depth:		**%> #4 Sieve:**	2.2 %
Location:	B-41		

NM:		**LL:**		**PL:**		**PI:**	

Curves of 100% Saturation for Specific Gravity Equal to: 2.60



Mold Information

Volume:	0.03340	**Weight:**	4,189.5

Classification

USCS:		**AASHTO:**	

Material Description

brown clay

Testing Results

Maximum dry density = 129.1 pcf

Optimum moisture = 8.1 %

Remarks

Tested By: Omar Esparza **Checked By:**

Printed Name: Omar Esparza **Printed Name:**

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Compaction Test Report

Test #:	260080-01	**Page:**	1 of 1
Report Date:	06/23/2026	**Project #:**	26-G0857
Client:	Sky Harbor Group 136 Tower Rd, Suite 205 White Plains, NY 60090	**Project:**	Sky Harbor - Chicago Executive Airport Additional Borings, Wheeling, IL 1089-1097 S Milwaukee Ave. Wheeling, IL 60090

Test Information

Sample #:	260080		
Date Sampled:	06/09/2026	**Date Tested:**	06/22/2026
Test Specification:	ASTM D1557, Method A, Mechanical		
Preparation Method:			
Hammer Weight:	10.0 lbs	**Number of Layers:**	5
Hammer Drop:	18 in	**Blows per Layer:**	25
Elev/Depth:		**%> #4 Sieve:**	
Location:	B-46 (1'-5')		

NM:		**LL:**		**PL:**		**PI:**	

Mold Information

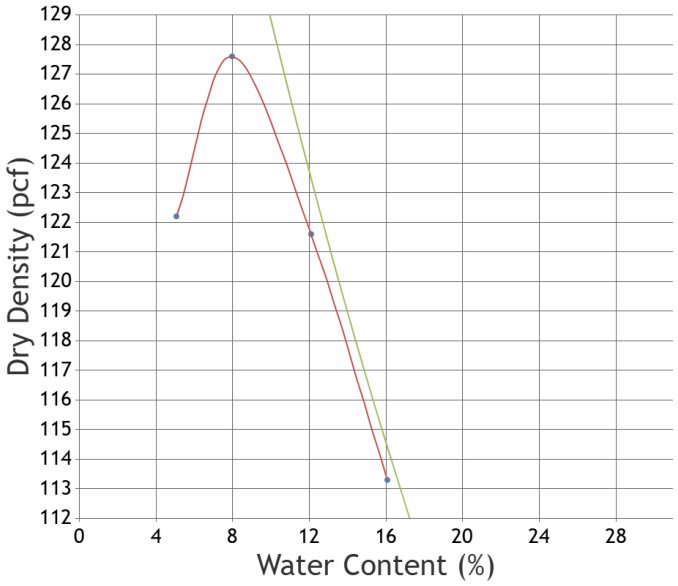
Volume:	0.03340	**Weight:**	4,186.9

Classification

USCS:		**AASHTO:**	

Curves of 100% Saturation for Specific Gravity Equal to:

2.60



Material Description

Sandy Brown Clay

Testing Results

Maximum dry density = 127.6 pcf

Optimum moisture = 8.0 %

Remarks

Tested By: Omar Esparza **Printed Name:** Omar Esparza

Checked By: Anthony Wommack **Printed Name:** Anthony Wommack

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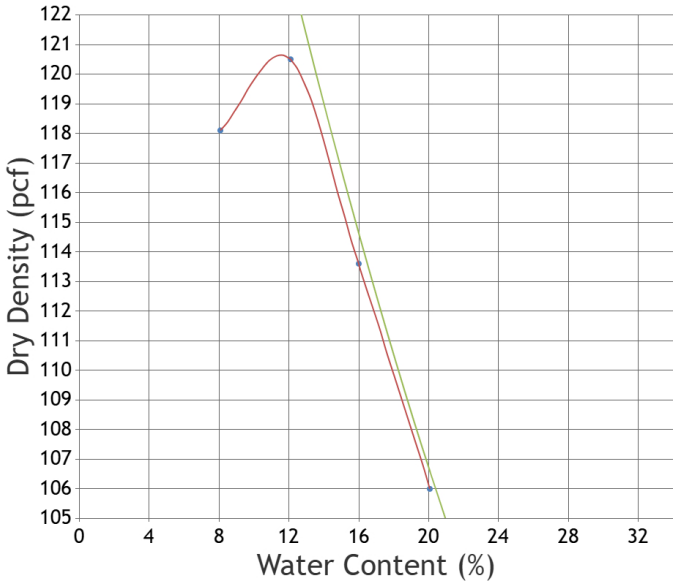
Compaction Test Report

Test #:	260080-02	**Page:**	1 of 1
Report Date:	06/23/2026	**Project #:**	26-G0857
Client:	Sky Harbor Group 136 Tower Rd, Suite 205 White Plains, NY 60090	**Project:**	Sky Harbor - Chicago Executive Airport Additional Borings, Wheeling, IL 1089-1097 S Milwaukee Ave. Wheeling, IL 60090

Test Information

Sample #:	260080		
Date Sampled:	06/09/2026	**Date Tested:**	06/22/2026
Test Specification:	ASTM D1557, Method A, Mechanical		
Preparation Method:	Dry		
Hammer Weight:	10.0 lbs	**Number of Layers:**	5
Hammer Drop:	18 in	**Blows per Layer:**	25
Elev/Depth:	B-51 (6'-10')	**%> #4 Sieve:**	5.5 %
Location:	On-site		
NM: 17.9%	**LL:**	**PL:**	**PI:**

Curves of 100% Saturation for Specific Gravity Equal to: 2.60



Mold Information

Volume:	0.03340	**Weight:**	4,184.2

Classification

USCS:		**AASHTO:**	

Material Description

Brown Clay

Testing Results

Maximum dry density = 120.6 pcf

Optimum moisture = 11.7 %

Remarks

Tested By: Omar Esparza **Printed Name:** Omar Esparza

Checked By: Anthony Wommack **Printed Name:** Anthony Wommack

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Compaction Test Report

Test #:	260094-02	**Page:**	1 of 1
Report Date:		**Project #:**	26-G0857
Client:	Sky Harbor Group 136 Tower Rd, Suite 205 White Plains, NY 60090	**Project:**	Sky Harbor - Chicago Executive Airport Additional Borings, Wheeling, IL 1089-1097 S Milwaukee Ave. Wheeling, IL 60090

Test Information

Sample #:	260094		
Date Sampled:	07/07/2026	**Date Tested:**	07/07/2026
Test Specification:	ASTM D1557, Method A, Mechanical		
Preparation Method:	Dry		
Hammer Weight:	10.0 lbs	**Number of Layers:**	5
Hammer Drop:	18 in	**Blows per Layer:**	25
Elev/Depth:		**%> #4 Sieve:**	11.8 %
Location:	B-54		

NM:		**LL:**		**PL:**		**PI:**	

Mold Information

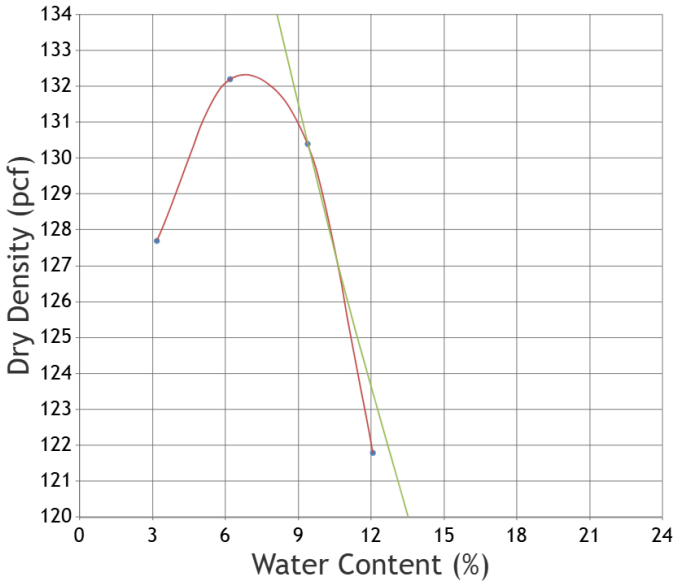
Volume:	0.03340	**Weight:**	4,189.5

Classification

USCS:		**AASHTO:**	

Curves of 100% Saturation for Specific Gravity Equal to:

2.60



Material Description

brown gray clay

Testing Results

Maximum dry density = 132.3 pcf

Optimum moisture = 6.8 %

Remarks

Tested By: Omar Esparza

Printed Name: Omar Esparza

Checked By:

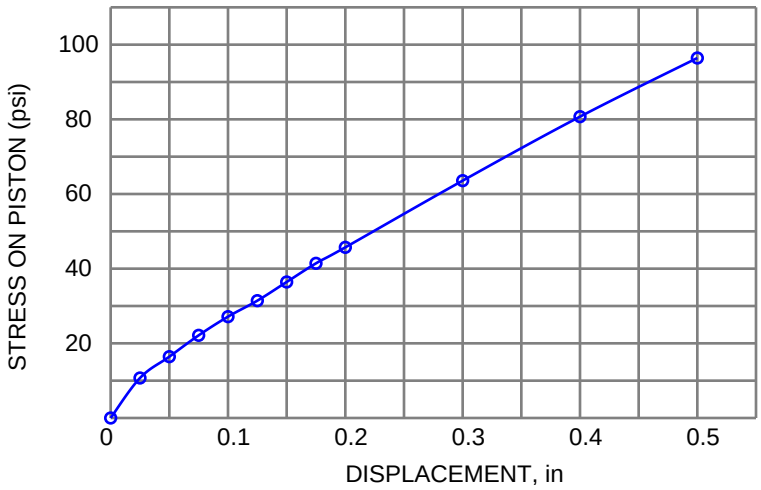
Printed Name:

CALIFORNIA BEARING RATIO (CBR) OF SOILS

AASHTO T193

SAMPLE ID:	**B-41**
DATE TESTED:	**7/7/2026**
COMPACTION METHOD:	**D1557**
SAMPLE CONDITION	**Soaked**
DRYDENSITY:	**129.1**
COMPACTED MOISTURE:	**8.1**
SWELL (% INIT HT):	**0.0**
SURCHARGE:	**10**
PISTON DIA:	**1.954**

Atterberg Limits (B-41):
LL: 23
PL: 13
PI: 10



Individual Readings:

Reading	Elapsed Time (s)	Penetration (in)	Load (lbf)	Stress (psi)	CBR (%)
0	0.0	0.0000	0.0	0.0	
1	30.4	0.0250	32.0	10.7	
2	60.0	0.0501	50.0	16.7	
3	89.6	0.0750	66.0	22.0	
4	118.8	0.1001	81.0	27.0	2.7
5	148.0	0.1250	95.0	31.7	
6	178.4	0.1500	110.0	36.7	
7	208.0	0.1750	124.0	41.4	
8	238.0	0.2001	137.0	45.7	3.0
9	357.0	0.3001	191.0	63.7	
10	476.4	0.4001	242.0	80.7	
11	594.0	0.5000	290.0	96.7	

Equipment:

Geocon Professional services
22774 Citation road
Frankfort,IL, 60423

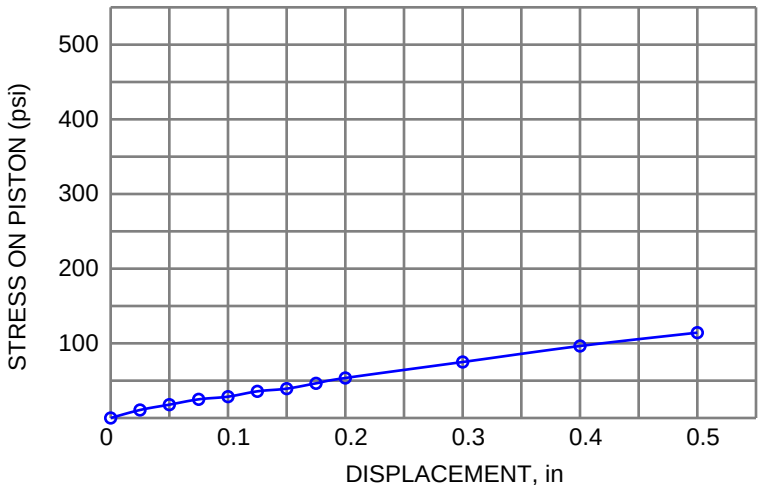
Project: **Chicago Executive Airport**
Project ID: **26-G0857**
Client: **Sky Habor**

CALIFORNIA BEARING RATIO (CBR) OF SOILS

AASHTO T193

SAMPLE ID:	**B-46**
DATE TESTED:	**6/29/2026**
COMPACTION METHOD:	**D1557**
SAMPLE CONDITION	**Soaked**
DRY DENSITY:	**127.6**
COMPACTED MOISTURE:	**8.0**
SWELL (% INIT HT):	**0.0**
SURCHARGE:	**10.0**
PISTON DIA:	**1.954**

Atterberg Limits (B-46):
LL: 25
PL: 16
PI: 9



Individual Readings:

Reading	Elapsed Time (s)	Penetration (in)	Load (lbf)	Stress (psi)	CBR (%)
0	0.0	0.0000	0.0	0.0	
1	30.6	0.0253	34.0	11.3	
2	61.2	0.0501	53.0	17.7	
3	91.0	0.0751	71.0	23.7	
4	121.0	0.1001	88.0	29.3	2.9
5	150.4	0.1252	105.0	35.0	
6	180.2	0.1501	123.0	41.0	
7	210.8	0.1751	141.0	47.0	
8	240.8	0.2001	158.0	52.7	3.5
9	359.0	0.3001	224.0	74.7	
10	478.2	0.4001	287.0	95.7	
11	596.4	0.5000	344.0	114.7	

Equipment:

Geocon Professional services
22774 Citation road
Frankfort,IL, 60423

Project: Chicago Executive Airport
Project ID: 26-G0857
Client: Sky Habor

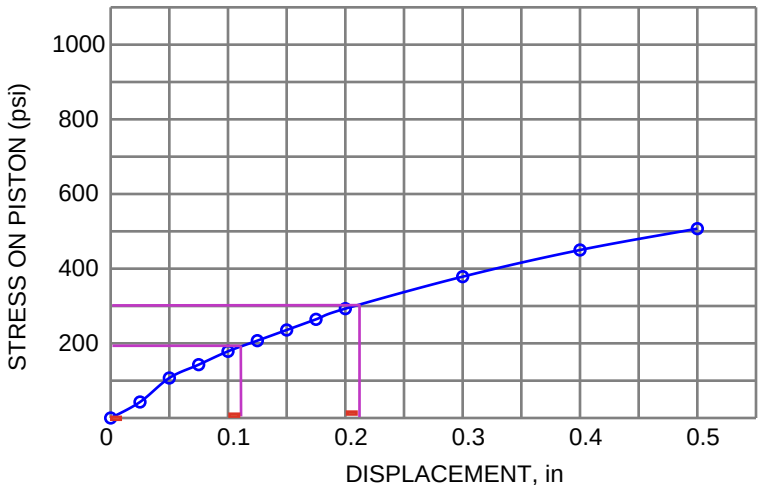
CALIFORNIA BEARING RATIO (CBR) OF SOILS

AASHTO T193

SAMPLE ID:	**B-51**
DATE TESTED:	**6/29/2026**
COMPACTION METHOD:	**D1557**
SAMPLE CONDITION	**Soaked**
DRYDENSITY:	**120.6**
COMPACTED MOISTURE:	**11.7**
SWELL (% INIT HT):	**0.0**
SURCHARGE:	**10.0**
PISTON DIA:	**1.954**

CBR @ .1"= 195/1000*100= 19.5%
CBR @ .2"= 300/1500*100= 20.0%

Atterberg Limits (B-51):
LL: 38
PL: 19
PI: 19



Individual Readings:

Reading	Elapsed Time (s)	Penetration (in)	Load (lbf)	Stress (psi)	CBR (%)
0	0.0	0.0000	0.0	0.0	
1	33.8	0.0250	132.0	44.0	
2	68.4	0.0502	311.0	103.7	
3	100.0	0.0750	430.0	143.4	
4	131.6	0.1000	532.0	177.4	17.7
5	162.2	0.1250	626.0	208.8	
6	193.2	0.1501	715.0	238.4	
7	224.8	0.1750	799.0	266.4	
8	252.6	0.2001	869.0	289.8	19.3
9	375.2	0.3003	1133.0	377.8	
10	494.8	0.4000	1350.0	450.2	
11	613.8	0.5000	1529.0	509.9	

Equipment:

Geocon Professional services
22774 Citation road
Frankfort,IL, 60423

Project: **Chicago Executive Airport**
Project ID: **26-G0857**
Client: **Sky Habor**

APPENDIX III

SHANNON & WILSON

July 16, 2026

Mr. Luke Szot, EIT
Geocon Professional Services
22774 Citation Road, Unit A
Frankfort, IL 60423

RE: CHICAGO EXECUTIVE AIRPORT, HOME BASE CAMPUS, FAARFIELD PAVEMENT DESIGN, WHEELING, ILLINOIS

Dear Mr. Szot:

This letter report presents our analyses and recommendations for the proposed new pavement areas associated with the Home Base Campus hangar development at Chicago Executive Airport in Wheeling, Illinois. This letter includes the design criteria, our subgrade characterization, analysis methodology, and recommended pavement sections for the new Portland Cement Concrete (PCC) apron/taxiway connector/parking areas and the new Hot Mix Asphalt (HMA) drive aisles surrounding the proposed hangar buildings.

PROJECT DESCRIPTION

Our understanding of the project is based on the information provided by Geocon Professional Services (Geocon) and includes the following documents:

- *California Bearing Ratio (CBR) Tests for soils from borings B-41, B-46, and B-51*, performed and prepared by Geocon.
- *Draft Boring Logs B-15 to B-56*, performed and prepared by Geocon.
- *Boring Exhibit (Development Site), PWK Home Base Campus, 1089-1097 S. Milwaukee Ave, Wheeling, IL 60090*, prepared by Cook Engineering Group for Sky Harbour, LLC.
- *Aircraft and Fuel Truck Weights*, prepared by Sky Harbor Group for Geocon
- *Aircraft and Fuel Truck Passes and Pavement Design Life*, prepared by Sky Harbor Group for Geocon

The project is located at the Chicago Executive Airport in Wheeling, Illinois, and includes the construction of several new airplane hangars and associated taxiway and drive aisle pavements.

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Design Guidance and Software

Our pavement design was performed in general accordance with the following design guidance:

- Federal Aviation Administration (FAA) Advisory Circular (AC) No. 150/5320-6G, *Airport Pavement Design and Evaluation* (FAA, 2021)
- FAA AC No. 150/5370-10H, *Standard Specifications for Construction of Airports* (FAA, 2018)
- FAA AC No. 150/5320-5D, *Airport Drainage Design* (FAA, 2013)
- Illinois Department of Transportation (IDOT), Standard Specifications for Construction of Airports (IDOT, 2023)

Pavement thicknesses were calculated using the FAA Rigid and Flexible Interactive Elastic Layered Design (FAARFIELD) computer program, version 2.1.2 (FAA, 2026). Frost penetration depth was evaluated using the design software Pavement-Transportation Computer Assisted Structural Engineering (PCASE), version 7.07, developed by the U.S. Army Corps of Engineers (USACE, 2025).

SUBSURFACE CHARACTERIZATION AND FAARFIELD DESIGN INPUT

We were provided with three CBR test results, applicable to borings B-41, B-46, and B-51. Borings B-46 and B-51 are located on the north side of Chicago Executive Airport, away from the proposed new pavement areas; therefore, we did not use these values for design. Boring B-41 is located south of the project area and is the nearest boring with CBR results to the proposed pavement areas. In addition to the CBR data, we reviewed the boring logs within the project area to evaluate the soil types, consistency, and density of the near-surface subsurface materials. The subsurface soils generally consist of medium stiff to stiff sandy clay fill and native lean clay, sandy clay, and clayey sand, which are comparable with those encountered at boring B-41. Based on this review, we used the boring B-41 CBR laboratory test results to determine a design subgrade CBR value. For our analysis, we used a design CBR of 2.7 percent, assumed applicable at 95 percent relative compaction per ASTM D1557.

Note that, per FAA AC 150/5320-6G guidance, FAA recommends that the design subgrade strength value should be one standard deviation below the mean of laboratory test results. Based on comparison of the Standard Penetration Test (SPT) blow counts and encountered soil types, we consider the CBR value from the boring B-41 test result to be representative of the project site and recommend using the 2.7 percent as the representative design value. As discussed above, we do not recommend using boring B-46 and B-51 laboratory test results due to the distance of the borings from the proposed new pavement location.

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FAARFIELD models the subgrade soils using elastic modulus parameter, E. For fine-grained, non-expansive soils, FAA AC 150-5320-6G recommends determining E through the following correlation: E (psi) = 1,500 × CBR. We therefore used a design elastic modulus of 4,050 psi. For rigid pavement design, FAA recommends the following correlation to determine the corresponding modulus of subgrade reaction, k: E (psi) = 20.15 × $k^{1.284}$. This results with a design k of 62 pci.

FAARFIELD PAVEMENT DESIGN

Design Areas and Design Life

Geocon provided the *Boring Exhibit (Development Site)* sheet prepared by Cook Engineering Group. We evaluated two pavement areas:

- New PCC area, comprising the apron area, taxiway connector, and parking section, designed for aircraft loading.
- New HMA area, comprising the drive aisles surrounding the new hangar structures, designed for vehicle (fuel truck) loading.

We used a **20-year design life** for both pavements based on guidance from Sky Harbor Group.

Pavement Loading

The following sections describe the design aircraft and vehicle loading and repetitions for the new pavement sections.

Proposed PCC Areas

We were provided a list of 26 aircrafts anticipated to use the facility, categorized as "Light," "Medium," and "Large" aircrafts. For design purposes, the heaviest aircraft within each classification group was selected.

Additionally, Sky Harbor Group indicated 5 aircraft per hangar structure across 7 proposed hangar structures (35 aircraft total), with an assumed frequency of 1.26 trips per aircraft per week over 52 weeks per year (1 trip equals 2 passes — one arrival pass and one departure pass). This results in 130 passes per aircraft per year, and results with 4,550 total annual passes when considering all 35 aircrafts. We assumed the 4,550 total annual passes were divided evenly among the three aircraft classes. Exhibit 1 summarizes the design aircraft traffic loading for the PCC areas.

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Exhibit 1: Design Aircraft Traffic Loading for PCC Areas

Aircraft	Aircraft Class	Annual Repetitions	Design Weight (pounds)
BeechJet-400A[1]	Light	1,516	14,221
Gulfsteam III	Medium	1,517	49,200
Gulfsteam G650[2]	Large	1,517	73,035

NOTES:

1 The heaviest listed aircraft in the "Light" class is the Embraer Phenom 300. This aircraft is not available as a default vehicle in FAARFIELD's Aircraft Library database and technical specification sheets were not available to create a User Defined Aircraft (UDA). Therefore, we chose the second heaviest vehicle listed, the BeechJet-400A, but entered the weight listed for the Phenom 300 as the design weight.

2 The heaviest listed aircraft in the "Large" class is the Bombardier Global 7000. This aircraft is not available as a default vehicle in FAARFIELD's Aircraft Library database and technical specification sheets were not available to create a UDA. The second heaviest vehicle listed is the Gulfstream G650, which is also not available as a default vehicle. We created a UDA to represent the Gulfstream G650 configuration, based on available technical specification sheets. We then entered the same weight as listed for the Bombardier Global 7000.

Proposed HMA Areas

We understand the new drive aisles will accommodate fuel delivery vehicles, comprising a 7,000-gallon fuel truck and a WB-50 semitrailer fuel tanker, with 2,275 annual re-fueler truck passes and 142 annual WB-50 deliveries. Exhibit 2 summarizes the design vehicle traffic loading for the HMA drive aisles.

Exhibit 2: Design Vehicle Traffic Loading for HMA Areas

Vehicle	Annual Repetitions	Design Weight (pounds)
Fuel Truck – 7,000 gallon[1]	2,275	52,580
WB-50 Semitrailer Fuel Tanker	142	57,700

NOTES:-

1 Vehicle not available as a default vehicle in FAARFIELD vehicle library database, nor is specific vehicle information provided. We modeled the design vehicle using "Truck Axle Dual-Tandem", which represents the rear vehicle axle, and assumed full weight on the axle.

Frost Depth Evaluation

The FAARFIELD program does not calculate or include frost penetration depth as part of its evaluation. Therefore, design frost depth was evaluated using PCASE, version 7.07 (USACE, 2025).

Based on the index properties of the soil used for the CBR from Boring B-41, we categorized the subgrade as Frost Group FG-4, per Table 2-2 of FAA AC 150/5320-6G. We entered the

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same amount of layers and layer thicknesses into PCASE and used PCASE's "Chicago" frost station climatic data to determine design frost depth penetration. The PCASE evaluation resulted with a design frost depth of 34 inches for the rigid pavement section and approximately 31 to 34 inches for the flexible pavement section.

FAA identifies the following two potential approaches to accommodate frost depth:

- Complete Frost Protection, which requires removal and replacement of frost-susceptible subgrade with non-frost susceptible material to contain frost penetration entirely within the pavement structure.
- Limited Subgrade Frost Protection, which allows a limited, maintainable degree of frost heave provided **non-frost susceptible material extends to at least 65 percent of the frost penetration depth, with a geosynthetic separation layer between the non-frost susceptible subbase and the frost-susceptible subgrade.**

We assumed that Limited Subgrade Frost Protection would be used and completed our subsequent analyses for the HMA pavement using the Limited Subgrade Frost Protection approach. The Limited Subgrade Frost Protection carries some risk of reduced pavement design life from freeze/thaw action, and the project should consider this risk in the long-term operations and maintenance of the pavement. For the PCC pavement section, the calculated minimum PCC surface thickness combined with the FAA minimum layer thicknesses for the underlying materials result in a total section depth that satisfies the Complete Frost Protection criteria.

Drainage Layer

The FAA AC 150/5320-6G recommends a drainage layer for pavements serving aircraft greater than 60,000 pounds, in areas with excessive subsurface moisture, or where existing soils have a coefficient of permeability less than 20 feet/day. Given the predominantly clayey subgrade and the maximum design aircraft weight of 73,035 pounds, we recommend incorporating a drainage layer for the new pavement.

We assume the drainage layer will consist of untreated aggregate, for which the FAA recommends a design modulus in the range of 15,000 to 30,000 psi. We selected a design modulus of 15,000 psi for our analysis.

Stabilized Subgrade

Per FAA AC 150/5320-6G, Section 2.4, chemical or mechanical improvement, or replacement with suitable material, is recommended where the mean subgrade strength is less than a CBR of 5, and warranted where a CBR less than 3 occurs, extending to a minimum depth of

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12 inches. Because our design subgrade CBR of 2.7 percent falls below this threshold, we evaluated two alternative pavement section approaches:

1. Replacement of the upper subgrade with a minimum 12-inch subbase, assuming no chemical stabilization.
2. Cement treated base stabilization of the upper 12 inches of subgrade.

For the chemical stabilization alternative, additional laboratory tests should be performed to verify the design CBR value and amount of chemical needed for stabilization. Based on discussion in Sections 2.4.6 and 3.15.6.5 of FAA AC 150/5320-6G, we assumed a design stabilized subgrade CBR equal to four times the unstabilized CBR (10.8 percent), corresponding to a design elastic modulus of 16,000 psi.

Additionally, FAA AC 150/5320-6G, Section 2.4.6 recommends that the soluble sulfate content should be checked if chemical stabilization is utilized, as there is a potential for adverse expansive reaction with either cement treatment or lime treatment. Section 2.4.6.1 indicates that the designer should exercise caution when the soluble sulfate content is greater than 3,000 parts per million (ppm). The designer should incorporate additional measures to control expansion potential if the soluble sulfate content is greater than 5,000 ppm.

Recommended Pavement Sections

Based our FAARFIELD analysis, Table 3 presents our recommended pavement section thicknesses for a 20-year design life. We designed the pavement sections for a cumulative damage factor (CDF) for the HMA/PCC and subgrade layers for a value less than one. Table 3 presents two alternative sections for the PCC Area and the HMA Area, reflecting the subgrade stabilization approaches discussed above.

Additionally, we performed a sensitivity analysis for the PCC pavement to check our assumption that traffic is evenly divided among the three design aircraft classes. For our sensitivity analysis, we performed the analysis assuming 100 percent of annual passes are performed by the heaviest design aircraft (Gulfstream G650). The check resulted with the same required PCC thickness of 10 inches.

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Exhibit 3: Pavement Section Recommendations

Pavement Type	Design Life	Material	Thickness (Inches)	FAA Standard or IL Airport Specification Identification
New PCC (No Subgrade Stabilization)	20	PCC	10	P-501
		Drainage Layer	6[1]	IDOT 208-2.1 - CA-4
		Crushed Aggregate Base	6[1]	P-209
		Subbase	12	P-154
New PCC (Subgrade Stabilization)	20	PCC	10	P-501
		Drainage Layer	6[1]	IDOT 208-2.1 - CA-4
		Crushed Aggregate Base	6[1]	P-209
		Cement Treated Subgrade	12	P-156
New HMA Drive Aisles (No Subgrade Stabilization)	20	HMA	4[1]	P-401
		Crushed Aggregate Base	6[1]	P-209
		Subbase	12	P-154
		Drainage Layer	6[1]	IDOT 208-2.1 - CA-4
New HMA Drive Aisles (Subgrade Stabilization)	20	HMA	4[1]	P-401
		Crushed Aggregate Base	6[1]	P-209
		Drainage Layer	6[1]	IDOT 208-2.1 - CA-4
		Cement Treated Subgrade	12	P-156

NOTES:-

1 Indicates minimum thickness required by FAA Advisory Circular No. 150/5320-6G (FAA, 2021)

Geotextile Separation Layer

As discussed in the frost depth section above, we recommend incorporating a geotextile separation layer into the pavement section. The geotextile separation fabric should be placed over the subgrade, between the subgrade and the base, subbase or drainage layer, depending on the pavement section. The geotextile should meet the specifications in the IDOT Standard Specifications for Construction of Airports (2023), Section 152-2.1, Geotextile Fabric.

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Frost Susceptibility Considerations

To address potential adverse effects from frost penetration, the crushed aggregate base and subbase material should be designed as non-frost susceptible material. In order to be considered non-frost susceptible, FAA AC No. 150/5370-10 recommends the following:

- Crushed Aggregate Base: Section 209-2.2 states that the maximum allowable material passing the No. 200 sieve should be reduced to 0 to 5 percent.
- Subbase: Section 154-2.1 states that the maximum allowable material passing the No. 200 sieve should be reduced to 0 to 10 percent.

COMPACTION RECOMMENDATIONS

We recommend the following compaction criteria from the FAA be incorporated into the project specifications:

- The FAA recommends ASTM D1557, Modified Proctor Compaction, where the design aircraft weight is 60,000 pounds or greater; we recommend subgrade compaction for both the PCC and HMA areas be evaluated using ASTM D1557 compaction characteristics.
- For fill material, the FAA recommends the following compaction efforts under new pavement areas, including shoulders:
  - Cohesive fill should be compacted to a minimum of 95 percent of maximum dry density
  - Cohesionless fill should be compacted to 100 percent of maximum dry density in the top 6 inches, and 95 percent below.
- Per FAA AC No. 150/5370-10H, Section 152-2.5, "Preparation of Cut Areas or Areas Where Existing Pavement Has Been Removed," FAA recommends that the top 12 inches of subgrade exposed in cut sections should be reworked and recompacted to a minimum of 95 percent of the maximum dry density for cohesive soils, as determined by ASTM D1557. "Cohesive" soils are defined as soils having a PI greater than or equal to 3.
- Project specifications as outlined in FAA AC No. 150/5370-10H should be followed for material specification and placement requirements.

Quality Control During Construction

During construction, we recommend Geocon be retained to observe and test earthwork operations. Fill and subgrade soils should be compacted at a moisture content within approximately 3 percent of the optimum moisture content determined from the applicable ASTM D1557 test. Prior to placement of fill, base, or subbase materials, the exposed

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subgrade should be proof-rolled with a loaded dump truck or similar heavy rubber-tired equipment, under the observation of a geotechnical engineer, to identify soft, yielding, or unstable areas; any such areas identified should be overexcavated and replaced with properly compacted crushed aggregate base or drainage rock. In-place density and moisture content testing should be performed at a frequency consistent with the IDOT Standard Specifications for Construction of Airports (2023) to confirm the specified relative compaction is achieved in each lift of fill, base, and subbase, and in the reworked subgrade. We recommend earthwork be observed and tested throughout construction to confirm that subgrade, subbase, and drainage rock materials and compaction conform to the recommendations in this letter and the project specifications.

CLOSURE

This letter report has been prepared for the exclusive use of Geocon Professional Services and its design team for the Chicago Executive Airport, Home Base Campus project. Our recommendations are based on the traffic, subsurface, and site information provided to us by others as described herein; if conditions are found to differ from those described, or if project design areas, aircraft mix, or vehicle loading change, we should be contacted to evaluate whether revisions to our recommendations are warranted.

Sincerely,

SHANNON & WILSON

Illinois Professional Design Firm
License No. 184-001377

Benjamin Warren, PE
Senior Geotechnical Engineer

BJW:BPT:JZB/bjw

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APPENDIX 3
STORMWATER CALCULATIONS

COMPOSITE RUNOFF COEFFICIENT (*C*)

PROJECT: PWK HOME BASE CAMPUS **PERMIT NUMBER:** 2026-0159

LOCATION: CHICAGO EXECUTIVE AIRPORT (PWK) **DATE:** 7/20/2026

TYPE OF AREA (SELECT WITH DROP-DOWN)

X DETAINED AREA

___ UNRESTRICTED AREA

___ UPSTREAM AREA

___ MAJOR STORMWATER SYSTEM

___ OTHER: _____

CONDITION (SELECT WITH DROP-DOWN)

___ PROPOSED CONDITION

X EXISTING CONDITION

RUNOFF COEFFICIENT

Surface Description	C	Area (acres)	Product (C)(Area)
IMPERVIOUS	0.95	14.16	13.45
PERVIOUS	0.50	14.68	7.34
TOTALS:		28.84	20.79

COMPOSITE RUNOFF COEFFICIENT

$$\text{Composite C} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{20.79}{28.84} \rightarrow \text{Composite C} = \mathbf{0.72}$$

MODIFIED RATIONAL METHOD: TP-40 RAINFALL DATA

PROJECT: PWK HOME BASE CAMPUS **PERMIT NUMBER:** 2026-0159

LOCATION: CHICAGO EXECUTIVE AIRPORT (PWK) **DATE:** 7/20/2026

DEVELOPMENT INFORMTION

1. Detained Area	28.840	acres
2. Runoff Coefficient	0.720	
3. Actual Release Rate	4.326	cfs

REQUIRED DETENTION VOLUME

4. Required Detention Volume	**5.434**	ac-ft

CALCULATION TABLE

Storm Duration	Rainfall Intensity (in/hr)	Inflow Rate (cfs)	Stored Rate (cfs)	Required Storage (ac-ft)	
10 min	7.60	157.81	153.49	2.114	
20 min	5.50	114.21	109.88	3.027	
30 min	4.40	91.37	87.04	3.597	
40 min	3.70	76.83	72.50	3.995	
50 min	3.20	66.45	62.12	4.278	
1 hr	2.80	58.14	53.82	4.448	
1.5 hr	2.10	43.61	39.28	4.869	
2 hr	1.70	35.30	30.97	5.120	
3 hr	1.20	24.92	20.59	5.105	
4 hr	1.00	20.76	16.44	5.434	←
5 hr	0.84	17.44	13.12	5.420	
6 hr	0.73	15.16	10.83	5.371	
7 hr	0.65	13.50	9.17	5.306	
8 hr	0.58	12.04	7.72	5.103	
9 hr	0.53	11.01	6.68	4.968	
10 hr	0.49	10.17	5.85	4.834	
11 hr	0.46	9.55	5.23	4.751	
12 hr	0.43	8.93	4.60	4.565	
13 hr	0.40	8.31	3.98	4.276	
14 hr	0.38	7.89	3.56	4.124	
15 hr	0.36	7.48	3.15	3.904	
16 hr	0.34	7.06	2.73	3.615	
17 hr	0.33	6.85	2.53	3.549	
18 hr	0.31	6.44	2.11	3.140	
19 hr	0.30	6.23	1.90	2.989	
20 hr	0.29	6.02	1.70	2.803	
21 hr	0.28	5.81	1.49	2.583	
22 hr	0.27	5.61	1.28	2.328	
23 hr	0.26	5.40	1.07	2.039	
24 hr	0.25	5.19	0.87	1.716	

COMPOSITE RUNOFF COEFFICIENT (*C*)

PROJECT: PWK HOME BASE CAMPUS **PERMIT NUMBER:** 2026-0159

LOCATION: CHICAGO EXECUTIVE AIRPORT (PWK) **DATE:** 7/20/2026

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 COEFFICIENT

Surface Description	C	Area (acres)	Product (C)(Area)
IMPERVIOUS	0.95	15.82	15.03
PERVIOUS	0.50	13.02	6.51
TOTALS:		28.84	21.54

COMPOSITE RUNOFF COEFFICIENT

$$\text{Composite C} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{21.54}{28.84} \rightarrow \text{Composite C} = \mathbf{0.75}$$

MODIFIED RATIONAL METHOD: BULLETIN 75 RAINFALL DATA

PROJECT: PWK HOME BASE CAMPUS **PERMIT NUMBER:** 2026-1059

LOCATION: CHICAGO EXECUTIVE AIRPORT (PWK) **DATE:** 7/20/2026

DEVELOPMENT INFORMTION

1. Detained Area	28.840	acres
2. Composite Runoff Coefficient	0.750	
3. Actual Release Rate	4.326	cfs

REQUIRED DETENTION VOLUME

4. Required Detention Volume	**9.510**	ac-ft

CALCULATION TABLE

Storm Duration	Rainfall Intensity (in/hr)	Inflow Rate (cfs)	Stored Rate (cfs)	Required Storage (ac-ft)	
5 min	12.36	267.35	263.02	1.811	
10 min	10.80	233.60	229.28	3.158	
15 min	9.28	200.73	196.40	4.058	
20 min	8.04	173.91	169.58	4.672	
30 min	6.34	137.13	132.81	5.488	
40 min	5.28	114.21	109.88	6.054	
50 min	4.55	98.42	94.09	6.480	
1 hr	4.03	87.17	82.84	6.847	
1.5 hr	3.03	65.54	61.21	7.588	
2 hr	2.49	53.86	49.53	8.187	
3 hr	1.83	39.58	35.26	8.741	
4 hr	1.48	32.01	27.69	9.153	
5 hr	1.25	27.04	22.71	9.385	
6 hr	1.07	23.14	18.82	9.331	
7 hr	0.96	20.76	16.44	9.510	←
8 hr	0.86	18.60	14.28	9.439	
9 hr	0.79	17.09	12.76	9.492	
10 hr	0.72	15.57	11.25	9.296	
11 hr	0.67	14.49	10.17	9.242	
12 hr	0.62	13.44	9.11	9.038	
18 hr	0.45	9.68	5.35	7.965	
24 hr	0.36	7.72	3.40	6.739	

NORTH HANGAR DRAINAGE AREA

TOTAL DRAINAGE AREA:	231,354	SF	5.311	AC
PERVIOUS (GREEN) AREA:	5,270	SF	0.121	AC
IMPERVIOUS AREA:	226,085	SF	5.190	AC
VOLUME CONTROL REQUIRED:	**18,840**	**CF**	**0.433**	**AC-FT**

VOLUME CONTROL AREA:	18,094	SF	0.415 AC
AQUAMOD AREA:	13,814	SF	
PERIMETER STONE BACKFILL AREA:	4,280	SF	(2' AROUND PERIMETER)
LOWEST RIM ELEVATION:	642.00		
OUTLET PIPE INVERT:	638.83		1.92 ft (depth of cover)
TOP OF AQUAMOD ELEVATION:	638.50		
UNDERDRAIN INVERT:	637.53		
BOTTOM OF AQUAMOD ELEVATION:	636.86		
BOTTOM OF STONE ELEVATION:	636.53		0.33 ft (depth of stone)
SHGL:	630.00		
SEPARATION:	6.53	FT	

Total Excavation (cy)
3,666

RATE CONTROL SUMMARY

VOLUME TYPE	DEPTH (FT)	POROSITY	STORAGE VOLUME	VOLUME PROV'D (CF)
RA: COARSE AGGREGATE TOP (BELOW OUTLET, ABOVE AQUAMOD)	0.33	0.36	0.50 X 0.36 X RA	829
RB: AQUAMOD (ABOVE UD INVERT)	0.97	0.965	0.50 X 0.965 X RB	6,465
RB: COARSE AGGREGATE PERIMETER (ABOVE UD INVERT)	1.30	0.360	0.50 X 0.36 X RB	1,004
			TOTAL	**8,298** **CF**
				0.190 **AC-FT**

VOLUME CONTROL SUMMARY

VOLUME TYPE	DEPTH (FT)	POROSITY	STORAGE VOLUME	VOLUME PROV'D (CF)
VA: COARSE AGGREGATE TOP (BELOW OUTLET, ABOVE AQUAMOD)	0.33	0.36	0.50 X 0.36 X VA	829
VB: AQUAMOD (ABOVE UD INVERT)	0.97	0.965	0.50 X 0.965 X VB	6,465
VB: COARSE AGGREGATE PERIMETER (ABOVE UD INVERT)	1.30	0.360	0.50 X 0.36 X VB	1,004
VC: AQUAMOD (BELOW UD INVERT)	0.67	0.965	0.965 X VC	8,931
VD: COARSE AGGREGATE PERIMETER (BELOW U.D. INVERT)	1.00	0.36	0.36 X VD	1,541
VD: COARSE AGGREGATE BOTTOM (BELOW U.D. INVERT)	0.33	0.36	0.36 X VD	1,641
			VOLUME CONTROL PROVIDED:	**19,582** **CF**
				0.450 **AC-FT**

SOUTH HANGAR DRAINAGE AREA

TOTAL DRAINAGE AREA:	187,673	SF	4.308	AC
PERVIOUS (GREEN) AREA:	3,441	SF	0.079	AC
IMPERVIOUS AREA:	184,232	SF	4.229	AC
VOLUME CONTROL REQUIRED:	**15,353**	**CF**	**0.352**	**AC-FT**

VOLUME CONTROL AREA:	14,556	SF	0.334 AC
AQUAMOD AREA:	11,103	SF	
PERIMETER STONE BACKFILL AREA:	3,453	SF	(2' AROUND PERIMETER)
LOWEST RIM ELEVATION:	642.00		
OUTLET PIPE INVERT:	638.83		1.92 ft (depth of cover)
TOP OF AQUAMOD ELEVATION:	638.50		
UNDERDRAIN INVERT:	637.53		
BOTTOM OF AQUAMOD ELEVATION:	636.86		
BOTTOM OF STONE ELEVATION:	636.53		0.33 ft (depth of stone)
SHGL:	630.00		
SEPARATION:	6.53	FT	

Total Excavation (cy)
2,949

RATE CONTROL SUMMARY

VOLUME TYPE	DEPTH (FT)	POROSITY	STORAGE VOLUME	VOLUME PROV'D (CF)
RA: COARSE AGGREGATE TOP (BELOW OUTLET, ABOVE AQUAMOD)	0.33	0.36	0.50 X 0.36 X RA	666
RB: AQUAMOD (ABOVE UD INVERT)	0.97	0.965	0.50 X 0.965 X RB	5,196
RB: COARSE AGGREGATE PERIMETER (ABOVE UD INVERT)	1.30	0.360	0.50 X 0.36 X RB	810
			TOTAL	**6,673** **CF**
				0.153 **AC-FT**

VOLUME CONTROL SUMMARY

VOLUME TYPE	DEPTH (FT)	POROSITY	STORAGE VOLUME	VOLUME PROV'D (CF)
VA: COARSE AGGREGATE TOP (BELOW OUTLET, ABOVE AQUAMOD)	0.33	0.36	0.50 X 0.36 X VA	666
VB: AQUAMOD (ABOVE UD INVERT)	0.97	0.965	0.50 X 0.965 X VB	5,196
VB: COARSE AGGREGATE PERIMETER (ABOVE UD INVERT)	1.30	0.360	0.50 X 0.36 X VB	810
VC: AQUAMOD (BELOW UD INVERT)	0.67	0.965	0.965 X VC	7,179
VD: COARSE AGGREGATE PERIMETER (BELOW U.D. INVERT)	1.00	0.36	0.36 X VD	1,243
VD: COARSE AGGREGATE BOTTOM (BELOW U.D. INVERT)	0.33	0.36	0.36 X VD	1,319
			VOLUME CONTROL PROVIDED:	**15,747** **CF**
				0.362 **AC-FT**

PWK HOME BASE CAMPUS (CHICAGO EXECUTIVE AIRPORT) CEG #: 2025-117

Detention / Floodplain Compensatory Storage Summary (1.1:1) Date: 4/27/2026

City of Prospect Heights & Village of Wheeling, IL REV Date: 7/20/2026

DEVELOPMENT AREA, SECTIONS 0+00 - 14+50 (28.98 ACRES) (100-YR BFE = 640.10)

	MATERIAL NAME	CUMULATIVE VOLUME (CY)	(AC-FT)
1	0-10 BFE / DETENTION CUT	39,840	24.69
2	DETENTION FILL (< 638.00)	30,672	19.01
3	10-100 YEAR CUT	19,378	12.01
4	10-100 YEAR FILL	41,233	25.56

SOUTH FLOODPLAIN COMP STORAGE, SECTIONS 79+00 - 71+00 (BFE = 640.00)

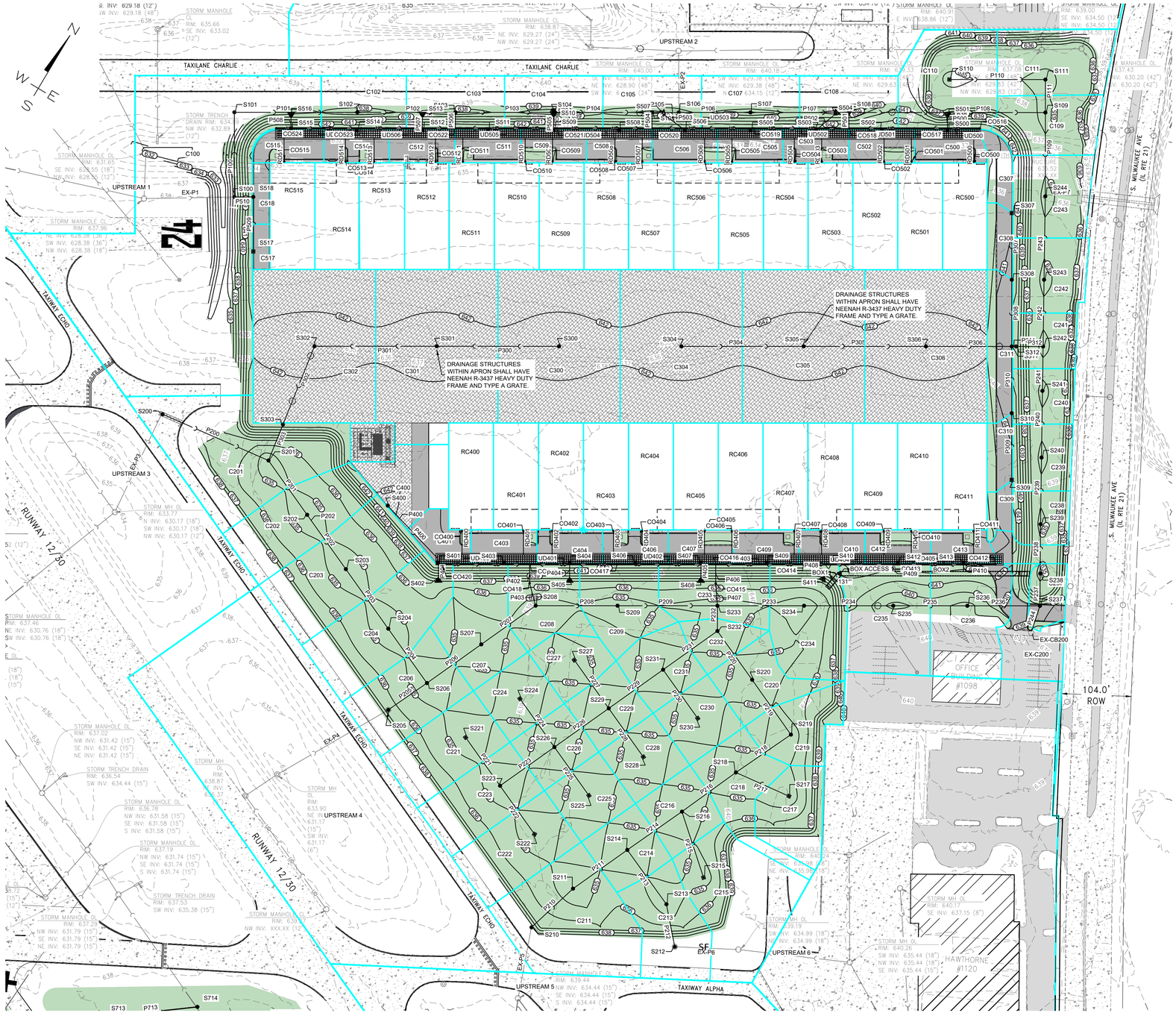
	MATERIAL NAME	CUMULATIVE VOLUME (CY)	(AC-FT)
5	0-10 BFE / DETENTION CUT	4,852	3.01
6	DETENTION FILL (< 638.00)	20	0.01
7	10-100 YEAR CUT	6,571	4.07
8	10-100 YEAR FILL	2	0.00

NORTH FLOODPLAIN COMP STORAGE, SECTIONS 34+00 - 12+00 (BFE = 640.20)

	MATERIAL NAME	CUMULATIVE VOLUME (CY)	(AC-FT)
9	0-10 BFE CUT	7,218	4.47
10	0-10 BFE FILL	3	0.00
11	10-100 YEAR CUT	16,296	10.10
12	10-100 YEAR FILL	0	0.00

FLOODPLAIN COMP STORAGE SUMMARY

	MATERIAL NAME	CUMULATIVE VOLUME (CY)	(AC-FT)	*REF LINE*
13	0-10 BFE / DETENTION CUT	44,692	27.70	*1+5*
14	REQUIRED DETENTION	37,252	23.09	*LEGACY D*
15	EXCESS 0-10 BFE CUT	14,659	9.09	*9+13-14*
16	0-10 YEAR FILL	3	0.00	*10*
17	10-100 YEAR CUT	42,245	26.18	*3+7+11*
18	10-100 YEAR FILL	41,235	25.56	*4+8+12*
19	REQUIRED COMP STORAGE 1.1X	45,361	28.12	*(16+18) * 1.1*
20	PROVIDED COMP STORAGE	56,904	35.27	*15+17*
21	**EXCESS COMPENSATORY STORAGE**	**11,543**	**7.15**	***20-19***



Inflow Name	Connection Name	Area (Total) (acre)	Runoff Method	Time of Concentration (Max.) (mins)	Pervious Curve Number	Percentage Impervious (%)	Composite Curve Number	Initial Abstraction Depth (in)
C102	P102	0.234	SCS	10	74	56.53	88	0.284
C103	P103	0.270	SCS	10	74	56.57	88	0.284
C104	P104	0.271	SCS	10	74	56.72	88	0.283
C105	P105	0.271	SCS	10	74	56.79	88	0.282
C107	P107	0.271	SCS	10	74	56.76	88	0.282
C108	P108	0.271	SCS	10	74	55.10	87	0.293
C109	P109	0.308	SCS	10	74	0.15	74	0.701
C110	P110	0.477	SCS	10	74	16.79	76	0.563
C111	P111	0.386	SCS	10	74	7.69	76	0.637
C201	P201	0.853	SCS	10	74	42.34	84	0.376
C202	P202	0.441	SCS	10	74	19.06	79	0.545
C203	P203	0.575	SCS	10	74	17.18	78	0.56
C204	P204	0.542	SCS	10	74	17.23	78	0.56
C206	P206	0.403	SCS	10	74	22.13	79	0.522
C207	P207	0.383	SCS	10	74	0.00	74	0.703
C208	P208	0.293	SCS	10	74	0.00	74	0.703
C209	P209	0.320	SCS	10	74	0.00	74	0.703
C211	P211	0.682	SCS	10	74	44.34	85	0.363
C213	P213	0.367	SCS	10	74	41.08	84	0.385
C214	P214	0.222	SCS	10	74	0.00	74	0.703
C215	P215	0.622	SCS	10	74	64.76	90	0.234
C216	P216	0.224	SCS	10	74	0.00	74	0.703
C217	P217	0.280	SCS	10	74	13.66	77	0.588
C218	P218	0.319	SCS	10	74	14.11	77	0.584
C219	P219	0.262	SCS	10	74	0.05	74	0.702
C220	P220	0.252	SCS	10	74	0.00	74	0.703
C221	P221	0.370	SCS	10	74	22.76	79	0.517
C222	P222	0.372	SCS	10	74	22.68	79	0.518
C223	P223	0.349	SCS	10	74	22.73	79	0.517
C224	P224	0.217	SCS	10	74	0.00	74	0.703
C225	P225	0.218	SCS	10	74	0.00	74	0.703
C226	P226	0.206	SCS	10	74	0.00	74	0.703
C227	P227	0.187	SCS	10	74	0.00	74	0.703
C228	P228	0.219	SCS	10	74	0.00	74	0.703
C229	P229	0.205	SCS	10	74	0.00	74	0.703
C230	P230	0.219	SCS	10	74	0.00	74	0.703
C231	P231	0.235	SCS	10	74	0.00	74	0.703
C232	P232	0.139	SCS	10	74	0.00	74	0.703
C233	P233	0.330	SCS	10	74	0.00	74	0.703
C234	P234	0.433	SCS	10	74	0.04	74	0.702
C235	P235	0.465	SCS	10	74	54.49	87	0.297
C236	P236	0.444	SCS	10	74	49.98	86	0.326
C237	P237	0.114	SCS	10	74	100.00	98	0.041
C238	P238	0.155	SCS	10	74	5.63	75	0.654
C239	P239	0.203	SCS	10	74	6.95	76	0.643
C240	P240	0.176	SCS	10	74	6.58	76	0.646
C241	P241	0.183	SCS	10	74	6.18	75	0.65
C242	P242	0.282	SCS	10	74	5.85	75	0.652
C243	EX-P7	0.329	SCS	10	74	0.00	74	0.703
C300	P301	0.968	SCS	10	74	100.00	98	0.041
C301	P302	1.029	SCS	10	74	100.00	98	0.041
C302	P304	0.971	SCS	10	74	99.79	98	0.042
C304	P306	0.968	SCS	10	74	100.00	98	0.041
C305	P307	0.968	SCS	10	74	100.00	98	0.041
C306	P308	0.968	SCS	10	74	100.00	98	0.041
C307	P309	0.094	SCS	10	74	99.92	98	0.041
C308	P310	0.088	SCS	10	74	99.99	98	0.041
C309	P311	0.060	SCS	10	74	100.00	98	0.041
C310	P312	0.090	SCS	10	74	100.00	98	0.041
C311	P313	0.195	SCS	10	74	100.00	98	0.041

Inflow Name	Connection Name	Area (Total) (acre)	Runoff Method	Time of Concentration (Max.) (mins)	Pervious Curve Number	Percentage Impervious (%)	Composite Curve Number	Initial Abstraction Depth (in)
C400	P400	0.263	SCS	10	74	100.00	98	0.041
C401	P401	0.120	SCS	10	74	97.35	97	0.054
C404	P404	0.114	SCS	10	74	96.79	97	0.057
C407	P405	0.114	SCS	10	74	82.33	94	0.133
C410	P408	0.114	SCS	10	74	97.21	97	0.055
C413	P410	0.106	SCS	10	74	93.50	96	0.074
C500	P500	0.122	SCS	10	74	100.00	98	0.041
C503	P502	0.114	SCS	10	74	97.21	97	0.055
C506	P503	0.114	SCS	10	74	90.87	96	0.088
C509	P505	0.114	SCS	10	74	81.60	94	0.137
C512	P507	0.114	SCS	10	74	97.21	97	0.055
C515	P508	0.116	SCS	10	74	94.04	97	0.071
C517	P509	0.041	SCS	10	74	100.00	98	0.041
C518	P510	0.059	SCS	10	74	100.00	98	0.041
EX-C200	P243	0.242	SCS	10	74	100.00	98	0.041
RC400	RD400	0.246	SCS	10	74	100.00	98	0.041
RC401	RD401	0.248	SCS	10	74	100.00	98	0.041
RC402	RD402	0.248	SCS	10	74	100.00	98	0.041
RC403	RD403	0.248	SCS	10	74	100.00	98	0.041
RC404	RD404	0.247	SCS	10	74	100.00	98	0.041
RC405	RD405	0.247	SCS	10	74	100.00	98	0.041
RC406	RD406	0.247	SCS	10	74	100.00	98	0.041
RC407	RD407	0.247	SCS	10	74	100.00	98	0.041
RC408	RD408	0.247	SCS	10	74	100.00	98	0.041
RC409	RD409	0.247	SCS	10	74	100.00	98	0.041
RC410	RD410	0.247	SCS	10	74	100.00	98	0.041
RC411	RD411	0.245	SCS	10	74	100.00	98	0.041
RC500	RD500	0.245	SCS	10	74	100.00	98	0.041
RC501	RD501	0.247	SCS	10	74	100.00	98	0.041
RC502	RD502	0.247	SCS	10	74	100.00	98	0.041
RC503	RD503	0.247	SCS	10	74	100.00	98	0.041
RC504	RD504	0.245	SCS	10	74	100.00	98	0.041
RC505	RD505	0.247	SCS	10	74	100.00	98	0.041
RC506	RD506	0.247	SCS	10	74	100.00	98	0.041
RC507	RD507	0.249	SCS	10	74	100.00	98	0.041
RC508	RD508	0.245	SCS	10	74	100.00	98	0.041
RC509	RD509	0.247	SCS	10	74	100.00	98	0.041
RC510	RD510	0.247	SCS	10	74	100.00	98	0.041
RC511	RD511	0.249	SCS	10	74	100.00	98	0.041
RC512	RD512	0.245	SCS	10	74	100.00	98	0.041
RC513	RD513	0.249	SCS	10	74	100.00	98	0.041
RC514	RD514	0.243	SCS	10	74	100.00	98	0.041
RC515	RD515	0.247	SCS	10	74	100.00	98	0.041

EXISTING HMA PAVEMENT

EXISTING PCC PAVEMENT

PROPOSED HMA PAVEMENT

PROPOSED PCC PAVEMENT

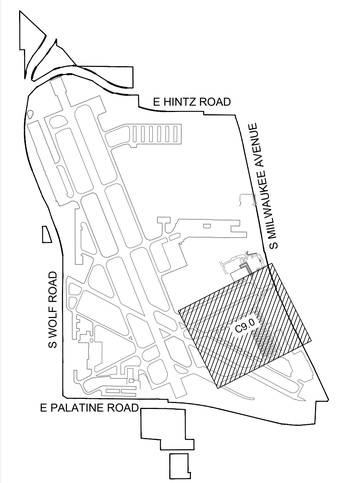
PROPOSED PCC SIDEWALK

NOTES:

1. EXISTING TOPOGRAPHY WITHIN THE DEVELOPMENT SITE AREA PROVIDED BY ACCURATE SURVEYING, PER FIELD WORK COMPLETED MARCH 3, 2026, AND OVERLAID WITH 2022 COOK COUNTY GIS INFORMATION AS PUBLICLY AVAILABLE.
2. ALL EXISTING FIELD TILES WITHIN THE LIMITS OF DISTURBANCE SHALL BE ABANDONED AND COLLAPSED. ALL DRAINAGE ENTERING THE SITE SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM.
3. THE CONTRACTOR SHALL CONTACT JULIE (JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. CALL 1-800-892-0123.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. HAND OR EXPLORATORY EXCAVATION MAY BE REQUIRED TO CONFIRM UTILITY LOCATIONS.
5. THE CONTRACTOR SHALL COORDINATE AND ADJUST OR RELOCATE EXISTING UTILITIES AS NECESSARY TO COMPLETE THE PROPOSED IMPROVEMENTS.
6. ALL EXISTING SIGNS AFFECTED BY CONSTRUCTION SHALL BE TEMPORARILY REMOVED AND REINSTALLED OR RELOCATED AS REQUIRED TO ACCOMMODATE PAVEMENT AND UTILITY WORK.

80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.



KEY MAP

COOK ENGINEERING GROUP
Civil Engineering & Land Development Consulting
26316 Mapleview Drive
Plainfield, IL 60585
815.577.1707 T 815.577.2595 F
www.cookengroup.com

#	DATE	REVISION DESCRIPTION
1	04/27/2026	PER REVISED BUILDING G PROTOTYPE
2	07/20/2026	PER MWRD / IEPA / CCPH / IDOT REVIEW COMMENTS
3		
4		
5		
6		
7		
8		
9		
10		

DRAINAGE EXHIBIT

PWK HOME BASE CAMPUS
1089-1097 S MILWAUKEE AVE
WHEELING, IL 60090

PREPARED FOR
SKY HARBOUR, LLC
136 TOWER ROAD, SUITE 205
WHITE PLAINS, NY 10604
312.965.7672
DANNIN@SKYHARBOUR.GROUP
MR. DAVID ANNIN

CEG JOB NUMBER
2025-117

SCALE:	1" = 80'
DRAWN BY:	GRC
CHECKED BY:	MDC
DATE:	03/27/2026
SHEET:	C9.0

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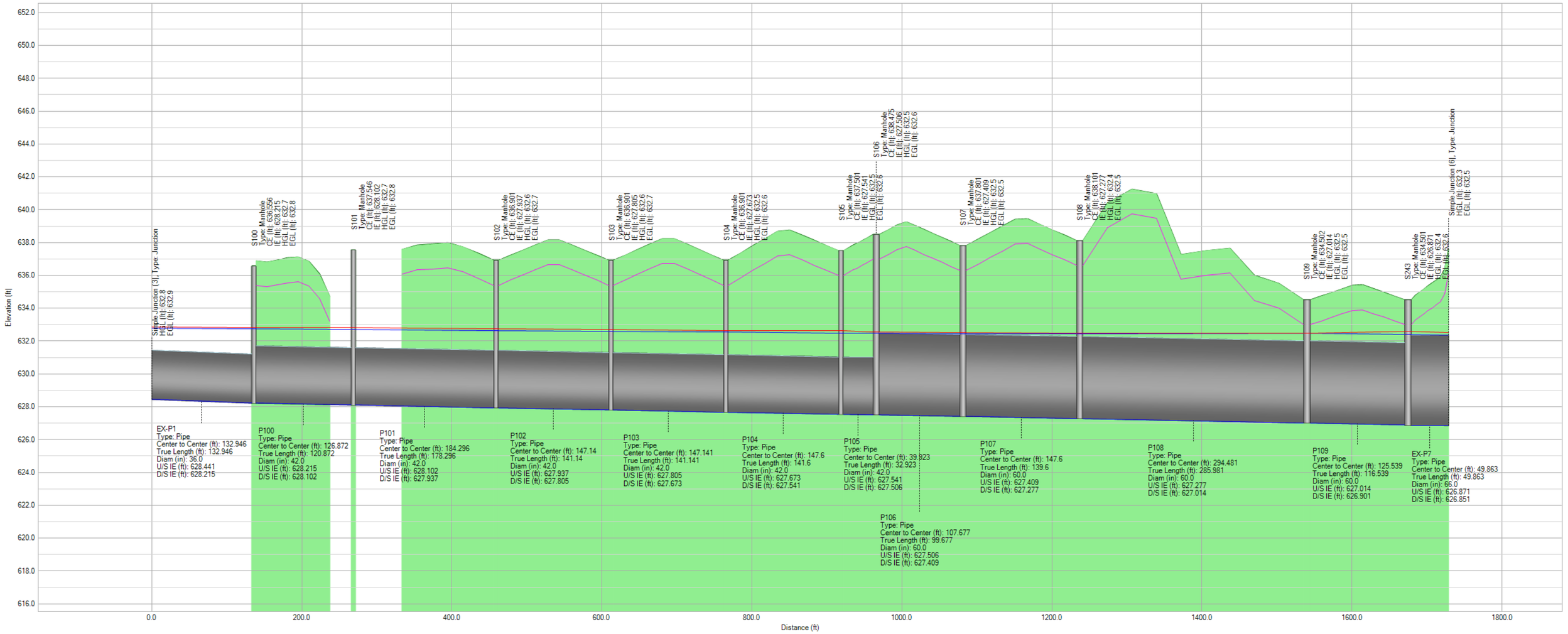
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	Connection Name	Connection Incoming Item(s)	Connection Outgoing Item	Connection Length (ft)	Connection Slope (%)	Connection Manning's n	Connection Diameter / Base Width (in)	Connection Upstream Cover Elevation (ft)	Connection EGL Up (ft)	Connection HGL Up (ft)	Connection Upstream Invert Elevation (ft)	Connection Downstream Cover Elevation (ft)	Connection EGL Down (ft)	Connection HGL Down (ft)	Connection Downstream Invert Elevation (ft)	Inflow Name	Area (Total) (acre)	Percentage Impervious (Weighted Average) (%)	Composite Curve Number	Initial Abstraction Depth (in)	Time of Concentration (Max.) (mins)	Max. Inflow (ft³/s)	Connection Max. Depth (ft)	Connection Max. Velocity (ft/s)	Connection Max. Inflow (ft³/s)	Connection Flow / Capacity
2	BOX1	Simple Junction (7)	BOX ACCESS 1	12	0.29	0.013	72	642.96	637.03	637.03	636.96	642.07	637.04	637.03	636.92								0.09	0.00	0.00	0
3	BOX2	BOX ACCESS 1	BOX ACCESS 2	239	0.29	0.013	72	642.07	637.04	637.03	636.92	642.11	636.51	636.49	636.23								0.18	1.22	0.91	0.01
4	BOX3	BOX ACCESS 2	BOX3 OUT	69	0.29	0.013	72	642.11	636.51	636.49	636.23	642.04	636.44	636.43	636.04								0.33	1.50	2.59	0.02
5	EX-P1	Simple Junction (3)	S100	133	0.17	0.013	36	631.44	632.86	632.78	628.44	636.56	632.84	632.74	628.22	SSA OUTPUT - PIPE 499						10.368	3.00	2.23	10.38	0.38
6	EX-P2	Simple Junction (5)	S106	97	1.73	0.013	48	633.18	632.55	632.48	629.18	638.48	632.55	632.47	627.51	SSA OUTPUT - PIPE 511						18.894	4.00	2.12	17.81	0.09
7	EX-P3	Simple Junction (8)	S200	164	0.24	0.013	18	631.67	635.83	635.55	630.17	639.00	635.13	634.93	629.78	SSA OUTPUT - PIPE 437						7.516	1.50	4.25	7.51	1.46
8	EX-P4	Simple Junction (9)	S205	189	0.77	0.013	15	632.42	635.50	635.35	631.17	636.87	634.76	634.65	629.71	SSA OUTPUT - PIPE 443						3.830	1.25	3.12	3.83	0.67
9	EX-P5	Simple Junction (2)	S210	108	2.20	0.013	15	635.34	635.93	635.52	634.09	639.11	635.33	635.03	631.72	SSA OUTPUT - PIPE 489						4.030	1.25	5.16	4.03	0.42
10	EX-P6	Simple Junction (4)	S212	95	4.04	0.013	18	636.49	637.92	636.98	634.99	639.90	635.49	634.91	631.14	UPSTREAM 6	6.412	0.00	84	0.381	5	13.802	1.50	7.81	13.79	0.65
11	EX-P7	S243	Simple Junction (6)	50	0.04	0.013	66	634.50	632.59	632.41	626.87	632.35	632.50	632.35	626.85	C243	0.329	0.00	74	0.703	10	0.321	5.50	3.16	67.01	1
12	P100	S100	S101	127	0.09	0.013	42	636.56	632.84	632.74	628.22	637.55	632.81	632.70	628.10	C100	2.705	87.26	95	0.107	10	10.855	3.50	2.70	15.32	0.51
13	P101	S101	S102	184	0.09	0.013	42	637.55	632.81	632.70	628.10	636.90	632.75	632.64	627.94								3.50	2.63	15.70	0.52
14	P102	S102	S103	147	0.09	0.013	42	636.90	632.75	632.64	627.94	636.90	632.72	632.59	627.81	C102	0.234	56.53	88	0.284	10	0.586	3.50	2.53	16.33	0.54
15	P103	S103	S104	147	0.09	0.013	42	636.90	632.72	632.59	627.81	636.90	632.63	632.54	627.67	C103	0.270	56.57	88	0.284	10	0.676	3.50	2.54	17.74	0.59
16	P104	S104	S105	148	0.09	0.013	42	636.90	632.63	632.54	627.67	637.50	632.63	632.50	627.54	C104	0.271	56.72	88	0.283	10	0.679	3.50	2.60	18.52	0.62
17	P105	S105	S106	40	0.09	0.013	42	637.50	632.63	632.50	627.54	638.48	632.55	632.47	627.51	C105	0.271	56.79	88	0.282	10	0.682	3.50	2.99	19.80	0.66
18	P106	S106	S107	108	0.09	0.013	60	638.48	632.55	632.47	627.51	637.80	632.50	632.45	627.41								5.00	2.09	27.84	0.36
19	P107	S107	S108	148	0.09	0.013	60	637.80	632.50	632.45	627.41	638.10	632.49	632.45	627.28	C107	0.271	56.76	88	0.282	10	0.679	5.00	1.50	27.49	0.35
20	P108	S108	S109	294	0.09	0.013	60	638.10	632.49	632.45	627.28	634.50	632.50	632.46	627.01	C108	0.271	55.10	87	0.293	10	0.662	5.00	1.43	27.57	0.35
21	P109	S109	S243	126	0.09	0.013	60	634.50	632.50	632.46	627.01	634.50	632.59	632.41	626.90	C109	0.308	0.15	74	0.701	10	0.301	5.00	1.50	29.43	0.38
22	P110	S110	S111	144	1.00	0.013	18	634.50	632.49	632.46	630.00	634.50	632.60	632.48	628.56	C110	0.477	16.79	78	0.563	10	0.639	1.50	2.67	1.29	0.12
23	P111	S111	S109	49	1.00	0.013	18	634.50	632.60	632.48	628.56	634.50	632.50	632.46	628.07	C111	0.386	7.69	76	0.637	10	0.438	1.50	2.97	1.56	0.15
24	P200	S200	S201	173	0.13	0.013	24	639.00	635.13	634.93	629.78	634.50	635.01	634.82	629.55								2.00	2.96	7.51	0.91
25	P201	S201	S202	100	0.13	0.013	30	634.50	635.01	634.82	629.55	634.50	634.92	634.76	629.42	C201	0.853	42.34	84	0.376	10	1.707	2.50	3.24	15.91	1.06
26	P202	S202	S203	100	0.13	0.013	30	634.50	634.92	634.76	629.42	634.50	634.87	634.69	629.28	C202	0.441	19.06	79	0.545	10	0.615	2.50	3.34	16.38	1.09
27	P203	S203	S204	110	0.13	0.013	30	634.50	634.87	634.69	629.28	634.50	634.79	634.61	629.14	C203	0.575	17.18	78	0.56	10	0.777	2.50	3.45	16.95	1.13
28	P204	S204	S206	100	0.13	0.013	30	634.50	634.79	634.61	629.14	634.50	634.73	634.53	629.00	C204	0.542	17.23	78	0.56	10	0.733	2.50	3.57	17.54	1.17
29	P205	S205	S206	71	1.00	0.013	18	636.87	634.76	634.65	629.71	634.50	634.73	634.53	629.00								1.50	2.17	3.83	0.36
30	P206	S206	S207	100	0.13	0.013	30	634.50	634.73	634.53	629.00	634.50	634.66	634.42	628.87	C206	0.403	22.13	79	0.522	10	0.591	2.50	3.94	19.34	1.29
31	P207	S207	S208	100	0.13	0.013	30	634.50	634.66	634.42	628.87	634.50	634.59	634.34	628.73	C207	0.383	0.00	74	0.703	10	0.374	2.50	3.92	19.26	1.28
32	P208	S208	S209	123	0.13	0.013	30	634.50	634.59	634.34	628.73	634.50	634.45	634.20	628.57	C208	0.293	0.00	74	0.703	10	0.286	2.50	4.02	19.72	1.31
33	P209	S209	S233	150	0.13	0.013	30	634.50	634.45	634.20	628.57	634.80	634.29	634.04	628.37	C209	0.320	0.00	74	0.703	10	0.312	2.50	3.93	19.29	1.29
34	P210	S210	S211	85	0.40	0.013	18	639.11	635.33	635.03	631.72	634.50	635.38	634.87	631.38								1.50	3.56	4.03	0.61
35	P211	S211	S214	100	0.40	0.013	18	634.50	635.38	634.87	631.38	634.50	635.10	634.71	630.98	C211	0.682	44.34	85	0.363	10	1.402	1.50	6.49	11.45	1.72
36	P212	S212	S213	65	0.40	0.013	24	639.90	635.49	634.91	631.14	634.50	635.08	634.78	630.88								2.00	4.38	13.78	0.96
37	P213	S213	S214	100	0.40	0.013	24	634.50	635.08	634.78	630.88	634.50	635.10	634.71	630.48	C213	0.367	41.08	84	0.385	10	0.721	2.00	4.46	12.80	0.89
38	P214	S214	S216	100	0.40	0.013	24	634.50	635.10	634.71	630.48	634.52	634.83	634.56	630.08	C214	0.222	0.00	74	0.703	10	0.217	2.00	4.16	12.24	0.86
39	P215	S215	S216	104	2.00	0.013	12	634.50	634.65	634.58	632.16	634.52	634.83	634.56	630.08	C215	0.622	64.76	90	0.234	10	1.782	1.00	2.20	1.73	0.34
40	P216	S216	S218	100	0.40	0.013	24	634.52	634.83	634.56	630.08	634.50	634.76	634.45	629.68	C216	0.224	0.00	74	0.703	10	0.219	2.00	4.48	14.08	0.98
41	P217	S217	S218	87	2.00	0.013	12	634.50	634.45	634.45	631.42	634.50	634.76	634.45	629.68	C217	0.280	13.66	77	0.588	10	0.356	1.00	0.42	0.33	0.07
42	P218	S218	S219	100	0.40	0.013	24	634.50	634.76	634.45	629.68	634.50	634.69	634.36	629.28	C218	0.319	14.11	77	0.584	10	0.408	2.00	4.62	14.54	1.02
43	P219	S219	S220	101	0.40	0.013	24	634.50	634.69	634.36	629.28	634.50	634.60	634.26	628.88	C219	0.262	0.05	74	0.702	10	0.256	2.00	4.64	14.59	1.02
44	P220	S220	S232	90	0.40	0.013	24	634.50	634.60	634.26	628.88	634.50	634.47	634.16	628.52	C220	0.252	0.00	74	0.703	10	0.246	2.00	4.65	14.63	1.02
45	P221	S221	S223	89	2.00	0.013	12	634.67	634.46	634.42	632.34	634.50	634.48	634.41	630.56	C221	0.370	22.76	79	0.517	10	0.550	1.00	1.61	0.53	0.11
46	P222	S222	S223	89	2.00	0.013	12	634.50	634.46	634.42	632.34	634.50	634.48	634.41	630.56	C222	0.372	22.68	79	0.518	10	0.551	1.00	1.61	0.54	0.11
47	P223	S223	S226	100	0.50	0.013	15	634.50	634.48	634.41	630.56	634.50	634.42	634.37	630.06	C223	0.349	22.73	79	0.517	10	0.518	1.25	2.41	1.56	0.34
48	P224	S224	S226	89	2.00	0.013	12	634.50	634.37	634.37	631.84	634.50	634.42	634.37	630.06	C224	0.217	0.00	74	0.703	10	0.212	1.00	0.46	0.18	0.04
49	P225	S225	S226	89	2.00	0.013	12	634.50	634.37	634.37	631.84	634.50	634.42	634.37	630.06	C225	0.218	0.00	74	0.703	10	0.213	1.00	0.46	0.18	0.04
50	P226	S226	S229	100	0.50	0.013	15	634.50	634.42	634.37	630.06	634.50	634.32	634.29	629.56	C226	0.206	0.00	74	0.703	10	0.201	1.25	1.78	2.08	0.46
51	P227	S227	S229	89	2.00	0.013	12	634.50	634.28	634.28	631.34	634.50	634.32	634.29	629.56	C227	0.187	0.00	74	0.703	10	0.183	1.00	0.36	0.16	0.03
52	P228	S228	S229	89	2.00	0.013	12	634.50	634.29	634.28	631.35	634.50	634.32	634.29	629.56	C228	0.219	0.00	74	0.703	10	0.213	1.00	0.43	0.19	0.04
53	P229	S229	S231	100	0.50	0.013	18	634.50	634.32	634.29	629.56	634.50	634.27	634.23	629.06	C229	0.205	0.00	74	0.703	10	0.200	1.50	1.47	2.60	0.35

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	Connection Name	Connection Incoming Item(s)	Connection Outgoing Item	Connection Length (ft)	Connection Slope (%)	Connection Manning's n	Connection Diameter / Base Width (in)	Connection Upstream Cover Elevation (ft)	Connection EGL Up (ft)	Connection HGL Up (ft)	Connection Upstream Invert Elevation (ft)	Connection Downstream Cover Elevation (ft)	Connection EGL Down (ft)	Connection HGL Down (ft)	Connection Downstream Invert Elevation (ft)	Inflow Name	Area (Total) (acre)	Percentage Impervious (Weighted Average) (%)	Composite Curve Number	Initial Abstraction Depth (in)	Time of Concentration (Max.) (mins)	Max. Inflow (ft³/s)	Connection Max. Depth (ft)	Connection Max. Velocity (ft/s)	Connection Max. Inflow (ft³/s)	Connection Flow / Capacity
54	P230	S230	S231	90	2.00	0.013	12	634.50	634.24	634.23	630.85	634.50	634.27	634.23	629.06	C230	0.219	0.00	74	0.703	10	0.214	1.00	0.57	0.22	0.04
55	P231	S231	S232	100	0.50	0.013	18	634.50	634.27	634.23	629.06	634.50	634.47	634.16	628.56	C231	0.235	0.00	74	0.703	10	0.229	1.50	1.72	3.03	0.41
56	P232	S232	S233	38	0.40	0.013	24	634.50	634.47	634.16	628.52	634.80	634.29	634.04	628.37	C232	0.139	0.00	74	0.703	10	0.136	2.00	4.75	14.94	1.04
57	P233	S233	S234	130	0.13	0.013	42	634.80	634.29	634.04	628.37	634.50	634.12	633.93	628.20	C233	0.330	0.00	74	0.703	10	0.322	3.50	3.68	32.65	0.89
58	P234	S234	S235	134	0.13	0.013	42	634.50	634.12	633.93	628.20	638.50	633.98	633.80	628.02	C234	0.433	0.04	74	0.702	10	0.423	3.50	3.45	32.18	0.87
59	P235	S235	S236	111	0.13	0.013	42	638.50	633.98	633.80	628.02	638.50	633.85	633.68	627.87	C235	0.485	54.49	87	0.297	10	1.170	3.50	3.37	32.41	0.88
60	P236	S236	S237	109	0.13	0.013	42	638.50	633.85	633.68	627.87	638.30	633.74	633.55	627.72	C236	0.444	49.98	86	0.326	10	0.989	3.50	3.43	32.99	0.9
61	P237	S237	S238	122	0.13	0.013	42	638.30	633.74	633.55	627.72	634.50	633.60	633.42	627.56	C237	0.114	100.00	98	0.041	10	0.535	3.50	3.54	34.12	0.93
62	P238	S238	S239	100	0.13	0.013	42	634.50	633.60	633.42	627.56	634.50	633.48	633.28	627.43	C238	0.155	5.63	75	0.654	10	0.170	3.50	3.60	34.66	0.94
63	P239	S239	S240	100	0.13	0.013	42	634.50	633.48	633.28	627.43	634.50	633.33	633.13	627.29	C239	0.203	6.95	76	0.643	10	0.228	3.50	3.61	34.72	0.94
64	P240	S240	S241	67	0.13	0.013	42	634.50	633.33	633.13	627.29	634.50	633.33	633.00	627.20	C240	0.176	6.58	76	0.646	10	0.196	3.50	3.61	34.77	0.94
65	P241	S241	S242	100	0.13	0.013	42	634.50	633.33	633.00	627.20	634.50	633.10	632.72	627.07	C241	0.183	6.18	75	0.65	10	0.202	3.50	5.00	48.10	1.31
66	P242	S242	S243	125	0.13	0.013	42	634.50	633.10	632.72	627.07	634.50	632.59	632.41	626.90	C242	0.282	5.85	75	0.652	10	0.310	3.50	5.00	48.15	1.31
67	P243	EX-CB200	S237	42	3.00	0.013	12	639.00	636.57	636.06	635.75	638.30	635.29	634.78	634.48	EX-C200	0.242	100.00	98	0.041	10	1.132	0.30	5.73	1.13	0.18
68	P300	S300	S301	183	0.50	0.013	18	641.40	637.45	637.15	636.27	641.40	636.38	636.01	635.35	C300	0.968	100.00	98	0.041	10	4.534	0.85	4.36	4.50	0.61
69	P301	S301	S302	183	0.50	0.013	24	641.40	636.38	636.01	634.85	641.40	635.33	634.91	633.93	C301	1.029	100.00	98	0.041	10	4.819	1.12	5.09	9.25	0.58
70	P302	S302	S303	127	0.50	0.013	30	641.40	635.33	634.91	633.43	642.56	635.18	634.83	632.80	C302	0.971	99.79	98	0.042	10	4.537	1.74	5.30	13.62	0.47
71	P303	S303	S201	58	1.00	0.013	30	642.56	635.18	634.83	630.13	634.50	635.01	634.82	629.55								2.50	4.07	11.61	0.28
72	P304	S304	S305	183	0.50	0.013	18	641.40	637.49	637.19	636.31	641.40	636.39	636.03	635.39	C304	0.968	100.00	98	0.041	10	4.534	0.85	4.36	4.50	0.61
73	P305	S305	S306	183	0.50	0.013	24	641.40	636.39	636.03	634.89	641.40	635.20	634.86	633.98	C305	0.968	100.00	98	0.041	10	4.535	1.10	5.05	8.97	0.56
74	P306	S306	S311	129	0.50	0.013	30	641.40	635.20	634.86	633.48	640.20	634.74	634.38	632.83	C306	0.968	100.00	98	0.041	10	4.534	1.46	4.52	13.46	0.46
75	P307	S307	S308	100	2.00	0.013	12	641.15	637.18	637.03	636.83	640.70	635.16	635.11	634.83	C307	0.094	99.92	98	0.041	10	0.439	0.24	3.05	0.44	0.09
76	P308	S308	S311	100	2.00	0.013	12	640.70	635.16	635.11	634.83	640.20	634.74	634.38	632.83	C308	0.088	99.99	98	0.041	10	0.414	0.91	1.13	0.85	0.17
77	P309	S309	S310	100	2.00	0.013	12	641.28	637.08	636.99	636.83	640.74	635.12	635.09	634.83	C309	0.060	100.00	98	0.041	10	0.282	0.21	2.41	0.28	0.06
78	P310	S310	S311	100	2.00	0.013	12	640.74	635.12	635.09	634.83	640.20	634.74	634.38	632.83	C310	0.090	100.00	98	0.041	10	0.422	0.90	0.94	0.70	0.14
79	P311	S311	S312	7	0.50	0.013	30	640.20	634.74	634.38	632.83	640.60	633.51	633.05	632.80	C311	0.195	100.00	98	0.041	10	0.914	1.43	5.46	15.88	0.55
80	P312	S312	S241	41	0.50	0.013	30	640.60	633.51	633.05	628.65	634.50	633.33	633.00	628.45								2.50	5.34	15.62	0.54
81	P400	S400	P400-OUT	108	0.50	0.013	12	639.91	639.71	639.67	638.24	638.70	639.64	639.63	637.70	C400	0.263	100.00	98	0.041	10	1.232	1.00	1.56	1.23	0.49
82	P401	S401	S402	22	1.00	0.013	12	642.00	639.43	639.38	638.83	639.61	639.24	639.19	638.61	C401	0.120	97.35	97	0.054	10	0.546	0.56	3.63	1.66	0.47
83	P402	CO419	CO418	28	11.21	0.013	8	642.65	638.15	637.79	637.53	636.80	635.59	634.69	634.34								0.30	8.50	1.24	0.31
84	P403	CO418	S208	35	5.29	0.013	8	636.80	635.59	634.69	634.34	634.50	634.59	634.34	632.50								0.67	6.77	1.23	0.44
85	P404	S404	S405	22	1.00	0.013	12	642.00	639.06	639.03	638.83	639.61	638.83	638.80	638.61	C404	0.114	96.79	97	0.057	10	0.516	0.20	2.61	0.29	0.08
86	P405	S407	S408	22	1.00	0.013	12	642.00	639.42	639.38	638.83	639.61	639.24	639.19	638.61	C407	0.114	82.33	94	0.133	10	0.428	0.56	3.58	1.63	0.46
87	P406	CO416	CO415	28	11.13	0.013	8	642.58	638.11	637.78	637.53	636.82	635.52	634.67	634.36								0.28	8.23	1.16	0.29
88	P407	CO415	S233	34	4.64	0.013	8	636.82	635.52	634.67	634.36	634.80	634.29	634.04	632.80								0.67	6.49	1.16	0.44
89	P408	S410	S411	23	1.00	0.013	12	642.00	639.43	639.38	638.83	639.60	639.24	639.18	638.60	C410	0.114	97.21	97	0.055	10	0.518	0.57	3.59	1.65	0.46
90	P409	CO413	P409 - OUT	10	2.00	0.013	8	642.47	638.34	638.30	637.53	637.99	638.21	638.18	637.33								0.67	2.68	0.93	0.55
91	P410	S413	P410 OUT	13	7.00	0.013	12	642.00	639.30	639.25	638.83	638.92	639.24	639.19	637.92	C413	0.106	93.50	96	0.074	10	0.462	0.85	3.16	2.24	0.24
92	P500	S500	S501	19	1.75	0.013	12	642.01	639.23	639.20	638.83	639.50	638.97	638.93	638.50	C500	0.122	100.00	98	0.041	10	0.570	0.40	3.36	0.97	0.21
93	P501	CO518	S108	24	23.18	0.013	8	642.77	638.55	637.76	637.53	638.10	632.49	632.45	632.00								0.30	12.82	1.31	0.22
94	P502	S503	S504	35	0.94	0.013	12	642.01	639.02	639.01	638.83	639.50	638.68	638.66	638.50	C503	0.114	97.21	97	0.055	10	0.518	0.17	2.40	0.22	0.06
95	P503	S506	S507	37	0.90	0.013	12	642.01	639.25	639.22	638.83	639.50	638.94	638.91	638.50	C506	0.114	90.87	96	0.088	10	0.480	0.40	3.11	0.90	0.27
96	P504	CO520	S105	24	23.18	0.013	8	642.77	638.36	637.73	637.53	637.50	632.63	632.50	632.00								0.31	11.99	1.01	0.17
97	P505	S509	S510	19	1.69	0.013	12	642.01	639.23	639.20	638.83	639.50	638.97	638.92	638.50	C509	0.114	81.60	94	0.137	10	0.423	0.39	3.34	0.96	0.21
98	P506	CO522	S103	24	23.05	0.013	8	642.77	638.57	637.77	637.53	636.90	632.72	632.59	632.00								0.36	12.87	1.34	0.23
99	P507	S512	S513	19	1.74	0.013	12	642.01	639.03	639.00	638.83	639.50	638.71	638.68	638.50	C512	0.114	97.21	97	0.055	10	0.518	0.17	2.87	0.25	0.05
100	P508	S515	S516	18	1.79	0.013	12	642.00	639.02	638.99	638.83	639.50	638.71	638.67	638.50	C515	0.116	94.04	97	0.071	10	0.510	0.17	2.87	0.25	0.05
101	P509	S517	S518	82	2.00	0.013	12	642.50	638.28	638.14	638.00	642.50	636.65	636.50	636.37	C517	0.041	100.00	98	0.041	10	0.194	0.13	3.06	0.19	0.04
102	P510	S518	S100	28	16.74	0.013	12	642.50	633.12	633.09	632.97	636.56	632.84	632.74	628.22	C518	0.056	100.00	98	0.041	10	0.263	1.00	0.72	0.46	0.03
103	RD400	CO400	RD400 OUT	36	5.35	0.013	8	643.22	640.11	639.90	639.60	638.37	639.83	639.78	637.70	RC400	0.246	100.00	98	0.041	10	1.153	0.67	3.72	1.15	0.41
104	RD401	CO401	RD401 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC401	0.248	100.00	98	0.041	10	1.161	0.67	3.72	1.16	0.42
105	RD402	CO402	RD402 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC402	0.248	100.00	98	0.041	10	1.162	0.67	3.72	1.16	0.42
106	RD403	CO403	RD403 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC403	0.248	100.00	98	0.041	10	1.161	0.67	3.72	1.16	0.42
107	RD404	CO404	RD404 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC404	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
108	RD405	CO405	RD405 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC405	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
109	RD406	CO406	RD406 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC406	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
110	RD407	CO407	RD407 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC407	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	Connection Name	Connection Incoming Item(s)	Connection Outgoing Item	Connection Length (ft)	Connection Slope (%)	Connection Manning's n	Connection Diameter / Base Width (in)	Connection Upstream Cover Elevation (ft)	Connection EGL Up (ft)	Connection HGL Up (ft)	Connection Upstream Invert Elevation (ft)	Connection Downstream Cover Elevation (ft)	Connection EGL Down (ft)	Connection HGL Down (ft)	Connection Downstream Invert Elevation (ft)	Inflow Name	Area (Total) (acre)	Percentage Impervious (Weighted Average) (%)	Composite Curve Number	Initial Abstraction Depth (in)	Time of Concentration (Max.) (mins)	Max. Inflow (ft³/s)	Connection Max. Depth (ft)	Connection Max. Velocity (ft/s)	Connection Max. Inflow (ft³/s)	Connection Flow / Capacity
111	RD408	CO408	RD408 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC408	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
112	RD409	CO409	RD409 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC409	0.247	100.00	98	0.041	10	1.155	0.67	3.72	1.15	0.41
113	RD410	CO410	RD410 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.83	639.78	637.70	RC410	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
114	RD411	CO411	RD411 OUT	36	5.35	0.013	8	643.25	640.11	639.90	639.60	638.37	639.83	639.77	637.70	RC411	0.245	100.00	98	0.041	10	1.147	0.67	3.72	1.15	0.41
115	RD500	CO500	RD500 OUT	36	5.35	0.013	8	643.24	640.11	639.90	639.60	638.37	639.50	639.45	637.70	RC500	0.245	100.00	98	0.041	10	1.148	0.67	3.72	1.15	0.41
116	RD501	CO501	RD501 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC501	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
117	RD502	CO502	RD502 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC502	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
118	RD503	CO503	RD503 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC503	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
119	RD504	CO504	RD504 OUT	36	5.35	0.013	8	643.24	640.11	639.90	639.60	638.37	639.50	639.45	637.70	RC504	0.245	100.00	98	0.041	10	1.148	0.67	3.72	1.15	0.41
120	RD505	CO505	RD505 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC505	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
121	RD506	CO506	RD506 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC506	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
122	RD507	CO507	RD507 OUT	36	5.35	0.013	8	643.25	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC507	0.249	100.00	98	0.041	10	1.166	0.67	3.72	1.17	0.42
123	RD508	CO508	RD508 OUT	36	5.35	0.013	8	643.24	640.11	639.90	639.60	638.37	639.50	639.45	637.70	RC508	0.245	100.00	98	0.041	10	1.148	0.67	3.72	1.15	0.41
124	RD509	CO509	RD509 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC509	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
125	RD510	CO510	RD510 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC510	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
126	RD511	CO511	RD511 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC511	0.249	100.00	98	0.041	10	1.166	0.67	3.72	1.17	0.42
127	RD512	CO512	RD512 OUT	36	5.35	0.013	8	643.24	640.11	639.90	639.60	638.37	639.50	639.45	637.70	RC512	0.245	100.00	98	0.041	10	1.148	0.67	3.72	1.15	0.41
128	RD513	CO513	RD513 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC513	0.249	100.00	98	0.041	10	1.166	0.67	3.72	1.17	0.42
129	RD514	CO514	RD514 OUT	36	5.35	0.013	8	643.24	640.11	639.90	639.60	638.37	639.50	639.44	637.70	RC514	0.243	100.00	98	0.041	10	1.139	0.67	3.72	1.14	0.41
130	RD515	CO515	RD515 OUT	36	5.35	0.013	8	643.24	640.12	639.90	639.60	638.37	639.50	639.45	637.70	RC515	0.247	100.00	98	0.041	10	1.157	0.67	3.72	1.16	0.41
131	UD400	CO420	CO419	132	0.00	0.013	6	642.50	638.60	638.58	637.53	642.65	638.15	637.79	637.53								0.50	2.13	0.42	0.86
132	UD401	CO417	CO419	132	0.00	0.013	6	642.60	638.12	638.12	637.53	642.65	638.15	637.79	637.53								0.42	1.47	0.26	0.54
133	UD402	CO417	CO416	147	0.00	0.013	6	642.60	638.12	638.12	637.53	642.58	638.11	637.78	637.53								0.42	1.42	0.25	0.51
134	UD403	CO414	CO416	132	0.00	0.013	6	642.67	638.36	638.35	637.53	642.58	638.11	637.78	637.53								0.50	1.77	0.35	0.72
135	UD404	CO414	CO413	134	0.00	0.013	6	642.67	638.36	638.35	637.53	642.47	638.34	638.30	637.53								0.50	0.60	0.12	0.24
136	UD405	CO412	CO413	153	0.00	0.013	6	642.72	638.89	638.88	637.53	642.47	638.34	638.30	637.53								0.50	1.75	0.34	0.71
137	UD500	CO516	CO517	98	0.00	0.013	6	642.76	638.99	638.98	637.53	642.68	638.84	638.80	637.53								0.50	1.20	0.23	0.49
138	UD501	CO517	CO518	98	0.00	0.013	6	642.68	638.84	638.80	637.53	642.77	638.55	637.76	637.53								0.50	2.73	0.53	1.11
139	UD502	CO519	CO518	143	0.00	0.013	6	642.50	638.10	638.10	637.53	642.77	638.55	637.76	637.53								0.40	1.43	0.24	0.5
140	UD503	CO519	CO520	152	0.00	0.013	6	642.50	638.10	638.10	637.53	642.77	638.36	637.73	637.53								0.38	1.44	0.23	0.48
141	UD504	CO521	CO520	143	0.00	0.013	6	642.50	638.10	638.10	637.53	642.77	638.36	637.73	637.53								0.38	1.48	0.24	0.49
142	UD505	CO521	CO522	152	0.00	0.013	6	642.50	638.10	638.10	637.53	642.77	638.57	637.77	637.53								0.40	1.39	0.23	0.48
143	UD506	CO523	CO522	141	0.00	0.013	6	642.51	639.45	639.42	637.53	642.77	638.57	637.77	637.53								0.50	2.93	0.57	1.18
144	UD507	CO524	CO523	127	0.00	0.013	6	642.52	639.45	639.44	637.53	642.51	639.45	639.42	637.53								0.50	1.31	0.26	0.53

NORTH TRUNK PIPE RUN (EX P1-EXISTING CONTROL STRUCTURE)

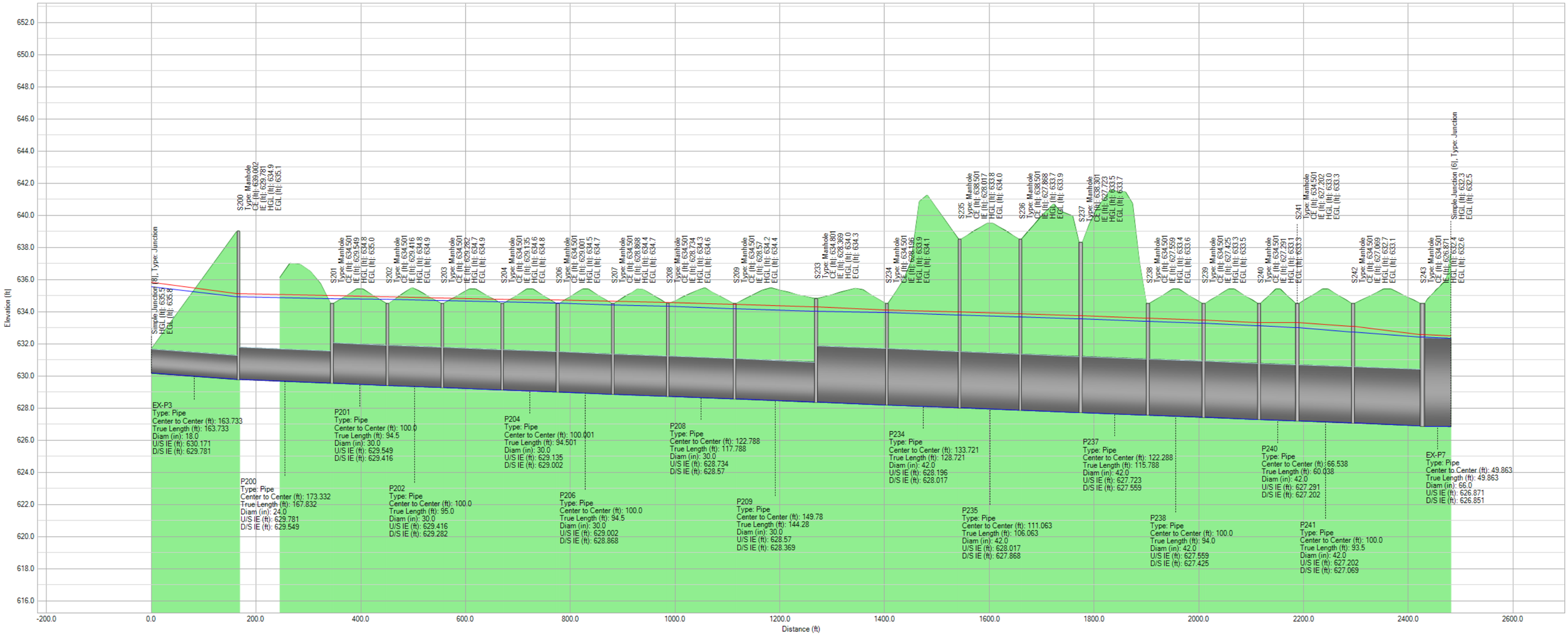


Junction	Simple Junction (3)	S100	S101	S102	S103	S104	S105	S106	S107	S108	S109	S243
Type	Simple Junction	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
CE (ft)		636.556	637.546	636.901	636.901	636.901	637.501	638.475	637.801	638.101	634.502	634.501
IE (ft)		628.215	628.102	627.937	627.805	627.673	627.541	627.506	627.409	627.277	627.014	626.871

Connection	EX-P1	P100	P101	P102	P103	P104	P105	P106	P107	P108	P109	EX-P7
Type	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe
Curved	No	No	No	No	No	No	No	No	No	No	No	No
Length (ft)	132.946	126.872	184.296	147.14	147.141	147.6	39.923	107.677	147.6	294.481	125.539	49.863
Diam (in)	36.0	42.0	42.0	42.0	42.0	42.0	42.0	60.0	60.0	60.0	60.0	66.0
U/S IE (ft)	628.441	628.215	628.102	627.937	627.805	627.673	627.541	627.506	627.409	627.277	627.014	626.871
D/S IE (ft)	628.215	628.102	627.937	627.805	627.673	627.541	627.506	627.409	627.277	627.014	626.901	626.851

SWC
Type
EE (ft)
BE (ft)

SOUTH TRUNK PIPE RUN (EX P3-EXISTING CONTROL STRUCTURE)

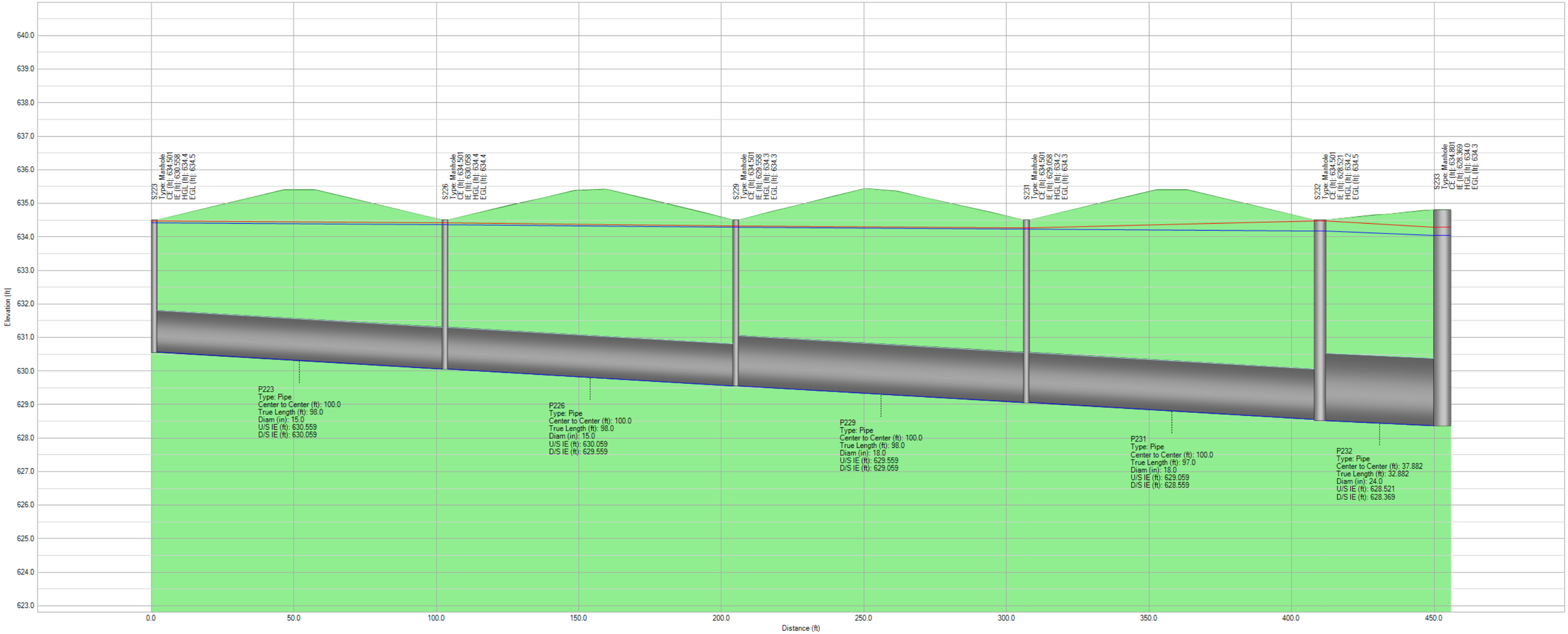


Junction	Simple Junction (8)	S200	S201	S202	S203	S204	S206	S207	S208	S209	S233	S234	S235	S236	S237	S238	S239	S240	S241	S242	S243
Type	Simple Junction	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
CE (ft)		639.002	634.501	634.501	634.501	634.501	634.501	634.501	634.501	634.501	634.801	634.501	638.501	638.501	638.301	634.501	634.501	634.501	634.501	634.501	634.501
IE (ft)		629.781	629.549	629.416	629.282	629.135	629.001	628.868	628.734	628.57	628.369	628.196	628.017	627.868	627.723	627.559	627.425	627.291	627.202	627.069	626.871

Connection	EX-P3	P200	P201	P202	P203	P204	P206	P207	P208	P209	P233	P234	P235	P236	P237	P238	P239	P240	P241	P242	EX-P7
Type	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe
Curved	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Length (ft)	163.733	173.332	100.0	100.0	109.59	100.001	100.0	100.0	122.788	149.78	129.868	133.721	111.063	108.893	122.288	100.0	100.0	66.538	100.0	125.144	49.863
Diam (in)	18.0	24.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	66.0
U/S IE (ft)	630.171	629.781	629.549	629.416	629.282	629.135	629.002	628.868	628.734	628.57	628.369	628.196	628.017	627.868	627.723	627.559	627.425	627.291	627.202	627.069	626.871
D/S IE (ft)	629.781	629.549	629.416	629.282	629.135	629.002	628.868	628.734	628.57	628.369	628.196	628.017	627.868	627.723	627.559	627.425	627.291	627.202	627.069	626.901	626.851

SWC
Type
EE (ft)
BE (ft)

SOUTH BASIN PIPE RUN (S223-S233)

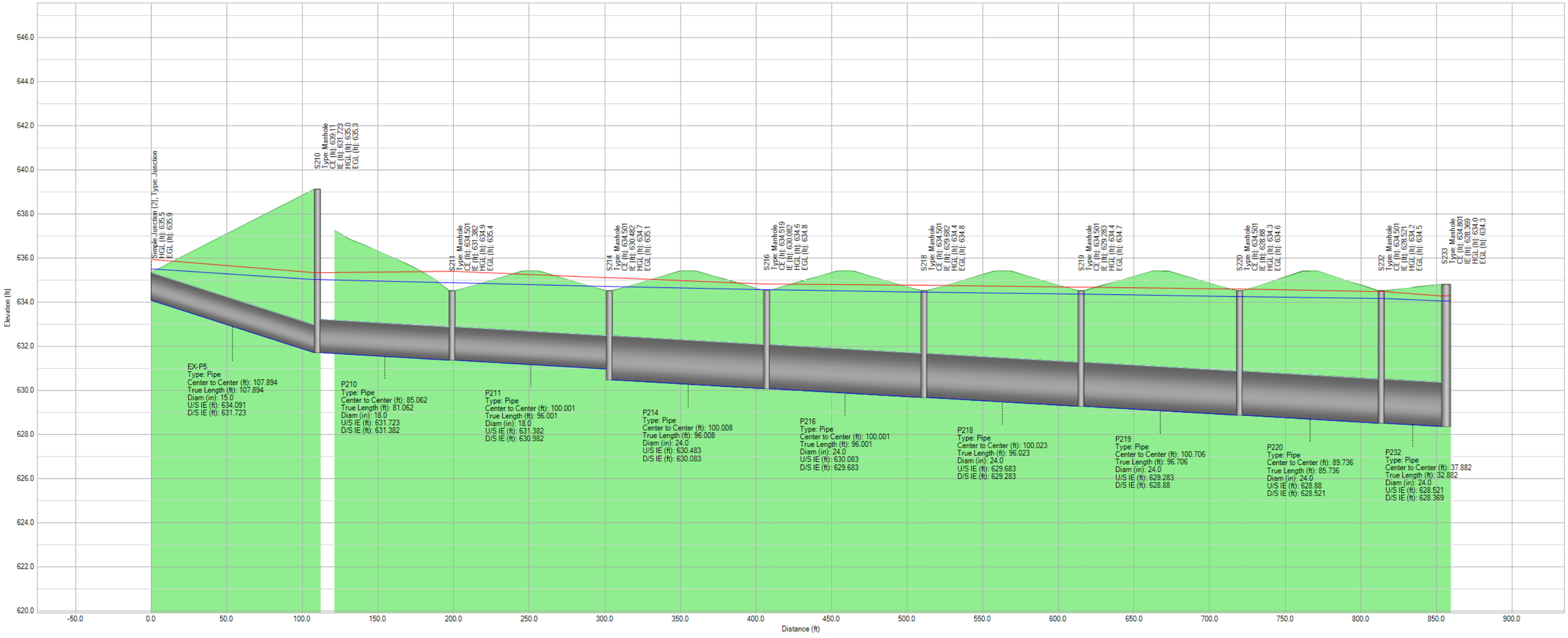


Junction	S223	S226	S229	S231	S232	S233
Type	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
CE (ft)	634.501	634.501	634.501	634.501	634.501	634.801
IE (ft)	630.558	630.058	629.558	629.058	628.521	628.369

Connection	P223	P226	P229	P231	P232
Type	Pipe	Pipe	Pipe	Pipe	Pipe
Curved	No	No	No	No	No
Length (ft)	100.0	100.0	100.0	100.0	37.882
Diam (in)	15.0	15.0	18.0	18.0	24.0
U/S IE (ft)	630.559	630.059	629.559	629.059	628.521
D/S IE (ft)	630.059	629.559	629.059	628.559	628.369

SWC						
Type						
EE (ft)						
BE (ft)						

SOUTH BASIN PIPE RUN (EX P5-S233)

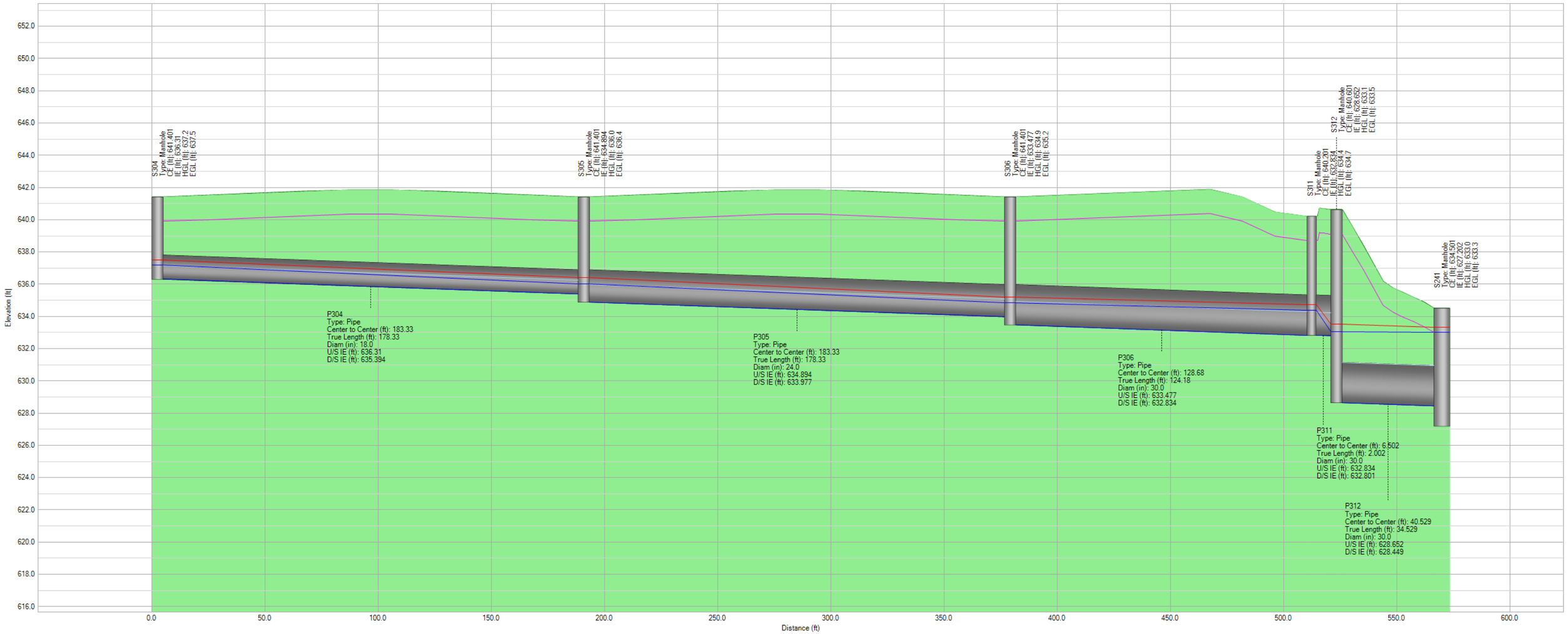


Junction	Simple Junction (2)	S210	S211	S214	S216	S218	S219	S220	S232	S233
Type	Simple Junction	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
CE (ft)		639.11	634.501	634.501	634.519	634.501	634.501	634.501	634.501	634.801
IE (ft)		631.723	631.382	630.482	630.082	629.682	629.283	628.88	628.521	628.369

Connection	EX-P5	P210	P211	P214	P216	P218	P219	P220	P232
Type	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe
Curved	No	No	No	No	No	No	No	No	No
Length (ft)	107.894	85.062	100.001	100.008	100.001	100.023	100.706	89.736	37.882
Diam (in)	15.0	18.0	18.0	24.0	24.0	24.0	24.0	24.0	24.0
U/S IE (ft)	634.091	631.723	631.382	630.483	630.083	629.683	629.283	628.88	628.521
D/S IE (ft)	631.723	631.382	630.982	630.083	629.683	629.283	628.88	628.521	628.369

SWC										
Type										
EE (ft)										
BE (ft)										

EAST APRON PIPE RUN (S304-S241)

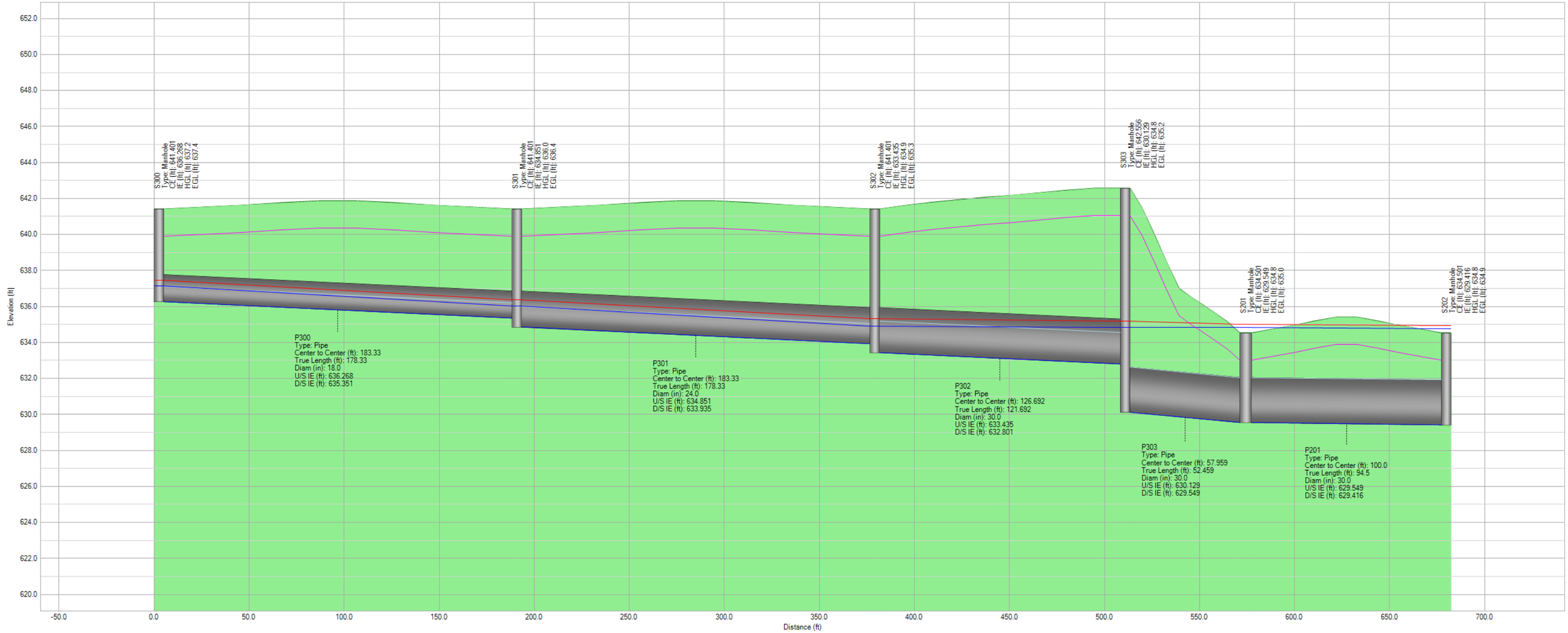


Junction	S304	S305	S306	S311	S241
Type	Manhole	Manhole	Manhole	Manhole	Manhole
CE (ft)	641.401	641.401	641.401	640.201	634.501
IE (ft)	636.31	634.894	633.477	632.834	627.202

Connection	P304	P305	P306	P311	P312
Type	Pipe	Pipe	Pipe	Pipe	Pipe
Curved	No	No	No	No	No
Length (ft)	183.33	183.33	128.68	6.502	40.529
Diam (in)	18.0	24.0	30.0	30.0	30.0
U/S IE (ft)	636.31	634.894	633.477	632.834	628.652
D/S IE (ft)	635.394	633.977	632.834	632.801	628.449

SWC
Type
EE (ft)
BE (ft)

WEST APRON PIPE RUN (S300-S202)



Junction	S300	S301	S302	S303	S201	S202
Type	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
CE (ft)	641.401	641.401	641.401	642.556	634.501	634.501
IE (ft)	636.268	634.851	633.435	630.129	629.549	629.416

Connection	P300	P301	P302	P303	P201
Type	Pipe	Pipe	Pipe	Pipe	Pipe
Curved	No	No	No	No	No
Length (ft)	183.33	183.33	126.692	57.959	100.0
Diam (in)	18.0	24.0	30.0	30.0	30.0
U/S IE (ft)	636.268	634.851	633.435	630.129	629.549
D/S IE (ft)	635.351	633.935	632.801	629.549	629.416

SWC
Type
EE (ft)
BE (ft)

UPSTREAM 10-YR 1-HR FLOW TO EX-P1
(OBTAINED FROM SSA OUTPUT)

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

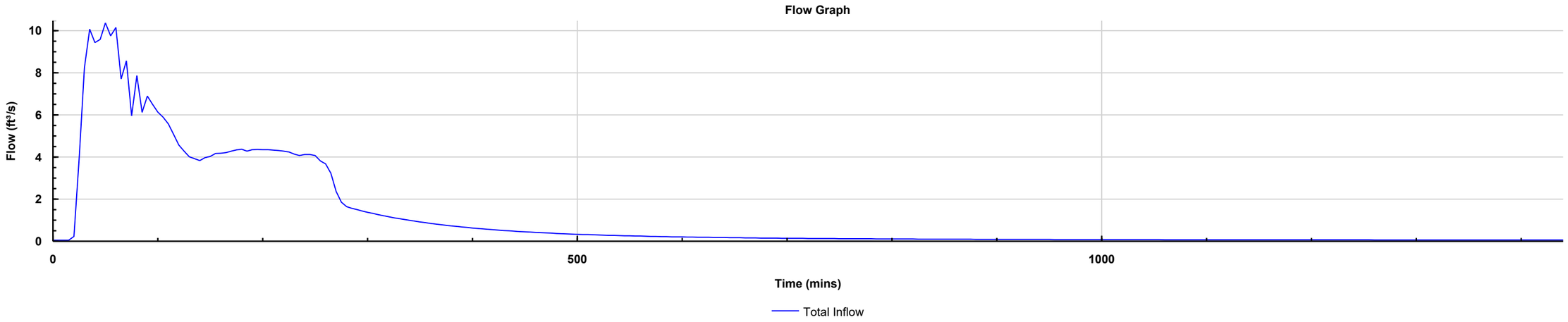
SSA OUTPUT - PIPE 499
10-YR STORM: Increase Rainfall (%): +0: 10-YR STORM60

Type : Hydrograph

Inflow

Max. Inflow (ft³/s)	10.368
Total Inflow Volume (ft³)	94638.1

Graphs



Tables

Time (mins)	Total Inflow (ft³/s)
0	0.000
5	0.000
10	0.000
15	0.000
20	0.180
25	3.925
30	8.233
35	10.067
40	9.431
45	9.580
50	10.368
55	9.751
60	10.149
65	7.696
70	8.558
75	5.937
80	7.854
85	6.106

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
90	6.877
95	6.481
100	6.112
105	5.871
110	5.551
115	5.052
120	4.542
125	4.252
130	3.981
135	3.890
140	3.800
145	3.939
150	4.000
155	4.139
160	4.150
165	4.180
170	4.250
175	4.310
180	4.340
185	4.251
190	4.320
195	4.330
200	4.320
205	4.320
210	4.300
215	4.280
220	4.250
225	4.210
230	4.111
235	4.041
240	4.090
245	4.090
250	4.040
255	3.782
260	3.641
265	3.194
270	2.328
275	1.814
280	1.602
285	1.521
290	1.460
295	1.391
300	1.331
305	1.281
310	1.221
315	1.170
320	1.120
325	1.071
330	1.031
335	0.990
340	0.950
345	0.910
350	0.871
355	0.840
360	0.800
365	0.770
370	0.740
375	0.710
380	0.680
385	0.660
390	0.630
395	0.610
400	0.580

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
405	0.560
410	0.540
415	0.520
420	0.500
425	0.480
430	0.460
435	0.450
440	0.430
445	0.410
450	0.400
455	0.390
460	0.370
465	0.360
470	0.350
475	0.340
480	0.320
485	0.310
490	0.300
495	0.290
500	0.280
505	0.270
510	0.270
515	0.260
520	0.250
525	0.240
530	0.230
535	0.230
540	0.220
545	0.210
550	0.210
555	0.200
560	0.200
565	0.190
570	0.180
575	0.180
580	0.170
585	0.170
590	0.160
595	0.160
600	0.160
605	0.150
610	0.150
615	0.140
620	0.140
625	0.140
630	0.130
635	0.130
640	0.130
645	0.120
650	0.120
655	0.120
660	0.110
665	0.110
670	0.110
675	0.100
680	0.100
685	0.100
690	0.100
695	0.090
700	0.090
705	0.090
710	0.090
715	0.090

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
720	0.080
725	0.080
730	0.080
735	0.080
740	0.080
745	0.080
750	0.070
755	0.070
760	0.070
765	0.070
770	0.070
775	0.070
780	0.070
785	0.060
790	0.060
795	0.060
800	0.060
805	0.060
810	0.060
815	0.060
820	0.060
825	0.050
830	0.050
835	0.050
840	0.050
845	0.050
850	0.050
855	0.050
860	0.050
865	0.050
870	0.050
875	0.050
880	0.040
885	0.040
890	0.040
895	0.040
900	0.040
905	0.040
910	0.040
915	0.040
920	0.040
925	0.040
930	0.040
935	0.040
940	0.040
945	0.040
950	0.040
955	0.030
960	0.030
965	0.030
970	0.030
975	0.030
980	0.030
985	0.030
990	0.030
995	0.030
1000	0.030
1005	0.030
1010	0.030
1015	0.030
1020	0.030
1025	0.030
1030	0.030

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1035	0.030
1040	0.030
1045	0.030
1050	0.030
1055	0.030
1060	0.020
1065	0.020
1070	0.020
1075	0.020
1080	0.020
1085	0.020
1090	0.020
1095	0.020
1100	0.020
1105	0.020
1110	0.020
1115	0.020
1120	0.020
1125	0.020
1130	0.020
1135	0.020
1140	0.020
1145	0.020
1150	0.020
1155	0.020
1160	0.020
1165	0.020
1170	0.020
1175	0.020
1180	0.020
1185	0.020
1190	0.020
1195	0.020
1200	0.020
1205	0.020
1210	0.020
1215	0.020
1220	0.020
1225	0.020
1230	0.020
1235	0.020
1240	0.020
1245	0.020
1250	0.020
1255	0.020
1260	0.010
1265	0.010
1270	0.010
1275	0.010
1280	0.010
1285	0.010
1290	0.010
1295	0.010
1300	0.010
1305	0.010
1310	0.010
1315	0.010
1320	0.010
1325	0.010
1330	0.010
1335	0.010
1340	0.010
1345	0.010

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1350	0.010
1355	0.010
1360	0.010
1365	0.010
1370	0.010
1375	0.010
1380	0.010
1385	0.010
1390	0.010
1395	0.010
1400	0.010
1405	0.010
1410	0.010
1415	0.010
1420	0.010
1425	0.010
1430	0.010
1435	0.010
1440	0.010

UPSTREAM 10-YR 1-HR FLOW TO EX-P2
(OBTAINED FROM SSA OUTPUT)

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

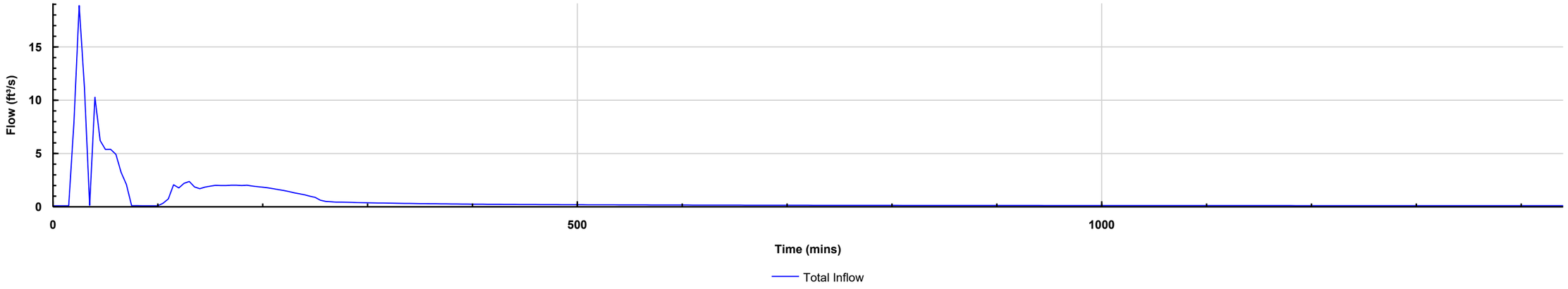
SSA OUTPUT - PIPE 511
10-YR STORM: Increase Rainfall (%): +0: 10-YR STORM60

Type : Hydrograph

Inflow

Max. Inflow (ft³/s)	18.894
Total Inflow Volume (ft³)	41539.1

Graphs



Tables

Time (mins)	Total Inflow (ft³/s)
0	0.000
5	0.000
10	0.000
15	0.000
20	7.869
25	18.894
30	11.163
35	0.020
40	10.250
45	6.148
50	5.312
55	5.320
60	4.851
65	3.144
70	2.012
75	0.006
80	0.010
85	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
90	0.000
95	0.000
100	0.000
105	0.239
110	0.648
115	1.984
120	1.681
125	2.118
130	2.289
135	1.773
140	1.611
145	1.759
150	1.850
155	1.930
160	1.910
165	1.910
170	1.940
175	1.940
180	1.910
185	1.940
190	1.861
195	1.800
200	1.750
205	1.691
210	1.611
215	1.521
220	1.441
225	1.341
230	1.221
235	1.131
240	1.031
245	0.901
250	0.791
255	0.522
260	0.411
265	0.380
270	0.340
275	0.340
280	0.330
285	0.320
290	0.300
295	0.290
300	0.280
305	0.270
310	0.260
315	0.260
320	0.250
325	0.240
330	0.230
335	0.220
340	0.220
345	0.210
350	0.200
355	0.200
360	0.190
365	0.190
370	0.180
375	0.180
380	0.170
385	0.170
390	0.160
395	0.160
400	0.150

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
405	0.150
410	0.150
415	0.140
420	0.140
425	0.140
430	0.130
435	0.130
440	0.130
445	0.120
450	0.120
455	0.120
460	0.120
465	0.110
470	0.110
475	0.110
480	0.110
485	0.100
490	0.100
495	0.100
500	0.100
505	0.100
510	0.090
515	0.090
520	0.090
525	0.090
530	0.090
535	0.090
540	0.080
545	0.080
550	0.080
555	0.080
560	0.080
565	0.080
570	0.070
575	0.070
580	0.070
585	0.070
590	0.070
595	0.070
600	0.070
605	0.070
610	0.060
615	0.060
620	0.060
625	0.060
630	0.060
635	0.060
640	0.060
645	0.060
650	0.060
655	0.060
660	0.050
665	0.050
670	0.050
675	0.050
680	0.050
685	0.050
690	0.050
695	0.050
700	0.050
705	0.050
710	0.050
715	0.050

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
720	0.050
725	0.040
730	0.040
735	0.040
740	0.040
745	0.040
750	0.040
755	0.040
760	0.040
765	0.040
770	0.040
775	0.040
780	0.040
785	0.040
790	0.040
795	0.040
800	0.040
805	0.040
810	0.030
815	0.030
820	0.030
825	0.030
830	0.030
835	0.030
840	0.030
845	0.030
850	0.030
855	0.030
860	0.030
865	0.030
870	0.030
875	0.030
880	0.030
885	0.030
890	0.030
895	0.030
900	0.030
905	0.030
910	0.030
915	0.030
920	0.030
925	0.030
930	0.030
935	0.030
940	0.030
945	0.020
950	0.020
955	0.020
960	0.020
965	0.020
970	0.020
975	0.020
980	0.020
985	0.020
990	0.020
995	0.020
1000	0.020
1005	0.020
1010	0.020
1015	0.020
1020	0.020
1025	0.020
1030	0.020

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1035	0.020
1040	0.020
1045	0.020
1050	0.020
1055	0.020
1060	0.020
1065	0.020
1070	0.020
1075	0.020
1080	0.020
1085	0.020
1090	0.020
1095	0.020
1100	0.020
1105	0.020
1110	0.020
1115	0.020
1120	0.020
1125	0.020
1130	0.020
1135	0.020
1140	0.020
1145	0.020
1150	0.020
1155	0.020
1160	0.020
1165	0.020
1170	0.020
1175	0.020
1180	0.020
1185	0.010
1190	0.010
1195	0.010
1200	0.010
1205	0.010
1210	0.010
1215	0.010
1220	0.010
1225	0.010
1230	0.010
1235	0.010
1240	0.010
1245	0.010
1250	0.010
1255	0.010
1260	0.010
1265	0.010
1270	0.010
1275	0.010
1280	0.010
1285	0.010
1290	0.010
1295	0.010
1300	0.010
1305	0.010
1310	0.010
1315	0.010
1320	0.010
1325	0.010
1330	0.010
1335	0.010
1340	0.010
1345	0.010

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1350	0.010
1355	0.010
1360	0.010
1365	0.010
1370	0.010
1375	0.010
1380	0.010
1385	0.010
1390	0.010
1395	0.010
1400	0.010
1405	0.010
1410	0.010
1415	0.010
1420	0.010
1425	0.010
1430	0.010
1435	0.010
1440	0.010

UPSTREAM 10-YR 1-HR FLOW TO EX-P5
(OBTAINED FROM SSA OUTPUT)

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by:	Checked by:	Approved By:
	GRC	MDC	MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

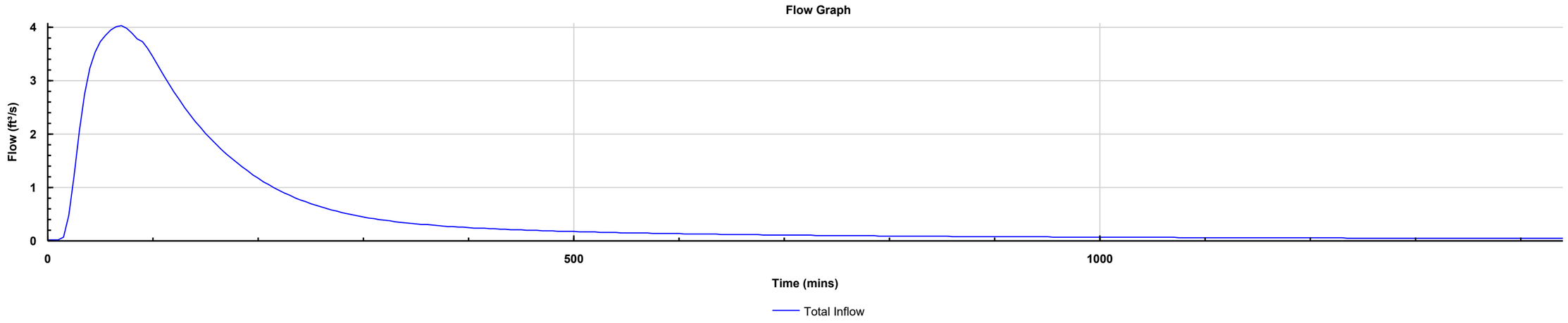
SSA OUTPUT - PIPE 489
10-YR STORM: Increase Rainfall (%): +0: 10-YR STORM60

Type : Hydrograph

Inflow

Max. Inflow (ft³/s)	4.030
Total Inflow Volume (ft³)	39608.0

Graphs



Tables

Time (mins)	Total Inflow (ft³/s)
0	0.000
5	0.000
10	0.000
15	0.050
20	0.460
25	1.199
30	2.039
35	2.739
40	3.229
45	3.529
50	3.730
55	3.850
60	3.950
65	4.010
70	4.030
75	3.980
80	3.890
85	3.780

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
90	3.730
95	3.600
100	3.441
105	3.271
110	3.101
115	2.941
120	2.781
125	2.641
130	2.491
135	2.361
140	2.231
145	2.121
150	2.001
155	1.900
160	1.801
165	1.701
170	1.611
175	1.530
180	1.451
185	1.370
190	1.300
195	1.221
200	1.160
205	1.091
210	1.040
215	0.980
220	0.930
225	0.880
230	0.840
235	0.790
240	0.750
245	0.720
250	0.680
255	0.650
260	0.620
265	0.590
270	0.560
275	0.540
280	0.510
285	0.490
290	0.470
295	0.450
300	0.430
305	0.410
310	0.400
315	0.380
320	0.370
325	0.360
330	0.340
335	0.330
340	0.320
345	0.310
350	0.300
355	0.290
360	0.290
365	0.280
370	0.270
375	0.260
380	0.250
385	0.250
390	0.240
395	0.240
400	0.230

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by:	Checked by:	Approved By:
	GRC	MDC	MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
405	0.220
410	0.220
415	0.220
420	0.210
425	0.210
430	0.200
435	0.200
440	0.190
445	0.190
450	0.190
455	0.180
460	0.180
465	0.180
470	0.170
475	0.170
480	0.170
485	0.160
490	0.160
495	0.160
500	0.160
505	0.150
510	0.150
515	0.150
520	0.150
525	0.140
530	0.140
535	0.140
540	0.140
545	0.130
550	0.130
555	0.130
560	0.130
565	0.130
570	0.130
575	0.120
580	0.120
585	0.120
590	0.120
595	0.120
600	0.120
605	0.110
610	0.110
615	0.110
620	0.110
625	0.110
630	0.110
635	0.110
640	0.100
645	0.100
650	0.100
655	0.100
660	0.100
665	0.100
670	0.100
675	0.100
680	0.090
685	0.090
690	0.090
695	0.090
700	0.090
705	0.090
710	0.090
715	0.090

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
720	0.090
725	0.090
730	0.080
735	0.080
740	0.080
745	0.080
750	0.080
755	0.080
760	0.080
765	0.080
770	0.080
775	0.080
780	0.080
785	0.080
790	0.070
795	0.070
800	0.070
805	0.070
810	0.070
815	0.070
820	0.070
825	0.070
830	0.070
835	0.070
840	0.070
845	0.070
850	0.070
855	0.070
860	0.060
865	0.060
870	0.060
875	0.060
880	0.060
885	0.060
890	0.060
895	0.060
900	0.060
905	0.060
910	0.060
915	0.060
920	0.060
925	0.060
930	0.060
935	0.060
940	0.060
945	0.060
950	0.060
955	0.050
960	0.050
965	0.050
970	0.050
975	0.050
980	0.050
985	0.050
990	0.050
995	0.050
1000	0.050
1005	0.050
1010	0.050
1015	0.050
1020	0.050
1025	0.050
1030	0.050

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1035	0.050
1040	0.050
1045	0.050
1050	0.050
1055	0.050
1060	0.050
1065	0.050
1070	0.050
1075	0.040
1080	0.040
1085	0.040
1090	0.040
1095	0.040
1100	0.040
1105	0.040
1110	0.040
1115	0.040
1120	0.040
1125	0.040
1130	0.040
1135	0.040
1140	0.040
1145	0.040
1150	0.040
1155	0.040
1160	0.040
1165	0.040
1170	0.040
1175	0.040
1180	0.040
1185	0.040
1190	0.040
1195	0.040
1200	0.040
1205	0.040
1210	0.040
1215	0.040
1220	0.040
1225	0.040
1230	0.040
1235	0.030
1240	0.030
1245	0.030
1250	0.030
1255	0.030
1260	0.030
1265	0.030
1270	0.030
1275	0.030
1280	0.030
1285	0.030
1290	0.030
1295	0.030
1300	0.030
1305	0.030
1310	0.030
1315	0.030
1320	0.030
1325	0.030
1330	0.030
1335	0.030
1340	0.030
1345	0.030

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1350	0.030
1355	0.030
1360	0.030
1365	0.030
1370	0.030
1375	0.030
1380	0.030
1385	0.030
1390	0.030
1395	0.030
1400	0.030
1405	0.030
1410	0.030
1415	0.030
1420	0.030
1425	0.030
1430	0.030
1435	0.030
1440	0.030

UPSTREAM 10-YR 1-HR FLOW TO EX-P4
(OBTAINED FROM SSA OUTPUT)

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by:	Checked by:	Approved By:
	GRC	MDC	MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

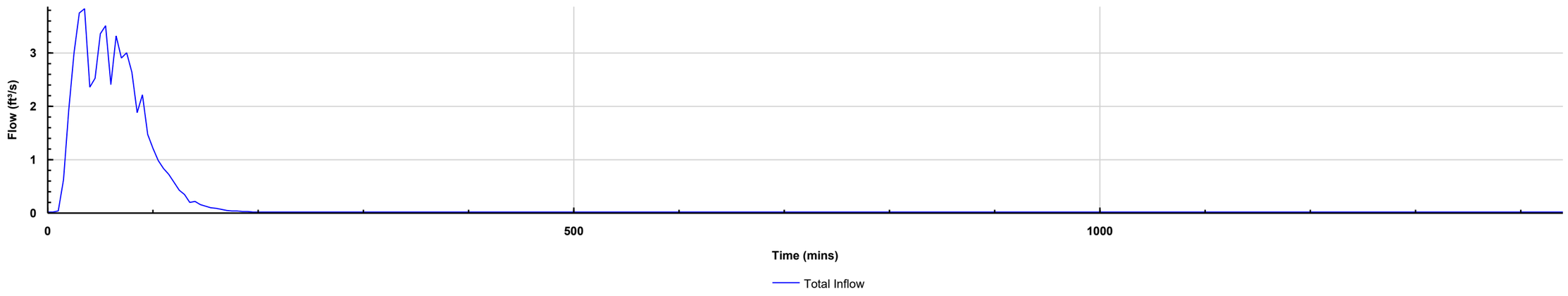
SSA OUTPUT - PIPE 443
10-YR STORM: Increase Rainfall (%): +0: 10-YR STORM60

Type : Hydrograph

Inflow

Max. Inflow (ft³/s)	3.830
Total Inflow Volume (ft³)	15177.8

Graphs



Tables

Time (mins)	Total Inflow (ft³/s)
0	0.000
5	0.000
10	0.020
15	0.609
20	1.928
25	2.998
30	3.749
35	3.830
40	2.353
45	2.520
50	3.358
55	3.510
60	2.402
65	3.318
70	2.901
75	3.000
80	2.631
85	1.873

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
90	2.209
95	1.463
100	1.201
105	0.971
110	0.821
115	0.710
120	0.561
125	0.411
130	0.330
135	0.181
140	0.200
145	0.140
150	0.110
155	0.080
160	0.070
165	0.050
170	0.030
175	0.020
180	0.020
185	0.010
190	0.010
195	0.000
200	0.000
205	0.000
210	0.000
215	0.000
220	0.000
225	0.000
230	0.000
235	0.000
240	0.000
245	0.000
250	0.000
255	0.000
260	0.000
265	0.000
270	0.000
275	0.000
280	0.000
285	0.000
290	0.000
295	0.000
300	0.000
305	0.000
310	0.000
315	0.000
320	0.000
325	0.000
330	0.000
335	0.000
340	0.000
345	0.000
350	0.000
355	0.000
360	0.000
365	0.000
370	0.000
375	0.000
380	0.000
385	0.000
390	0.000
395	0.000
400	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
405	0.000
410	0.000
415	0.000
420	0.000
425	0.000
430	0.000
435	0.000
440	0.000
445	0.000
450	0.000
455	0.000
460	0.000
465	0.000
470	0.000
475	0.000
480	0.000
485	0.000
490	0.000
495	0.000
500	0.000
505	0.000
510	0.000
515	0.000
520	0.000
525	0.000
530	0.000
535	0.000
540	0.000
545	0.000
550	0.000
555	0.000
560	0.000
565	0.000
570	0.000
575	0.000
580	0.000
585	0.000
590	0.000
595	0.000
600	0.000
605	0.000
610	0.000
615	0.000
620	0.000
625	0.000
630	0.000
635	0.000
640	0.000
645	0.000
650	0.000
655	0.000
660	0.000
665	0.000
670	0.000
675	0.000
680	0.000
685	0.000
690	0.000
695	0.000
700	0.000
705	0.000
710	0.000
715	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
720	0.000
725	0.000
730	0.000
735	0.000
740	0.000
745	0.000
750	0.000
755	0.000
760	0.000
765	0.000
770	0.000
775	0.000
780	0.000
785	0.000
790	0.000
795	0.000
800	0.000
805	0.000
810	0.000
815	0.000
820	0.000
825	0.000
830	0.000
835	0.000
840	0.000
845	0.000
850	0.000
855	0.000
860	0.000
865	0.000
870	0.000
875	0.000
880	0.000
885	0.000
890	0.000
895	0.000
900	0.000
905	0.000
910	0.000
915	0.000
920	0.000
925	0.000
930	0.000
935	0.000
940	0.000
945	0.000
950	0.000
955	0.000
960	0.000
965	0.000
970	0.000
975	0.000
980	0.000
985	0.000
990	0.000
995	0.000
1000	0.000
1005	0.000
1010	0.000
1015	0.000
1020	0.000
1025	0.000
1030	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1035	0.000
1040	0.000
1045	0.000
1050	0.000
1055	0.000
1060	0.000
1065	0.000
1070	0.000
1075	0.000
1080	0.000
1085	0.000
1090	0.000
1095	0.000
1100	0.000
1105	0.000
1110	0.000
1115	0.000
1120	0.000
1125	0.000
1130	0.000
1135	0.000
1140	0.000
1145	0.000
1150	0.000
1155	0.000
1160	0.000
1165	0.000
1170	0.000
1175	0.000
1180	0.000
1185	0.000
1190	0.000
1195	0.000
1200	0.000
1205	0.000
1210	0.000
1215	0.000
1220	0.000
1225	0.000
1230	0.000
1235	0.000
1240	0.000
1245	0.000
1250	0.000
1255	0.000
1260	0.000
1265	0.000
1270	0.000
1275	0.000
1280	0.000
1285	0.000
1290	0.000
1295	0.000
1300	0.000
1305	0.000
1310	0.000
1315	0.000
1320	0.000
1325	0.000
1330	0.000
1335	0.000
1340	0.000
1345	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1350	0.000
1355	0.000
1360	0.000
1365	0.000
1370	0.000
1375	0.000
1380	0.000
1385	0.000
1390	0.000
1395	0.000
1400	0.000
1405	0.000
1410	0.000
1415	0.000
1420	0.000
1425	0.000
1430	0.000
1435	0.000
1440	0.000

UPSTREAM 10-YR 1-HR FLOW TO EX-P3
(OBTAINED FROM SSA OUTPUT)

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

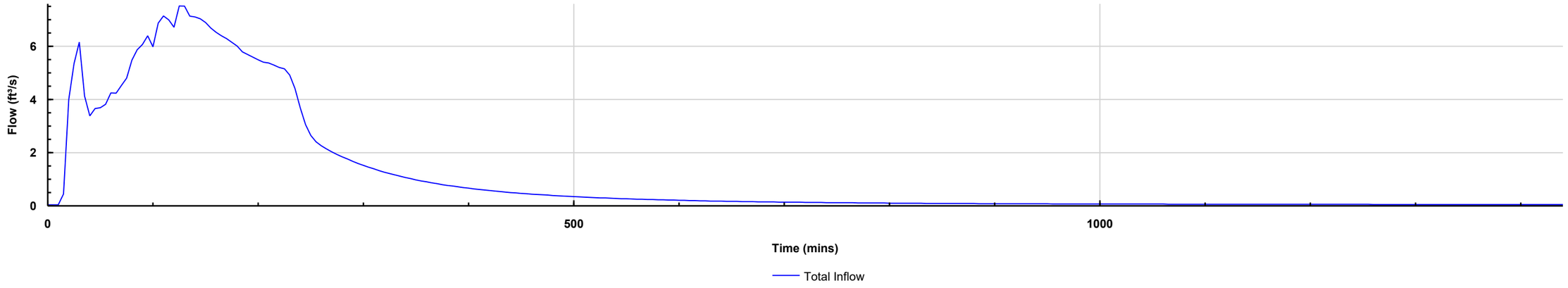
SSA OUTPUT - PIPE 437
10-YR STORM: Increase Rainfall (%): +0: 10-YR STORM60

Type : Hydrograph

Inflow

Max. Inflow (ft³/s)	7.516
Total Inflow Volume (ft³)	95150.0

Graphs



Tables

Time (mins)	Total Inflow (ft³/s)
0	0.000
5	0.000
10	0.000
15	0.409
20	3.985
25	5.338
30	6.149
35	4.114
40	3.361
45	3.639
50	3.670
55	3.800
60	4.229
65	4.220
70	4.509
75	4.789
80	5.468
85	5.859

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
90	6.059
95	6.389
100	5.972
105	6.866
110	7.139
115	6.991
120	6.711
125	7.516
130	7.510
135	7.132
140	7.100
145	7.030
150	6.891
155	6.681
160	6.521
165	6.391
170	6.281
175	6.141
180	6.001
185	5.781
190	5.681
195	5.581
200	5.481
205	5.391
210	5.360
215	5.280
220	5.190
225	5.140
230	4.902
235	4.394
240	3.666
245	3.035
250	2.623
255	2.382
260	2.231
265	2.111
270	2.001
275	1.901
280	1.811
285	1.731
290	1.641
295	1.561
300	1.491
305	1.421
310	1.361
315	1.291
320	1.231
325	1.180
330	1.131
335	1.080
340	1.031
345	0.990
350	0.941
355	0.901
360	0.870
365	0.830
370	0.800
375	0.760
380	0.730
385	0.710
390	0.681
395	0.650
400	0.630

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
405	0.600
410	0.580
415	0.560
420	0.540
425	0.520
430	0.500
435	0.480
440	0.460
445	0.450
450	0.430
455	0.420
460	0.400
465	0.390
470	0.380
475	0.370
480	0.350
485	0.340
490	0.330
495	0.320
500	0.310
505	0.300
510	0.290
515	0.280
520	0.270
525	0.260
530	0.260
535	0.250
540	0.240
545	0.230
550	0.230
555	0.220
560	0.210
565	0.210
570	0.200
575	0.200
580	0.190
585	0.190
590	0.180
595	0.180
600	0.170
605	0.170
610	0.160
615	0.160
620	0.150
625	0.150
630	0.140
635	0.140
640	0.140
645	0.130
650	0.130
655	0.130
660	0.120
665	0.120
670	0.120
675	0.110
680	0.110
685	0.110
690	0.110
695	0.100
700	0.100
705	0.100
710	0.100
715	0.100

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
720	0.090
725	0.090
730	0.090
735	0.090
740	0.080
745	0.080
750	0.080
755	0.080
760	0.080
765	0.080
770	0.070
775	0.070
780	0.070
785	0.070
790	0.070
795	0.070
800	0.060
805	0.060
810	0.060
815	0.060
820	0.060
825	0.060
830	0.060
835	0.050
840	0.050
845	0.050
850	0.050
855	0.050
860	0.050
865	0.050
870	0.050
875	0.050
880	0.050
885	0.040
890	0.040
895	0.040
900	0.040
905	0.040
910	0.040
915	0.040
920	0.040
925	0.040
930	0.040
935	0.040
940	0.040
945	0.040
950	0.040
955	0.030
960	0.030
965	0.030
970	0.030
975	0.030
980	0.030
985	0.030
990	0.030
995	0.030
1000	0.030
1005	0.030
1010	0.030
1015	0.030
1020	0.030
1025	0.030
1030	0.030

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1035	0.030
1040	0.030
1045	0.030
1050	0.030
1055	0.030
1060	0.030
1065	0.020
1070	0.020
1075	0.020
1080	0.020
1085	0.020
1090	0.020
1095	0.020
1100	0.020
1105	0.020
1110	0.020
1115	0.020
1120	0.020
1125	0.020
1130	0.020
1135	0.020
1140	0.020
1145	0.020
1150	0.020
1155	0.020
1160	0.020
1165	0.020
1170	0.020
1175	0.020
1180	0.020
1185	0.020
1190	0.020
1195	0.020
1200	0.020
1205	0.020
1210	0.020
1215	0.020
1220	0.020
1225	0.020
1230	0.020
1235	0.020
1240	0.020
1245	0.020
1250	0.020
1255	0.020
1260	0.010
1265	0.010
1270	0.010
1275	0.010
1280	0.010
1285	0.010
1290	0.010
1295	0.010
1300	0.010
1305	0.010
1310	0.010
1315	0.010
1320	0.010
1325	0.010
1330	0.010
1335	0.010
1340	0.010
1345	0.010

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1350	0.010
1355	0.010
1360	0.010
1365	0.010
1370	0.010
1375	0.010
1380	0.010
1385	0.010
1390	0.010
1395	0.010
1400	0.010
1405	0.010
1410	0.010
1415	0.010
1420	0.010
1425	0.010
1430	0.010
1435	0.010
1440	0.010

UPSTREAM 10-YR 1-HR FLOW TO EX-P6
(OBTAINED FROM SSA OUTPUT)

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

UPSTREAM 6
10-YR STORM: Increase Rainfall (%): +0: 10-YR STORM60

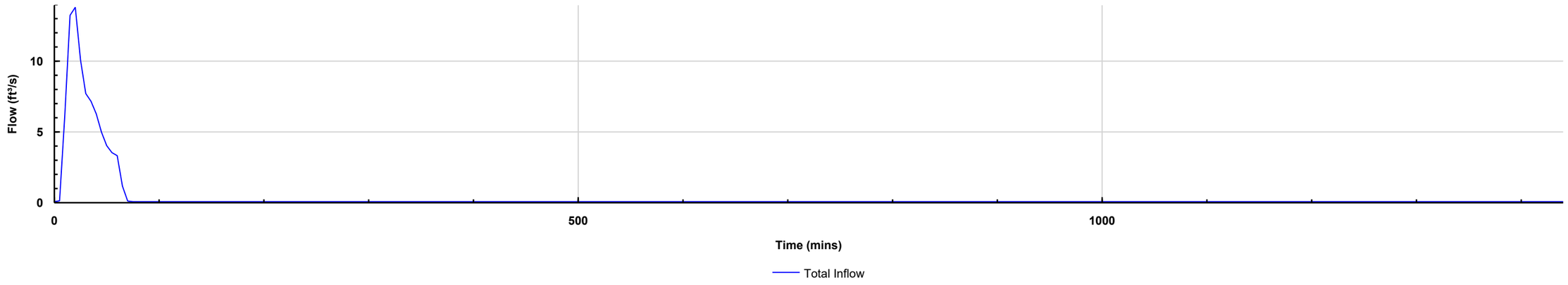
Type : Catchment Area

Inflow

Max. Inflow (ft³/s)	13.802
Total Inflow Volume (ft³)	24336.2

Graphs

Flow Graph



Tables

Time (mins)	Total Inflow (ft³/s)
0	0.000
5	0.060
10	6.133
15	13.232
20	13.802
25	10.059
30	7.676
35	7.126
40	6.235
45	4.934
50	3.975
55	3.480
60	3.266
65	1.105
70	0.042
75	0.001
80	0.000
85	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
90	0.000
95	0.000
100	0.000
105	0.000
110	0.000
115	0.000
120	0.000
125	0.000
130	0.000
135	0.000
140	0.000
145	0.000
150	0.000
155	0.000
160	0.000
165	0.000
170	0.000
175	0.000
180	0.000
185	0.000
190	0.000
195	0.000
200	0.000
205	0.000
210	0.000
215	0.000
220	0.000
225	0.000
230	0.000
235	0.000
240	0.000
245	0.000
250	0.000
255	0.000
260	0.000
265	0.000
270	0.000
275	0.000
280	0.000
285	0.000
290	0.000
295	0.000
300	0.000
305	0.000
310	0.000
315	0.000
320	0.000
325	0.000
330	0.000
335	0.000
340	0.000
345	0.000
350	0.000
355	0.000
360	0.000
365	0.000
370	0.000
375	0.000
380	0.000
385	0.000
390	0.000
395	0.000
400	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
405	0.000
410	0.000
415	0.000
420	0.000
425	0.000
430	0.000
435	0.000
440	0.000
445	0.000
450	0.000
455	0.000
460	0.000
465	0.000
470	0.000
475	0.000
480	0.000
485	0.000
490	0.000
495	0.000
500	0.000
505	0.000
510	0.000
515	0.000
520	0.000
525	0.000
530	0.000
535	0.000
540	0.000
545	0.000
550	0.000
555	0.000
560	0.000
565	0.000
570	0.000
575	0.000
580	0.000
585	0.000
590	0.000
595	0.000
600	0.000
605	0.000
610	0.000
615	0.000
620	0.000
625	0.000
630	0.000
635	0.000
640	0.000
645	0.000
650	0.000
655	0.000
660	0.000
665	0.000
670	0.000
675	0.000
680	0.000
685	0.000
690	0.000
695	0.000
700	0.000
705	0.000
710	0.000
715	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
720	0.000
725	0.000
730	0.000
735	0.000
740	0.000
745	0.000
750	0.000
755	0.000
760	0.000
765	0.000
770	0.000
775	0.000
780	0.000
785	0.000
790	0.000
795	0.000
800	0.000
805	0.000
810	0.000
815	0.000
820	0.000
825	0.000
830	0.000
835	0.000
840	0.000
845	0.000
850	0.000
855	0.000
860	0.000
865	0.000
870	0.000
875	0.000
880	0.000
885	0.000
890	0.000
895	0.000
900	0.000
905	0.000
910	0.000
915	0.000
920	0.000
925	0.000
930	0.000
935	0.000
940	0.000
945	0.000
950	0.000
955	0.000
960	0.000
965	0.000
970	0.000
975	0.000
980	0.000
985	0.000
990	0.000
995	0.000
1000	0.000
1005	0.000
1010	0.000
1015	0.000
1020	0.000
1025	0.000
1030	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
	Designed by: GRC	Checked by: MDC	Approved By: MDC
Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

Time (mins)	Total Inflow (ft³/s)
1035	0.000
1040	0.000
1045	0.000
1050	0.000
1055	0.000
1060	0.000
1065	0.000
1070	0.000
1075	0.000
1080	0.000
1085	0.000
1090	0.000
1095	0.000
1100	0.000
1105	0.000
1110	0.000
1115	0.000
1120	0.000
1125	0.000
1130	0.000
1135	0.000
1140	0.000
1145	0.000
1150	0.000
1155	0.000
1160	0.000
1165	0.000
1170	0.000
1175	0.000
1180	0.000
1185	0.000
1190	0.000
1195	0.000
1200	0.000
1205	0.000
1210	0.000
1215	0.000
1220	0.000
1225	0.000
1230	0.000
1235	0.000
1240	0.000
1245	0.000
1250	0.000
1255	0.000
1260	0.000
1265	0.000
1270	0.000
1275	0.000
1280	0.000
1285	0.000
1290	0.000
1295	0.000
1300	0.000
1305	0.000
1310	0.000
1315	0.000
1320	0.000
1325	0.000
1330	0.000
1335	0.000
1340	0.000
1345	0.000

Project:	Date:		
PWK HOME BASE CAMPUS CEG# 2025-117 STORM SEWER CALCULATIONS	06/22/2026		
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Report Details: Type: Inflow Results Storm Phase: P-STORM - 26-0622	Company Address: COOK ENGINEERING GROUP 26316 MAPLEVIEW DRIVE PLAINFIELD, IL 60585		

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1350	0.000
1355	0.000
1360	0.000
1365	0.000
1370	0.000
1375	0.000
1380	0.000
1385	0.000
1390	0.000
1395	0.000
1400	0.000
1405	0.000
1410	0.000
1415	0.000
1420	0.000
1425	0.000
1430	0.000
1435	0.000
1440	0.000

APPENDIX 4
VILLAGE OF WHEELING
STANDARDS FOR VARIATION RESPONSES

22.24.030 Standards for variation.

The board shall not recommend a variation of the regulations of this Title unless it shall, in each specific case, make findings of fact, based upon the evidence presented to it, that support the following conclusions:

(a) The development activity cannot be located outside the SFHA;

Due to existing site topography, regulatory base flood elevation per Zone AE floodplain established per FEMA FIRM Panel 17031C0207J with an effective date 8/19/2008, existing airport layout, future airport layout, FAA separation requirements for hangar layout meeting Building Restriction Line (BRL), Taxiway Safety Area (TSA), Taxiway Object Free Area (TOFA), Taxilane Object Free Area (TLOFA) and aircraft visibility from the Air Traffic Control Tower, the development activity is constrained and required to be located within the current Special Flood Hazard Area (SFHA). Site rate control (detention) and volume control (water quality) per MWRD Watershed Management Ordinance (WMO) as amended January 9, 2025 need to be met which include additional stormwater requirements based on updated Bulletin 75 rainfall data in addition to compensatory storage requirements. All future site development will be in accordance with the current MWRD WMO.

(b) An exceptional hardship would result if the variance were not granted;

A hardship would be exceptional due to limited areas for development outside of the SFHA on the PWK site based on current site topography. Also, the existing site topography is extremely flat with limited areas available for compensatory storage outside of existing hangar aprons, taxiways and runways along with limited site depth between the 10-year and 100-year base flood elevations of 638.0 and 640.1, respectively.

(c) The relief requested is the minimum necessary;

The relief required will meet the minimum requirements per MWRD for compensatory storage will be met and shall be required for any fill, structure, or other material above grade in the floodplain that temporarily or permanently displaces floodplain storage volume. Due to extremely flat site topography required for an airport use, the compensatory storage locations are limited to be provided in the same Des Plaines River watershed in areas the airport property currently controls. Compensatory storage is confined contiguous to the development site and adjacent locations on the PWK property that would not impact airport operations or various FAA requirements for TSA, TOFA and FLOFA.

(d) There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance;

The development will provide no additional threat to public health, safety, beneficial stream uses and functions, especially to aquatic habitat, or creation of a nuisance to the Des Plaines River located downstream of the development site. All site discharges to the Des Plaines River will not change. Site detention and compensatory storage are be provided in the same location on-site (intermingled) provided that the respective required storage volumes for each category are fully met. Due to the size of the watershed flooding source (Des Plaines River) and time of concentrations between floodplain watershed for and on-site detention varies

significantly for peak storage elevation. The reduction in compensatory storage from 1.5x:1 to 1.1x:1 and expanded site detention requirements will not increase base flood elevations upstream or downstream of the airport property. With flows leaving the development site in the same location along the east side of S. Milwaukee Ave. and providing no modifications to the existing outlet control structure, both the flows and velocity thru the existing conveyance system will not increase.

(e) There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to stream beds and banks, roads, utilities, or other public facilities;

No additional public expense will be required for flood protection. In addition to meeting the MWRD compensatory storage requirements at 1.1:1 for the volume storage lost to the 100-year base flood elevation, all future buildings will have a finished floor flood protection elevation 2.0 feet above the 100-year regulatory base flood elevation meets MWRD requirements exceed the Village of Wheeling requirement of 1.0 foot. The design flood protection elevation of the future hangars will be set 2.5 feet above the 100-year base flood elevation per City of Prospect Heights minimum standards. Both restricted flows and velocities leaving site thru the existing conveyance system will not increase and will change downstream stream bed or banks.

(f) The provisions of Sections 22.14.070 and 22.18.060 shall still be met;

The provisions of subsections 22.14.070 include both a Conditional Letter of Map Revision (CLOMR) issued June 18, 2026 and will follow with a Letter of Map Revision (LOMR) post-construction. Section and 22.18.060 (floodway does not exist within development site) will be met.

(g) The activity is not in a regulatory floodway;

All proposed development activities are located outside of the regulatory floodway.

(h) The applicant's circumstances are unique and do not establish a pattern inconsistent with the intent of the NFIP;

Due to the character, location of the project and type of development, limitations of existing site topography for an airport use confined by limited open space availability on subject site for compensatory storage locations and FAA requirements for for TSA, TOFA and FLOFA , the variance request is unique and not a general problem within the Village of Wheeling corporate limits.

(i) The granting of the variance will not alter the essential character of the area involved including existing stream uses; and

The existing character will not be altered for the proposed development and the future land use will be consistent with what is currently located on the PWK airport site. Both restricted flows and velocities leaving site will not alter the existing stream uses.

(j) All other state and federal permits or waivers have been obtained.

All other state and federal permits will be obtained (i.e. FEMA and MWRD)

22.24.030 Standards for variation.

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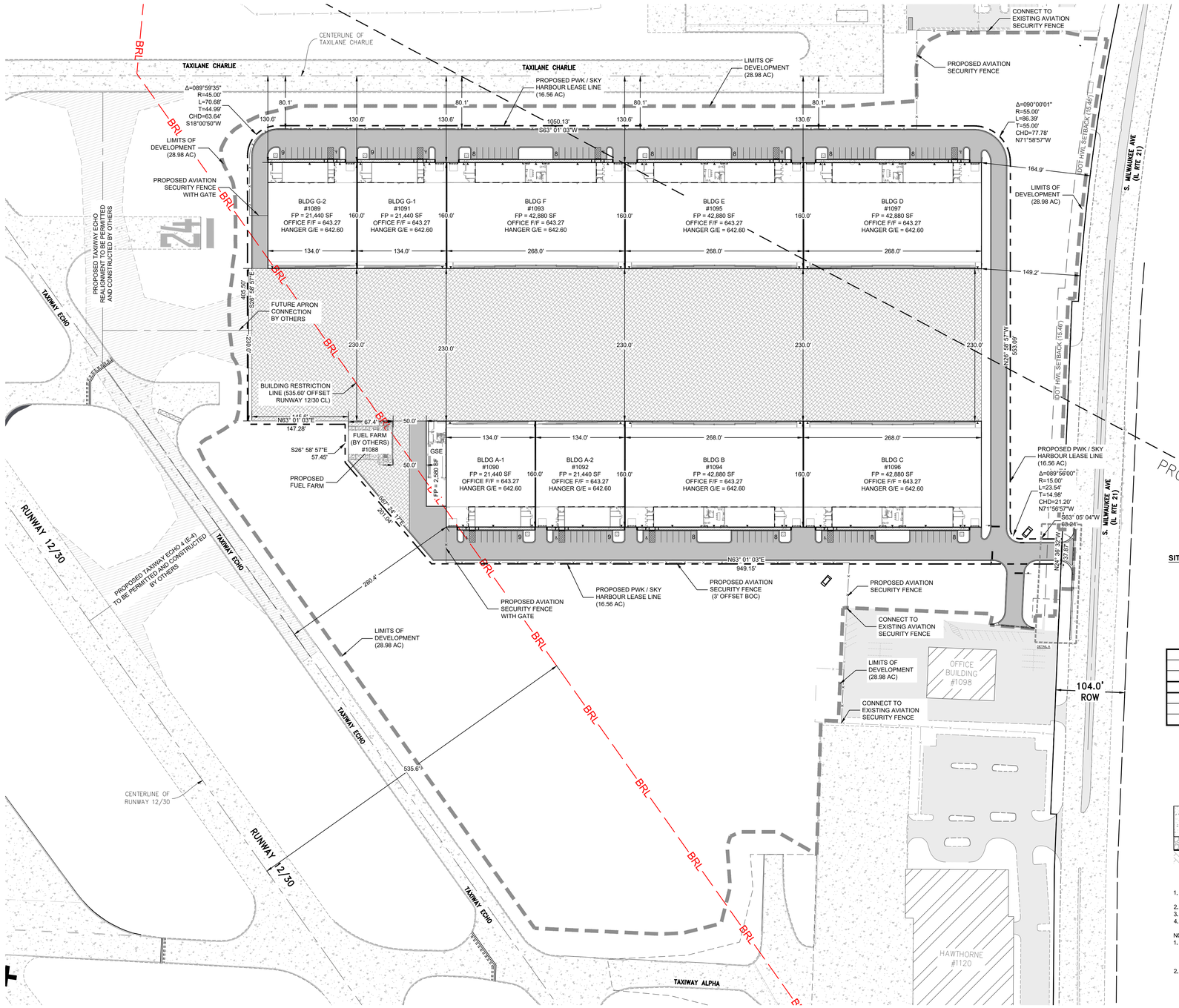
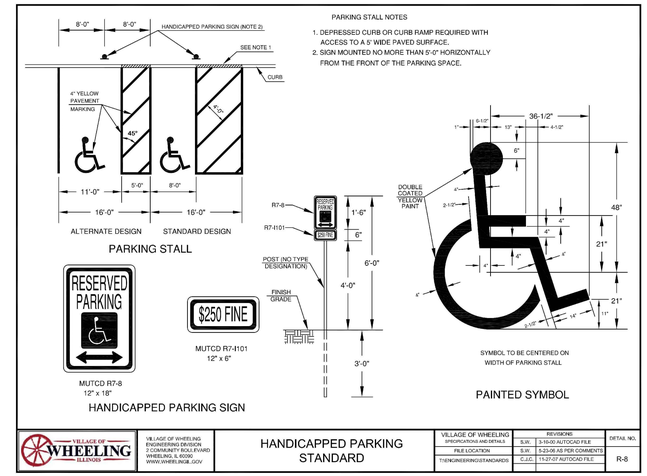




VILLAGE OF WHEELING ILLINOIS	VILLAGE OF WHEELING ENGINEERING DIVISION 2 COMMUNITY BOLI EVARD WHEELING, IL 60090 WWW.WHEELINGIL.GOV	HANDICAPPED PARKING STANDARD

VILLAGE OF WHEELING	REVISIONS:		DETAIL NO.
SPECIFICATIONS AND DETAILS	SJW.	3-15-05 AUTOCAD FILE	R-8
FILE LOCATION	SJW.	5-23-06 AS PER COMMENTS	
T:\ENGINEERING\STANDARDS	C.J.C.	11-27-07 AUTOCAD FILE	

PARKING SUMMARY

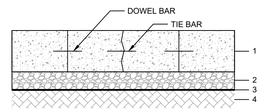
PROPOSED PARKING SPACES:	107
PROPOSED HANDICAP SPACES:	9
TOTAL PARKING SPACES:	**116**

SITE AREA STATISTICS

ESTIMATED SKY HARBOUR LEASE AREA:	721,153	SF	16.56	AC
OVERALL DISTURBED / DEVELOPMENT AREA:	**1,262,471**	**SF**	**28.98**	**AC**

DEVELOPMENT AREA STATISTICS

	EXISTING CONDITIONS (SF)	EXISTING CONDITIONS (AC)	PROPOSED CONDITIONS (SF)	PROPOSED CONDITIONS (AC)
PERVIOUS (GRASSED) AREA	645,464	14.82	572,253	13.14
IMPERVIOUS (BUILDING) AREA	56,439	1.30	304,020	6.98
IMPERVIOUS (PAVEMENT & CURB) AREA	560,568	12.87	386,198	8.87
TOTAL AREA	**1,262,471**	**28.98**	**1,262,471**	**28.98**
TOTAL IMPERVIOUS AREA	617,007	14.16	690,218	15.85
PERCENT IMPERVIOUS	48.9%		54.7%	
INCREASE IN IMPERVIOUS AREA			5.8%	

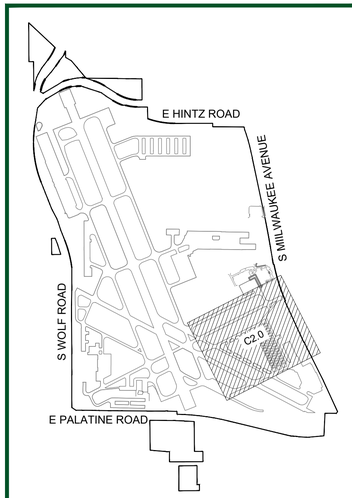


1. 10" PCC PAVEMENT, MAX WATER-CEMENT RATIO OF 0.42, STRENGTH OF 4,000 PSI @ 3 DAYS
2. 6" AGGREGATE BASE COURSE, TYPE B,
3. SOIL STABILIZATION FABRIC
4. COMPACTED SUBGRADE

NOTES:
1. CONCRETE CYLINDER SAMPLES SHALL BE COLLECTED DURING POURING AND TESTED AT 3- AND 7-DAY INTERVALS TO ENSURE ADEQUATE STRENGTH PRIOR TO ALLOWING TRAFFIC ON PAVEMENT.
2. ALL COMPACTION SHALL BE 95% MAXIMUM DRY DENSITY, AS DETERMINED BY MODIFIED PROCTOR TEST, ASTM D1557.

AIRPLANE APRON PCC PAVEMENT SECTION

N.T.S.



KEY MAP

EXISTING HMA PAVEMENT
EXISTING PCC PAVEMENT
PROPOSED HMA PAVEMENT
PROPOSED PCC PAVEMENT
PROPOSED PCC SIDEWALK

NOTES:

1. EXISTING TOPOGRAPHY WITHIN THE DEVELOPMENT SITE AREA PROVIDED BY ACCURATE SURVEYING, PER FIELD WORK COMPLETED MARCH 3, 2026, AND OVERLAID WITH 2022 COOK COUNTY GIS INFORMATION AS PUBLICLY AVAILABLE.
2. ALL EXISTING FIELD TILES WITHIN THE LIMITS OF DISTURBANCE SHALL BE ABANDONED AND COLLAPSED. ALL DRAINAGE ENTERING THE SITE SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM.
3. THE CONTRACTOR SHALL CONTACT JULIE (JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. CALL 1-800-892-0123.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. HAND OR EXPLORATORY EXCAVATION MAY BE REQUIRED TO CONFIRM UTILITY LOCATIONS.
5. THE CONTRACTOR SHALL COORDINATE AND ADJUST OR RELOCATE EXISTING UTILITIES AS NECESSARY TO COMPLETE THE PROPOSED IMPROVEMENTS.
6. ALL EXISTING SIGNS AFFECTED BY CONSTRUCTION SHALL BE TEMPORARILY REMOVED AND REINSTALLED OR RELOCATED AS REQUIRED TO ACCOMMODATE PAVEMENT AND UTILITY WORK.

80 0 40 80 160 320
(IN FEET)
1 inch = 80 ft.

COOK ENGINEERING GROUP
Civil Engineering & Land Development Consulting
26316 Mapleview Drive
Plainfield, IL 60585
815.577.1707 T 815.577.2595 F
www.cookengroup.com

#	DATE	REVISION DESCRIPTION
1	04/27/2026	PER REVISED BUILDING G PROTOTYPE
2		
3		
4		
5		
6		
7		
8		
9		
10		

OVERALL SITEPLAN

PWK HOME BASE CAMPUS
1089-1097 S MILWAUKEE AVE
WHEELING, IL 60090

PREPARED FOR
SKY HARBOUR, LLC
136 TOWER ROAD, SUITE 205
WHITE PLAINS, NY 10604
312.965.7672
DANNIN@SKYHARBOUR.GROUP
MR. DAVID ANNIN

CEG JOB NUMBER
2025-117

SCALE:	1" = 80'
DRAWN BY:	GRC
CHECKED BY:	MDC
DATE:	03/27/2026
SHEET:	C2.0

© Copyright, 2026

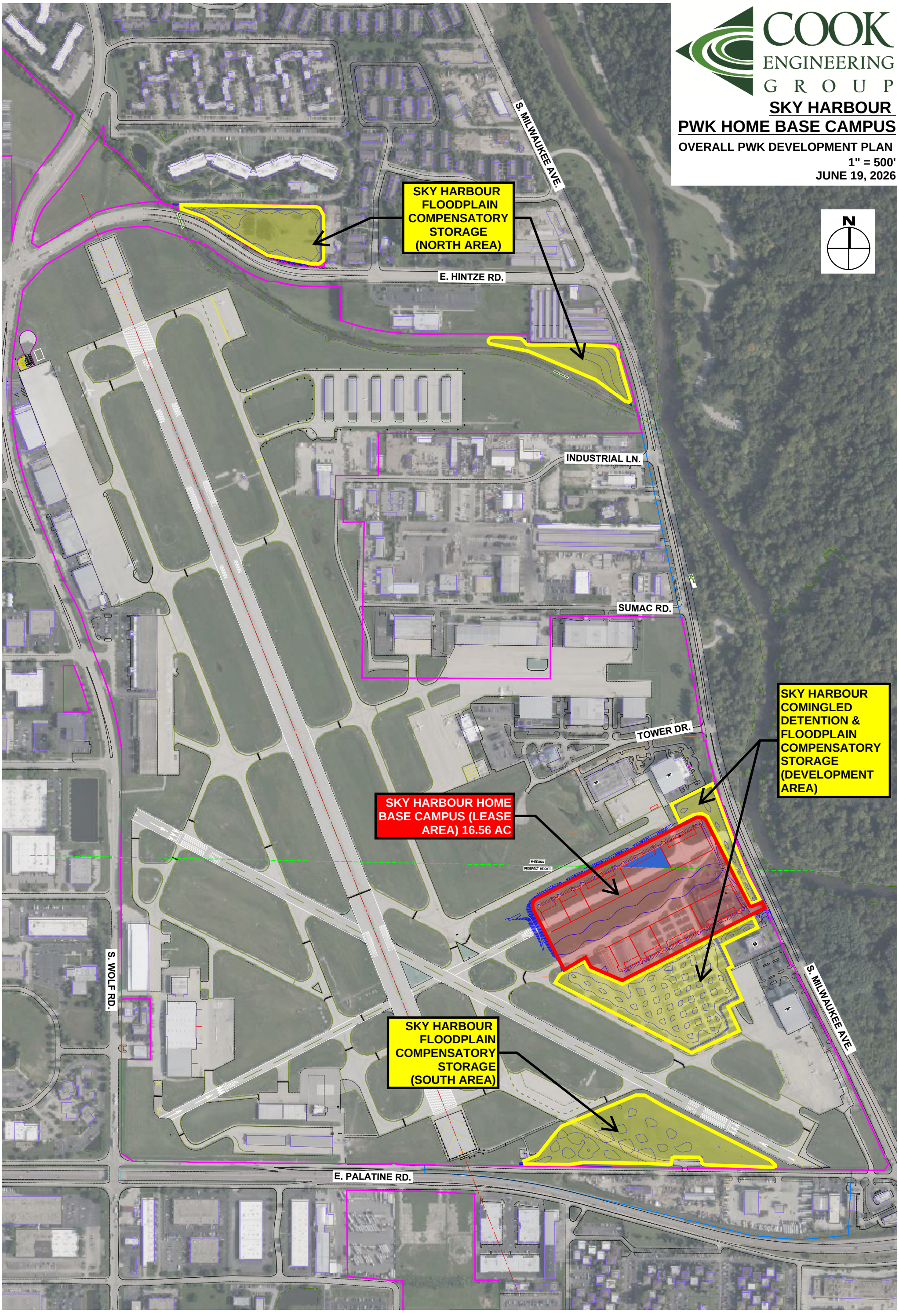
COOK ENGINEERING GROUP

SKY HARBOUR
PWK HOME BASE CAMPUS

OVERALL PWK DEVELOPMENT PLAN

1" = 500'

JUNE 19, 2026



MEMORANDUM

DATE: August 12, 2026
FROM: Marcy Knysz, Village Planner
SUBJECT: Docket No. PSU26-0006, Request for Special Use Approval to Permit a Tobacco Retail Establishment for Smoke It (48 W. Dundee Road) - **PUBLIC HEARING**

RECOMMENDED ACTION: **Recommend approval of Docket No. PSU26-0008,** granting Special Use approval to permit a tobacco retail establishment for Smoke It, located at 48 W. Dundee Road, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, in accordance with the Project Description Letter received by the Village on 4/9/2026; Supplemental Narrative Received by the Village on 5/26/2026; Floor Plan received by the Village on 3/3/2026, and subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the business hours of operation.
2. No on-site consumption of tobacco, electronic smoking devices, cannabis, CBD, THC, or similar products shall be permitted.
3. No lounge, smoking room, vaping lounge, hookah lounge, or sampling area shall be permitted.
4. The sale of products shall be limited to those permitted under applicable federal, state, and local laws.
5. All accessories and/or paraphernalia displayed and/or sold at the premises must be clearly labeled for tobacco use only.
6. Any expansion of the product line to include products not represented as part of this application shall require Village review to determine compliance with the Special Use approval.
7. Only non-intoxicating CBD products with less than 0.4 mg total THC are permitted for sale, per state law.
8. All synthetically and semi-synthetic derived THC products (including hemp-derived cannabinoid products) are prohibited for sale, display, advertisement, give away or delivery.
9. The business shall operate solely as a retail storefront. Shipping, delivery, and order fulfillment services to customers shall not be permitted from the Subject Site.
10. The following printed card shall be displayed at all times in a prominent place which shall read substantially as follows:

    Warning to Minors

    Persons under the age of twenty-one are subject to a fine up to five hundred dollars under Chapter 19 of the Village of Wheeling Code, for purchasing any tobacco product, or for misrepresenting their age for

the purpose of purchasing or obtaining any tobacco product.

11. The petitioner shall obtain and maintain all required federal, state, and local licenses and registrations necessary for the sale of tobacco products, CBD products, and any other legally permitted cannabinoid products. Proof of all required licenses shall be submitted to the Village as part of the Business License application prior to the issuance of a Business License.

12. Failure to maintain the required licenses or compliance with applicable regulations may constitute grounds for suspension or revocation of the Village Business License and/or Special Use approval, subject to applicable procedures.

13. No merchandise shall be displayed, stored, or offered for sale outside the building.

14. Pennants, streamers, banners, posters, ribbons, strings of light bulbs, spinners, inflatable objects, the outlining of windows with neon tubing or strings of lights, blinking or flashing, or other attention getting devices are prohibited.

15. The hours of operation shall be limited to 10:00 a.m. to 10:00 p.m., seven days per week, unless otherwise approved by the Village.

EXECUTIVE SUMMARY

Docket No. PSU26-0008: Rami Nedal Duqa (48 W. Dundee Road, Wheeling, IL 60090), lessee, is seeking special use approval to permit a tobacco retail establishment (“Smoke It”), located at 48 W. Dundee Road, which is zoned B-3 (General Commercial and Office), pursuant to Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19.10 Use Regulations, and associated sections.

GENERAL PROPERTY INFORMATION

Petitioner: Smoke It (lessee)

Building size: 1,100 ft. Unit / 9,940 sq. ft. Building

Property Size: 0.57 Acres

Neighboring Property Land Use(s):
North: Residential
East: Commercial
South: Commercial (across Dundee Road)
West: Commercial

Existing Use of Property: Multi-tenant commercial building

Existing Zoning: B-3 (General Commercial and Office)

Comprehensive Plan Designation: Commercial

Zoning History:

- Ordinance No. 3863, approved 4/26/2004, granting special use and site plan approval for a restaurant (Docket No. 2004-12).

SUMMARY OF REQUEST

The petitioner requests special use approval to permit a tobacco retail establishment located at 48 W. Dundee

Road. The petitioner has purchased “Smoke It” from the previous operator, which began operation prior to the Zoning Code change requiring special use approval for tobacco retail establishments. Since the business is changing ownership, Special Use approval is required in order to continue operating the tobacco retail establishment at this location.

SPECIAL USE ANALYSIS

A Special Use is the use of land in which, because of their unique characteristics, cannot ordinarily be allowed in a particular zoning district without consideration of their impact upon neighboring land uses and would not be detrimental to the public health, safety or general welfare. After review of the Standards summarized in this staff report, the Commission may impose reasonable restrictions that make the special use more compatible for the zoning district in which it is located, which may include conditions related to site plan aspects to mitigate adverse effects.

The petitioner is requesting Special Use approval to continue operating a tobacco retail establishment named “Smoke It”, offering tobacco products, vape products, smoking accessories, and other related convenience retail items. A detailed list of the products proposed for sale, as well as the petitioner's proposed compliance measures, is included in the attached Supplemental Narrative provided by the petitioner.
The original business began operating prior to the adoption of the Village's zoning regulations requiring Special Use approval for tobacco retail establishments. As a result, the existing business has operated as a legal nonconforming use. Because the business has changed ownership and operators, the legal nonconforming status no longer applies. Accordingly, the petitioner is required to obtain Special Use approval in order to continue operating a tobacco retail establishment at this location.

As outlined in the petitioner’s project description letter, the business operates from Monday through Sunday from 10:00 AM through 10:00 PM with one employee shift, with a total of 1-2 employees. No on-site consumption of tobacco products is proposed nor permitted by the Municipal Code. Staff has included a condition limiting the sale of CBD products to those permitted under applicable state law and prohibiting the sale of all synthetic and semi-synthetic THC products, including hemp-derived cannabinoid products. These conditions are to ensure the business operates in compliance with current Village regulations governing tobacco retail establishments.

Standards for Special Use: The petitioner has submitted the following responses to the standards for special use. (Any staff comments follow the petitioner’s response)

1. **State why the Special Use is necessary or desirable to provide a service or a facility which is in the interest of public convenience or need and will contribute to the general welfare of the neighborhood or village.**

   Petitioner: The smoke shop will enhance the welfare of the community by offering a regulated, compliant location for the purchase of tobacco-related products, reducing the need for residents to travel outside the area. By operating in accordance with all local, state, and federal regulations, including age restrictions and licensing requirements, the business will promote responsible retail practices and contribute to public safety. Additionally, the establishment will support the local economy by generating sales tax revenue, creating employment opportunities, and contributing to the vitality of nearby businesses through increased customer traffic. The shop is designed to operate in a manner that minimizes impacts on neighboring properties, with appropriate hours of operation, security measures, and site management practices. Overall, the proposed smoke shop is a suitable and beneficial use of the property that will serve community needs, enhance convenience, and contribute positively to the general welfare of the neighborhood and village.

   Staff: The proposed tobacco retail establishment is consistent with the intent of the B-3 (General Commercial and Office) Zoning District by providing a retail service within an established commercial corridor and utilizing an existing tenant space.

2. **State how the Special Use will not, under the circumstances of the particular case, be detrimental to the health, safety, morals or general welfare of the adjoining area or village and will not be injurious to property values or improvements in the vicinity.**

   Petitioner: The business will operate as a professionally managed retail establishment, fully compliant with all

applicable local, state, and federal laws and regulations governing tobacco and related product sales. Smoke It" will implement strict operational controls to ensure a safe and responsible environment. All employees will be trained to verify identification and enforce age restrictions in full compliance with legal requirements. No underage sales will be permitted under any circumstances. The store will not allow loitering, on-site consumption, or any unlawful activity. To promote safety and security, the premises will be equipped with a comprehensive surveillance camera system, proper exterior and interior lighting, and active staff supervision during all business hours. These measures will help deter crime and ensure a secure environment for customers and neighboring properties. The business is designed to operate with minimal impact on the surrounding area. Hours of operation will be reasonable and consistent with nearby commercial uses. The establishment will not generate excessive noise, odors, or disturbances. The property will be maintained in a clean, orderly, and attractive condition at all times, including regular trash removal and storefront upkeep. Based on these considerations, the proposed use is compatible with the surrounding area and will not be injurious to property values or improvements in the vicinity.

Staff: The proposed use will occur entirely within an existing building and will not alter the character of the area.

3. **State how the establishment of the special use will not impede or interfere with the normal and orderly development and improvement of surrounding property for uses permitted in the district.**

Petitioner: The proposed use is consistent with the character of the area, which is comprised of commercial and retail businesses, and will function as a standard retail operation compatible with surrounding land uses. The business will occupy an existing commercial space and does not require any significant structural changes or deviations from current zoning patterns. As such, it will not restrict or limit the ability of neighboring properties to be developed, redeveloped, or improved in accordance with permitted uses under the applicable zoning regulations. The scale and nature of the operation are similar to other retail establishments in the area, generating typical levels of traffic, parking demand, and customer activity. it will not interfere with the present or future development of nearby properties. Instead, it will complement the existing mix of uses and contribute to the ongoing economic vitality of the area.

Staff: The proposed use will occupy a developed property with convenient public access that will not impede the surrounding properties.

4. **State how the proposed use and development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries and schools or the applicant will provide adequately for such services.**

Petitioner: The proposed Special Use for "Smoke It" will be adequately served by existing public facilities and services, and will not place any undue burden on municipal infrastructure or public safety resources. The property is located within a fully developed commercial area that is already served by established streets, utilities, and public services designed to support retail uses of this nature. The business will be served by existing police and fire protection services, and due to the nature of the operation as a low-intensity retail use, it is not expected to generate any unusual demand for emergency services. The implementation of on-site security measures, including surveillance cameras and proper lighting, will further support public safety and reduce any potential need for service calls. Refuse disposal will be handled through regular waste collection services, with trash stored and managed in a clean and orderly manner in designated areas, ensuring no impact on neighboring properties or public health. Additionally, the proposed use does not place any demand on schools, parks, or library services, as it is a retail establishment with no residential component.

Staff: The proposed use will occur within an existing building that is currently served by public facilities. There are no proposed changes to the exterior of the building or site that would require additional public services.

5. **State how the proposed use or development will not cause undue traffic congestion nor draw significant amounts of traffic through residential streets. Parking areas and driveways shall be designed so as to prevent traffic hazards, eliminate nuisance and minimize traffic congestion in the public streets.**

Petitioner: will not cause undue traffic congestion nor draw significant amounts of traffic through residential streets. The business is a low- to moderate-traffic retail use, and customer visits are typically short in duration, resulting in a steady but manageable flow of traffic that is consistent with other retail establishments in the area. The property is located along established commercial corridors with direct access to public roadways designed to accommodate regular business traffic. Customers will access the site via primary streets rather than residential

roads, ensuring that nearby residential areas are not impacted by additional traffic. The layout of the parking and access points will eliminate potential traffic hazards and reduce congestion on surrounding streets. No delivery or operational activities will interfere with normal traffic patterns, and any deliveries will be scheduled during off-peak hours when possible. Due to the nature of the business, it is not expected to generate high volumes of traffic or peak-hour congestion beyond what is typical for retail uses in the area. As such, the proposed use will integrate seamlessly with existing traffic conditions and will not create any nuisance or safety concerns for neighboring properties or the public

Staff: The proposed use will be located within an existing development which shares parking with other tenants. Sufficient parking exists on site to service the proposed use.

6. **State how the proposed use will comply with the regulations and stipulations specified for such use.**

Petitioner: Smoke It" will fully comply with all regulations and stipulations specified for retail tobacco and smoke-related establishments. The business will operate in strict accordance with the zoning requirements of the district, including use restrictions, signage regulations, and building setbacks. The property will be maintained in compliance with fire and life-safety codes, including proper egress, fire suppression systems where required, and accessible exits. Smoke detectors, fire extinguishers, and other safety equipment will be installed and regularly inspected to ensure ongoing compliance. The operation of "Smoke It" will adhere to all applicable local, state, and federal regulations governing the sale of tobacco and related products, including age verification requirements and prohibitions on illegal or unsafe products. Staff will be trained to enforce these regulations consistently. the business will comply with all health, safety, and sanitation requirements, and any other specific conditions imposed by the village for this type of use. No exceptions or variances are requested at this time, and the business is prepared to meet any reasonable conditions imposed by the approving authority to ensure full compliance.

Staff: The proposed use is consistent with the B-3 (General Commercial and Office) zoning district and the Comprehensive Land Use designation of Commercial.

STAFF REVIEW

Fire Department Review: No comments from the Fire Department related to the Special Use.

Health Division Review: No comments from the Health Division related to the Special Use.

Engineering Division Review: No comments from the Engineering Division related to the Special Use.
Staff Recommended Action: Staff recommends approval of the special use subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the business hours of operation.
2. No on-site consumption of tobacco, electronic smoking devices, cannabis, CBD, THC, or similar products shall be permitted.
3. No lounge, smoking room, vaping lounge, hookah lounge, or sampling area shall be permitted.
4. The sale of products shall be limited to those permitted under applicable federal, state, and local laws.
5. All accessories and/or paraphernalia displayed and/or sold at the premises must be clearly labeled for tobacco use only.
6. Any expansion of the product line to include products not represented as part of this application shall require Village review to determine compliance with the Special Use approval.
7. Only non-intoxicating CBD products with less than 0.4 mg total THC are permitted for sale, per state law.
8. All synthetically and semi-synthetic derived THC products (including hemp-derived cannabinoid products) are prohibited for sale, display, advertisement, give away or delivery.
9. The business shall operate solely as a retail storefront. Shipping, delivery, and order fulfillment services to customers shall not be permitted from the Subject Site.
10. The following printed card shall be displayed at all times in a prominent place which shall read substantially

as follows:

Warning to Minors

Persons under the age of twenty-one are subject to a fine up to five hundred dollars under Chapter 19 of the Village of Wheeling Code, for purchasing any tobacco product, or for misrepresenting their age for the purpose of purchasing or obtaining any tobacco product.

11. The petitioner shall obtain and maintain all required federal, state, and local licenses and registrations necessary for the sale of tobacco products, CBD products, and any other legally permitted cannabinoid products. Proof of all required licenses shall be submitted to the Village as part of the Business License application prior to the issuance of a Business License.

12. Failure to maintain the required licenses or compliance with applicable regulations may constitute grounds for suspension or revocation of the Village Business License and/or Special Use approval, subject to applicable procedures.

13. No merchandise shall be displayed, stored, or offered for sale outside the building.

14. Pennants, streamers, banners, posters, ribbons, strings of light bulbs, spinners, inflatable objects, the outlining of windows with neon tubing or strings of lights, blinking or flashing, or other attention getting devices are prohibited.

15. The hours of operation shall be limited to 10:00 a.m. to 10:00 p.m., seven days per week, unless otherwise approved by the Village.

******

If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of a special use for the operation of a tobacco retail establishment, the appropriate motion would be to:

Recommend approval of Docket No. PSU26-0008, granting Special Use approval to permit a tobacco retail establishment for Smoke It, located at 48 W. Dundee Road, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, in accordance with the Project Description Letter received by the Village on 4/9/2026; Supplemental Narrative Received by the Village on 5/26/2026; Floor Plan received by the Village on 3/3/2026, and subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the business hours of operation.

2. No on-site consumption of tobacco, electronic smoking devices, cannabis, CBD, THC, or similar products shall be permitted.

3. No lounge, smoking room, vaping lounge, hookah lounge, or sampling area shall be permitted.

4. The sale of products shall be limited to those permitted under applicable federal, state, and local laws.

5. All accessories and/or paraphernalia displayed and/or sold at the premises must be clearly labeled for tobacco use only.

6. Any expansion of the product line to include products not represented as part of this application shall require Village review to determine compliance with the Special Use approval.

7. Only non-intoxicating CBD products with less than 0.4 mg total THC are permitted for sale, per state law.

8. All synthetically and semi-synthetic derived THC products (including hemp-derived cannabinoid products) are prohibited for sale, display, advertisement, give away or delivery.

9. The business shall operate solely as a retail storefront. Shipping, delivery, and order fulfillment services to customers shall not be permitted from the Subject Site.

10. The following printed card shall be displayed at all times in a prominent place which shall read substantially

as follows:

Warning to Minors

Persons under the age of twenty-one are subject to a fine up to five hundred dollars under Chapter 19 of the Village of Wheeling Code, for purchasing any tobacco product, or for misrepresenting their age for the purpose of purchasing or obtaining any tobacco product.

11. The petitioner shall obtain and maintain all required federal, state, and local licenses and registrations necessary for the sale of tobacco products, CBD products, and any other legally permitted cannabinoid products. Proof of all required licenses shall be submitted to the Village as part of the Business License application prior to the issuance of a Business License.

12. Failure to maintain the required licenses or compliance with applicable regulations may constitute grounds for suspension or revocation of the Village Business License and/or Special Use approval, subject to applicable procedures.

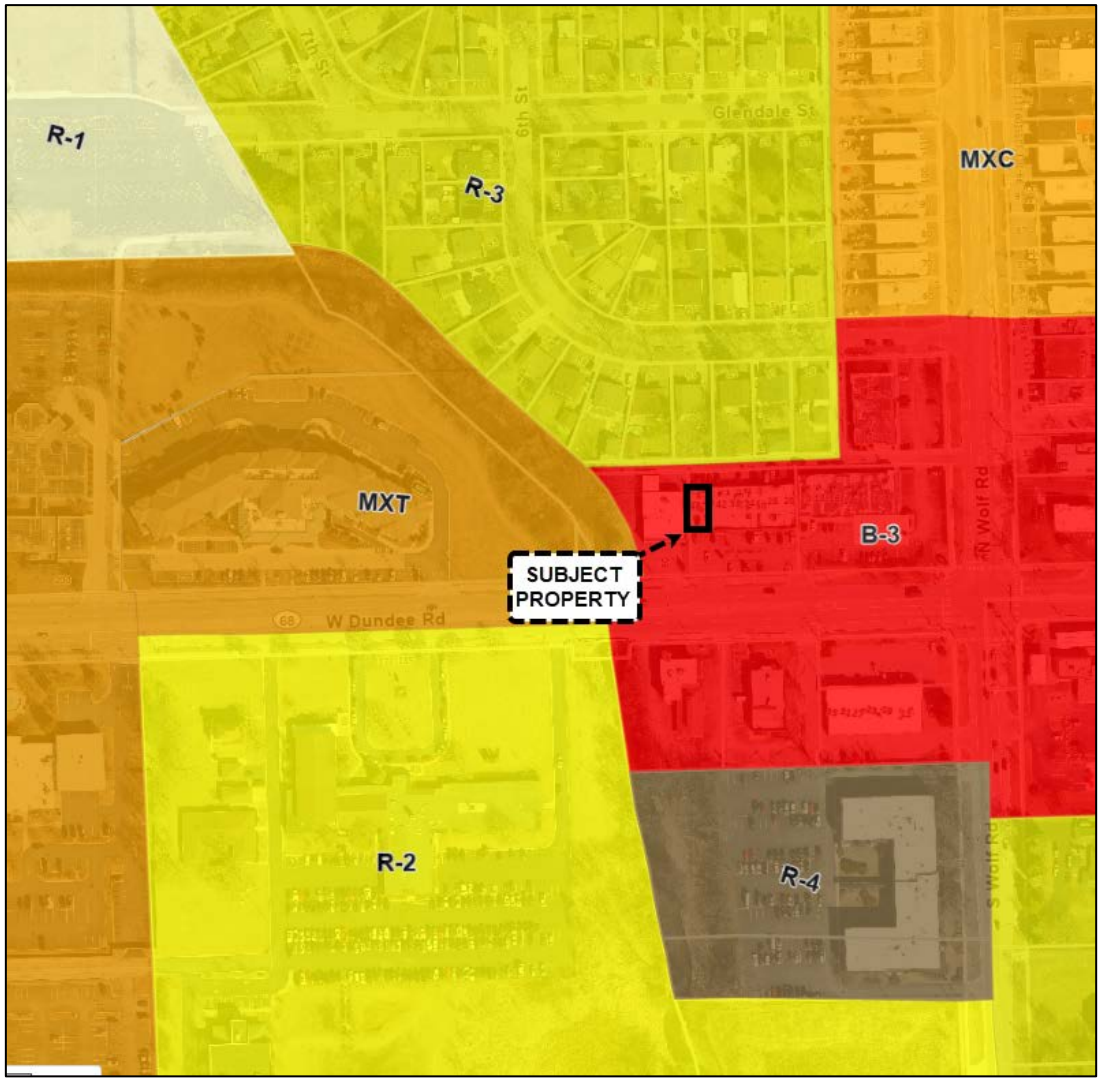
13. No merchandise shall be displayed, stored, or offered for sale outside the building.

14. Pennants, streamers, banners, posters, ribbons, strings of light bulbs, spinners, inflatable objects, the outlining of windows with neon tubing or strings of lights, blinking or flashing, or other attention getting devices are prohibited.

15. The hours of operation shall be limited to 10:00 a.m. to 10:00 p.m., seven days per week, unless otherwise approved by the Village.

ATTACHMENTS:
Location and zoning maps (Staff)
Project Description Letter received by the Village on 4/9/2026
Supplemental Narrative Received by the Village on 5/26/2026
Floor Plan received by the Village on 3/3/2026

LOCATION MAP



ZONING MAP

Front of business, facing south.

Received by the Village 4/9/2026

Smoke it .Inc, wheeling, Illinois

Smoke IT Smoke Shop – Wheeling, Illinois

Applicant: Rami Duqa

Proposed Business Name: Smoke IT Smoke Shop

Property Address: 48W Dundee Rd, Wheeling, IL

PIN: []

Zoning District: []

Project Overview

The applicant proposes to establish Smoke IT Smoke Shop, a retail business specializing in the sale of tobacco products, vape products, accessories, and related convenience retail items. The proposed use is a low-impact retail operation intended to serve adult customers in a clean, professional, and well-managed environment.

The business will occupy an existing commercial tenant space and will not require major structural modifications. The shop is designed to complement surrounding commercial uses and contribute positively to the local business community.

Background of the Business

Smoke IT Smoke Shop is a locally owned and operated retail concept focused on providing high-quality products, excellent customer service, and strict compliance with all federal, state, and local regulations. The ownership is committed to responsible retail practices, including age verification, staff training, and maintaining a safe and respectful environment.

The business model emphasizes a modern, organized, and upscale retail experience rather than a traditional or outdated smoke shop concept.

Operational Details

- **Hours of Operation:**
- Monday – Sunday: 10:00 AM – 10:00 PM
- **Number of Employees:**

Approximately 0–1 employee per shift, with a total staff of 1–2 employees

- **Number of Seats:**

0 (no on-site consumption or lounge area is proposed)

- **On-Site Vehicles / Parking:**

No company-owned vehicles will be stored on-site.

Customers will utilize existing shared parking provided by the commercial center.

- **Deliveries:**

Occasional small-scale deliveries (UPS/FedEx or similar) during normal business hours

Nature of the Proposed Use

The proposed business is strictly retail in nature, with no on-site consumption, no entertainment, and no late-night activity beyond standard retail hours. The shop will operate in full compliance with:

- All Village of Wheeling ordinances
- Illinois state laws regarding tobacco and vape sales
- Age restriction laws (21+), enforced through ID verification systems

The store will include:

- Professionally designed interior layout
- Secured display cases
- Surveillance camera system for safety
- Clear product organization and labeling

Community Compatibility

Smoke IT Smoke Shop is designed to be a quiet, low-traffic retail use like other small commercial businesses in the area. The business will not generate excessive noise, traffic, or disruptions.

Ownership is committed to:

- Maintaining a clean storefront and surrounding area
- Preventing loitering
- Being a responsible member of the business community

Conclusion

The applicant respectfully requests approval for this proposed retail use. Smoke IT Smoke Shop will provide a well-managed, compliant, and community-conscious business that contributes positively to the local economy and commercial corridor.

We appreciate your consideration and are available to provide any additional information as needed.

Sincerely,

Rami Duqa / Owner

[773-501-3883]

Supplemental Narrative
Received by the Village 5/26/2026

Smoke IT .Smoke Shop – Wheeling, Illinois

48 W Dundee Rd,Wheeling ,IL 60090

Smoke IT Smoke Shop intends to sell a variety of adult-use tobacco-related retail products and accessories in compliance with all applicable federal, state, and Village of Wheeling regulations. All products will be sold strictly to individuals twenty-one (21) years of age or older, and valid government-issued identification will be verified at the point of sale.

Tobacco Products

Cigarettes

Cigars and cigarillos

Pipe tobacco

Hookah / shisha tobacco

Rolling tobacco

Nicotine pouches

Smokeless tobacco products

Vape Products

Disposable vape devices

Rechargeable vape devices

Vape starter kits

Vape tanks and pods

Nicotine e-liquids

Replacement coils and batteries

CBD Products

The business may offer hemp-derived CBD products compliant with applicable federal and Illinois laws, including:

CBD gummies and edibles

CBD topicals and creams

CBD capsules

CBD vape products

CBD disposable vape devices

No products containing unlawful substances will be sold.

Tobacco Accessories

Rolling papers

Cigarette tubes

Tobacco grinders

Hookahs and hookah accessories

Lighters and torches

Ashtrays

Glass storage containers

Humidors

Tobacco pipes intended for lawful tobacco use only

Vape chargers and carrying cases

All accessories and related products displayed and/or sold on the premises will be clearly labeled and marketed for tobacco use only in compliance with Village requirements.

Compliance Measures

Smoke IT Smoke Shop will strictly comply with Section 8.60 of the Wheeling Municipal Code and all other applicable laws regarding the sale of tobacco, vape, and CBD-related products.

The business will implement the following procedures:

Strict 21+ age verification policy

Employee training regarding tobacco compliance laws

Security camera monitoring throughout the premises

Clearly posted age restriction signage

No sale of products to minors

No sale of unlawful smoking herbs or prohibited substances

The store will operate as a professional retail establishment with no on-site consumption or lounge area.

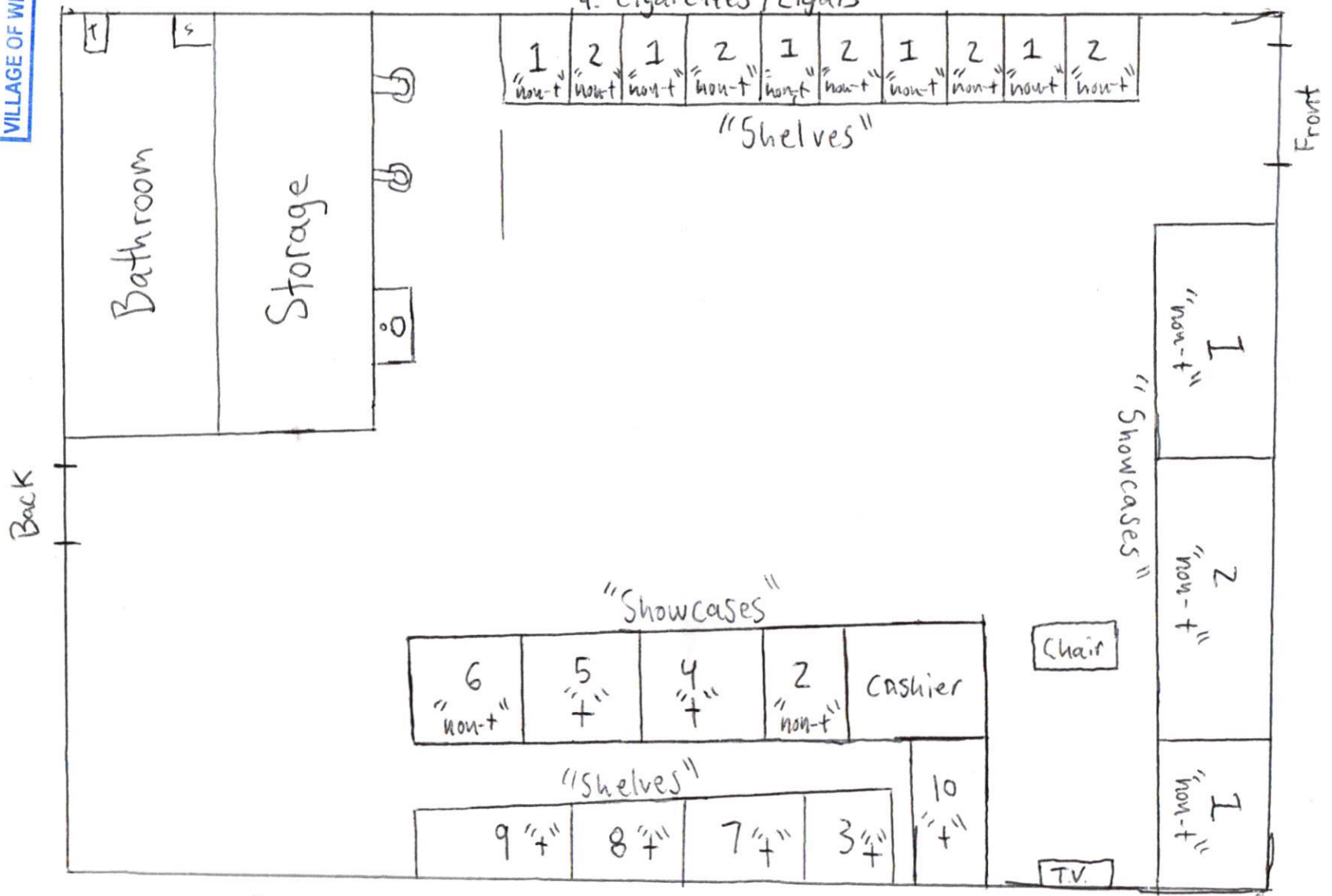
No Other Locations:

The applicant does not currently own or operate any other tobacco retail stores or similar businesses.

No Business website offered.

RECEIVED
MAR 03 2026
VILLAGE OF WHEELING

1. Hookah and Hookah related products
2. Glass (bongs/pipes)
3. Disposable Vape
4. Loose Tobacco
5. Vape Juice
6. Vape Mods
7. Tobacco Rolling Papers
8. Blunts
9. Cigarettes/Cigars
10. Hookah shisha tobacco



"t": tobacco sales
"nont": non-tobacco sales

Floor Plan

MEMORANDUM

DATE: August 12, 2026
FROM: Marcy Knysz, Village Planner
SUBJECT: Docket No. PSU26-0015, Request for Special Use Approval to Permit a Recreational and Instructional Facility for JYZ Dance (1053 Lake Cook Road) - **PUBLIC HEARING**
RECOMMENDED ACTION: **Recommend approval of Docket No. PSU26-0015,** granting Special Use approval to permit a recreational and instructional facility for JYZ Dance, located at 1053 Lake Cook Road, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, in accordance with the Project Description Letter prepared by Karina Chen, dated 7/17/2026; Floor Plan prepared by Palo Dobrik; and subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the facility's hours of operation.
2. All activities shall be conducted entirely within the indoor facility.
3. The facility shall be used exclusively for supervised dance instruction and practice sessions, and related activities. No unrelated activities, parties, receptions or general events shall be permitted.
4. No alcoholic beverages shall be permitted at the subject premises unless a Wheeling Liquor License is obtained.
5. Food service shall be limited to bottled water and commercially pre-packaged snacks that do not require refrigeration, heating, or other temperature control. The preparation or service of any other food or beverage items shall require approval from the Village and the issuance of all applicable permits and certificates.
6. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

EXECUTIVE SUMMARY

Docket No. PSU26-0015: Junyi Zhu (1053 Lake Cook Road, Wheeling, IL 60090), lessee, is seeking special use approval to permit a recreational and instructional facility ("JYZ Dance"), located at 1053 Lake Cook Road, which is zoned B-2, Neighborhood Commercial, pursuant to Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19.10 Use Regulations, and associated sections.

GENERAL PROPERTY INFORMATION

Petitioner: JYZ Dance (lessee)

Building size: 2,175 ft. Unit / 26,600 sq. ft. building

Property size: 2.36 acres

Neighboring Property Land Use(s):
North: Commercial (across Lake Cook Road)
South: Residential
West: Residential (across Lexington Drive)
East: Residential

Existing Use of Property: Multi-tenant commercial building

Existing Zoning: B-2, Neighborhood Commercial

Comprehensive Plan Designation: Commercial

Zoning History: None

SUMMARY OF REQUEST

The petitioner, JYZ Dance, requests special use approval to permit a recreational and instructional facility to operate a dance studio providing Latin and ballroom dance instruction and supervised practice sessions located at 1053 Lake Cook Road.

SPECIAL USE ANALYSIS

A Special Use is the use of land in which, because of their unique characteristics, cannot ordinarily be allowed in a particular zoning district without consideration of their impact upon neighboring land uses and would not be detrimental to the public health, safety or general welfare. After review of the Standards summarized in this staff report, the Commission may impose reasonable restrictions that make the special use more compatible for the zoning district in which it is located, which may include conditions related to site plan aspects to mitigate adverse effects.

The petitioner is requesting special use approval to operate a dance studio providing Latin and ballroom dance instruction through private lessons, group classes and supervised practice sessions.

As outlined in the petitioner's project description letter (attached), dance classes are proposed daily from 8:00 A.M. to 10:00 P.M. with approximately 6-15 participants per class. In addition to group dance instruction, the proposed use will also offer private and small group lessons with fewer than three participants. The business will be operated exclusively by the owner (petitioner). Staff has included a condition the facility be used exclusively for dance related classes, no tournaments, parties, events or unrelated activities are to be permitted. This limitation ensures the use remains consistent with the applicant's stated operations and prevents the space from functioning as a general event venue (e.g., special events, parties, etc.) that would not align with the intent of the zoning district.

Standards for Special Use: The petitioner has submitted the following responses to the standards for special use. (Any staff comments follow the petitioner's response)

1. **State why the Special Use is necessary or desirable to provide a service or a facility which is in the interest of public convenience or need and will contribute to the general welfare of the neighborhood or village.**

   Petitioner: The proposed dance studio is necessary and desirable because it provides recreational, educational, and wellness opportunities for residents of Wheeling and surrounding communities. The studio offers Latin and ballroom dance instruction through private lessons, group classes, and practice sessions, providing a safe and inclusive environment that promotes physical fitness, social interaction, lifelong learning, and cultural enrichment. The proposed use will enhance the general welfare of the community by creating opportunities for residents of all ages to participate in healthy recreational activities. In addition, the studio is expected to attract visitors from neighboring communities who will patronize nearby restaurants, retail stores, and other local businesses, thereby increasing customer traffic and supporting the economic vitality of the shopping center and the Village as a whole. The proposed location within an existing commercial plaza is particularly appropriate because the use is low intensity, generates limited noise, and complements existing commercial businesses. The dance studio will occupy existing tenant space without requiring significant site modifications and will contribute to the long-term success and occupancy of the shopping center.

   Staff: The proposed special use for a recreational and instructional facility is consistent with the B-2, Neighborhood Commercial zoning district. The use is compatible and consistent with the surrounding

commercial uses.

2. **State how the Special Use will not, under the circumstances of the particular case, be detrimental to the health, safety, morals or general welfare of the adjoining area or village and will not be injurious to property values or improvements in the vicinity.**

   Petitioner: The business will operate in a controlled indoor environment with scheduled classes and appointments, resulting in predictable occupancy levels and orderly operations. All activities will take place entirely within the building. Music used during instruction will be played at moderate indoor volumes typical instructional facilities. No outdoor activities or late-night operations are planned. The proposed use presents minimal safety concerns and is significantly less intensive than many other commercial uses permitted within the shopping center. The studio will comply with all applicable building, fire, occupancy, and life-safety requirements. Because the use involves educational and recreational activities in a professionally managed environment, it is not expected to negatively impact neighboring businesses or nearby properties.

   Staff: The proposed use will occur entirely within an existing building and will not alter the character of the area.

3. **State how the establishment of the special use will not impede or interfere with the normal and orderly development and improvement of surrounding property for uses permitted in the district.**

   Petitioner: The dance studio is compatible with existing commercial development patterns and utilizes an existing tenant space within a shopping center designed to accommodate customer-serving businesses. The use does not require unusual infrastructure improvements, excessive parking demand, or operational characteristics that would restrict future development of neighboring properties. The studio's operating hours and occupancy levels are consistent with the existing commercial environment and allow surrounding businesses to continue operating and developing in accordance with permitted zoning regulations. As a service-oriented business, the dance studio complements rather than competes with neighboring uses and contributes to a diverse mix of commercial services available to residents and visitors.

   Staff: The proposed use will occupy a developed property with convenient public access that will not impede the surrounding properties.

4. **State how the proposed use and development will be served adequately by essential public facilities and services such as streets, public utilities, drainage structures, police and fire protection, refuse disposal, parks, libraries and schools or the applicant will provide adequately for such services.**

   Petitioner: The property is already developed and served by public streets, water, sanitary sewer, stormwater drainage systems, electrical and telecommunications infrastructure, police protection, fire protection, refuse collection services, and other municipal services. Because the dance studio will occupy an existing commercial space with a relatively low occupancy levels, the use is not expected to create a significant additional demand on municipal infrastructure or public services. The anticipated number of students at any given time is modest, and the business does not involve industrial processes, hazardous materials, or activities requiring specialized public services. Accordingly, existing public facilities are sufficient to accommodate the proposed use without placing an undue burden on Village resources.

   Staff: The proposed use will occur within an existing building that is currently served by public facilities. There are no proposed changes to the exterior of the building or site that would require additional public services.

5. **State how the proposed use or development will not cause undue traffic congestion nor draw significant amounts of traffic through residential streets. Parking areas and driveways shall be designed so as to prevent traffic hazards, eliminate nuisance and minimize traffic congestion in the public streets.**

   Petitioner: Student attendance is expected to be modest, with approximately 4 to 10 students during daytime hours and 10 to 15 students during evening class periods. The business primarily operates by appointment and scheduled classes, which naturally distributes arrivals and departures throughout the day and reduces peak traffic impacts. Private lessons typically involve only one student at a time, further minimizing traffic generation. The shopping center provides existing parking facilities that are adequate to accommodate anticipated demand. Parking needs are expected to be fewer than 10 vehicles during daytime hours and fewer than 15 vehicles during evening hours. Access is provided through existing driveways and internal circulation routes designed to safely accommodate commercial traffic. The proposed use is not expected to generate significant traffic through residential neighborhoods, as customers will primarily access the site via established commercial roadways

serving the shopping center.

Staff: The proposed use will be located within an existing commercial retail development which shares parking with other tenants. Sufficient parking exists on site to service the proposed use.

6. **State how the proposed use will comply with the regulations and stipulations specified for such use.**

Petitioner: The proposed dance studio will comply with all applicable Village zoning regulations, building codes, fire codes, occupancy requirements, and life-safety standards. The business will obtain all required permits and approvals prior to commencing operations and will operate in accordance with any conditions imposed through the Special Use Permit process. All activities will occur within the existing commercial tenant space. The studio will maintain compliance with occupancy limits, accessibility requirements, fire protection requirements, and all applicable health and safety regulations. No variances or exceptions are being requested beyond the Special Use Permit necessary to allow the proposed dance instruction use at this location. The petitioner is committed to operating the business responsibly and in a manner consistent with the intent and requirements of the Village's zoning ordinance.

Staff: The proposed use is consistent with the B-2 (Neighborhood Commercial) zoning district and the Comprehensive Land Use designation of Commercial.

STAFF REVIEW

Fire Department Review: The following comment will be addressed during the Business License review.

1. Fire alarm devices will be required in the tenant space if there are none currently there.

Health Division Review: No comments from the Health Division related to the Special Use.

Engineering Division Review: No comments from the Engineering Division related to the Special Use.

Staff Recommended Action: Staff recommends approval of the special use subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the facility's hours of operation.
2. All activities shall be conducted entirely within the indoor facility.
3. The facility shall be used exclusively for supervised dance instruction and practice sessions, and related activities. No unrelated activities, parties, receptions or general events shall be permitted.
4. No alcoholic beverages shall be permitted at the subject premises unless a Wheeling Liquor License is obtained.
5. Food service shall be limited to bottled water and commercially pre-packaged snacks that do not require refrigeration, heating, or other temperature control. The preparation or service of any other food or beverage items shall require approval from the Village and the issuance of all applicable permits and certificates.
6. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

******

If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of a special use for the operation of a recreational and instructional facility, the appropriate motion would be to:

Recommend approval of Docket No. PSU26-0015, granting Special Use approval to permit a recreational and instructional facility for JYZ Dance, located at 1053 Lake Cook Road, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, in accordance with the Project Description Letter prepared by Karina Chen, dated 7/17/2026; Floor Plan prepared by Palo Dobrik; and subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the facility's hours of operation.
2. All activities shall be conducted entirely within the indoor facility.
3. The facility shall be used exclusively for supervised dance instruction and practice sessions, and related activities. No unrelated activities, parties, receptions or general events shall be permitted.
4. No alcoholic beverages shall be permitted at the subject premises unless a Wheeling Liquor License is obtained.
5. Food service shall be limited to bottled water and commercially pre-packaged snacks that do not require refrigeration, heating, or other temperature control. The preparation or service of any other food or beverage items shall require approval from the Village and the issuance of all applicable permits and certificates.
6. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

ATTACHMENTS:
Location and zoning maps (Staff)
Project Description Letter prepared by Karina Chen, dated 7/17/2026
Floor Plan prepared by Palo Dobrik

LOCATION MAP

ZONING MAP

www.jyzdance.com

Business Description and Occupancy Information

Date: _July 17, 2026____

Prepared By: Karina Chen
Junyi Zhu
Owner & Instructor
Location: 1053 E. Lake Cook Road, Wheeling, IL 60090

Business Use
The proposed business will provide Latin and ballroom dance instruction through private lessons, group classes, and supervised practice sessions.

Hours of Operation
• 8:00 AM – 10:00 PM

Number of Employees
The business is owner-operated and currently has no employees.

Attendance
• Group Classes: 6-15 students
• Private lessons: 1-on-1 or groups under 3 people

Services Offered
• Latin dance classes, Ballroom dance classes
• Private lessons, Group classes
• Practice sessions

Class Schedule

Classes will be scheduled by appointment and through quarterly membership registration. Most group classes will occur during evening hours, while private lessons and coaching sessions will primarily occur during daytime hours.

Operating Model

The studio will operate on an appointment-based and membership-based model. Students will register for classes, lessons, and practice sessions, allowing for controlled attendance and efficient facility management.

Parking

Parking demand is expected to remain modest:

- **Daytime:** Fewer than 10 vehicles
- **Evenings:** Fewer than 15 vehicles

Noise and Music Management

Music used during instruction will be played indoors only through standard amplified sound equipment. No live bands or outdoor music activities are planned. Music volume will be maintained at levels comparable to those commonly experienced in restaurants or neighborhood entertainment venues.

Growth Plan and Community Impact

The business currently serves approximately 50 students through its existing Lake Zurich studio and anticipates steady growth over the next three years. We have signed a five-year and seven months' lease and intend to establish a long-term presence at this location. Future expansion opportunities throughout Illinois may also be pursued as the business grows.

We believe the studio will positively contribute to the shopping center by attracting visitors from Wheeling and surrounding communities, including Barrington, Long Grove, Evanston, and neighboring areas. Students attending classes are expected to support nearby businesses such as restaurants, flower shops, dessert stores, and other retailers, generating additional foot traffic and economic activity within the plaza.

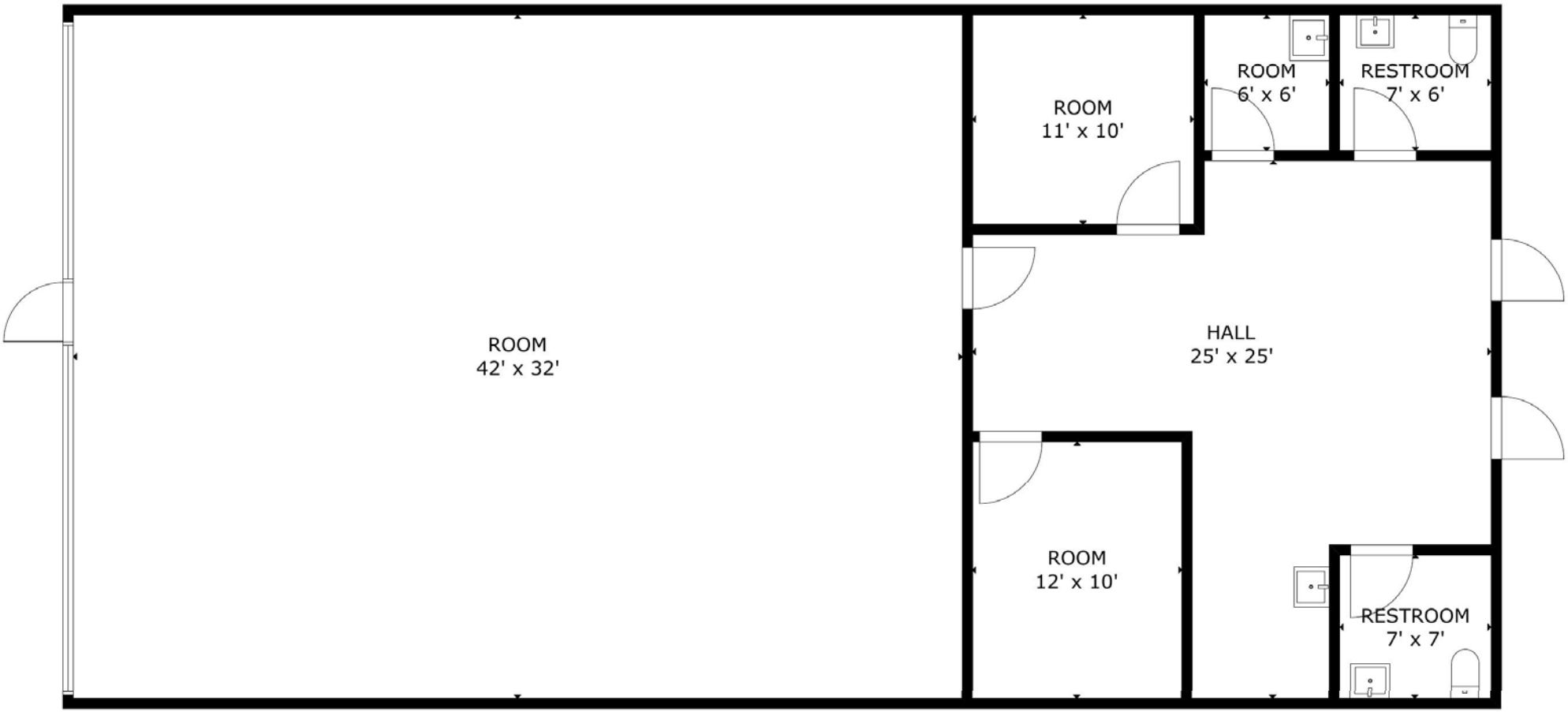
Thank you for your time and consideration. Should you require any additional information, please feel free to contact me.

Sincerely,

Junyi Zhu
Owner & Instructor
ZD Entertainment LLC / Brand Name: JYZ Dance

www.jyzdance.com
Contact: Karina Chen
224 422 9039

1053 E Lake Cook Rd Wheeling, IL, United States



FIRST FLOOR

GROSS INTERNAL AREA
TOTAL: 2,175 sq ft
FIRST FLOOR: 2,175 sq ft
SIZE AND DIMENSIONS ARE APPROXIMATE, ACTUAL MAY VARY

PALO DOBRIK PHOTOGRAPHY

MEMORANDUM

DATE: August 12, 2026
FROM: Marcy Knysz, Village Planner
SUBJECT: Docket No. PSU26-0013, Request for Special Use Approval to Permit the Operation of a Heavy Motor Vehicle Repair Facility for Ramar Land Corporation (900 Chaddick Drive) - **PUBLIC HEARING**

RECOMMENDED ACTION: **Recommend approval of Docket No. PSU26-0013,** granting Special Use approval in order to permit the operation of a heavy motor vehicle repair facility for Ramar Land Corporation, located at 900 Chaddick Drive, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, and in accordance with the Site Plan prepared by Atwell, dated 7/13/2026; Floor Plan prepared by Wah Yee Associates, dated 7/6/2026; Petitioner's Project Description Letter prepared by Stan Richards, dated 7/19/2026; Details for Turnstile by Controlled Access, Inc.; and subject to the following conditions:

1. Special Use approval is contingent upon approval of Docket No. PSPMIN26-0009 (request for minor site plan approval).

2. The Wheeling Business License application shall include an updated interior floor plan that identifies the locations of any storage areas, wash areas, hazardous material storage areas, and the storage locations for oils, lubricants, antifreeze, fuel, batteries, tires, and any other hazardous materials.

3. Prior to the issuance of a Wheeling Business License for the heavy motor vehicle repair facility, the petitioner shall apply for and obtain a construction permit from the Wheeling Community Development Department for the installation of a code compliant triple basin. The triple basin shall be installed and approved prior to commencement of the heavy motor vehicle repair use.

4. Any services performed, including but not limited to inspection, diagnosis, repair, maintenance activities, or storage of any kind, shall be conducted entirely within the interior of the principal building.

5. All parking shall occur only within the designated parking areas shown on the approved Site Plan. No vehicles, equipment, or parts of any kind, shall be parked or stored within landscape areas, drive aisles, fire lanes or any pavement areas not delineated for vehicle parking.

6. Heavy motor vehicle dismantling and/or salvage operations shall be prohibited.

7. Long-term storage of heavy motor vehicles or equipment is prohibited.

8. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

EXECUTIVE SUMMARY

Docket No. PSU26-0013: Ramar Land Corporation (600 Gilliam Road, Wilmington, OH 45177), contract property owner, is seeking special use approval to permit the operation of a heavy motor vehicle repair facility, located at 900 Chaddick Drive, which is zoned I-3 (General Industrial), pursuant to Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19.10 Use Regulations, and associated sections.

GENERAL PROPERTY INFORMATION

Petitioner: Ramar Land Corporation, contract property owner

Address: 900 Chaddick Drive

Building size: 75,902 sq. ft.

Property size: 238,842 sq. ft. (5.48 acres)

Neighboring Property Land Use(s):
North/South/West: Industrial
East: Industrial (across Chaddick Drive)

Existing Use of Property: Industrial (vacant building)

Existing Zoning: I-3, General Industrial

Comprehensive Plan Designation: Industrial

Zoning History:

- Docket #AC81-42, approved 11/18/1981, granting architectural, landscaping and lighting approval for the construction of a building.
- Ordinance No. 3566, approved 8/13/2001, granting site plan approval to construct a building addition to an existing industrial facility (Docket #PC-561).

SUMMARY OF REQUEST

Ramar Land Corporation (R+L Carriers), contract property owner, is seeking special use approval to operate a heavy motor vehicle repair facility within the existing industrial building at 900 Chaddick Drive to service its existing fleet of heavy motor vehicles and trailers.

In addition, the petitioner is seeking Minor Site Plan approval (Docket No. PSPMIN26-0009) for the construction of a driveway connection between the subject property (900 Chaddick Drive) and the adjacent property to the south at 1000 Chaddick Drive, which is also owned and occupied by the petitioner, as well as the installation of a perimeter fence and employee turnstile access.

SPECIAL USE ANALYSIS

A Special Use is the use of land in which, because of their unique characteristics, cannot ordinarily be allowed in a particular zoning district without consideration of their impact upon neighboring land uses and would not be detrimental to the public health, safety or general welfare. After review of the Standards summarized in this staff report, the Commission may impose reasonable restrictions that make the special use more compatible for the zoning district in which it is located, which may include conditions related to site plan aspects to mitigate adverse effects.

The petitioner currently owns and operates R+L Carriers truck freight terminal at 1000 Chaddick Drive, immediately south of the subject property. As outlined in the project description letter (attached), the petitioner is under contract to purchase 900 Chaddick Drive to expand its operations by establishing a maintenance facility to service its existing fleet of semi-tractors and trailers operating from the adjacent property (1000 Chaddick Drive). To facilitate movement between the two sites, the petitioner is proposing a driveway connection that will allow tractors and trailers to travel directly between the properties. The proposed site improvements are summarized in the staff report for Minor Site Plan Approval, Docket No. PSPMIN26-0009.

The proposed maintenance facility will be exclusively for R+L Carriers fleet of vehicles and will operate continuously from 12:00 A.M. Sunday through 8:00 P.M. Friday. Approximately 4-5 employees are expected to be on-site during operating hours.

Floor Plan: The proposed heavy motor vehicle repair facility will occupy the existing industrial building, with the maintenance bays/service area located in the southwest portion of the building, as shown on the submitted Floor Plan. The floor plan does not identify the locations of ancillary storage areas, wash areas, hazardous material storage, or the storage of oils, lubricants, antifreeze, fuel, batteries, and other hazardous materials. In addition, the location of a required triple basin has not been identified. Although staff requested this information to be included on the floor plan to fully illustrate how the building will be used for the proposed motor vehicle repair, such details do not detract from the requested special use since. Accordingly, conditions of approval have been included requiring the inclusion of such operational information as part of the Business License application and required building permit application.

Parking: Construction of the proposed driveway connection will reduce the number of on-site parking spaces from 104 spaces to 99 spaces. Staff reviewed the parking demand associated with the proposed heavy motor vehicle repair facility and the remaining parking supply complies with the Village's off-street parking requirements and is sufficient to accommodate the proposed use.

Standards for Special Use: The petitioner has submitted the following responses to the standards for special use. (Any staff comments follow the petitioner's response)

1. **State why the Special Use is necessary for the public convenience at the proposed location.**

   Petitioner: R+L Carriers' operations in the Village of Wheeling and the local/regional need for their services warrants expansion of their facility and services. This expansion will help increase operational efficiency to better serve the community and region at large. The requested special use for a heavy motor vehicle facility is necessary for R+L Carriers to operate a maintenance shop within the existing building at 900 Chaddick Drive. Capitalizing on existing infrastructure is cost effective and sustainable for both the Village and the applicant.

   Staff: The proposed location within the I-3, General Industrial Zoning District, permits heavy motor vehicle repair facilities subject to the granting of a Special Use, which the proposed use will be compatible with typical I-3 uses along Chaddick Drive.

2. **State how the Special Use will not alter the essential character of the area in which it is to be located.**

   Petitioner: The requested special use will allow for the reuse of an existing building to better serve the existing operations of R+L Carriers. The existing operations is not detrimental to the health, safety, morals or general welfare of the immediate area and the village at large. The requested special use will allow for existing fleet tractors and trailers to obtain necessary maintenance locally, on-site which is a safer alternative than trying to secure maintenance services at another facility off-site. Additionally, property values will not be negatively effected by the requested special use because the overall operations for the R+L Carriers facility will not change.

   Staff: The proposed repair facility will utilize an existing industrial building and all repair services will be conducted inside the building. Therefore, the proposed use will not alter the essential character of the area, as the use maintains the industrial nature of the area.

3. **State how the location and size of the Special Use, the nature and intensity of the operation involved in or conducted with it, the size of the site in relation to it, and the location of the site with respect to streets giving access to it will be in harmony with and not impede the normal, appropriate and orderly development of the district in which it is to be located and the development of surrounding properties.**

   Petitioner: The establishment of a heavy motor vehicle facility special use will not negatively effect the development, improvement, and/or operations of the uses permitted on the surrounding properties. The special use being requested re-purposes an existing building which served a similar purpose with its previous use/operation. The proposed use will maintain the existing character of the area and will not prohibit redevelopment of adjacent properties.

   Staff: The proposed heavy motor vehicle repair facility will occupy an existing developed site with sufficient building area, circulation space, and parking to support the use. No expansion of the building footprint is

proposed. Vehicular access from Chaddick Drive is adequate for the proposed use. The Special Use will not interfere with the normal or orderly development of adjacent industrial properties and will operate in harmony with surrounding land uses.

4. **State how the location, nature and height of buildings, walls and fences, and the nature and extent of the landscaping on the site shall be such that the use will not hinder or discourage the appropriate development and use of adjacent land and buildings, or will not impair the value thereof.**

   Petitioner: The existing building located on 900 Chaddick Drive had been previous occupied and was adequately served by public facilities and services. The proposed use and development will only occupy a portion of the existing building initially thus not creating any need for additional or enhanced public facilities and/or services. Proposed reconfiguration and expansion of site security fencing will work with fire protection to ensure all access requirements are met. Additionally, the proposed development intends to meet local BMP requirements through installing permeable pavers on the existing employee lot at 900 Chaddick Drive.

   Staff: The proposed use will operate within the existing industrial building and will not introduce new building mass or structures that would negatively affect adjacent properties. Therefore, the proposed use is not anticipated to hinder or discourage the development or use of adjacent properties or impair their value.

5. **State how the parking areas will be of adequate size for the particular use, properly located and suitably screened from adjacent residential uses, entrance and exit drives shall be laid out so as to prevent traffic hazards and nuisances and the development will not cause traffic congestion.**

   Petitioner: The traffic generated from the existing R+L Carriers operation at 1000 Chaddick Drive will essentially remain the same after the proposed use is implemented. The proposed maintenance garage will service the existing fleet and thus not generate additional traffic concerns. With the proposed use/expansion, additional parking for the R+L Carriers operation as a whole will be provided. Additionally, with only 4-6 additional staff members expected to be generated, providing adequate parking will not be an issue.

   Staff: Based on the Village's parking requirements for the proposed special use, the number of parking spaces provided will be sufficient to accommodate the operational needs of the proposed use.

6. **State how the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulation in that zone.**

   Petitioner: The proposed use will be occupying an existing building which complies with regulations that permitted the existing building to be constructed and previous uses to be in operation. The applicant will work with fire department to ensure all access requirements will be met. Any changes or upgrades to the interior of the existing building will be applied for and communicated with staff as required.

   Staff: The proposed use is consistent with the I-3, General Industrial Zoning District, and the Comprehensive Land Use designation of Industrial.

STAFF REVIEW

Fire Department Review: No comments from the Fire Department related to the Special Use.

Engineering Division Review: No comments from the Engineering Division related to the Special Use.

Staff Recommended Action: Staff recommends approval of the special use, subject to the following conditions:

1. Special Use approval is contingent upon approval of Docket No. PSPMIN26-0009 (request for minor site plan approval).

2. The Wheeling Business License application shall include an updated interior floor plan that identifies the locations of any storage areas, wash areas, hazardous material storage areas, and the storage locations for oils, lubricants, antifreeze, fuel, batteries, tires, and any other hazardous materials.

3. Prior to the issuance of a Wheeling Business License for the heavy motor vehicle repair facility, the petitioner shall apply for and obtain a construction permit from the Wheeling Community Development

Department for the installation of a code compliant triple basin. The triple basin shall be installed and approved prior to commencement of the heavy motor vehicle repair use.

4. Any services performed, including but not limited to inspection, diagnosis, repair, maintenance activities, or storage of any kind, shall be conducted entirely within the interior of the principal building.

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6. Heavy motor vehicle dismantling and/or salvage operations shall be prohibited.

7. Long-term storage of heavy motor vehicles or equipment is prohibited.

8. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of a special use, the appropriate motion would be to:

Recommend approval of Docket No. PSU26-0013, granting Special Use approval in order to permit the operation of a heavy motor vehicle repair facility for Ramar Land Corporation, located at 900 Chaddick Drive, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, and in accordance with the Site Plan prepared by Atwell, dated 7/13/2026; Floor Plan prepared by Wah Yee Associates, dated 7/6/2026; Petitioner's Project Description Letter prepared by Stan Richards, dated 7/19/2026; Details for Turnstile by Controlled Access, Inc.; and subject to the following conditions:

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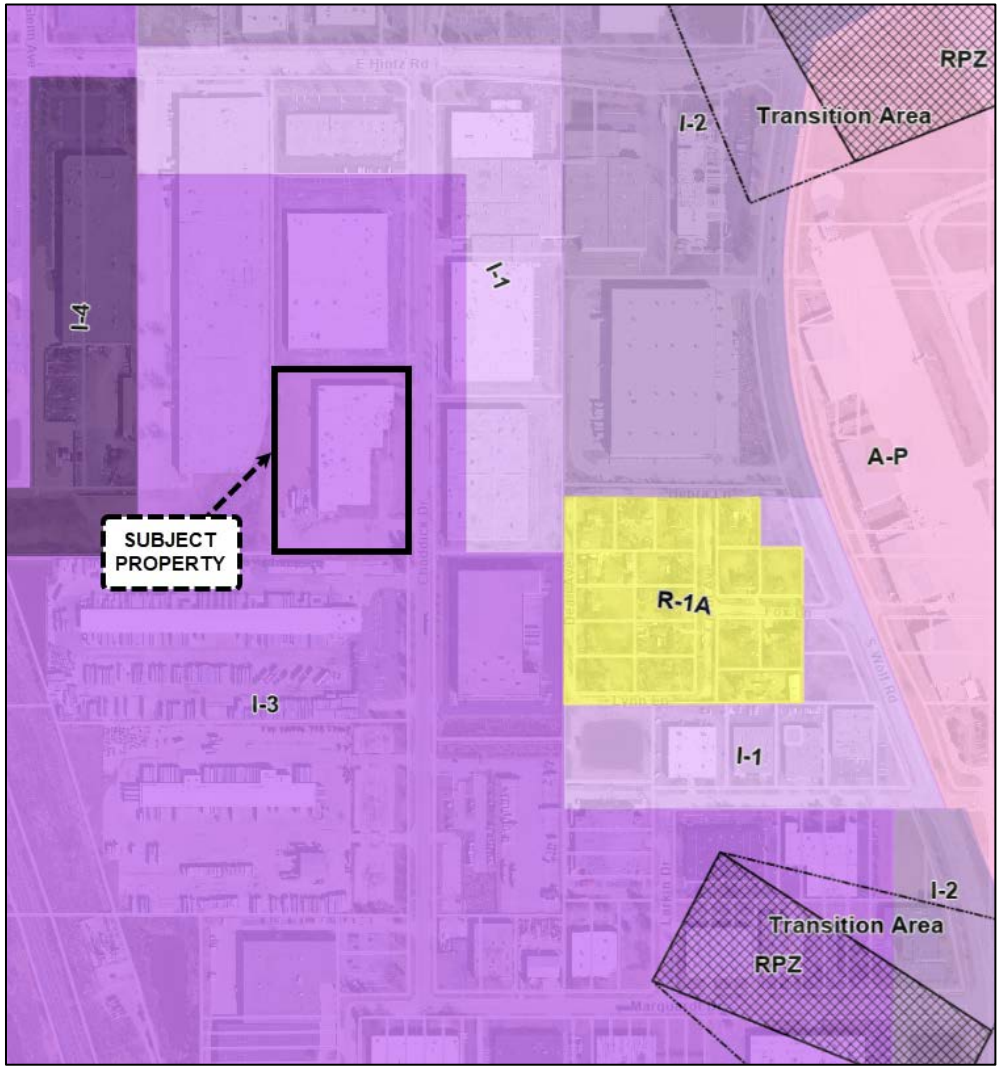
ATTACHMENTS:
Attachments to Staff Report (Staff)
Site Plan prepared by Atwell, dated 7/13/2026
Floor Plan prepared by Wah Yee Associates, dated 7/6/2026
Petitioner's Project Description Letter prepared by Stan Richards, dated 7/19/2026

LOCATION MAP



ZONING MAP

Front entrance to the building facing north.

West side of property and rear docks facing north.

Location for proposed driveway between two properties facing south.

Parking lot and south property line (right side of photo) facing east.

Frontage of property along Chaddick Drive facing north.

Docks along east side of building on Chaddick Drive facing west.

GENERAL NOTES

A. LAYOUT / INFORMATION PROVIDED FOR DESIGN INTENT ONLY. FINAL LAYOUT & DETAILS BY AOR / EOR. DETAILS DEVELOPED FOR NEW CONSTRUCTION - RENOVATIONS MAY REQUIRE ADDITIONAL DETAILS & INFORMATION. COORDINATE WITH R+L PROJECT MANAGER.

B.

R+L CARRIERS

SKETCH PROVIDED FOR CONCEPT / REFERENCE ONLY
NOT FOR CONSTRUCTION

TYPICAL TURN-STILE

2021.04.21

ASK-15

A 2' wide concrete strip to be placed under the perimeter security fence shall be 3" of normal weight concrete over 2" of compacted subbase aggregate.

Notes:
1. Weights of all pipe members shall meet the minimum requirements of A.N.S.I. schedule 40.
2. Barbed wire extension arms angled from the vertical shall lean away from site at a 45° angle.
3. Contractor shall use 12"Ø sonotube casings on all concrete fence post footings.

Symbol Identification

A. 4" NPT Monitor Fitting or Optional 18" Dia. Hydrostatic Reservoir (DW only)
B. 1" Dia. FRP Influent Flanged Nozzle with Diffuser
C. 1" Dia. FRP Effluent Flanged Nozzle with Clean-Water Outlet
D. 22" Dia. x 30" High Manway with 4-4" NPT Fittings in Cover & 4-12"x12" Striker Plates
E. Platform, Sludge Baffle & Coalescer
F. Lifting Lug
G. (Optional Prefabricated Deadmen)
Hold-Down Strap Location

★ See Oil/Water Separator Product Literature to identify proper pipe/flange size, which is determined by selected flow rate.

A. Use Parameters
Proper performance of the separator and the quality of effluent is based upon the operational, functional and installation requirements, and limitations as detailed in the following Xerxes publications:

1. Oil/Water Separator Product Literature;
2. Installation Manual and Operating Guidelines for Fiberglass Underground Storage Tanks;
3. Oil/Water Separator Operating and Maintenance Manual.

B. Design Parameters
This separator is designed for a maximum influent quality of 1,000 ppm and an effluent quality of 10 ppm. Also:

1. maximum flow rate_____ gpm
2. number of coalescer rows to be installed_____
3. Single-Wall or Double-Wall (circle one)

The undersigned acknowledges and agrees to the use and design parameters as detailed on this drawing and accepts responsibility therefore and hereby approves application. Any deviation from these parameters and limitations, must be approved by Xerxes in writing.

MAXIMUM SPILL CAPACITY	NOMINAL WEIGHT SW	NOMINAL WEIGHT DW
600 Gal.	1,400 LBS.	1,700 LBS.

SIGNATURE

PRINTED NAME | DATE

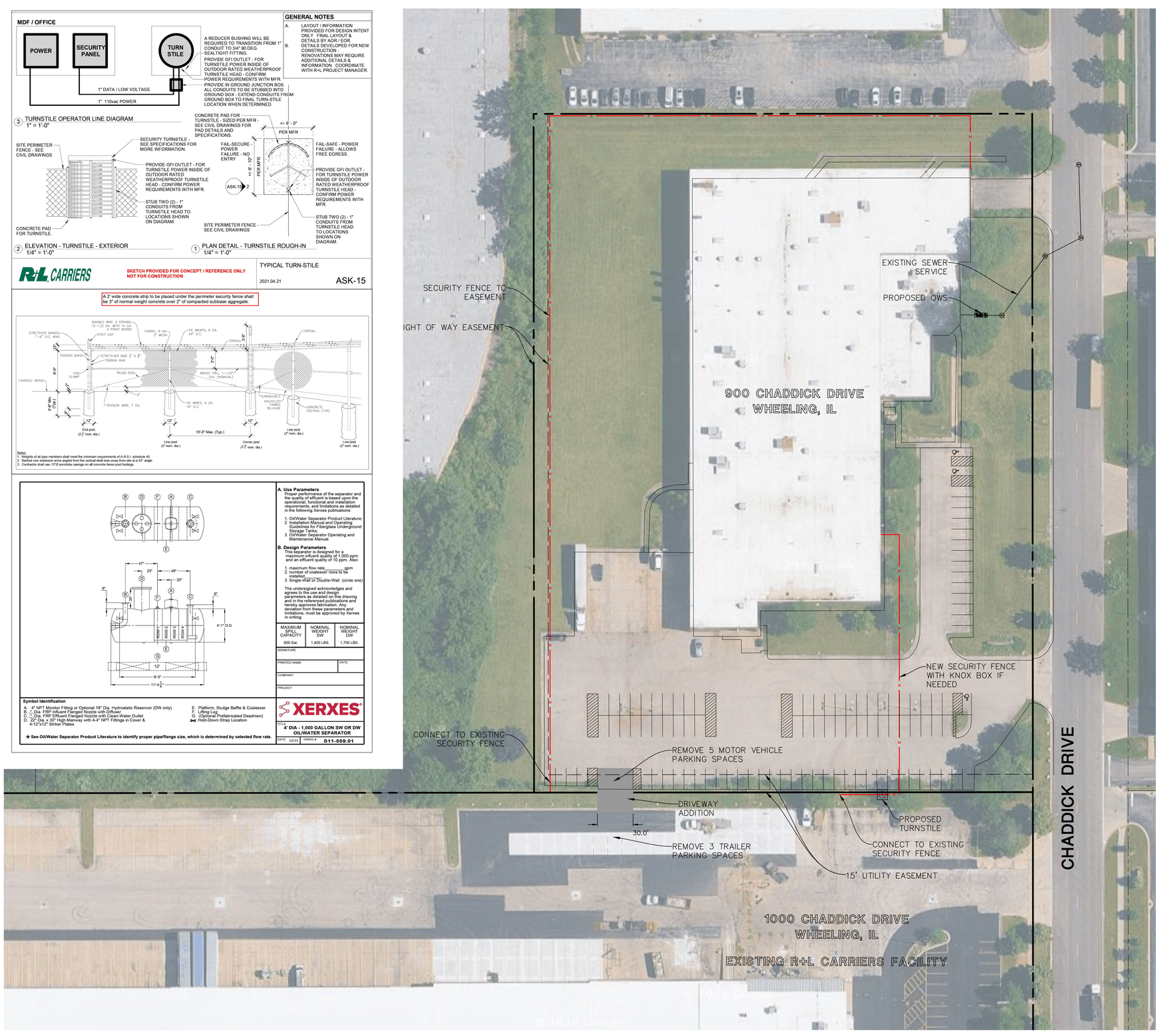
COMPANY

PROJECT

XERXES

TITLE: 4' DIA - 1,000 GALLON SW OR DW OIL/WATER SEPARATOR

DATE 10/23 | DRWG # S11-559.01



SITE DATA

GROSS LAND AREA	238,935 SF	5.485 ACRES	100%
IMPERVIOUS SURFACE			
EXISTING	136,299 SF	3.129 ACRES	57.0%
PROPOSED	136,388 SF (+89 SF)	3.131 ACRES	57.1%
GREEN SPACE			
EXISTING	102,636 SF	2.356 ACRES	43.0%
PROPOSED	102,547 SF (−89 SF)	2.354 ACRES	42.9%
MOTOR VEHICLE PARKING SPACES			
EXISTING	104		
PROPOSED	99 (−5)		
TRAILER PARKING SPACES			
EXISTING	0		
PROPOSED	−3 REMOVED FROM 1000 CHADDICK DRIVE PROPERTY AT CONNECTING DRIVEWAY		

DRAWN BY | REVISIONS | DATE

ATWELL
866.850.4200 www.atwell.com
333 East Butterfield Road, Suite 600
Lombard, IL 60148
ph:630.691.8500

R+L CARRIERS - WHEELING, IL
900 CHADDICK DRIVE, WHEELING, IL
CONCEPT SITE PLAN

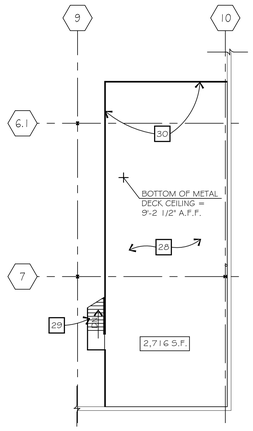
PROJ. MGR.: JMI
PROJ. ASSOC.:
DRAWN BY: BRB
DATE: 7/13/2026
SCALE: 1"=40'

SHEET 1 OF 1

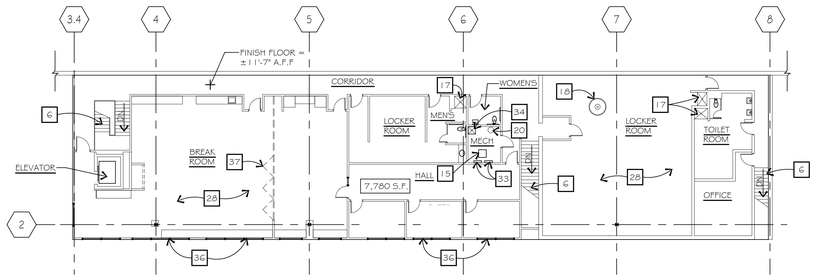
26007479

© 2026 ATWELL LLC, ALL RIGHTS RESERVED

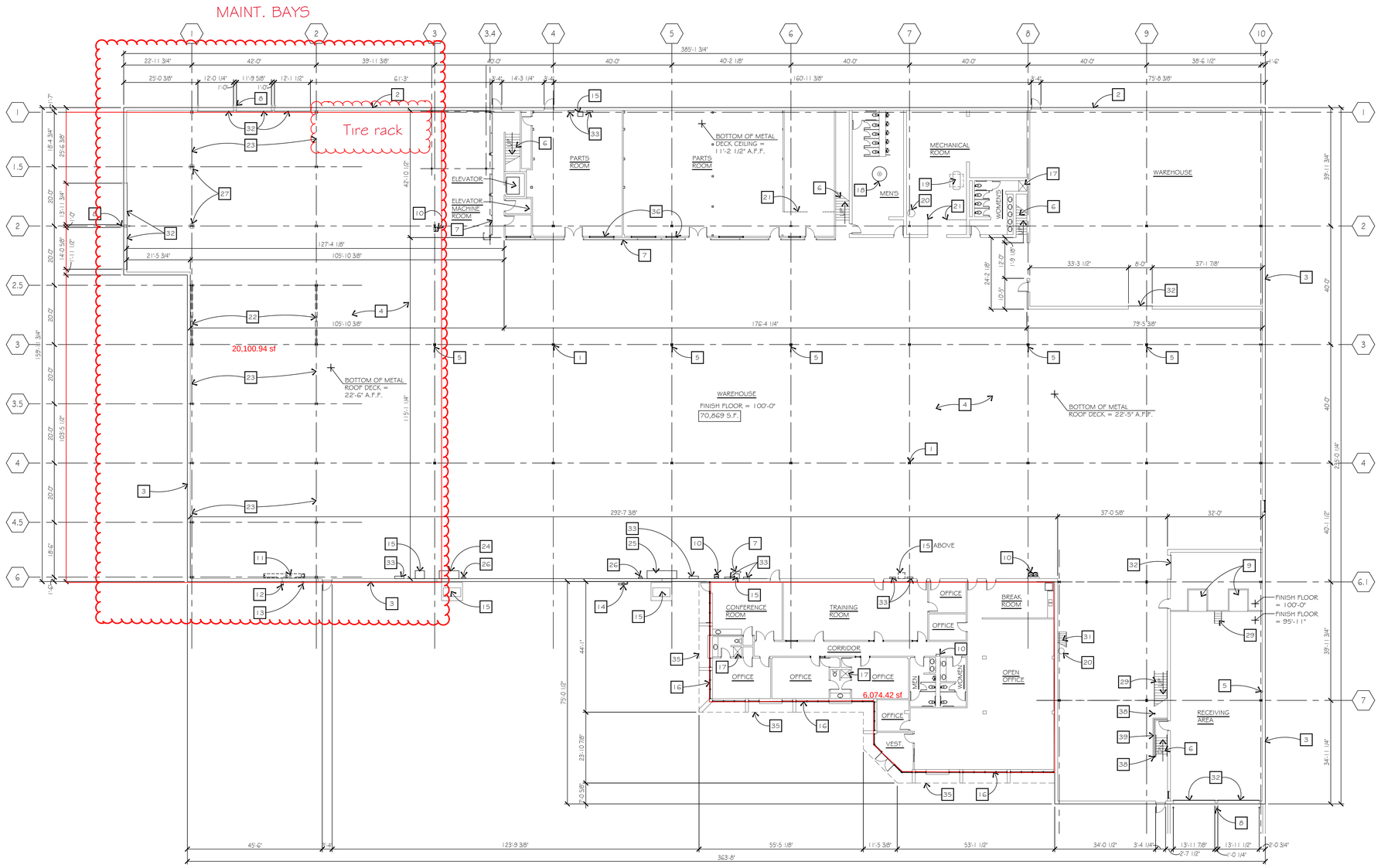
July 10, 2026 - 16:24 Dwg Name: K:\Projects\2026\Lombard\Engineering\P26007479 R+L Wheeling, IL\Concept Plans\Concept Site Plan.dwg Updated By: DChow



MEZZANINE ABOVE RECEIVING FLOOR PLAN
SCALE: 1/16"=1'-0"



EXISTING MEZZANINE FLOOR PLAN
SCALE: 1/16"=1'-0"



EXISTING FLOOR PLAN
SCALE: 1/16"=1'-0"

KEY NOTES

1. EXISTING STEEL COLUMN, TYPICAL.
2. EXISTING 12" BLOCK MASONRY.
3. EXISTING BRICK VENEER ON BLOCK MASONRY.
4. EXISTING CONCRETE SLAB.
5. EXISTING ROOF CONDUCTOR.
6. EXISTING CONCRETE STAIRS.
7. EXISTING STEEL GUARD RAIL AND STEEL POSTS.
8. EXISTING STEEL BOLLARD, TYPICAL.
9. EXISTING RECESSED MECHANICAL DOCK LEVELER.
10. EXISTING DRINKING FOUNTAIN.
11. EXISTING FIRE RISER AND WATER METER ASSEMBLY.
12. EXISTING FIRE DEPARTMENT CONNECTION.
13. EXISTING FIRE PROTECTION DRAIN.
14. EXISTING GAS METER.
15. EXISTING TRANSFORMER.
16. EXISTING INSULATING GLASS IN ALUMINUM FRAME.
17. EXISTING SHOWER.
18. EXISTING RADIAL SINK.
19. EXISTING COMPRESSOR.
20. EXISTING WATER HEATER.
21. EXISTING FENCE PARTITION.
22. EXISTING STRUCTURAL STEEL "X" BRACING.
23. EXISTING CONTINUOUS STEEL RAIL SYSTEM RUNS BETWEEN COLUMN LINES 1 AND 2. LOWEST RAIL SYSTEM STRUCTURAL MEMBER = 14'-4" ABOVE FINISHED FLOOR.
24. EXISTING MDP, 2000 AMP 3PH, 3W, 480 VOLT SERVICE.
25. EXISTING MDP, 2000 AMP 3PH, 4W, 277/480 VOLT SERVICE.
26. EXISTING ELECTRIC METER.
27. EXISTING CONCRETE STEEL COLUMN GUARD.
28. CONCRETE SLAB ON METAL DECK ON STRUCTURAL FRAMING.
29. EXISTING STEEL STAIRS AND RAILING.
30. EXISTING STEEL RAILING WITH REMOVABLE SECTION.
31. EXISTING SHIPS LADDER TO ROOF HATCH ABOVE.
32. EXISTING STEEL OVERHEAD DOOR.
33. EXISTING ELECTRICAL PANEL.
34. EXISTING FLOOR MOUNTED SERVICE SINK.
35. LINE OF EXISTING CANOPY OVERHANG ABOVE.
36. EXISTING 1/4" GLASS WINDOW.
37. EXISTING FOLDING PARTITION.
38. EXISTING STEEL STAIR POST SUPPORTS.
39. EXISTING STEEL GUARD RAIL.

Wah Yee Associates
Architects & Planners
43636 WOODWARD AVENUE, SUITE 200
NOVI, MICHIGAN 48375
PHONE 248.489.9160

PROJECT
EXISTING BUILDING
900 CHADDICK DRIVE
WHEELING ILLINOIS

Date Issued
July 6, 2026

Job Number
5327

SHEET TITLE
FLOOR PLAN

Sheet Number
P.1

DISCLAIMER
THIS DRAWING IS ILLUSTRATIVE OF FIELD INVESTIGATION INFORMATION ESTABLISHED TO THE BEST OF OUR ABILITIES. DRAWING LAYOUT, SIZES, QUANTITIES, ETC. ARE SUBJECT TO SITE VERIFICATION BY THE USER OF THIS DOCUMENT. THE LAYOUT MAY NOT BE FINAL, NOR TO SCALE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. WAH YEE ASSOCIATES ARE NOT RESPONSIBLE FOR ERRORS OF OMISSIONS AND NO REPRESENTATION OR WARRANTIES ARE EXPRESSED OR IMPLIED BY THIS DRAWING.

Do not scale drawings - Use figured dimensions CAD DWG 5327_P1.DWG

June 19, 2026
Special Use Request for a Heavy Motor Vehicle Facility
Preparer: Eric Isaacs, Senior Project Manager
Petitioner/Applicant: Stan Richards (Ramar Land Corporation), Vice President Construction/Facilities

Dear Village of Wheeling, IL,

Ramar Land Corporation (business entity for R+L Carriers) currently owns the property located at 1000 Chaddick Drive, Wheeling, IL, 60090. R+L Carriers currently operates a truck freight terminal use on this property. They are looking to expand existing operations onto the adjacent property to the north located at 900 Chaddick Drive. The intention is to utilize the existing structure located at 900 Chaddick Drive as a maintenance shop to service the existing fleet of vehicles operating out of the facility located at 1000 Chaddick Drive. Ultimately, R+L Carriers operations will run seamlessly across both 1000 and 900 Chaddick Drive properties with tractors and trailers traversing across the properties via an easement to be serviced as needed at the proposed maintenance shop. This proposed facility expansion is expected to generate 4-6 staff members and intends to operate Sunday 12:00 a.m. through Friday 8 p.m. The applicant and their representatives are happy to answer any questions regarding this request and the proposed expansion of operations.

Sincerely,

STAN RICHARDS
R+L CARRIERS
VICE PRESIDENT – CONSTRUCTION/FACILITIES
800-543-5589 EXT 1281
937-603-3900 CELL

RAYMAR Land Corporation
600 Gillam Rd.
Wilmington, OH 45177
(800) 799-0178

MEMORANDUM

DATE: August 12, 2026
FROM: Marcy Knysz, Village Planner
SUBJECT: Docket No. PSPMIN26-0009, Request for Minor Site Plan and Appearance Approval for Proposed Site Improvements for Ramar Land Corporation (900 Chaddick Drive).

RECOMMENDED ACTION: **Approve Docket No. PSPMIN26-0009,** granting minor site plan and appearance approval for proposed site improvements for Ramar Land Corproation, located at 900 Chaddick Drive, as required under Title 19, Zoning, of the Wheeling Municipal Code and Chapter 19-12, and associated sections, in accordance with the Site Plan prepared by Atwell, dated 7/13/2026; Details for Turnstile by Controlled Access, Inc.; Floor Plan prepared by Wah Yee Associates, dated 7/6/2026; Landscape Plan prepared by Rauenhorst, dated October 29, 1981; Petitioner's Project Description Letter prepared by Stan Richards, dated 7/19/2026; and subject to the following conditions:

1. Minor site plan and appearance approval is contingent upon approval of Docket No. PSU26-0013 (special use approval to permit the operation of a heavy motor vehicle facility).

2. Prior to construction, the petitioner shall submit an Application for Permit to the Community Development Department which shall, at a minimum, include geometric and grading plans prepared by an Illinois licensed engineer for the proposed vehicular access connection between the subject site and 1000 Chaddick Drive. The design of said vehicular connection shall maintain the existing tributary drainage areas and ensure that drainage from all affected properties remains separate.

3. The petitioner shall restore the landscaping in substantial conformance with the Landscape Plan prepared by Rauenhorst, dated October 29, 1981, and approved on November 18, 1981, under Docket No. AC81-42. All required landscaping shall be installed and maintained in a healthy condition no later than October 31, 2026, subject to review and approval by the Community Development Department.

4. The petitioner shall apply for and obtain all required Village of Wheeling permits prior to commencement of any site or building improvements, including, but not limited to, the vehicular access connection, installation of the required triple basin, landscaping improvements, perimeter fencing, gates, and the pedestrian turnstile. Detailed plans and specifications for all proposed gates, including materials, dimensions, operating mechanism, and locking/security features, shall accompany an Application for Permit, subject to review and approval by the Community Development Department.

5. A new Knoxbox lockbox will be required for Fire Department access, subject to review and approval by the Fire Department prior to installation.

6. If the proposed gate is electronically operated, it shall be equipped with a Fire Department-approved emergency key switch to provide emergency access, subject to review and approval by the Fire Department prior to installation.

EXECUTIVE SUMMARY

GENERAL PROPERTY INFORMATION

Petitioner: Ramar Land Corporation (600 Gilliam Road, Wilmington, OH 45177), contract property owner

Address: 900 Chaddick Drive

Building size: 75,902 sq. ft.

Property size: 238,842 sq. ft. (5.48 acres)

Neighboring Property Land Use(s):
North/South/West: Industrial
East: Industrial (across Chaddick Drive)

Existing Use of Property: Industrial (vacant building)

Existing Zoning: I-3, General Industrial

Comprehensive Plan Designation: Industrial

Zoning History:

- Docket #AC81-42, approved 11/18/1981, granting architectural, landscaping and lighting approval for the construction of a building.
- Ordinance No. 3566, approved 8/13/2001, granting site plan approval to construct a building addition to an existing industrial facility (Docket #PC-561).

SUMMARY OF REQUEST

The petitioner, Ramar Land Corporation (R+L Carriers), is requesting Minor Site Plan and Appearance approval for proposed site improvements including a driveway connection, perimeter fencing, and an employee access turnstile gate, located at 900 Chaddick Drive associated with the repurposing of the subject site for heavy motor vehicle repair of R+L Carriers fleet.

Site Plan and Appearance Review

For the purposes of promoting compatible development and ensuring adequate public facilities, Site Plan and Appearance review and approval is required prior to issuance of a building permit or commencing use of land, except for single and two-family residences. Site Plan review only involves the static aspects of a site – layout, parking, landscaping, fencing, etc., and not the land use or operations of a business. Appearance review only involves the aspects of exterior architectural design – style, form, scale, materials, colors, etc., and not the land use or operations of a business. Major Site Plan and Appearance review requires a concept review by the Village Board, a recommendation by the Commission, and a final decision by the Village Board. Minor Site Plan and Appearance review does not require a concept review and only requires a final decision by the Plan Commission.

As outlined in the petitioner's project description letter (attached), R+L Carriers is proposing minor site improvements to include a new internal access drive connecting the subject site with 1000 Chaddick Drive (immediately to the south), also owned by the petitioner, as well as the installation of a perimeter fence and employee turnstile gate.

The site improvements are associated with the petitioner's repurposing of the subject site to operate a heavy motor vehicle repair facility to service its existing fleet of vehicles at 900 Chaddick Drive and is seeking Special Use approval per Docket No. PSU26-0013.

Site Plan: The proposed site improvements include construction of a 30' wide internal driveway connection between the subject site and the adjacent property to the south (1000 Chaddick Drive). The internal connection will allow R+L Carriers fleet of semi-trucks and trailers to travel between the existing truck freight terminal (at 1000 Chaddick Drive)

and the proposed maintenance facility located at the subject site. Construction of the driveway will require the removal of 5 parking spaces and 3 semi-trailer spaces on 1000 Chaddick Drive, as shown on the attached site plan. Additional engineering information will be required prior to issuance of a permit for the driveway improvements. Accordingly, a condition has been included requiring the petitioner to submit geometric and grading plans for the driveway construction to the Community Development Department for permit review.

Fence and Turnstile: As part of the acquisition and integration of the subject site into the petitioner's operations, a 6’ tall perimeter chain link fence topped with 1’ of barbed wire is proposed. The fence will consist of 9-gauge chain link, as shown on the attached Site Plan. A detail for the proposed gate within the parking lot was not provided and will be required as part of the building permit review. In addition, an employee pedestrian turnstile access gate is proposed on the south side of the property, east of the proposed driveway connection.

Landscaping: The existing landscaping on the site is overgrown and in need of maintenance and replacement in several areas. The petitioner has agreed to restore the property to comply with the approved Landscape Plan prepared by Rauenhorst, dated October 29, 1981, and approved on November 18, 1981, under Docket No. AC81-42. A condition has been included requiring restoration of the landscaping in accordance with the approved Landscape Plan and complete all required landscaping improvements by October 31, 2026.

Parking: The subject property currently contains 104 parking spaces, including 3 ADA-accessible spaces. Construction of the proposed driveway connection will require the removal of 5 parking spaces, resulting in a total of 99 parking spaces. Pursuant to Village Code, industrial properties containing at least 50,000 square feet in total size are eligible for a 12.5% reduction in the minimum required number of parking spaces. The proposed development qualifies for this parking reduction, which the resulting parking supply of 99 spaces complies with the Village's off-street parking requirements and is sufficient to accommodate the anticipated parking demand associated with the proposed use.

The off-street parking requirements for the subject site are summarized as follows:

Parking Analysis Table

Proposed Use	Parking Requirement	No. of Spaces Required
Office	6 spaces per 1,000 sq. ft.	24
Maintenance Bays	2 spaces per 1,000 sq. ft.	40
Warehouse/Storage	1 space per 1,000 sq. ft	49
	Total	**113**
	12.5% Parking Reduction for properties = 50,000 sq. ft. or more	**-14**
	Total Required Spaces	**99**
	Total Spaces Provided	**99**

No other site changes are proposed.

STAFF REVIEW

Fire Department Review:

- A Knoxbox lockbox will be required for Fire Department access. The old box will not be accessible with the new fence.
- If the new gate is electronic a fire department key switch will be required for the gate.

Engineering Division Review:

1. Provide a grading plan for the proposed access road before final permitting. The design shall maintain the existing tributary drainage areas and ensure that drainage from each property remains separate.

Staff Recommended Actions: Staff recommends approval of the Minor Site Plan and Appearance request subject to the following conditions:

1. Minor site plan and appearance approval is contingent upon approval of Docket No. PSU26-0013 (special use approval to permit the operation of a heavy motor vehicle facility).

2. Prior to construction, the petitioner shall submit an Application for Permit to the Community Development Department which shall, at a minimum, include geometric and grading plans prepared by an Illinois licensed engineer for the proposed vehicular access connection between the subject site and 1000 Chaddick Drive. The design of said vehicular connection shall maintain the existing tributary drainage areas and ensure that drainage from all affected properties remains separate.

3. The petitioner shall restore the landscaping in substantial conformance with the Landscape Plan prepared by Rauenhorst, dated October 29, 1981, and approved on November 18, 1981, under Docket No. AC81-42. All required landscaping shall be installed and maintained in a healthy condition no later than October 31, 2026, subject to review and approval by the Community Development Department.

4. The petitioner shall apply for and obtain all required Village of Wheeling permits prior to commencement of any site or building improvements, including, but not limited to, the vehicular access connection, installation of the required triple basin, landscaping improvements, perimeter fencing, gates, and the pedestrian turnstile. Detailed plans and specifications for all proposed gates, including materials, dimensions, operating mechanism, and locking/security features, shall accompany an Application for Permit, subject to review and approval by the Community Development Department.

5. A new Knoxbox lockbox will be required for Fire Department access, subject to review and approval by the Fire Department prior to installation.

6. If the proposed gate is electronically operated, it shall be equipped with a Fire Department-approved emergency key switch to provide emergency access, subject to review and approval by the Fire Department prior to installation.

******

If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of minor site plan and appearance approval, the appropriate motion would be to:

Approve Docket No. PSPMIN26-0009, granting minor site plan and appearance approval for proposed site improvements for Ramar Land Corporation, located at 900 Chaddick Drive, as required under Title 19, Zoning, of the Wheeling Municipal Code and Chapter 19-12, and associated sections, in accordance with the Site Plan prepared by Atwell, dated 7/13/2026; Details for Turnstile by Controlled Access, Inc.; Floor Plan prepared by Wah Yee Associates, dated 7/6/2026; Landscape Plan prepared by Rauenhorst, dated October 29, 1981; Petitioner's Project Description Letter prepared by Stan Richards, dated 7/19/2026; and subject to the following conditions:

1. Minor site plan and appearance approval is contingent upon approval of Docket No. PSU26-0013 (special use approval to permit the operation of a heavy motor vehicle facility).

2. Prior to construction, the petitioner shall submit an Application for Permit to the Community Development Department which shall, at a minimum, include geometric and grading plans prepared by an Illinois licensed engineer for the proposed vehicular access connection between the subject site and 1000 Chaddick Drive. The design of said vehicular connection shall maintain the existing tributary drainage areas and ensure that drainage from all affected properties remains separate.

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4. The petitioner shall apply for and obtain all required Village of Wheeling permits prior to commencement of any site or building improvements, including, but not limited to, the vehicular access connection, installation of the required triple basin, landscaping improvements, perimeter fencing, gates, and the pedestrian

turnstile. Detailed plans and specifications for all proposed gates, including materials, dimensions, operating mechanism, and locking/security features, shall accompany an Application for Permit, subject to review and approval by the Community Development Department.

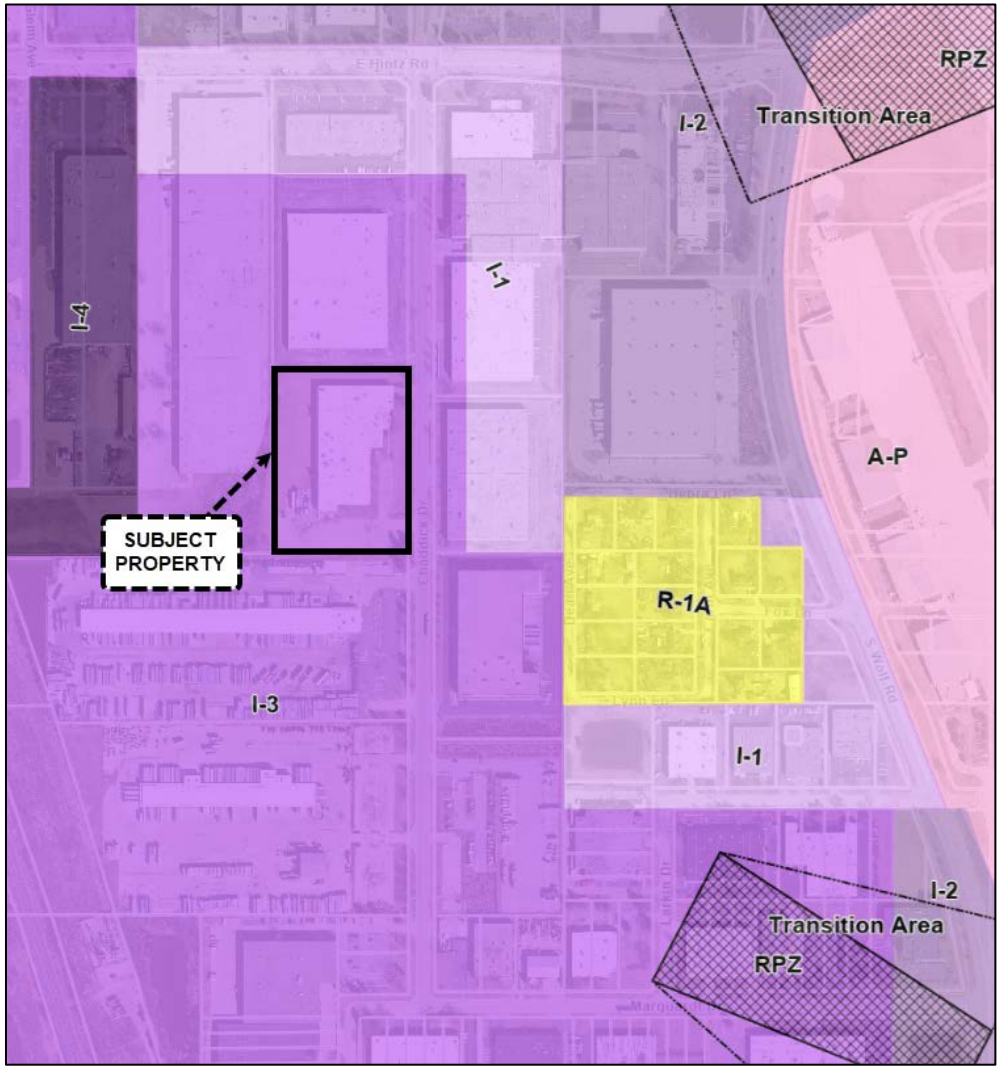
5. A new Knoxbox lockbox will be required for Fire Department access, subject to review and approval by the Fire Department prior to installation.

6. If the proposed gate is electronically operated, it shall be equipped with a Fire Department-approved emergency key switch to provide emergency access, subject to review and approval by the Fire Department prior to installation.

ATTACHMENTS:

Attachments to Staff Report (Staff)
Site Plan prepared by Atwell, dated 7/13/2026
Details for Turnstile by Controlled Access, Inc.
Floor Plan prepared by Wah Yee Associates, dated 7/6/2026
Landscape Plan prepared by Rauenhorst, dated October 29, 1981
Petitioner's Project Description Letter prepared by Stan Richards, dated 7/19/2026

LOCATION MAP



ZONING MAP

Front entrance to the building facing north.

West side of property and rear docks facing north.

Location for proposed driveway between two properties facing south.

Parking lot and south property line (right side of photo) facing east.

Frontage of property along Chaddick Drive facing north.

Docks along east side of building on Chaddick Drive facing west.

GENERAL NOTES

A. LAYOUT / INFORMATION PROVIDED FOR DESIGN INTENT ONLY. FINAL LAYOUT & DETAILS BY AOR / EOR. DETAILS DEVELOPED FOR NEW CONSTRUCTION - RENOVATIONS MAY REQUIRE ADDITIONAL DETAILS & INFORMATION. COORDINATE WITH R+L PROJECT MANAGER.

R+L CARRIERS

SKETCH PROVIDED FOR CONCEPT / REFERENCE ONLY
NOT FOR CONSTRUCTION

TYPICAL TURN-STILE

2021.04.21

ASK-15

A 2' wide concrete strip to be placed under the perimeter security fence shall be 3" of normal weight concrete over 2" of compacted subbase aggregate.

Notes:
1. Weights of all pipe members shall meet the minimum requirements of A.N.S.I. schedule 40.
2. Barbed wire extension arms angled from the vertical shall lean away from site at a 45° angle.
3. Contractor shall use 12"Ø sonotube casings on all concrete fence post footings.

A. Use Parameters
Proper performance of the separator and the quality of effluent is based upon the operational, functional and installation requirements, and limitations as detailed in the following Xerxes publications:

1. Oil/Water Separator Product Literature;
2. Installation Manual and Operating Guidelines for Fiberglass Underground Storage Tanks;
3. Oil/Water Separator Operating and Maintenance Manual.

B. Design Parameters
This separator is designed for a maximum influent quality of 1,000 ppm and an effluent quality of 10 ppm. Also:

1. maximum flow rate: ____ gpm
2. number of coalescer rows to be installed
3. Single-Wall or Double-Wall (circle one)

The undersigned acknowledges and agrees to the use and design parameters as detailed on this drawing and hereby approves said parameters and specifications. Any deviation from these parameters and limitations, must be approved by Xerxes in writing.

MAXIMUM SPILL CAPACITY	NOMINAL WEIGHT SW	NOMINAL WEIGHT DW
600 Gal.	1,400 LBS.	1,700 LBS.

SIGNATURE
PRINTED NAME | DATE
COMPANY
PROJECT

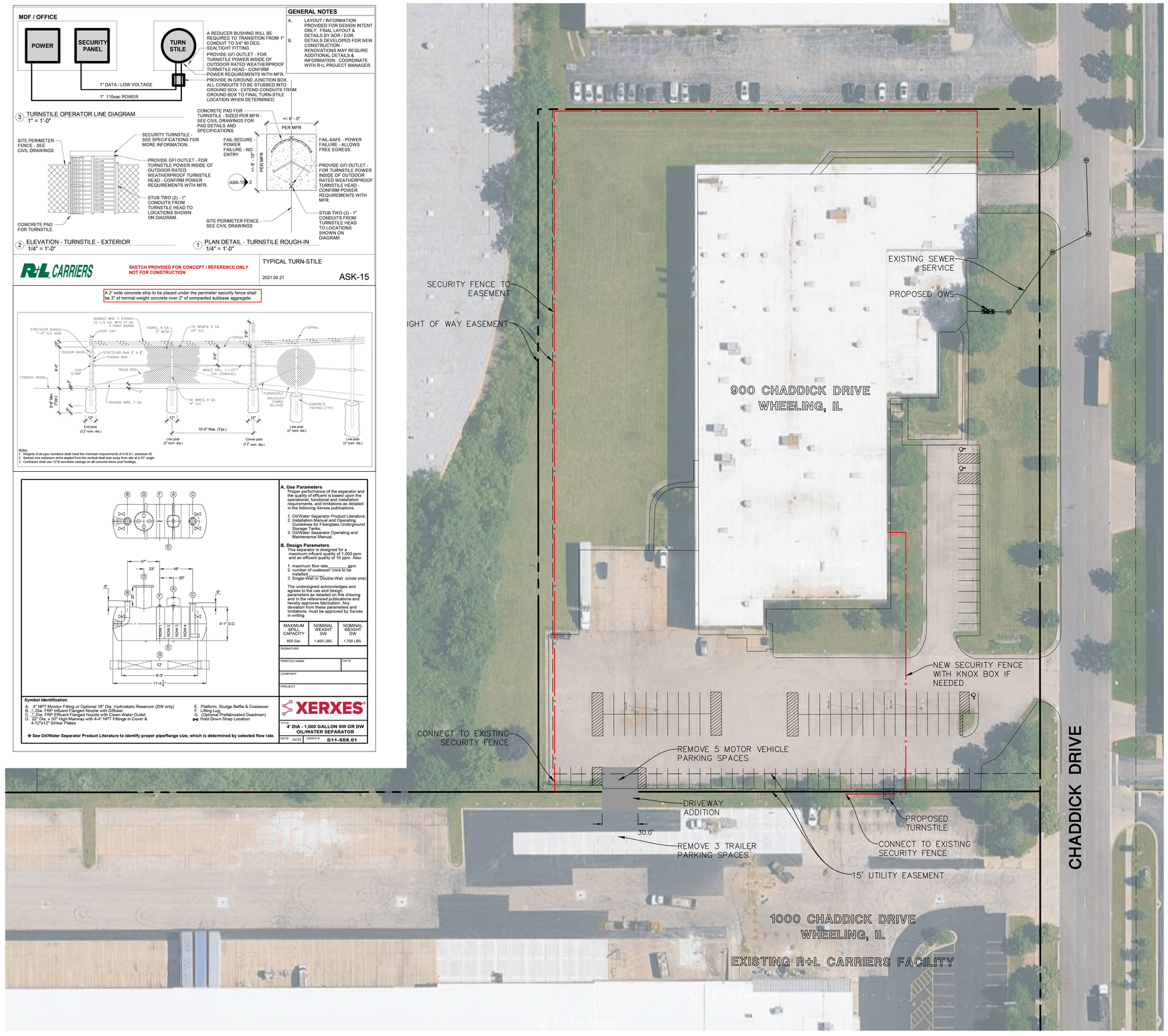
Symbol Identification
A. 4" NPT Monitor Fitting or Optional 18" Dia. Hydrostatic Reservoir (DW only)
B. 1" Dia. FRP Influent Flanged Nozzle with Diffuser
C. 1" Dia. FRP Effluent Flanged Nozzle with Clean-Water Outlet
D. 22" Dia. x 30" High Manway with 4-4" NPT Fittings in Cover & 4-12"x12" Striker Plates
E. Platform, Sludge Baffle & Coalescer
F. Lifting Lug
G. (Optional Prefabricated Deadmen)
Hold-Down Strap Location

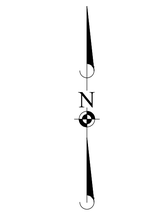
★ See Oil/Water Separator Product Literature to identify proper pipe/flange size, which is determined by selected flow rate.

XERXES

TITLE: 4' DIA - 1,000 GALLON SW OR DW OIL/WATER SEPARATOR

DATE 10/23 | DRWG # S11-559.01





SITE DATA

GROSS LAND AREA	238,935 SF	5.485 ACRES	100%
IMPERVIOUS SURFACE			
EXISTING	136,299 SF	3.129 ACRES	57.0%
PROPOSED	136,388 SF (+89 SF)	3.131 ACRES	57.1%
GREEN SPACE			
EXISTING	102,636 SF	2.356 ACRES	43.0%
PROPOSED	102,547 SF (−89 SF)	2.354 ACRES	42.9%
MOTOR VEHICLE PARKING SPACES			
EXISTING	104		
PROPOSED	99 (−5)		
TRAILER PARKING SPACES			
EXISTING	0		
PROPOSED	−3 REMOVED FROM 1000 CHADDICK DRIVE PROPERTY AT CONNECTING DRIVEWAY		

DRAWN BY | REVISIONS | DATE

ATWELL
866.850.4200 www.atwell.com
333 East Butterfield Road, Suite 600
Lombard, IL 60148
ph:630.691.8500

R+L CARRIERS - WHEELING, IL
900 CHADDICK DRIVE, WHEELING, IL
CONCEPT SITE PLAN

PROJ. MGR.: JMI
PROJ. ASSOC.:
DRAWN BY: BRB
DATE: 7/13/2026
SCALE: 1"=40'

SHEET 1 OF 1
26007479

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July 10, 2026 - 16:24 Dwg Name: K:\Projects\2026\Lombard\Engineering\P26007479 R+L Wheeling, IL\Concept Plans\Concept - Site Plan.dwg Updated By: DChow

Controlled Access, Inc.
Turnstiles and ADA Gates
1535 Industrial Parkway South • Brunswick, OH 44212

HS400 Series Single Full Height Turnstile

Service & Installation Manual

Note: Successful turnstile installation depends on reading this manual.

Please keep this service manual after installation. If an installation is done by a construction company or outside installer, please pass this book along to the end user. This book is required for maintenance, troubleshooting & repairs.

Service Manual: 0740 E Gen. 3

Important Electrical Information

Installation of the control head mechanism into the turnstile requires a grounding-type outlet receptacle installed inside of the frame or cabinet through the provided conduit access points.

To reduce the risk of electric shock, this equipment has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change this plug in any way.

Additionally, the P24-60W power supply from this appliance must be grounded to the frame of the turnstile. Utilize the green colored grounding screw threaded into the grounding tab located near the power supply along with the provided grounding wire from the power supply to ensure the equipment is properly grounded.

Do not connect to a receptacle controlled by a switch.

UL 294 Classification Declarations:

Feature	**Level**
Destructive Attack Test	I
Line Security	I
Endurance	IV
Standby Power	I

ULC S319, Class 1

Wiring methods shall be in accordance with:
National Electrical Code, ANSI/NFPA 70
Canadian Electrical Code, CSA C22.1, Part I, Safety Standard for Electrical Installations

The 6500 Series Control Head is suitable for indoor & outdoor use, within in an appropriate turnstile or gate model.

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The High-Security Series

HS427-S | HS430-S | HS439-S | HS448-S

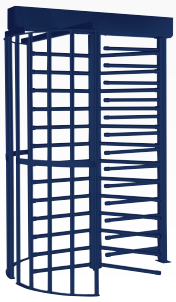
Full-Height Turnstile (Single) | Interior & Exterior Application

Controlled Access manufactures the most reliable full-height turnstiles available. The High-Security Series units can be engineered to meet all your security and control requirements, and can be created as stand-alone units, or as part of an integrated system. Available in stainless steel (304 or 316), carbon steel with powder coating, or hot-dipped galvanized finish. These units can be fitted for any application with leading edge technology and features.

Controls and Interfaces:

- Biometric Integration
- Fail-Open or Fail-Secure Locking
- Card Readers
- Push-Button and Wireless Remotes
- Electronic/LCD Counters
- Manual Key Override – both directions
- Indicator Lights

Optional black or safety orange end caps available.



Also available in hot-dipped galvanized or powder coat finishes.

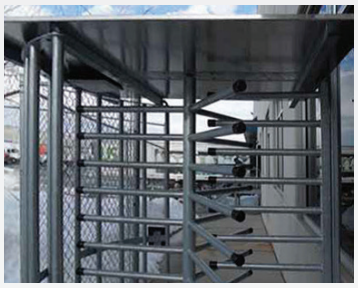
Built in the USA

Size Options *(pedestrian clearance):*

HS427-S: 27″ (685.8mm)
HS430-S: 30″ (762mm)
HS439-S: 38.5″ (978mm)
HS448-S: 49.319″ (1252.7mm)

304 Stainless, No. 4 Satin finish (shown)

Optional full canopy available in stainless steel.



Shown (below) HS430-S powder coated turnstile with optional ADA Mesh Gate and custom size Filler Barrier (made to your job's requirements)

Standard powder coating color selections:

Additional colors available and can be quoted upon request.

60% Gloss Black	60% Gloss White	RAL 1013 Oyster White	RAL 9007 Grey Aluminum	RAL 5023 Distant Blue	RAL 5010 Gentian Blue	RAL 6002 Leaf Green	RAL 8028 Terra Brown

We're the #1 Choice of Top Architects, Security Pros and Engineers

For more than 30 years, Controlled Access has been the globally trusted name in pedestrian control equipment. Made in Ohio and shipped worldwide, we are the first choice of leading architects, facility managers, security consultants, and engineers. Whether your project requires high security full-height turnstiles, waist high units, or matching ADA accessible gates, Controlled Access is the secure choice. We're experienced in access control systems, from card readers to biometric scanning, to give you the power to control access.

	Depth	Width	Passage Width	Passage Height	Overall Height
	A*	B*	C*	D*	E*
HS427-S	57.375″ (1457.3mm)	62″ (1574.8mm)	27″ (685.8mm)	84″ (2133.6mm)	91″ (2311.4mm)
HS430-S	59.250″ (1505mm)	66″ (1676.4mm)	30″ (762mm)	84″ (2133.6mm)	91″ (2311.4mm)
HS439-S	76″ (1930.4mm)	84″ (2133.6mm)	38.5″ (978mm)	84″ (2133.6mm)	91″ (2311.4mm)
HS448-S	96.187″ (2443.1mm)	106″ (2692.4mm)	49.319″ (1252.7mm)	84″ (2133.6mm)	91″ (2311.4mm)

* *Dimensions subject to change without notice. See CAD drawings on reverse side*

CONTROLLED ACCESS, INC.
Turnstiles and ADA Gates
The Leader in Pedestrian Access Control

1535 Industrial Parkway South
Brunswick, Ohio 44212
www.controlledaccess.com

PH: 330.273.6185 | Fax: 330.273.4468
Toll-Free Ph: 800.942.0829 | Toll-Free Fax: 800.942.0828
E-mail: *sales@controlledaccess.com*

The High-Security Series

HS427-S | HS430-S | HS439-S | HS448-S

Full-Height Turnstile (Single) | Interior & Exterior Application

Applications:

Ideal for controlling orderly flow of foot traffic in both indoor and outdoor settings

Design & Construction:

- Designed for secure operation with aesthetics in mind
- Featuring fully welded exterior components
- Minimal exposed stainless steel hardware
- Heavy gauge materials meeting ASTM standards

Dimensions:

HS427-S
- **Pedestrian Clearance:** 27" (685.8mm)
- **Width:** 62" (1574.8mm)
- **Depth:** 57.375" (1457.3mm)

HS430-S
- **Pedestrian Clearance:** 30" (762mm)
- **Width:** 66" (1676.4mm)
- **Depth:** 59.250" (1505mm)

Arm & Barrier Tubing Sizes (HS427-S & HS430-S):
- Standard: 1 1/2" (38.1mm) diameter 14 gauge
- Optional: 1 3/4" (44.4mm) diameter 14 gauge (16 gauge – Stainless Steel models)

HS439-S
- **Pedestrian Clearance:** 38.5" (978mm)
- **Width:** 84" (2133.6mm)
- **Depth:** 76" (1930.4mm)

HS448-S
- **Pedestrian Clearance:** 49.319" (1252.7mm)
- **Width:** 106" (2692.4mm)
- **Depth:** 96.187" (2443.1mm)

Arm & Barrier Tubing Sizes (HS439-S & HS448-S):
- Standard: 1 3/4" (44.4mm) diameter 14 gauge

All Models:
- **Overall Exterior Height:** 91" (2311.4mm)
- **Passage Height:** 84" (2133.6mm)
- **Removal of Cover:** Minimum of 4" needed

⋆ Dimensions are subject to change without notice

Available Finishes:

- Hot dipped galvanized carbon steel
- Carbon steel with powder coating *(standard color is black/ other colors available upon request)*
- Our signature 304 stainless steel, No. 4 satin finish, or 316 stainless

Operation Features 6500 Series Control Head:

- Auto-indexing (self-centering) with adjustable hydraulic shock suppression
- Hardened tool steel locking bars, cam and roller assemblies
- Permanently lubricated bearings
- Your choice of manual or electronic control on both directions
- Nearly universal integration to any number of access control systems
- Your choice on each electronic direction of locking or unlocking on power failure

Options:

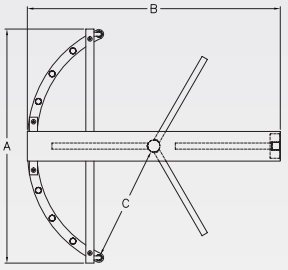
- Card reader mounting plates
- Daylight visible indicator lights
- Bi-directional key overrides
- Lockout bar (padlock not included)
- Decorative arm caps
- Stainless steel overhead full canopy
- Half canopy (covers passageway)
- 8 digit key resettable LCD counter with seven year lithium battery
- Cold weather package, including thermostat controlled heater and insulated mainframe
- Push button and wireless remotes
- Heel guard arm covers
- Additional options available upon request

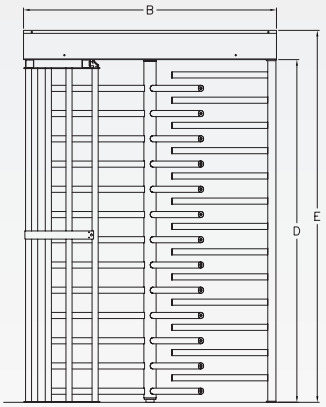
Warranty:

Units are warranted against defects in materials and workmanship for a period of one year from date of delivery. See warranty information for specific details.

Matching Swing Gate available:

(see model HS336 and model HS348 Manual Passage Gate information)





⋆ Dimensions are approximate based on chart on reverse side

Electrical Specifications:

Input Voltage: 100-240 VAC
Input Current: 1.3 - .55 A
Frequency: 50/60 Hz

Storage Temperature: -40 to 158°F
Operating Temperature: -4 to 131°F
(Cold weather package available)

Operating Voltage: 24VDC
Operating Current: 1.2 A (typical)

Standards and Codes:

Austenitic stainless steel:
ASTM A240, A249, A276

Hot rolled steel:
AISI C-1020, AISI C-1018

Hot dipped galvanizing:
ASTM A-143, ASTM A-153-80

All fasteners provided meet IFI ANSI/ ASME Fastener Standards

American Welding Society (AWS) Standard D 1.1

The 6500 Series Control Head is certified to conform to the following standards:
UL 294, UL 325, UL Subject 2593, CAN/ULC S319 & CSA C22.2#247

Controlled Access, Inc. is certified by Advantage International Registrar to be an ISO 9001:2015 company

CONTROLLED ACCESS, INC.
Turnstiles and ADA Gates
The Leader in Pedestrian Access Control

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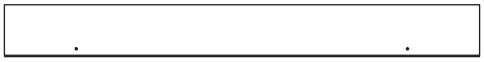
E-mail: *sales@controlledaccess.com*

HS400 Series Single Full Height Components

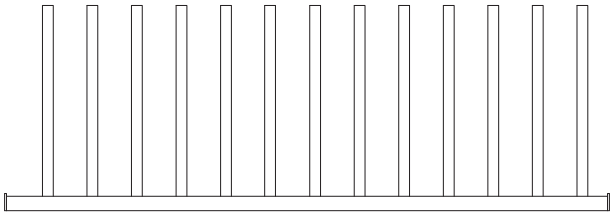
Each HS400 Series single full height turnstile comes with the following components:

1x Main Channel



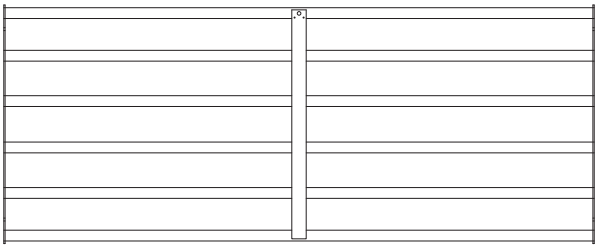
Wrapped in foam & cardboard to protect the cover's finish.

1x Barrier Assembly



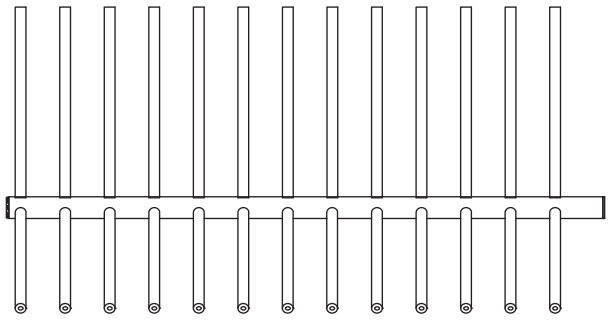
Constructed with 2" x 2" square tubing or 3" round tubing depending on model.

2x Yoke Assemblies



Quantity of poles varies between model sizes.

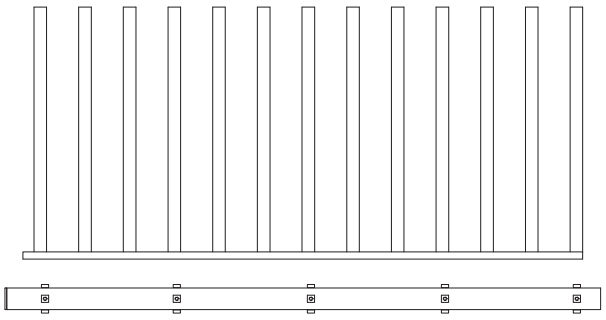
1x Rotor Assembly



427/430 & all stainless steel models

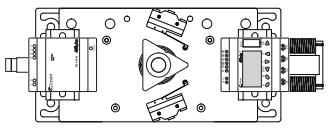
or...

1x Center Column & 3x Arm Assemblies



Carbon steel 439/448 models

1x 6500 Series Control Head



Preconfigured as ordered, appearances may vary.

Not Shown: Fastener Kit, Optional Components

High Security Series Single Full Height Turnstile Fasteners

All High Security Series Full Height Single Turnstiles

Qty 4 - 3/8"-16 x 1.5" carriage bolts with nuts, washers & lock washers
For mounting the control head to the mainframe

Qty 4 - 3/8"-16 x 1.5" carriage bolts with nuts
For mounting the two yoke assemblies to the cross arms

Qty 2 - 3/8"-16 x 1.5" carriage bolts with nuts, washers and lock washers
For mounting the barrier assembly to the main channel

Qty 4 - 3/8"-16 x 3" carriage bolts with nuts, washers and lock washers
For mounting the cross arms to the main channel

Qty 1 - 5/8"-11 x 4.5" concrete anchor with nut, bearing block and greased roller bearing
For the rotor's bearing assembly to the concrete

Qty 4 - 2" x 2" square ribbed black plugs
For decorative plugging of the ends of the cross arms

HS427 & HS430 Single Full Height Turnstiles

Qty 6 - 3/8"-16 x 4" concrete anchors with nuts and washers
For mounting the two yoke assemblies and the barrier assembly to the concrete

HS439 & HS448 Single Full Height Turnstiles

Qty 10 - 1/2"-13 x 1" socket head cap screws with lock washers (carbon steel models only)
For mounting the arm assemblies to the center column

Qty 4 - 3/8"-16 x 3.75" concrete anchors with nuts and washers
For mounting the two yoke assemblies to the concrete

Qty 4 - 1/2"-13 x 3.75" concrete anchors with nuts and washers
For mounting the barrier assembly to the concrete

HS448 Single Full Height Turnstiles Only

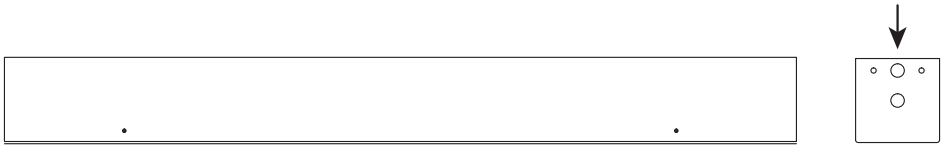
Qty 4 - Additional 3/8"-16 x 3.75" concrete anchors with nuts and washers
For mounting the two yoke assemblies to the concrete (8 total 3/8" anchors)

Qty 2 - Additional 2" x 2" square ribbed black plugs (HS448 models only)
For decorative plugging of the ends of the center cross arm (6 total plugs)

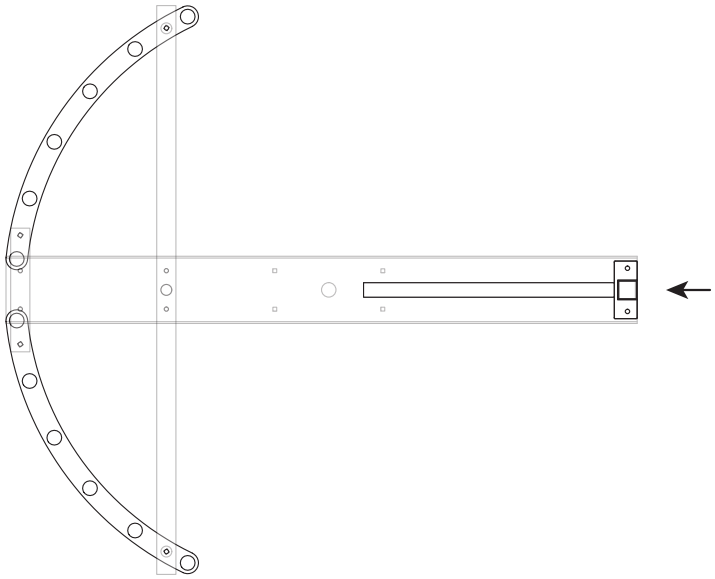
Note: HS427 & HS430 models share a universal fastener kit.
Some options (such as canopies) may alter fastener requirements.

Full Height Pre-Installation Electrical Tips

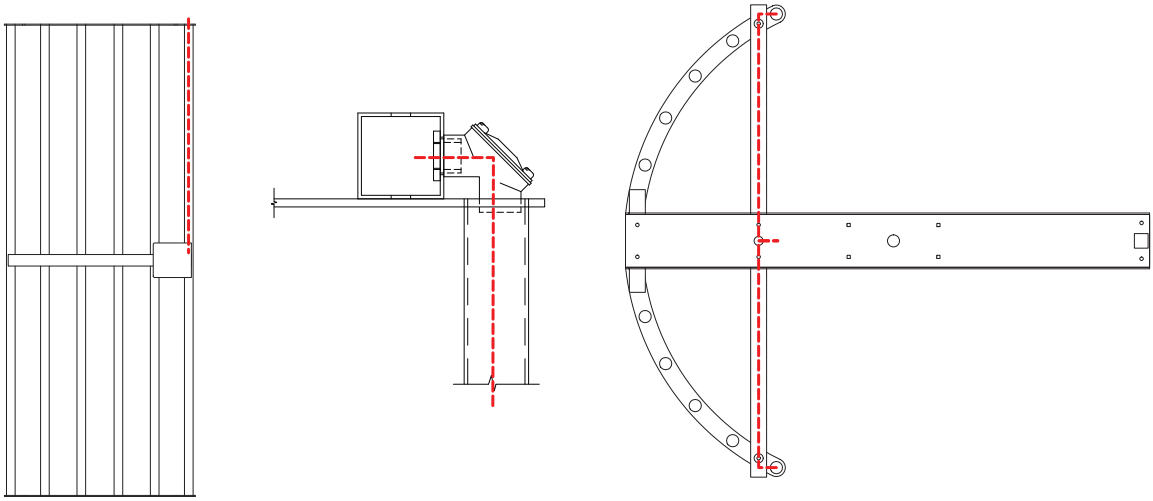
If the unit is to be electronically controlled, pre-plan how it will be wired. We provide several options for running conduit to each turnstile.



Each end of the main channel is designed to accept up to two 3/4" conduits, and also allow for multiple units to be bolted together.



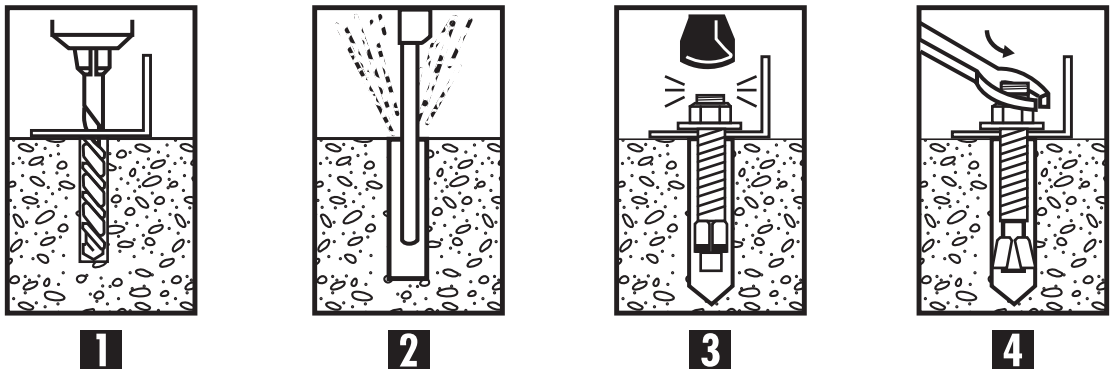
The stationary barrier (which runs vertically from the concrete to the mainframe) acts as a conduit raceway with an I.D. of over 1.75" x 1.75".



If equipped with optional card reader plates, the reader's cabling goes through the back of the plate into the vertical yoke tube (drilling required), into the long cross arm via a provided fitting, and finally into the mainframe itself. Access control contacts to the controller should be at least 18 gauge. A normally open contact closure is required for each direction (and if used, each directional override).

Wedge Type Concrete Anchor Instructions

RED HEAD®



1 Select a carbide drill bit with a diameter equal to the anchor diameter. Drill hole at least 1/4" deeper than nominal anchor embedment.

2 Clean hole with pressurized air or vacuum to remove any excess dust/debris.

3 Using the washer and nut provided, assemble the anchor, leaving nut one half turn from the end of anchor to protect threads. Drive anchor through fixture to be fastened until washer is flush to the surface of fixture.

4 Expand anchor by tightening nut to the specified setting torque - see Table (approx 3 to 5 full revolutions).

Anchor Diameter & Drill Bit Size	Installation Torque Ft. lbs.*	Minimum Anchor Embedment	Minimum Hole Diameter in Fixture
3/8"	25	1-7/8"	1/2"
1/2"	45	2-1/2"	5/8"
5/8"	90	2-3/4"	3/4"

* Setting torque only applies at the time of installation.

Warning!

⚠ Use in concrete ONLY. Not recommended for use in lightweight masonry such as block or brick.

⚠ Always wear safety glasses and other necessary protective devices or apparel when installing or working with anchors.

Caution: Use of core drills is not recommended to drill holes for use with this anchor.

Do not use an impact wrench to set or tighten the anchor. Not recommended for use in concrete which has not had sufficient time to cure.

The use of carbide drill bits manufactured with ANSI B212.15 drill bit diameter requirements is recommended for installation of this anchor. Anchor spacing and edge distance (anchor installation locations) are the responsibility of the engineer of record.

Installing product in oversized holes is not recommended. Product will not set properly or achieve full designed load in oversized holes.

Installation Instructions

1.) If needed, pour a level concrete pad at least 4" thick and 4" greater than the unit's length and width in each direction. Model specific diagrams are available if needed.

2.) Unpack turnstile(s) and verify all parts are included. Use the parts checklist in the beginning of this book.

3.) Unwrap the main channel from the cardboard & foam packaging. Remove the 4x 10/24 truss head screws and lift the cover off.

4.) Remove the cross arms from inside of the main channel and identify the different sides to the cross arms. HS448 models have a third cross arm for stability. Note that optional canopies affect the cross arms as well. See canopy diagram provided with option for proper assembly technique in that instance.

Short Cross Arm

Has holes on two sides. Length varies by model.

Upper View (2x Holes)
Touching the main channel

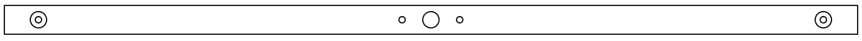
Under View (4x Holes)
Facing the floor

Center holes may be large or small depending on model.

Long Cross Arm

Has holes on three sides. Length varies by model.

Upper View (5x Holes)
Touching the main channel



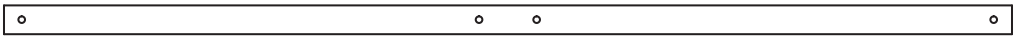
Under View (4x Holes)
Facing the floor

Side View (2x Holes)
Facing in towards center

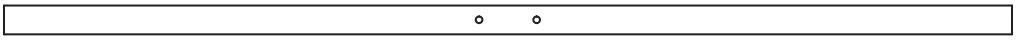
Center Cross Arm (HS448 Models Only)

Has holes on two sides

Upper View (4x Holes)
Touching the main channel

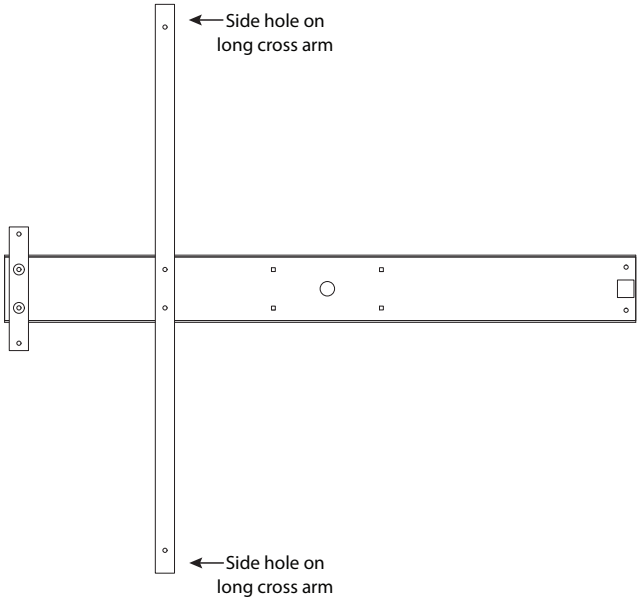


Under View (2x Holes)
Facing the floor

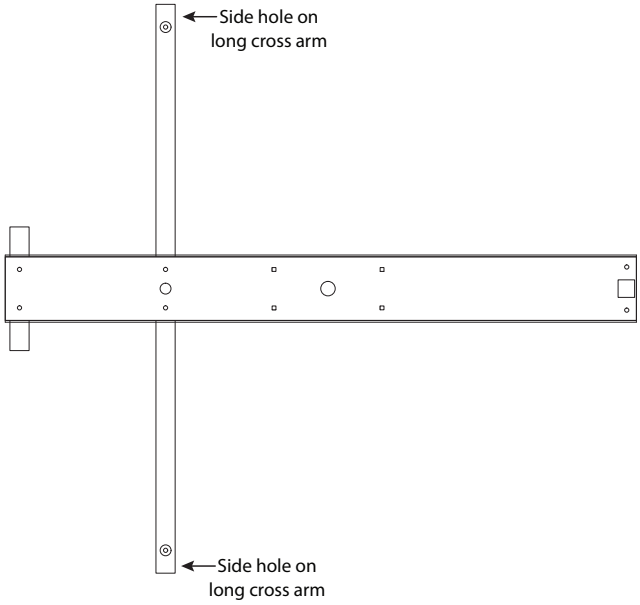


Installation Instructions (continued)

5.) Assemble cross arms to mainframe using the provided 3/8" x 3" carriage bolts as illustrated below. Ensure cross arms are square to mainframe and that the cross arms are flipped the correct way before attaching. Note that the carriage bolts have square heads and may need to be hammered into the round holes of the cross arms.

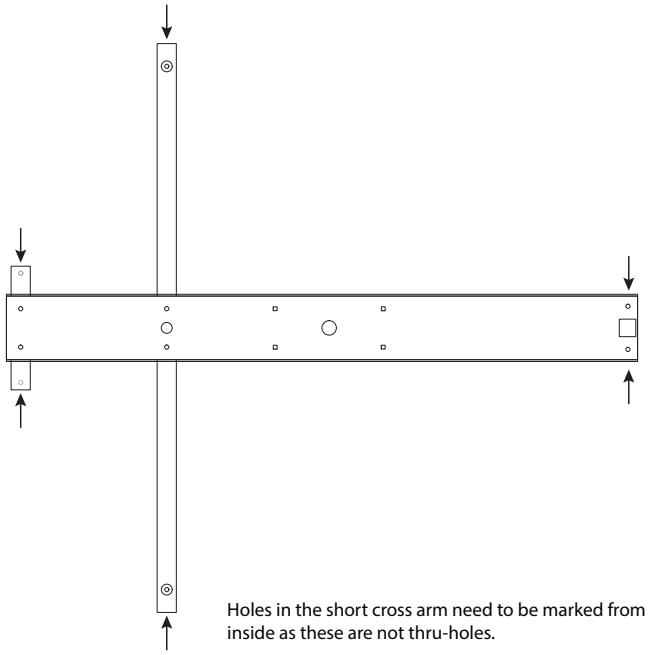


Under View



Upper View

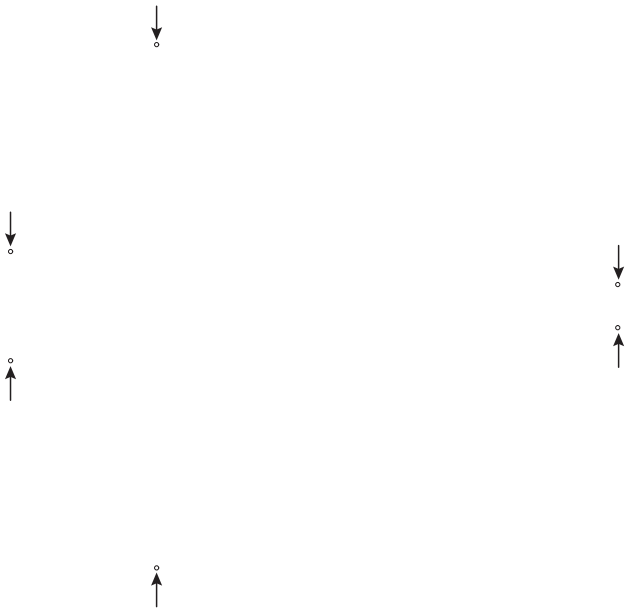
6.) Utilizing the assembled mainframe, mark holes on the ground for the 3/8" concrete anchors to each of the marked holes below.



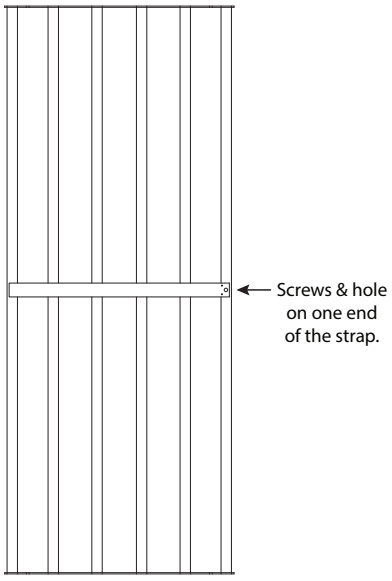
Holes in the short cross arm need to be marked from the inside as these are not thru-holes.

Installation Instructions (continued)

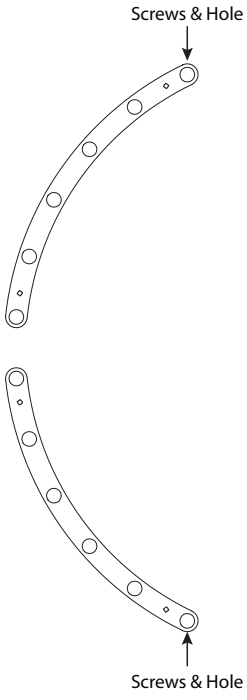
7.) Following the concrete anchor installation directions, drill each of the marked holes marked for the 3/8" anchors. Be sure to remove debris from holes before installing the anchors.

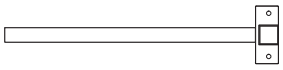


8.) Install the curved yoke assemblies and stationary barrier upright onto the concrete over the anchors. Take special notice of the two screws and extra hole on one side of the yoke strap. These screws and holes are for card reader mounting plates and should be facing outward when bolting down.



Each yoke assembly has two button head cap screws and a larger hole in the center strap. Take notice of this for the next step.

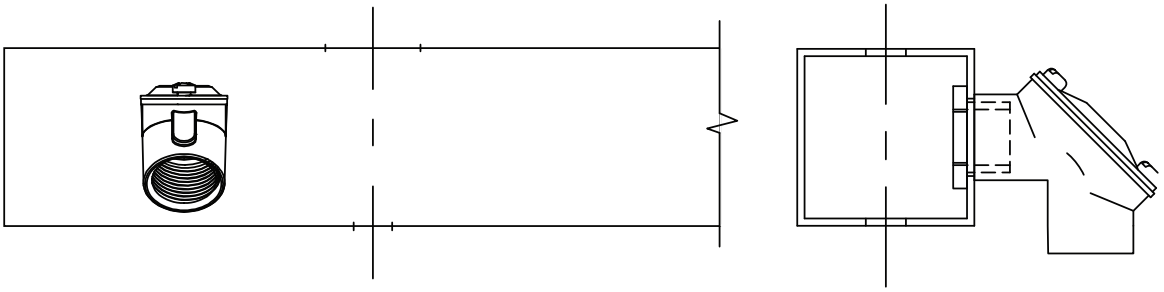




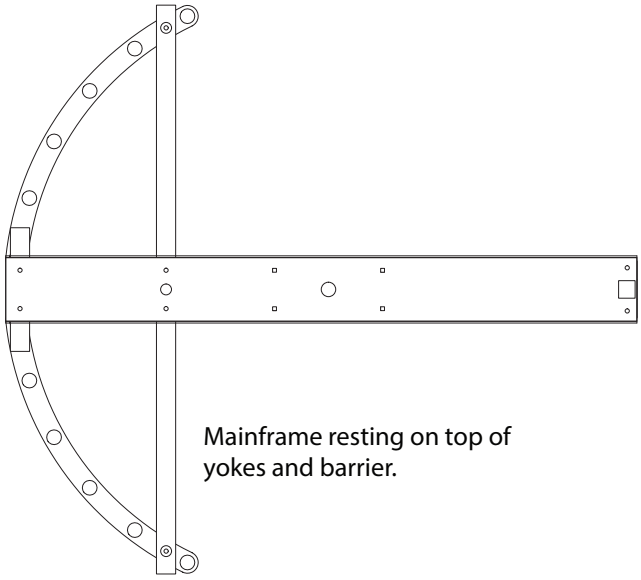
Place yoke assemblies and stationary barrier upright in their positions through the anchors.
The two screws and extra hole should be facing away from the center.

Installation Instructions (continued)

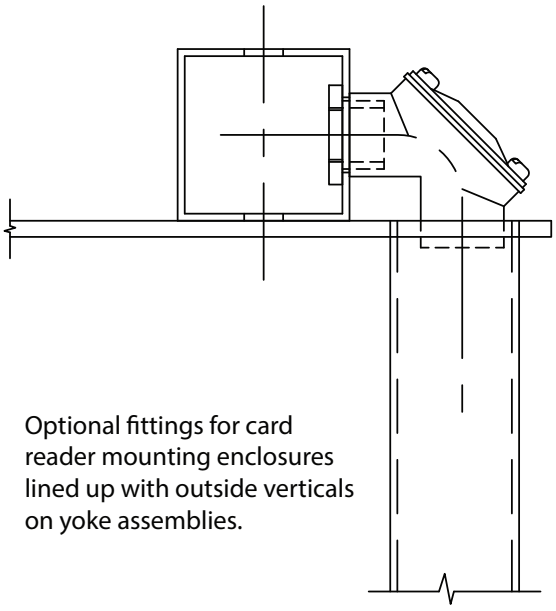
9.) If ordered with optional card reader mounting enclosures, remove the plastic plugs from the side holes of the long cross arm and install the elbow fitting (packaged with enclosures in control head box) by placing the threaded chase nipples inside of the box tubing and spinning the fittings into place. The fittings need to be pointing downward to the ground when complete.



10.) Place assembled mainframe on top of yokes and stationary barrier. Install carriage bolts to attach components together. The square necks of the carriage bolts may need to be hammered into the round holes of the cross arms. If equipped, the elbow fittings will line up above the outside vertical tubing on the two yoke assemblies.



Mainframe resting on top of yokes and barrier.

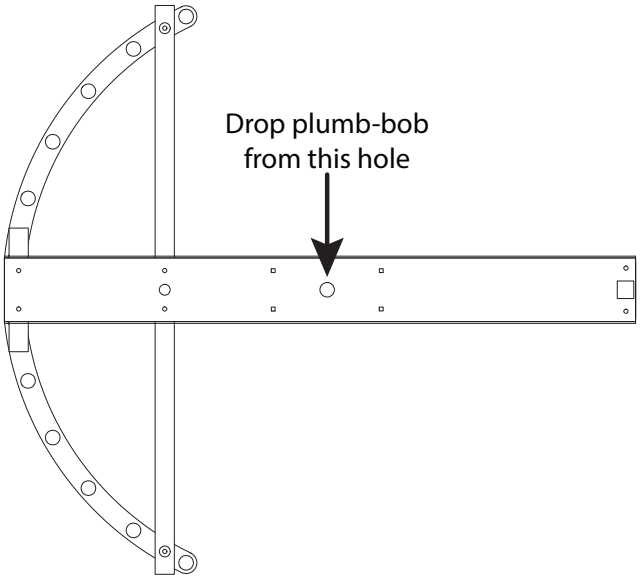


Optional fittings for card reader mounting enclosures lined up with outside verticals on yoke assemblies.

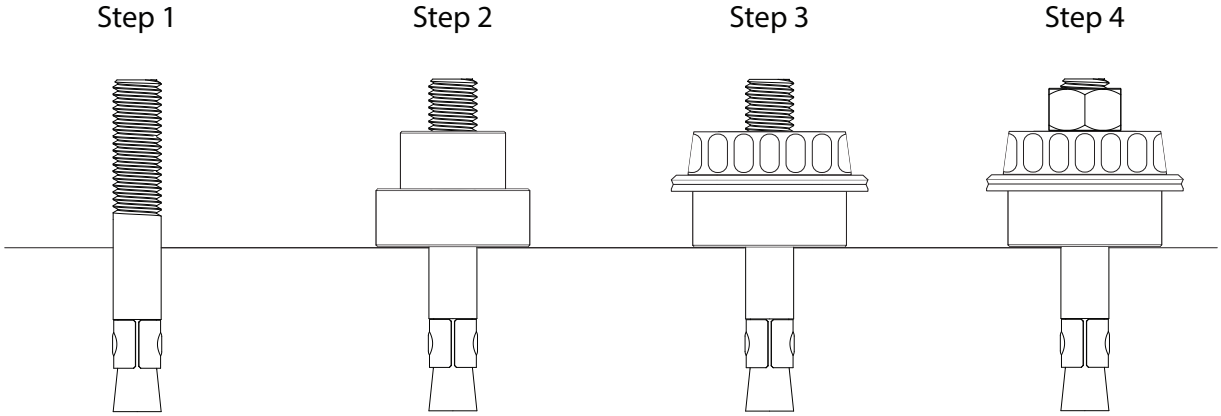
Installation Instructions (continued)

11.) If necessary, level the mainframe by shimming from under the yokes and the barrier. Once level, secure these components to the concrete by adding the nuts to the anchors.

12.) Once level and secure, use a plumb-bob to find the center for the rotor by dropping it from the mainframe's output hole. Mark the concrete for drilling in this position.

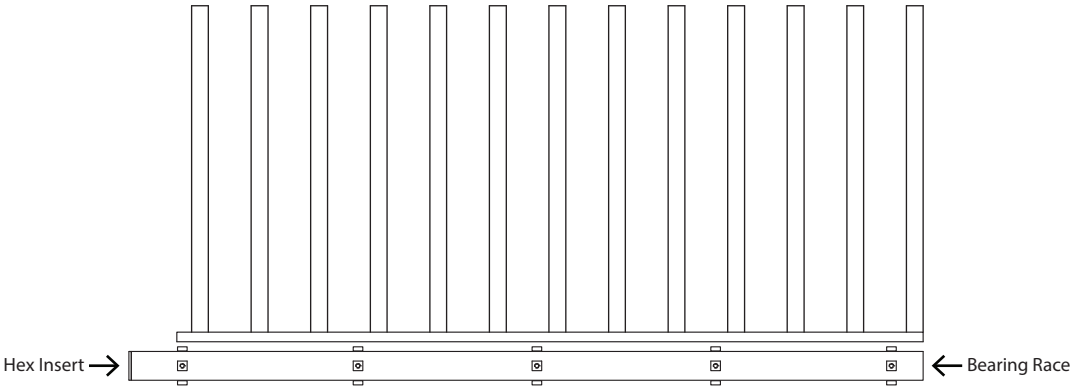


13.) Drill hole for 5/8" concrete anchor in the marked position and remove dust. Install concrete anchor, bearing block, greased roller bearing and nut as shown below. There is no need for a flat washer on this component.



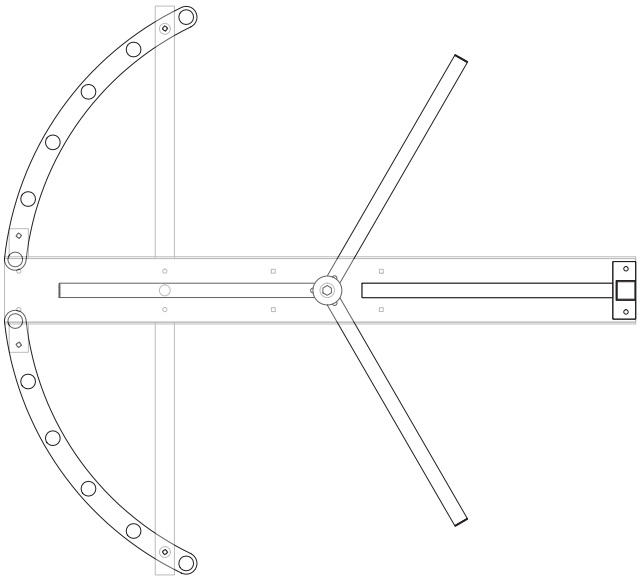
Installation Instructions (continued)

14.) If unit is a carbon steel 439 or 448, attach arm assemblies to center column using provided 1/2" socket head cap screws and lock washers. The arms should be arranged so that the lowest arm is nearly flush with the bottom of the rotor (bearing race side).



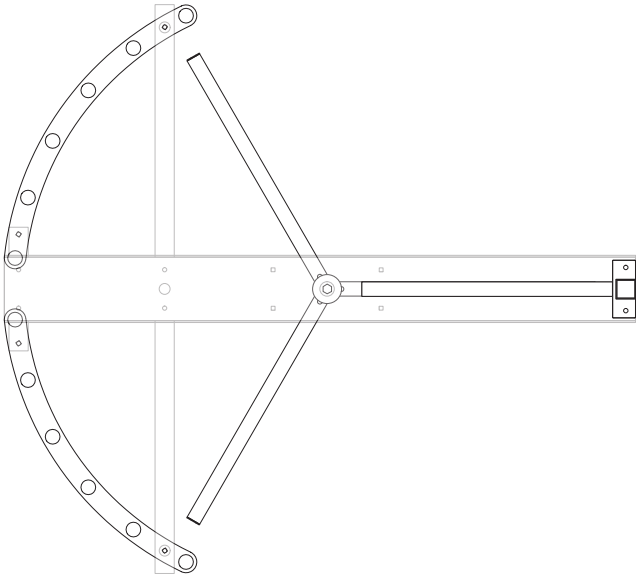
15.) Place rotor assembly on bearing and align rotor to correct position. Take the time to review the diagram shown below for details. This step is critical to proper operation. Failure to properly align the rotor will cause operational issues.

Correct Alignment



Rotor has one set of arms in between two half-moon yokes in home position. Arms are not meshed with stationary arms on the barrier.

Incorrect Alignment



Rotor should **NOT** have one set of arms meshed with stationary arms on barrier with the other two sets of arms pointing to the outsides of the half-moon yokes.

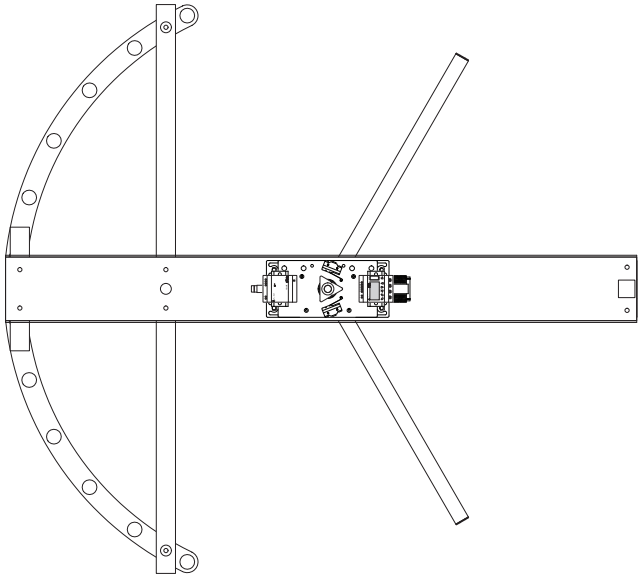
CRITICAL INSTALLATION STEP: Place rotor onto bearing and align it so that there is one set of arms pointing to the center of the half-moon shaped yokes, not meshed together with the arms of the stationary barrier.

Failure to properly align the rotor can cause inconsistent operation and the **possibility to become trapped within the turnstile** in some scenarios. If the rotor was installed incorrectly, the solution is to fix the rotor alignment. Do not adjust access control or logic controller settings to accommodate the improper alignment.

Simply remove the four carriage bolts holding the 6500 Series Control Head to the mainframe, pull up on the control head to remove it as one assembly, spin the rotor to the correct position, then reinstall the control head into the mainframe.

Installation Instructions (continued)

16.) With the rotor in the correct position, install the 6500 Series Control Head into the mainframe by feeding the hex output shaft into the hex insert in the top of the rotor assembly. Bolt the control head into the main channel with the provided 3/8 x 1.5" carriage bolts.



17.) If required, refer to the wiring diagram & legend for connecting access control to the turnstile.

18.) Refer to the hydraulic shock information to properly adjust the rotor's rotation. Ideally, the rotor should rotate to the home position, but do so without slamming. This prevents wear and tear on the control head assembly.

19.) Using a grease gun, fill the roller bearing grease cavity by utilizing the grease fitting located about 3/4" from the bottom of the rotor. In the factory, we use Mobil Mobilgrease XHP 222 Special with Lithium Thickener, but a simple white lithium or similar grease is suitable.

20.) Test the turnstile to ensure it is functioning properly, reinstall the cover on the top of the unit once satisfied, and keep this book for future reference.

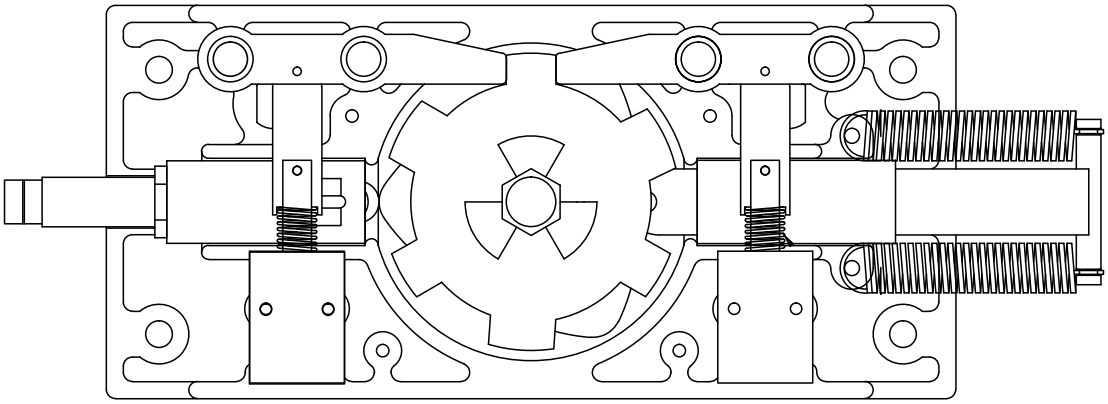
We are dedicated to making sure our customers are satisfied with the product we manufacture. If you need any assistance, don't hesitate to contact us.

CONTROLLED ACCESS, INC.
Turnstiles and ADA Gates

Phone: (330) 273-6185
Toll Free: (800) 942-0829
E-mail: sales@controlledaccess.com

6500 Series Control Head Mechanical Information

All of our turnstiles and ADA gates operate with a mechanism called the 6500 Series Control Head. This sturdy and easy to maintain drive for the turnstile has replaced all previous model control heads. It is adaptable to nearly any existing turnstile and comes with each new turnstile purchase. This control head can be configured in multiple ways to accommodate the security requirements of each individual job site.

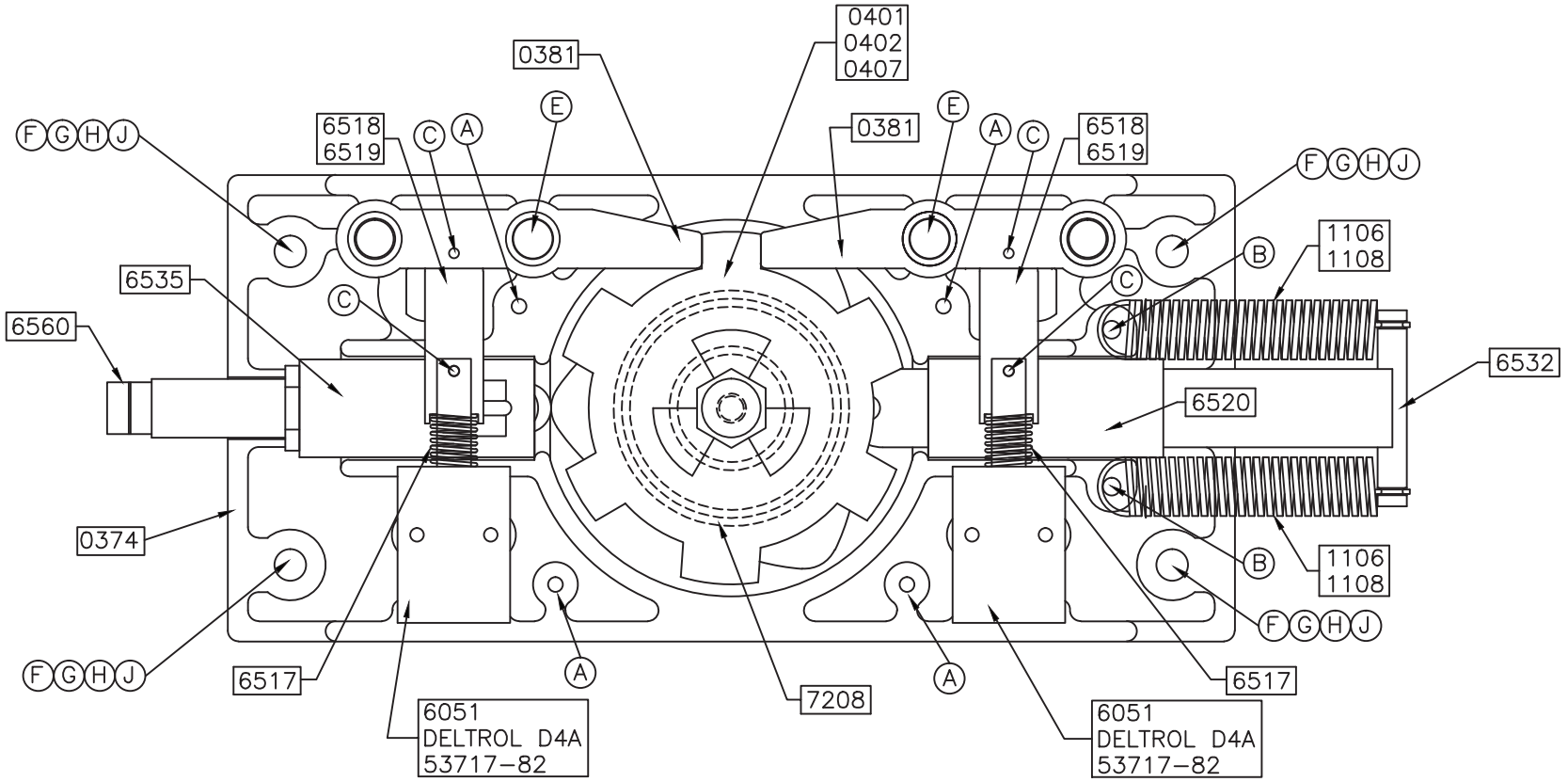


An internal view of an electronically controlled two way 6500 series control head.

While the head can be configured for mechanical (no electronics) operation, a turnstile's security potential is reached in the case of an electronic two way control head. In this instance, each rotational direction is independently unlocked. Configured properly, a control head will allow for one rotation per valid entry request. Our anti-backup cams are designed so that it is mechanically impossible to become trapped within the turnstile when properly installed.

Each control head comes preconfigured to your specific needs based off of a directional sheet that is filled out before shipment. The heads are delivered pre-wired, tested and adjusted to our factory recommendations. Installation is simple: connect inputs from access control devices into the logic controller and plug the unit's power supply into a 100-240 VAC (single phase) receptacle. The power supply will automatically set itself to function on your local voltage and convert it to 24VDC.

TOP CASTING REMOVED



ALL ELECTRICAL COMPONENTS UL CERTIFIED

NOTE:
ALL WIRE AWG 18 GAUGE 300 VAC
UL 1007/1569

CONTROLLED ACCESS, INC.
Turnstiles and ADA Gates

SYM	QTY	DESCRIPTION
Ⓐ	4	1/4–20 x 1" SOCKET HEAD
Ⓑ	2	1/4"ø x 1 1/4" SPRING PIN
Ⓒ	4	1/8"ø x 5/8" SPRING PIN
Ⓔ	2	1/2"ø X 2 1/4" DOWEL PIN

WAIST HIGH UNITS		
Ⓕ	4	5/16 x 1–1/2" SS CARRIAGE BOLT
Ⓖ	4	5/16 SS FLAT WASHER
Ⓗ	4	5/16 SS LOCK WASHER
Ⓙ	4	5/16 SS HEX NUT

FULL HEIGHT UNITS		
Ⓕ	4	3/8" x 1–1/2" SS CARRIAGE BOLT
Ⓖ	4	3/8 SS FLAT WASHER
Ⓗ	4	3/8 SS LOCK WASHER
Ⓙ	4	3/8 SS HEX NUT

6500 SERIES CONTROL HEAD BOTTOM ASSEMBLY

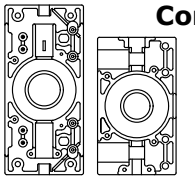
Controlled Access, Inc.
Turnstiles and ADA Gates

1535 Industrial Parkway South • Brunswick, OH 44212

Phone: (800)942-0829
Fax: (800)942-0828
Web: www.controlledaccess.com
Email: sales@controlledaccess.com

Complete control heads are available upon request. Contact us for pricing details.

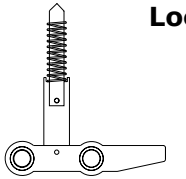
Control Head Castings



0373 - Bottom Casting
$219.65

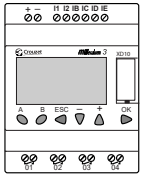
0372 - Top Casting
$219.65

Locking Bar Assemblies



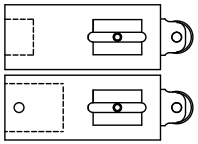
0382 - Fail Open Assembly
$90.92

0383 - Fail Lock Assembly
$90.92



0740 - Logic Controller (XD10)
$281.34

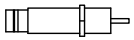
Shock Housing Assemblies



6535 - WH/427/430/T80/ADA
$189.18

6541 - 439/448/P60/HD
$198.68

Hydraulic Shock Absorbers



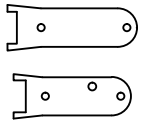
6560 - WH/427/430/T80/ADA
$190.75

6561 - 439/448/P60/HD
$346.47

0751 - 24VDC Power Supply (60 W) w/ NEMA 5-15 Drop Cord
$183.85

0381 - Locking Bar Casting w/ Oil Impregnated Bushings
$43.76

Locking Bar Linkages



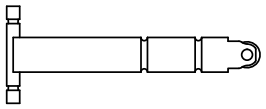
6519 - Fail Open
$12.26

6518 - Fail Lock
$12.26

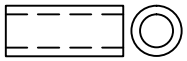
Solenoid Springs

6510 - Fail Open Spring
$9.02

6016 - Fail Lock Spring
$9.02

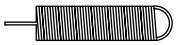


6532 - Index Pin
$132.69



6520 - Index Pin Tubing
$32.99

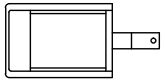
Indexing Springs



1106 - Waist High (Light) $6.51

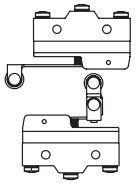
1108 - Full Height (Heavy) $6.51

1107 - ADA (Extra Heavy) $6.51



6051 - Solenoid
Deltrol D4A53717-82
$65.55

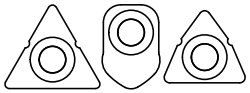
Limit Switches



2180 - Standard
(Z-15GW2-B7-K) $22.68

1700 - One Way
(BZ2RW825-A2) $82.33

Limit Switch Cams



2267 - Standard $30.66

2268 - ADA $30.66

2269 - One-Way $30.66

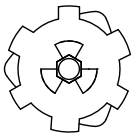
Control Head Bearings

7208 - Bottom casting on all models
(6007RSNR) $6.14

1641 - 1” ID for HS-22/439/448/P60 /RD70/Pre 2018 Top Castings
(1641-2RSNR) $7.39

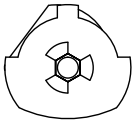
1640 - 7/8” ID for WH/ADA/T80 and 7/8” hex cams sold after 2018
(1640-2RSNR) $5.89

Cam Assemblies



0415 - All HS-22 Models/439/448/HD
(1.25" Hex, Short) $278.26

0407 - P60 & RD70 Models
(1.25" Hex, Long) $291.95

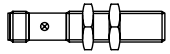


0401 - T80/WH/Legacy 427/430
(7/8 Hex Shaft) $264.26

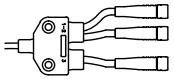
0402 - ADA w/ Arm Adaptor $264.26

0416 - ADA w/ Chain Drive $278.26

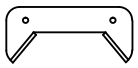
Proximity Sensor & Accessories



7211 - 24VDC PNP Prox. Sensor w/ M12 Connector (Sick 1040763)
$91.09



0766 - 3 Branch M12 Splitter
$148.92



6589 - Turnstile Prox. Bracket w/ 3x Mounts - LH, RH & Home
$11.19

Prices are subject to change without notice. Parts orders are shipped via FedEx. Shipping costs are not included. All parts orders under $500 require a credit card payment.

6500 Series Control Head Configurations

The 6500 Series Control Head can be configured in a number of different ways. All units operating with the 6500 Series Control Head self-center with a spring driven indexing pin and hydraulically shock to the home position to prevent damage or injury.

Various configurations are available to suit the needs of any environment. These include:

Manual both ways: Unit rotates freely in both directions. This unsecure configuration is used as a means to direct traffic through one area. Full height turnstiles can be also be purchased with an out of service lockout bar which would allow the end user to lock the turnstile with a standard pad lock.

Manual one way: Turnstile rotates in one direction but not the other. This is often used for egress only areas.

Electronic one way with free exit: Unit rotates freely in one direction but requires some form of access control in the other. This is a typical installation in many facilities that want to control who is entering but want egress to be free flowing.

Electronic one way with no exit: Turnstile is locked in both directions at all times, but in one direction can be unlocked with access control. Typically, this would be installed in scenarios where there is an alternate means of exiting the facility.

Electronic two way: Turnstile requires access control for both entering and exiting a facility. This configuration offers the highest level of security and also flexibility for installations.

Fail lock: Upon power failure, an electronically controlled direction would remain locked. This offers a high level of security but typically is not a good idea for egress unless alternate methods of exiting are available. Unless equipped with key overrides, this is can be easily converted to fail open by ordering alternate parts. This is also known as fail secure.

Fail open: Upon power failure, an electronically controlled direction would remain open. This is the most common configuration as it allows for secure access controlled passage in normal situations but in power outages it free wheels. Unless equipped with key overrides, this can be easily converted to fail lock by ordering alternate parts. This is also known as fail safe.

Key overrides: This option is available on either electronic or manual two way models. It can allow for a quick reconfiguration of free flowing passage or locking in either direction. The key override option is not intended for constant every day use. Should you require an additional lock-down feature on your turnstile, a better option (on a full height turnstile) is an out of service lockout with a standard pad lock. Note that the key override option makes conversion between fail lock and fail open very difficult to accomplish and also may not be available for some turnstile or gate models.

6500 Series Control Head Locking Bar Information

The 6500 Series Control Head is built to order based on a direction set up sheet sent with each quote. This sheet defines how each direction of passage functions.

Direction 1 is defined as clockwise rotation on a full height or with the cabinet on the right for waist high. Direction 2 is defined as counter-clockwise rotation on a full height or with the cabinet on the left for waist high.

Possible configurations include: no passage, free passage (manual), fail lock and fail open. Fail lock and fail open are not field reversible without additional components.

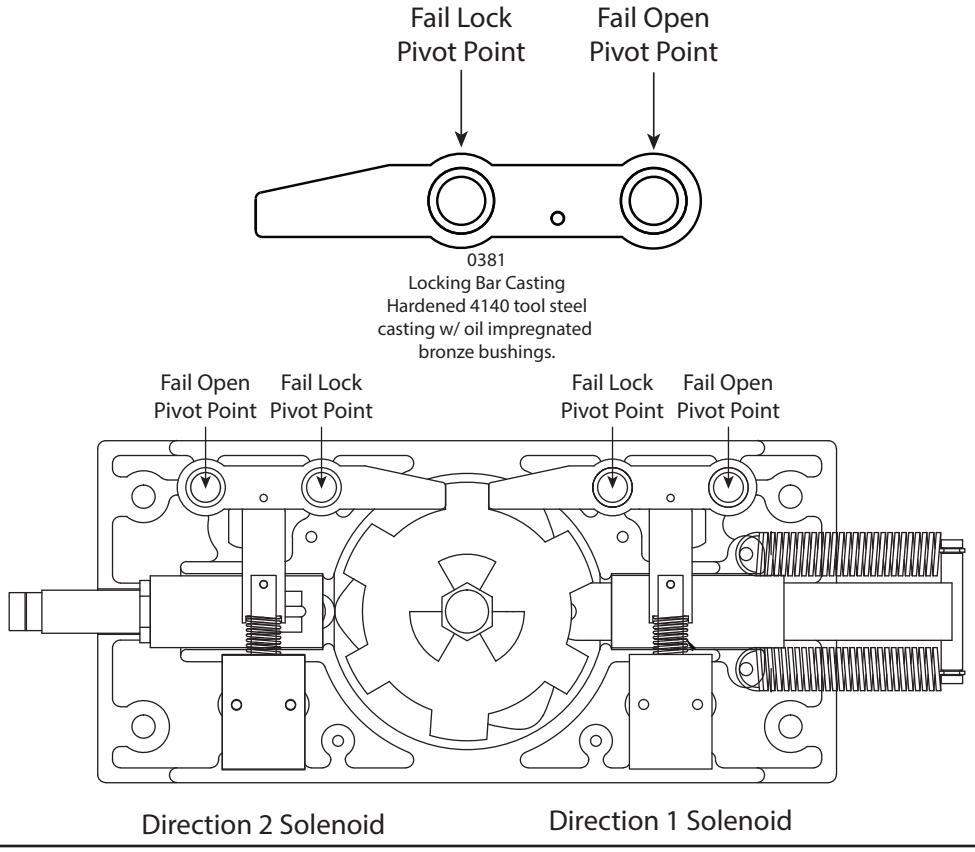
"No passage" directions include a fail lock locking bar assembly as well as an unwired solenoid. This adds the appropriate parts to the control head to prevent it from rotating in that direction.

"Free passage" (or manual) directions remove the solenoid and locking bar assembly, allowing the cam to spin freely.

Each direction has a pair of holes on the locking bar and control head casting. These holes act as pivot points for the locking bar casting. The inner holes are fail lock and outer holes are fail open. A .5" dowel pin slides through the entire assembly to hold everything in place.

Alternate linkages and springs are needed to convert a direction's power failure status.

If optional key overrides are included, it becomes much more difficult to re-arrange the configuration. Typically it is best to send the control head into the factory to reconfigure any key override equipped head to ensure everything is done correctly.



6500 Series Control Head Locking Bar Information (Continued)

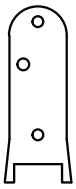
The 6500 Series Control Head can be reconfigured from fail lock to fail open and vice versa. Extra components are required to do so.

If a control head has key overrides, we suggest sending it in for factory reconfiguration.

Locking bar assemblies are held together with 1/8" spring pins. Extracting these pins and reinstalling them can be tricky, so for convenience we also offer entire locking bar assemblies.

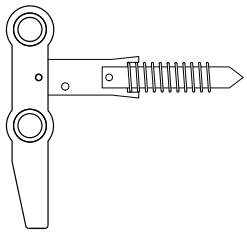
Replacing an entire locking bar assembly is simple; punch the .5" dowel pin from the pivot point through the head casting (via a small hole in the bottom casting for this purpose), pull out the old locking bar assembly and replace it with the new one.

If changing from fail lock to fail open or vice versa, install the dowel pin in the alternate hole.

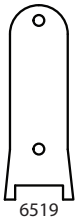


6518
Fail Lock Linkage
These have an approximate length of 2.25" and also include an extra hole the key override option.

6010
Fail Lock Solenoid Spring
These look the same as the fail open, but are actually lighter in force
Wire diameter is .032".
This spring was also used on the 6100 Series Control Head.

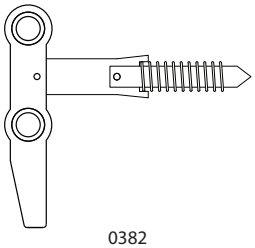


0383
Fail Lock Locking Bar Assembly
Includes locking bar casting w/ oil impregnated bushings, solenoid spring, locking bar linkage, and solenoid plunger.



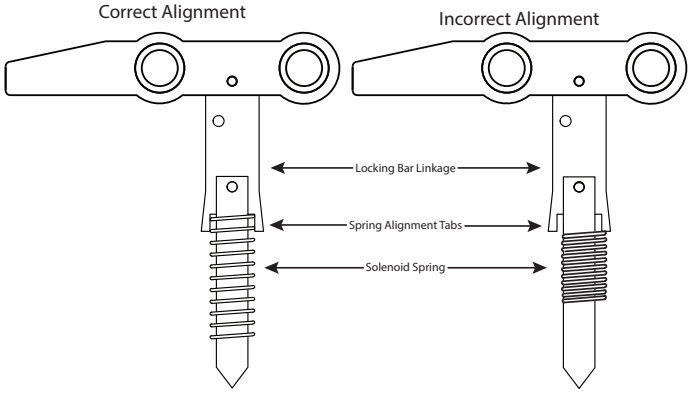
6519
Fail Open Linkage
These have an approximate length of 2.5" and do not have the extra hole for the key override option.

6510
Fail Open Solenoid Spring
These look similar to fail lock, but are actually stronger in force.
Wire diameter is .041".



0382
Fail Open Locking Bar Assembly
Includes locking bar casting w/ oil impregnated bushings, solenoid spring, locking bar linkage, and solenoid plunger.

Make sure the solenoid spring is between the alignment tabs on the linkage or the assembly may bind when pivoting.

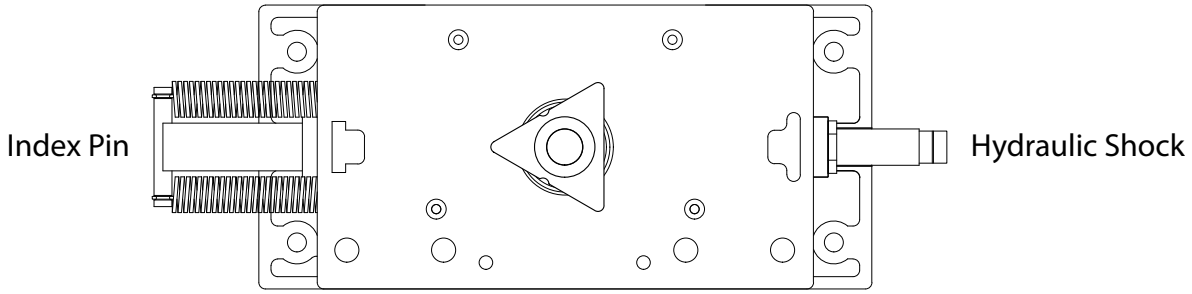


6500 Series Control Head Hydraulic Shock Information

The 6500 Series Control Head utilizes a spring loaded index pin for auto-centering the cam while a hydraulic shock offers counter resistance to slow the rotation down.

Set properly, the shock will allow a turnstile or gate to self-center while rotating smoothly without slamming.

Some turnstile models use a different shock than others. Waist highs and smaller full heights use a .75" diameter shock while larger full heights use a 1" diameter shock.



3/4" Hydraulic Shocks:

Setting:
Loosen the set screw on the head of the dial and turn the knob. The dial can be set between 0 and 8. The higher the number, the stronger the shock is. Tightening the set screw can alter the shock strength so a good habit is to loosen the set screw, turn the dial, tighten the set screw then test your setting. Repeat until satisfied.

Replacement:
Thread the new shock into the shock housing as far as it will turn while the cam is in the home position. Once it bottoms out, thread the shock back out 1.5 - 2 turns until the numbers on the dial are facing upright. Some models may require an additional turn or two outward if the arm does not self center on even the lowest setting.

1" Hydraulic Shocks:

Setting:
Loosen the set screw on the head of the dial and turn the knob. The dial can be set between 0 and 8. The higher the number, the stronger the shock is. Tightening the set screw can alter the shock strength so a good habit is to loosen the set screw, turn the dial, tighten the set screw then test your setting. Repeat until satisfied.

Replacement:
Thread the new shock into the housing as far as it will turn while the cam is in the home position. Once it bottoms out, thread the shock back out 1.5-2 turns until the set screw pointer is facing upright. Fasten the shock into the housing by snugging the 1/4-28 set screw into the bronze housing (snugly, but do not over tighten or the brass might start to tare).

Failure to turn the shock back out after threading it in all of the way will likely cause the part to wear out very quickly.

6500 Series Control Head Electrical Information

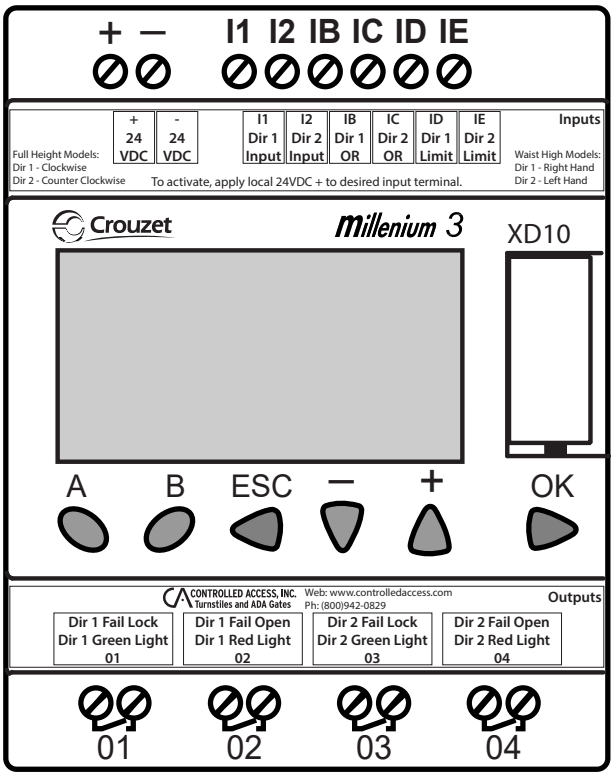
Each electronic control head comes with a power supply, a programmable logic controller (PLC), limit switches (or optionally, proximity sensors) and solenoids. For safety purposes, it is recommended that you read all literature on the electrical components before attempting to install the control head into a turnstile.

The 6500 Series Control Head is on the third generation of electronic components. The new XD10 logic controller is a direct replacement of both the 0789 control board and 6789 (Keyence KV-16DR) logic controller.

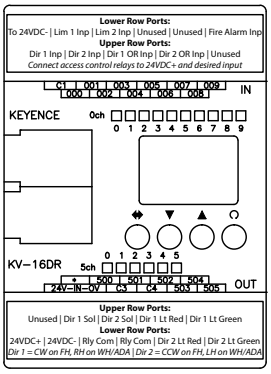
The latest enhancements provide a broader temperature range for outdoor installations (-4 to 131F) as well as a user friendly text based interface with a daylight visible display. With this also comes some new features such as on board testing buttons, turnstile statistics / information, etc.

While the wiring may be different, there are very few exceptions to when this board is compatible with installed products. If an installation has the old 0789 circuit board (PCB) and has the optional proximity sensor upgrade, new proximity sensors will need to be purchased. This is because the 0789 board had NPN inputs while the XD10 (and the KV-16DR) have PNP inputs.

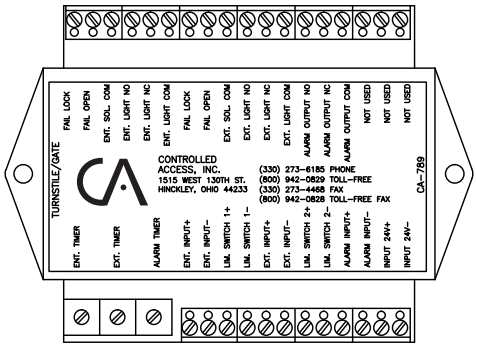
The new PLC still requires relay contact closures for inputs just like all previous generations, so any installation is compatible in one way or another. If assistance is needed with understanding how to convert the wiring from access control to the new logic controller, please view this manual or call our technical support department for assistance.



XD10 Logic Controller
0740

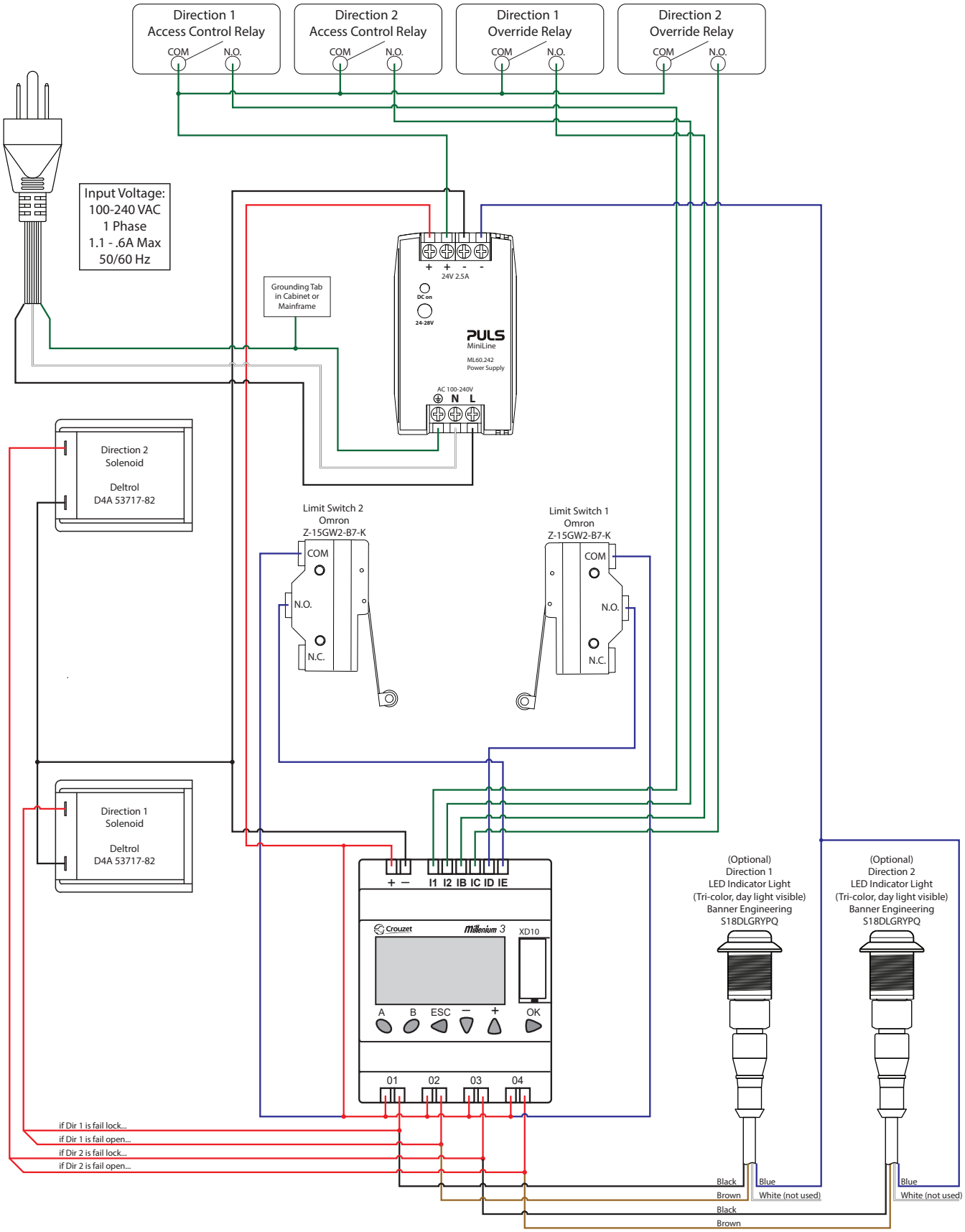


KV-16DR Logic Controller
6789



Control Board
0789

6500 Series Control Head w/ XD10 Controller Standard Wiring Diagram



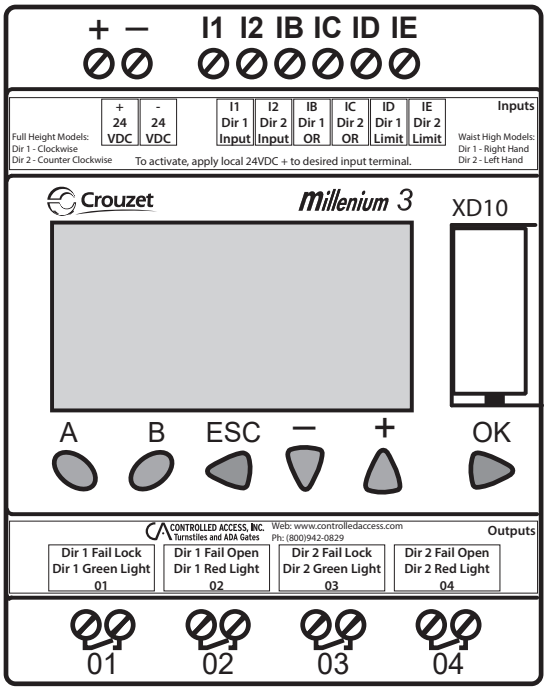
RECOGNIZED COMPONENT
ETL Intertek 4008027

The 6500 series control head is certified to conform to the following standards: UL Standard 326, UL Subject 2593 and CSA Standard C22.2 #247

5/28/2020

Controlled Access, Inc.
Turnstiles and ADA Gates
1535 Industrial Parkway South • Brunswick, OH 44212

6500 Series Control Head w/ XD10 Controller Standard Wiring Legend



General definitions:

Direction 1 - Clockwise on full height turnstiles or cabinet on right for waist high turnstiles & ADA gates.
Direction 2 - Counter clockwise on full height turnstiles or cabinet on left for waist high turnstiles & ADA gates.
Limit - A switch or sensor designed to detect rotation and lock the unit after a rotation.
Fail Lock - Upon power failure, the direction is designed to remain locked.
Also known as Fail Secure.
Fail Open - Upon power failure, the direction is designed to remain opened.
Also known as Fail Safe.

Each unit is built to order, preconfigured to function as specified at the time the order is placed. Some or all of the information listed may not be relevant to the installation.

Inputs are triggered with local 24VDC + (also known as PNP or sourcing).
Connect relay output from access control device to turnstile by terminating 24VDC + to relay common and the desired input to the relay's normally open terminal.

Be sure to disconnect power before wiring the board for safety.

Note: directional status outputs (lights) are unaffected by optional key overrides as the override occurs outside of the logic controller.

Input descriptions:

24VDC + Positive output from the 24VDC power supply connects here.
24VDC - Negative output from the 24VDC power supply connects here.

I1 - Direction 1 Input - Unlocks direction 1 for either one rotation or until the timer expires. Standard access control should terminate here.
I2 - Direction 2 Input - Unlocks direction 2 for either one rotation or until the timer expires. Standard access control should terminate here.

IB - Direction 1 Override - Holds direction 1 unlocked for duration of contact closure. Mainly for fire alarms and other temporary overrides.
IC - Direction 2 Override - Holds direction 2 unlocked for duration of contact closure. Mainly for fire alarms and other temporary overrides.

ID - Limit 1 Input - Cancels Direction 1 activation if triggered before timer expires, re-locking the unit after one rotation.
IE - Limit 2 Input - Cancels Direction 2 activation if triggered before timer expires, re-locking the unit after one rotation.

Output descriptions:

All 4 relay outputs have individual commons. 24VDC+ is distributed to each relay common to operate the turnstile. It is OK to add extra wires to these relay commons to distribute voltage to other devices.

01 - Output 1 - Dual purpose output for Direction 1. If the direction is fail lock, it's solenoid would connect here. If equipped with an indicator light, the green leg would connect here. Output switches from OFF to ON when directional input is triggered.

02 - Output 2 - Dual purpose output for Direction 1. If the direction is fail open, it's solenoid would connect here. If equipped with an indicator light, the red leg would connect here. Output switches from ON to OFF when directional input is triggered.

03 - Output 3 - Dual purpose output for Direction 2. If the direction is fail lock, it's solenoid would connect here. If equipped with an indicator light, the green leg would connect here. Output switches from OFF to ON when directional input is triggered.

04 - Output 4 - Dual purpose output for Direction 2. If the direction is fail open, it's solenoid would connect here. If equipped with an indicator light, the red leg would connect here. Output switches from ON to OFF when directional input is triggered.

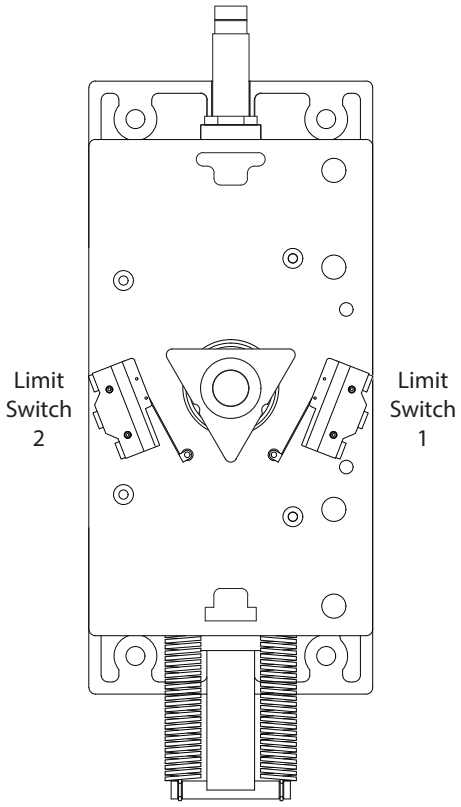
Indicator light information:

Green Light - An indicator to inform pedestrians that they are allowed to pass through the unit. Uses black output wire from light's cable.
Red Light - An indicator to inform pedestrians that the unit is locked or that pedestrians require credentials to enter. Uses brown output wire from light's cable.
As a side note, indicator lights purchased from Controlled Access, Inc. can also be wired to glow ***yellow***. If desired, this can be used instead of red with the unused white wire on the light's cable to indicate to pedestrians they require credentials to enter. This is especially handy for multi-lane installations in which some directions are "no passage" instead of "controlled passage". Likewise, green lights can also be wired to a red light output to constantly glow green to indicate "free passage".

6500 Series Control Head Limit Switch Information

Electronically controlled 6500 Series Control Heads utilize limit switches (or optionally, proximity sensors) in order to detect rotation. Depending on the type of unit (turnstile or ADA gate), the limit switch for a direction may be on the left or the right hand side of the control head.

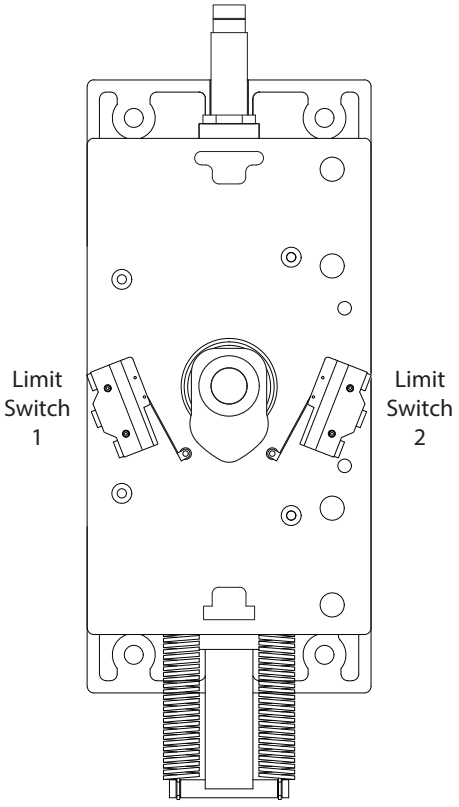
Turnstile Control Head



Turnstile control heads use a triangular shaped limit switch cam. One point of the triangle needs to be facing the index pin (bar with two springs) when the cam is in the home position. The two indents in the sides of the triangle are for jigging purposes. It does not matter which point is facing to the springs.

The limit switch for direction 1 is on the right and the limit switch for direction 2 is on the left. In this configuration, the first limit switch triggered does not affect the unit. The second switch triggers after the half-way point of the rotation, which draws in the solenoid. This allows the rotation to go to home but prevents the rotor from backing in the other direction.

ADA Gate Control Head



ADA Gate control heads use an oblong lobe shaped limit switch cam. The point of the lobe needs to be facing the index pin (bar with two springs) when the cam is in the home position.

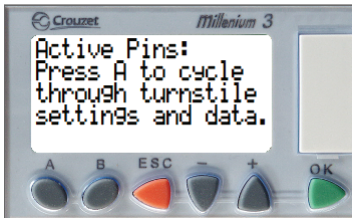
The limit switch for direction 1 is on the left and the limit switch for direction 2 is on the right. In this configuration, the limit switch relevant to the swing is triggered after the cam leaves home position, which re-engages the locking bar. The cam is still free to move until it swings back to the home position.

Options and configurations may alter the quantity or layout of the limit switches. Some examples of this would be electronically controlled one direction turnstiles, turnstiles with counters and turnstiles equipped with home position switches.

6500 Series Control Head w/ XD10 Controller Standard Turnstile Settings

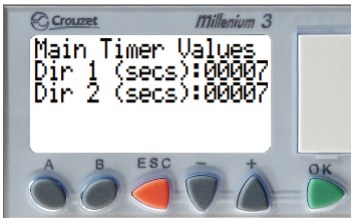
The XD10 logic controller on the 6500 Series Control Head has a text based menu screen to adjust settings and view statistics of the turnstile. Pressing the A button will cycle to each of the screens available on the device. Pressing B from any screen listed will return to the Home Screen.

Home Screen



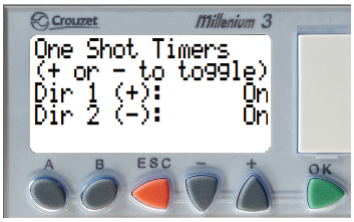
This screen is at the start of the menu cycle. The top section will give a read out of inputs that are currently receiving voltage. The display will return to this screen after cycling through all windows, 5 minutes of inactivity or pressing the B button.

Timer Values Screen



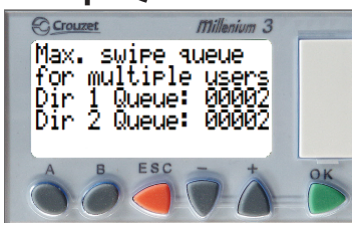
This screen allows for the each directional timer to be modified. Select which value you wish to edit by pressing the + & - key. Press OK to select the value then press + or - to modify. Save by pressing the OK button again. Each timer can have a value of 1 - 60 seconds. The timer will be canceled upon rotation of unit.

One-Shot Timers Screen



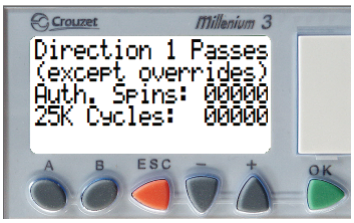
This screen allows for the two one-shot timer settings to be enabled or disabled. This setting prevents access control from holding open a direction on the standard direction inputs. Toggle Direction 1 by pressing + and Direction 2 by pressing -. This should be set to "On" in almost every installation.

Swipe Queue Screen



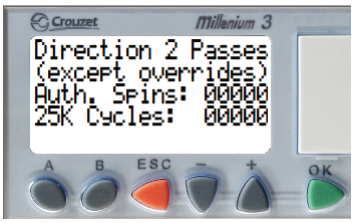
This screen defines the maximum number of access control requests the unit will allow in queue. Each value can be set from between 1 (for maximum security) to 3 (for fast paced passage). The default is 2. The method to change these settings is the same as the Timer Values Screen.

Direction 1 Counts Screen



This screen gives statistics about how many times direction 1 was activated and cycled. Since there is a limit to how many counts can be displayed, after 25000 cycles the first counter resets and adds to the second counter.

Direction 2 Counts Screen

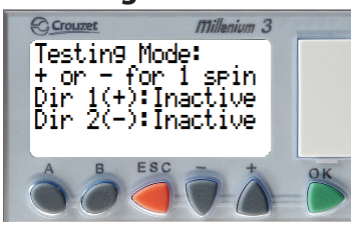


This screen gives statistics about how many times direction 2 was activated and cycled. Since there is a limit to how many counts can be displayed, after 25000 cycles the first counter resets and adds to the second counter.

General Info Screen

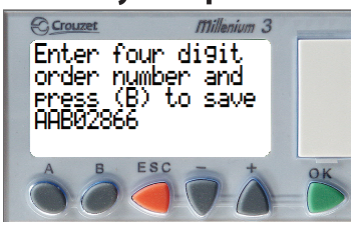
This screen displays when the PLC was initiated, the order number it was activated for (except for any revision suffixes which are not needed for order lookup), and the PLC software version.

Testing Mode Screen



While this screen is active, the unit can be tested with push buttons to simulate access control inputs. See the page dedicated to testing for more information.

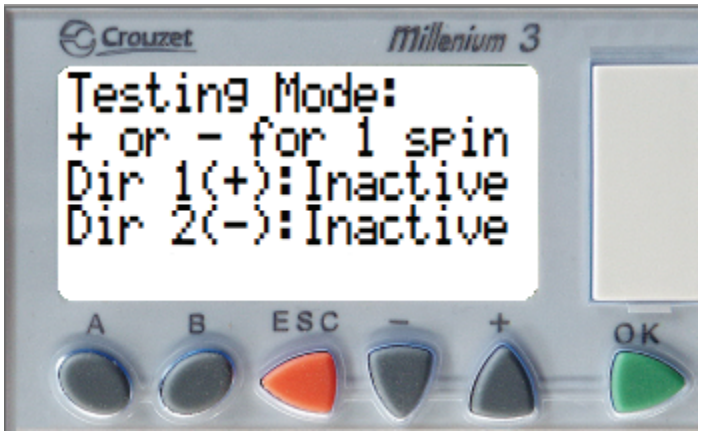
Factory Setup Screen



This screen should only appear when first set up in the factory or if something occurs to totally reset the logic controller. If this manages to occur and the order number (if known), enter it as a value then press B to save.

6500 Series Control Head w/ XD10 Controller Standard Turnstile Testing

The XD10 logic controller on the 6500 Series Control Head can be activated by contact closures between 24VDC+ and the relevant input. New technology allows for simpler on-board testing as well. To diagnose issues with the unit, press A on the keypad to cycle between screens until the testing mode screen appears.



Testing mode simulates valid access control inputs based on the settings defined on the other menu screens. The unit should unlock for the duration of the directional timer or until the unit is rotated. If the button is pressed twice, it should allow two rotations or time out based on the mult-swipe setting. If the button is held and the one shot timers are disabled, the unit will continue to remain open until the button is released and another rotation or timeout occurs.

With the testing mode screen open, press and release + to activate in direction 1. The unit should unlock and allow one rotation. If the unit successfully functions this way, repeat the same for direction 2 by pressing the - button.

If everything is functioning properly from the menu test but not with access control, either access control is not connected properly, is normally closed instead of normally open, or is not properly configured. Contact a security integrator for assistance with help with the access control system.

If the unit successful unlocks but does not re-lock upon rotation, try to manually trigger the appropriate limit switch for the direction that is not working correctly. If this helps, it is likely that the limit switch is not properly being triggered by the limit switch cam. Either adjust the height of the limit switch cam or tweak the lever on the limit switch a bit closer to the limit switch cam's tip.

If the unit does not successfully re-lock after manually triggering the limit switch, ensure that it is wired properly. Return to the home screen and press / hold the limit switch. If the switch is being held but the "Active Pins" display does not include the switch being held, it may be necessary to replace the switch. Note that there is a short delay from when the switch is triggered to when the display will register it as active, however this is normal.

If there are other issues with operation, check out the troubleshooting guide for additional diagnostic procedures or call Controlled Access, Inc. for assistance.

Maintenance & Cleaning

To ensure long life on any turnstile, the following maintenance is recommended. Note: these figures are assuming a maximum 75000 passages per year. Turnstiles with heavier traffic should be maintained more frequently.

Annual Servicing

- Secure all nuts & bolts throughout each model. This includes concrete anchors, carriage bolts holding together mainframes, and the bolts holding the control head assembly together.
- Remove the index pin assembly from the control head by disconnecting the two extension springs & apply white lithium grease. Use 3-in-1 oil on the index pin roller.
- If the unit is a High Security series full height turnstile, add grease to the rotor's roller bearing by utilizing the grease fitting fastened into the bottom of the rotor.

Biennial Servicing

- Disassemble the control head by removing the 4x socket head cap screws holding the top casting to the bottom casting (and the triangular limit switch cam if equipped).
- Clean any loose debris / grease from the inside of the casting.
- Inspect internal components for wear and replace as needed.
- Apply 3-in-1 oil to the bronze bushings on the locking bar assemblies and shock piston.
- Apply white lithium grease to the shock piston where it enters the bronze housing.
- Reassemble the control head assembly, using removable strength (typically blue) thread sealer (such as Loctite 243) on the head bolts to ensure the assembly stays together.

Cleaning

- Galvanized surfaces can be cleaned with soap and water. The finish may dull over time, but this is normal.
- Powder coated surfaces should be cleaned with a non-abrasive cleaner such as Formula 409. Inspect finish for chips and touch up as needed or the exposed steel may rust.
- Stainless steel surfaces should be polished with a stainless steel wax or polish. Contrary to common belief, stainless steel is not rust proof. Exposure to certain chemicals and harsh environments such as ocean air or chemical plants may cause surface corrosion. Minor discoloration can be removed with a rust penetrating product (such as PB Blaster) along with non-scratching scouring pads. Severe cases of contamination may require the use of specialty products. We have had great success with products such as Stellar Solutions' Citrisurf 2310 Rust Remover and Passivation Solution.
- The decorative solid surface tops on our Executive models, Beacon models and some PassThru models should be polished with furniture polish (such as Scott's Liquid Gold Wood Cleaner). Allowing the product to soak into the material for a few minutes easily restores the surface's luster.
- Polycarbonate plastic should only be cleaned following the plastic manufacturer's recommendations. **DO NOT USE ANY PRODUCTS THAT INCLUDE AMMONIA OR OTHER HIGH PH PRODUCTS.** If the model purchased includes polycarbonate plastic, see the section of the manual dedicated to cleaning it (starting on the next page). Failure to use appropriate cleaning methods will cause aesthetic and structural damage to the plastic which will not be covered under the warranty.

Control heads can be removed from the turnstile and shipped to the factory at any time for repairs and maintenance. Please include contact information so we can call to discuss any issues your control head may have. Please note that any repairs that cost under $500.00 will require a credit card payment before being returned.

6500 Series Control Head w/ XD10 Controller Troubleshooting

Symptoms	Causes	Solutions
Turnstile does not power up or logic controller's display cycles on and off.	Power supply is not receiving input voltage.	Verify outlet receptacle installed in mainframe / cabinet is operating correctly and that the power supply is plugged in.
	Power supply is not producing 24VDC voltage, but is receiving AC.	Remove + lead from power supply output. If output voltage resumes, there is a short circuit in the wiring. If not, the power supply is faulty. Replace power supply.
	Short circuit in the wiring as determined in previous step.	Refer to pages 24-26 for wiring information.
	Loose wiring from power supply to logic controller.	
	Short circuit in the wiring.	
	Solenoid(s) burnt out (will occur if main AC voltage is connected directly to solenoid).	If wiring is correct, try to disconnect the solenoids from outputs 01 - 04. If system stops cycling, replace faulty solenoid.
	Solenoid tabs grounded out against control head casting after being reassembled from maintenance or reconfiguration.	Disassemble control head casting and flip solenoids so that the tabs with wires are facing away from the center of the control head casting.
Turnstile powers up but does not respond.	Solenoid (-) wire(s) not properly terminated.	Ensure solenoid negative wires are properly terminated to 24VDC- input and that the 3 wire splice (if equipped) is properly crimped.
	Improper wiring from access control to logic controller.	Ensure one leg of access control output relay is connected to 24VDC + and the other to the desired input.
	Access control device malfunction.	Disconnect access control from logic controller. Preform testing procedures on page 29. If the turnstile works properly, contact manufacturer of access control device.

6500 Series Control Head w/ XD10 Controller Troubleshooting

Symptoms	Causes	Solutions
More than one person can get through turnstile.	Access control device output connected to override inputs.	Wire access control to I1 or I2 with one-shot timer enabled.
	Access control device output set too long.	This can be avoided by enabling the one-shot timers built into the logic controller program. If this is undesirable, ensure the output from the access control system is one second or less.
	Loose wiring to the logic controller from limit switches.	Refer to pages 24-26 for wiring information.
	Limit switches are broken.	Inspect limit switches for breakage, replace as needed.
	Control head requires maintenance.	Refer to page 30 for more information.
	Limit switches are missing the triangular top cam.	Adjust the top cam to the proper height and/or tweak the triggers on the limit switch. Refer to page 27 for more information.
People are becoming trapped inside of the turnstile (Full Height models)	Rotor was installed backwards.	Refer to page 15 installation for visual diagram on how to install rotor properly.
Turnstile only rotates 30 degrees.	Limit switches wired incorrectly.	Refer to pages 24-26 for wiring information and page 27 for limit switch placement.
	Limit switch cam is misaligned.	The top cam should have one point facing the control board. If this is not the case, readjust the top cam. Refer to page 27 for top cam information.
Unit remains unlocked until access control is presented.	Fail open / fail lock configuration is wired incorrectly.	Refer to pages 24-26 for wiring information.
Turnstile is slamming into the closed position.	Shock either needs adjusted or replaced.	Refer to page 23 for more information.
Turnstile is not centering properly.	Shock needs adjusted.	
	Binding in control head.	Ensure mainframe is level and the rotor is plumb. Shim the unit from the floor if necessary.
Turnstile seems to be binding mechanically.	Rotor is not plumb / turnstile body is not level.	

6500 Series Control Head w/ XD10 Controller Troubleshooting

Symptoms	Causes	Solutions
Unit remains locked after access control is presented until arm is pulled in.	Mechanical bind between locking bar and cam assembly (typically from unit being out of plumb or not level)	Remove locking bar assembly from control head (easiest way on non-key lock models is to punch out dowel pin pivot point from bottom side of head casting) and file down tip of locking bar to give clearance.
Turnstile rotating the wrong direction.	Improperly filled out direction sheet.	In some cases, the control head can be reconfigured in the field to operate as needed. Refer to pages 18-20 for information about how the control head operates. If needed, control heads can be returned to the factory for reconfiguration for a fee of labor plus parts (if required). Please contact us before returning a control head in this instance.
	Directional inputs wired incorrectly.	Refer to wiring legend on page 26 for direction port explanations.
Turnstile fails lock when needed to fail open or vice versa.	Improperly filled out direction sheet.	Refer to page 20 for more information. Additional parts will be required to convert operation. The control head can be returned for reconfiguration for a fee of labor plus parts (if required). Please contact us before returning a control head in this instance.
Unable to hold direction open to allow multiple people to pass through the turnstile.	Override wired to incorrect inputs.	Ensure the access control device dedicated to overriding passage is wired to the override input instead of the standard input for that direction.
	One-shot timers are enabled (on regular access control input).	Disable the one-shot timer settings on the logic controller. Be sure that your access control output is one second or less during regular secure operation or extra people may be able to pass through. Refer to page 28.
Other problems.		Please contact us for any other issues.

Proper Turnstile Usage

The 6500 Series Control head is easy to use. There are a few things that users should be trained on and informed of.

- In the case of an electronic turnstile, approach the unit and present access control credentials. Do not push on the arms of the rotor until after the access control device successfully unlocks the turnstile. A sturdy click sound will be heard from the main channel when the solenoid pulls the locking bar open.

- Note that the turnstile will not unlock the rotor is being pushed on before access control activates the solenoid. The unit should unlock once pressure is released but it is a better practice to wait until the unit is unlocked before pushing on the rotor.

- Once access has been granted, proceed through the turnstile immediately. Waiting too long could cause the rotor to time out mid-rotation, forcing the user to back out of the turnstile. There are timer settings for adjusting how long it takes for this to occur. The default time provided is 7 seconds. The reason for this is in case somebody swipes and walks away without passing through.

- Walk at a reasonable pace through the turnstile. Do not slam the rotor through the rotation. This can be unsafe and may cause unnecessary wear and tear to the control head.

- Try to be respectful of users wanting to pass through the opposite direction. Allow people who are waiting an opportunity to pass through the turnstile.

- Avoid rotating the rotor of a full height without being in the passage. This will cause the rotor to re-lock before you have a chance to pass through the turnstile.

- Piggybacking : More than one user trying to squeeze through the turnstile on one rotation should be avoided. Large bags and carts should be brought through an alternate means of entrance.

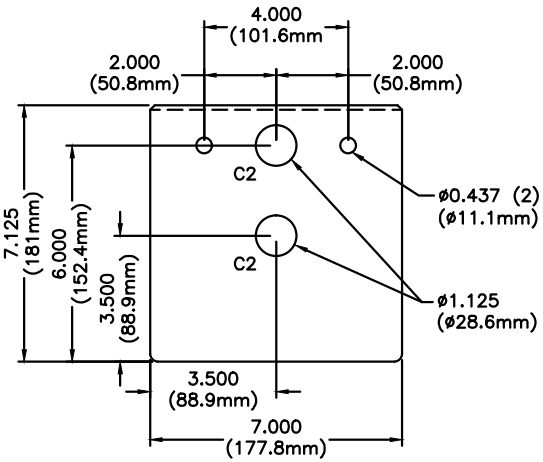
Warranty Information

Controlled Access, Inc.
Turnstiles and ADA Gates
1535 Industrial Parkway South • Brunswick, OH 44212

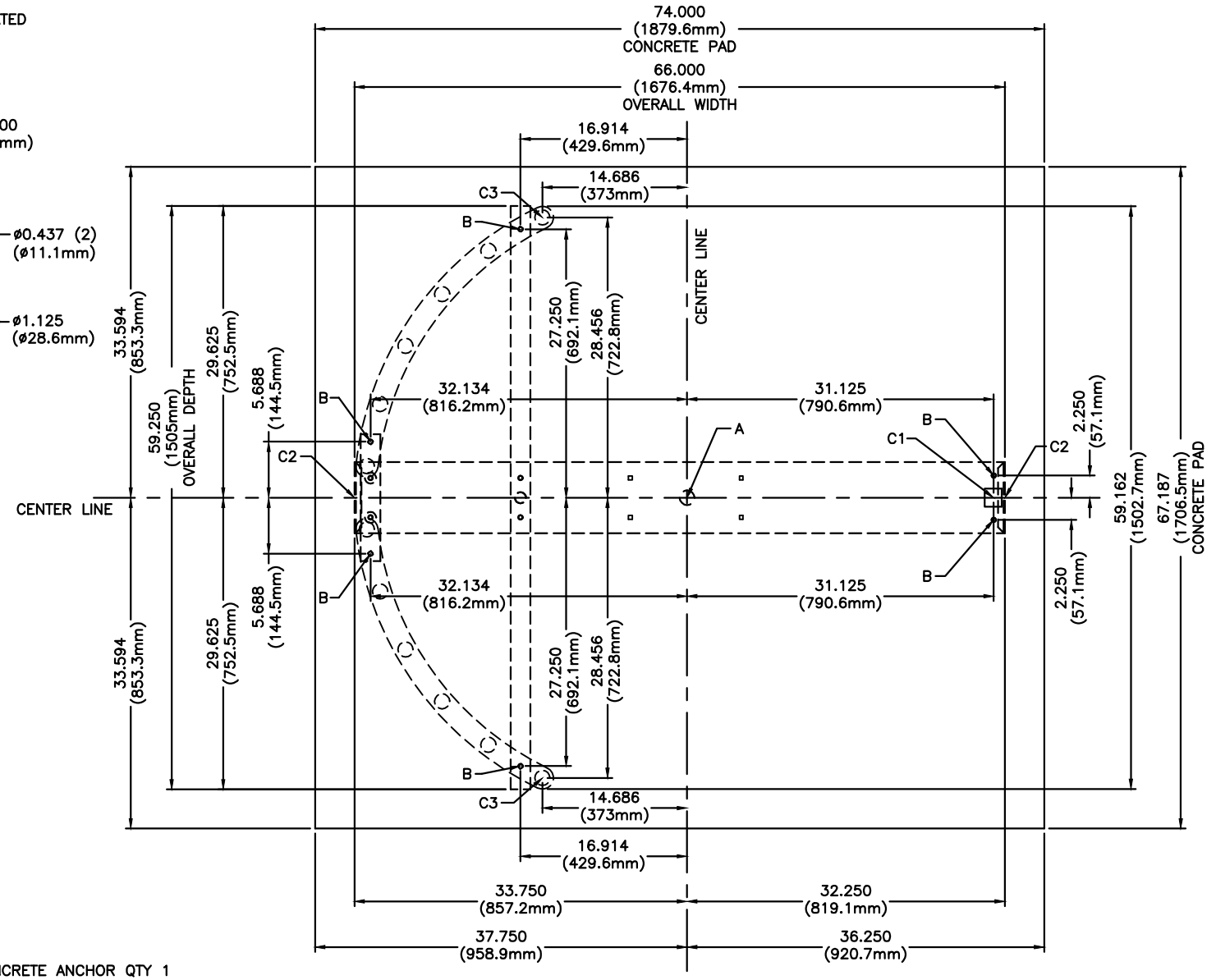
Seller warrants the goods against defective workmanship and materials provided that Buyer notify Seller within one (1) year after receipt by Buyer of the goods of any claim under this Warranty. The liability of Seller shall be limited to replacing or repairing defective goods returned by Buyer and delivered to the factory of the Seller, transportation charges prepaid.

Replaced or repaired goods will be redelivered freight prepaid to the address of Buyer shown hereon. Except for the Warranty contained herein, there shall be no other warranties, such as warranties of fitness and merchantability or otherwise express or implied, written or verbal, and Seller shall not be liable for consequential damages in any event.

FOR USE ON GALVANIZED OR POWDER COATED
HS430-S MODELS



MAIN CHANNEL END CAP



ANCHOR POINTS
A = ø.625 X 4.500 STAINLESS STEEL CONCRETE ANCHOR QTY 1
B = ø.375 X 4.500 STAINLESS STEEL CONCRETE ANCHOR QTY 6

SUGGESTED CONDUIT LOCATION
C1 = THROUGH VERTICAL BARRIER (PREFERRED)
C2 = THROUGH MAIN CHANNEL END CAP (TYP BOTH SIDES)
C3 = THROUGH VERTICAL YOKE TUBE

CONCRETE PAD NOTE:
POUR PAD 4.000 (101.6mm) – 6.000 (152.4MM) THICK,
AND ENSURE IT IS LEVEL ±.125 (3.1mm)

MATERIAL: N/A	SCALE: 1=16	APPROVED BY:	DRAWN BY: LC III
	DATE: 1/13/14		REVISED: 10/2018
FINISH:			
TOL. UNLESS OTHERWISE SPEC. .X ± .1 .XXX ± .015 .XX ± .03 ANGLES .5°			

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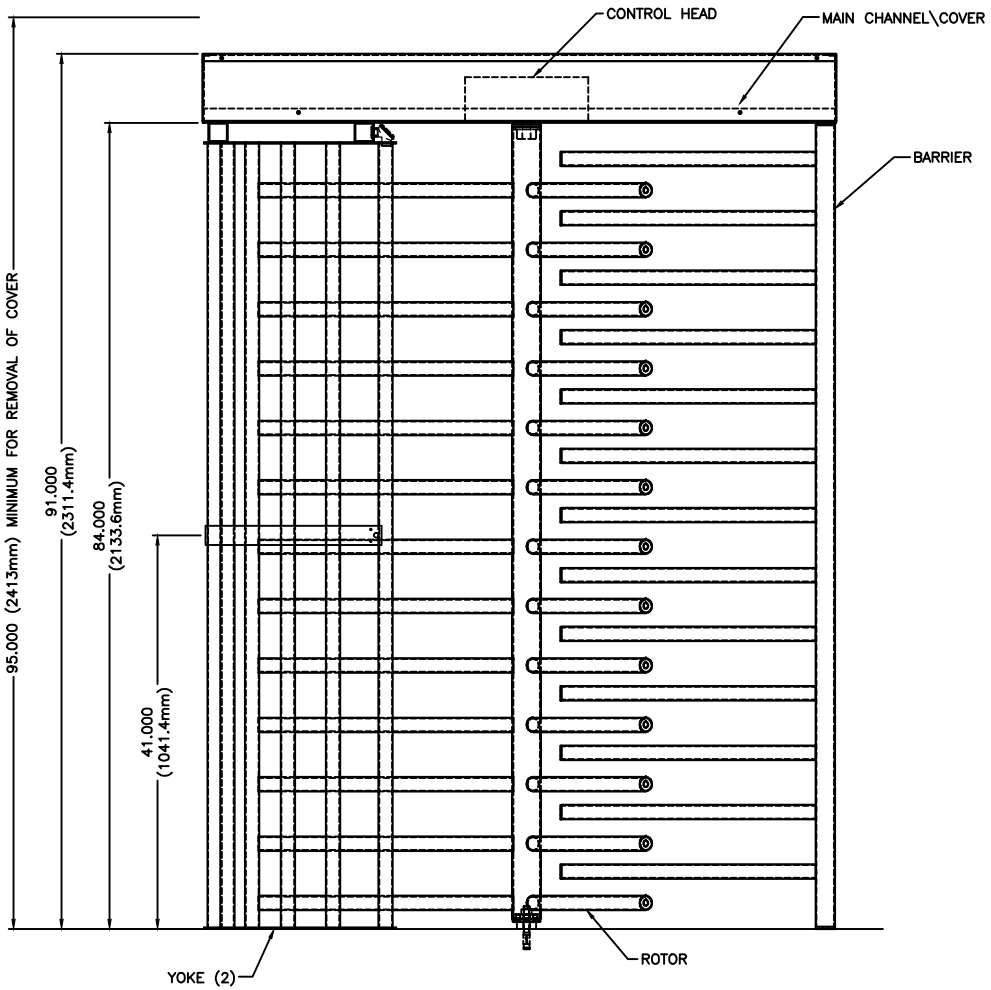
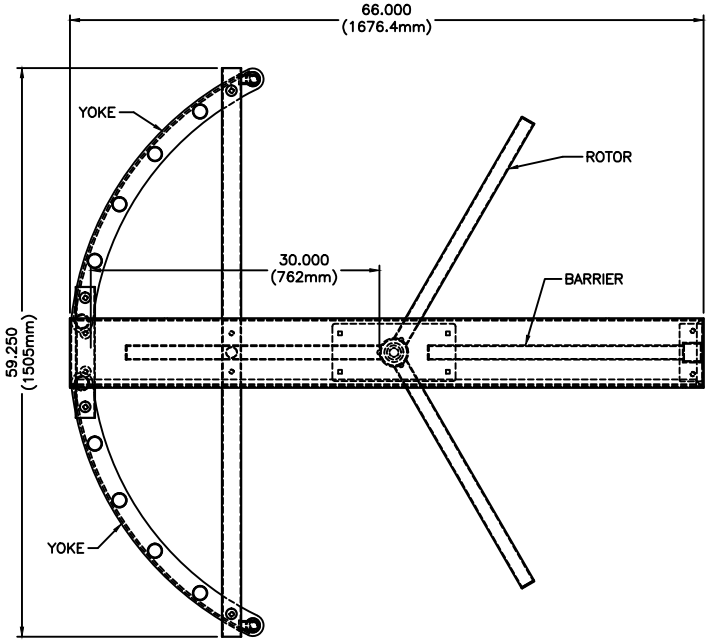
CONTROLLED ACCESS, INC.
1636 West 130th Street
Brunswick, Ohio 44212
330-273-6185
FAX 330-273-4468
USA 1-800-942-0829
FAX 1-800-942-0828

HS430-S GV\PC ANCHOR POINTS\CONDUIT 2018





1.) ALL DIMENSIONS ARE APPROXIMATE
2.) DIMENSIONS ARE IN INCHES (mm)
3.) DO NOT SCALE DRAWING

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MATERIAL: CARBON STEEL	SCALE: 1=20	APPROVED BY: MS	DRAWN BY: LC III
FINISH:	DATE: 3/2013		REVISED: 10/2018

TOL. UNLESS OTHERWISE SPEC.
.X ± .1 .XXX ± .015
.XX ± .03 ANGLES .5°

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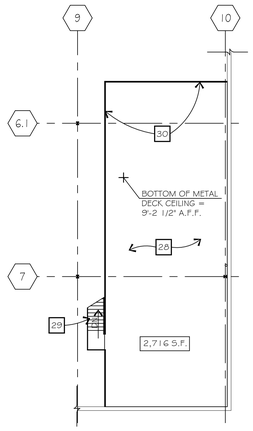
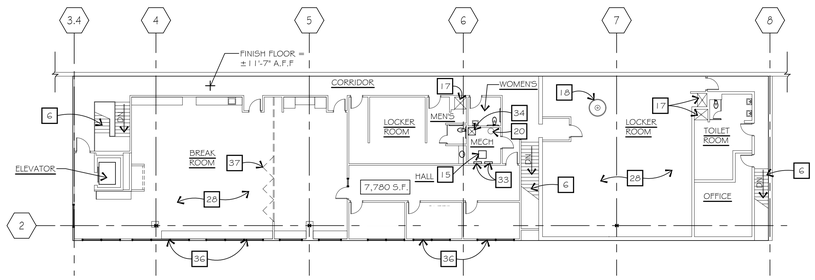
1636 West 130th Street
Brunswick, Ohio 44212
330-273-6185
FAX 330-273-4468
USA 1-800-942-0829
FAX 1-800-942-0828

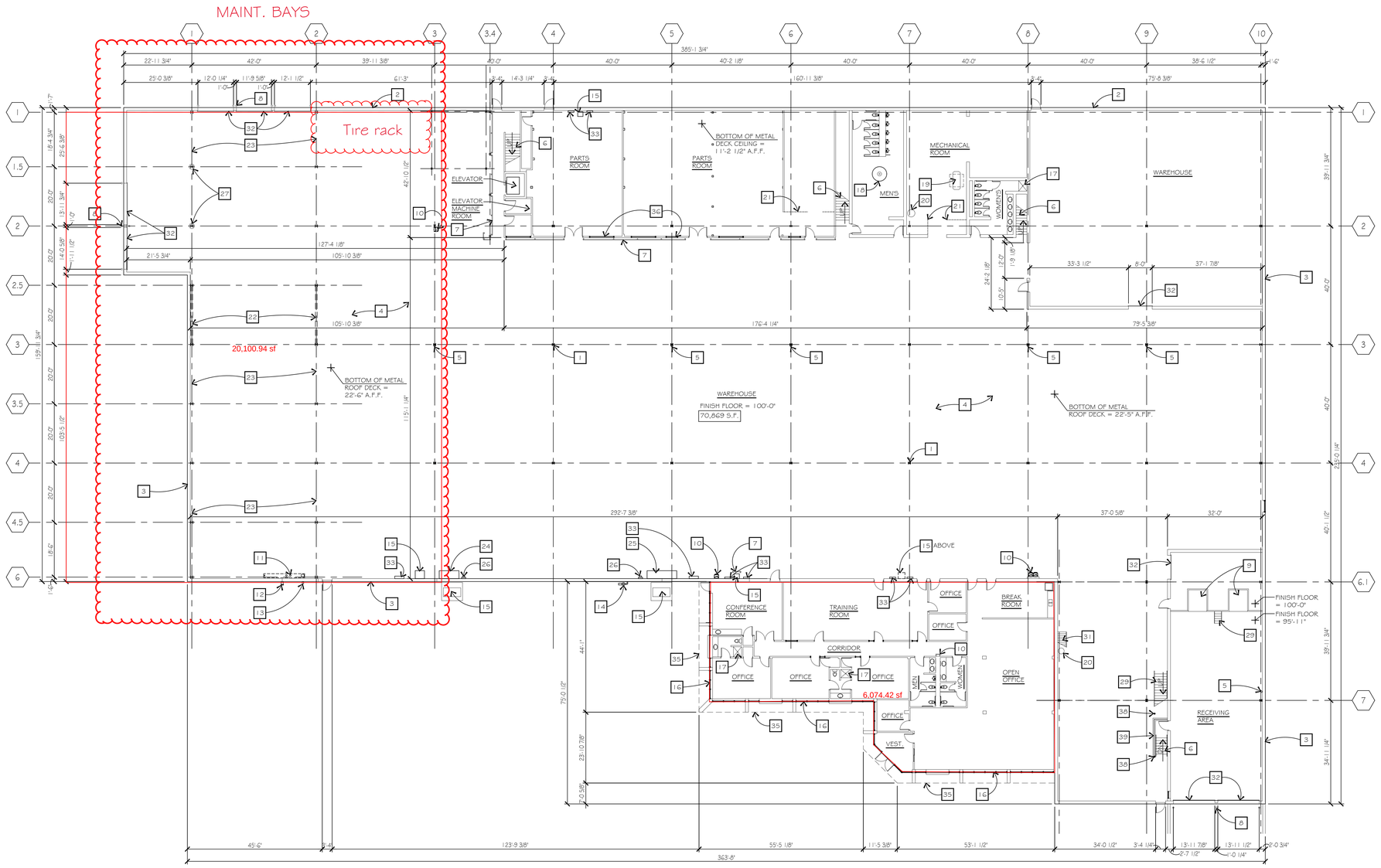
HS430-S (GV\PC) SINGLE ASSEMBLY (2018)



MEZZANINE ABOVE RECEIVING FLOOR PLAN
SCALE: 1/16"=1'-0"



EXISTING MEZZANINE FLOOR PLAN
SCALE: 1/16"=1'-0"



EXISTING FLOOR PLAN
SCALE: 1/16"=1'-0"

KEY NOTES

1. EXISTING STEEL COLUMN, TYPICAL.
2. EXISTING 12" BLOCK MASONRY.
3. EXISTING BRICK VENEER ON BLOCK MASONRY.
4. EXISTING CONCRETE SLAB.
5. EXISTING ROOF CONDUCTOR.
6. EXISTING CONCRETE STAIRS.
7. EXISTING STEEL GUARD RAIL AND STEEL POSTS.
8. EXISTING STEEL BOLLARD, TYPICAL.
9. EXISTING RECESSED MECHANICAL DOCK LEVELER.
10. EXISTING DRINKING FOUNTAIN.
11. EXISTING FIRE RISER AND WATER METER ASSEMBLY.
12. EXISTING FIRE DEPARTMENT CONNECTION.
13. EXISTING FIRE PROTECTION DRAIN.
14. EXISTING GAS METER.
15. EXISTING TRANSFORMER.
16. EXISTING INSULATING GLASS IN ALUMINUM FRAME.
17. EXISTING SHOWER.
18. EXISTING RADIAL SINK.
19. EXISTING COMPRESSOR.
20. EXISTING WATER HEATER.
21. EXISTING FENCE PARTITION.
22. EXISTING STRUCTURAL STEEL "X" BRACING.
23. EXISTING CONTINUOUS STEEL RAIL SYSTEM RUNS BETWEEN COLUMN LINES 1 AND 2. LOWEST RAIL SYSTEM STRUCTURAL MEMBER = 14'-4" ABOVE FINISHED FLOOR.
24. EXISTING MDP, 2000 AMP 3PH, 3W, 480 VOLT SERVICE.
25. EXISTING MDP, 2000 AMP 3PH, 4W, 277/480 VOLT SERVICE.
26. EXISTING ELECTRIC METER.
27. EXISTING CONCRETE STEEL COLUMN GUARD.
28. CONCRETE SLAB ON METAL DECK ON STRUCTURAL FRAMING.
29. EXISTING STEEL STAIRS AND RAILING.
30. EXISTING STEEL RAILING WITH REMOVABLE SECTION.
31. EXISTING SHIPS LADDER TO ROOF HATCH ABOVE.
32. EXISTING STEEL OVERHEAD DOOR.
33. EXISTING ELECTRICAL PANEL.
34. EXISTING FLOOR MOUNTED SERVICE SINK.
35. LINE OF EXISTING CANOPY OVERHANG ABOVE.
36. EXISTING 1/4" GLASS WINDOW.
37. EXISTING FOLDING PARTITION.
38. EXISTING STEEL STAIR POST SUPPORTS.
39. EXISTING STEEL GUARD RAIL.

Wah Yee Associates
Architects & Planners
43636 WOODWARD AVENUE, SUITE 200
NOVI, MICHIGAN 48375
PHONE 248.489.9160

PROJECT
EXISTING BUILDING
900 CHADDICK DRIVE
WHEELING, ILLINOIS

Date Issued
July 6, 2026

Job Number
5327

SHEET TITLE
FLOOR PLAN

Sheet Number
P.1

DISCLAIMER
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Do not scale drawings - Use figured dimensions CAD DWG 5327_P1.DWG

Honey Locust

Crimson King

80' foot Centers

Mounds to be decreased to meet SMC ABQ

LAWN

MOUND

3 THORNLESS HONEY LOCUST

2 SCOTCH PINE

22 FROBEL SPIREA

15 PEKING COTONEASTER

28 FROBEL SPIREA

SOD

3 RED MAPLE

2 SCOTCH PINE

3 SCOTCH PINE

1 GREEN ASH

60 FORSYTHIA INTERMEDIA

22 PEKING COTONEASTER

6 THORNLESS HONEY LOCUST

18 PEKING COTONEASTER

SEEDED

36 Ft SOD

PLANT MATERIAL LIST

	NO.	SIZE	TYPE	
A	2	3½"	RED MAPLE	
	9	2½"	THORNLESS HONEY LOCUST	
	1	2½"	GREEN ASH	
	3	6'	FLOWERING CRABS	
	7	6'	SCOTCH PINE	
	60	3'	FORSYTHIA INTERMEDIA	3'0 C.
	70	3'	PEKING COTONEASTER	3'0 C
	50	2'	FROBEL SPIREA	2½'0.C.

(B) 2 3½ Crimson King

RECEIVED
MAR 6 1981
AC81-48

SCALE 1"=20'

Sheet No. L-1

Project V.S. GRINDING CO. INC.

Title LANDSCAPE PLAN

Job No. 807 Proj. Mgr. M.T. Revisions

Drawn by M.T Checked by

Date 10-24-81 Printed

RAUENHORST
DESIGNERS • BUILDERS • DEVELOPERS

MICHAEL P TARNOW & ASSOCIATES INC LANDSCAPE ARCHITECTS DEERFIELD ILLINOIS

7900 Xerxes Ave. S., Minneapolis, MN 55431 (612) 830-4444 ■ 411 N. Business Center Dr., Mount Prospect, IL 60056 (312) 824-4444 ■ 777 E. Wisconsin Ave., Milwaukee, WI 53202 (414) 271-2980 ■ 3101 N. Central Ave., Phoenix, AZ 85012 (602) 274-7000

June 19, 2026
Special Use Request for a Heavy Motor Vehicle Facility
Preparer: Eric Isaacs, Senior Project Manager
Petitioner/Applicant: Stan Richards (Ramar Land Corporation), Vice President Construction/Facilities

Dear Village of Wheeling, IL,

Ramar Land Corporation (business entity for R+L Carriers) currently owns the property located at 1000 Chaddick Drive, Wheeling, IL, 60090. R+L Carriers currently operates a truck freight terminal use on this property. They are looking to expand existing operations onto the adjacent property to the north located at 900 Chaddick Drive. The intention is to utilize the existing structure located at 900 Chaddick Drive as a maintenance shop to service the existing fleet of vehicles operating out of the facility located at 1000 Chaddick Drive. Ultimately, R+L Carriers operations will run seamlessly across both 1000 and 900 Chaddick Drive properties with tractors and trailers traversing across the properties via an easement to be serviced as needed at the proposed maintenance shop. This proposed facility expansion is expected to generate 4-6 staff members and intends to operate Sunday 12:00 a.m. through Friday 8 p.m. The applicant and their representatives are happy to answer any questions regarding this request and the proposed expansion of operations.

Sincerely,

STAN RICHARDS
R+L CARRIERS
VICE PRESIDENT – CONSTRUCTION/FACILITIES
800-543-5589 EXT 1281
937-603-3900 CELL

RAYMAR Land Corporation
600 Gillam Rd.
Wilmington, OH 45177
(800) 799-0178

Meeting Minutes
Wednesday, July 8, 2026
Wheeling Plan Commission Regular Meeting
Board Room, Wheeling Village Hall, 2 Community Boulevard, Wheeling, Illinois
6:30 p.m.

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1. CALL TO ORDER

Chairman Johnson called the meeting to order at 6:30 p.m. on July 8, 2026.

2. PLEDGE OF ALLEGIANCE

Everyone stood for the Pledge of Allegiance.

3. ROLL CALL

Present were Commissioners Riles, Hyken, Karl, Myer, Sprague, Smart, and Chairman Johnson. Also present was Village Planner Marcy Knysz and Village Attorney Mallory Milluzzi.

4. CHANGES TO AGENDA – NONE

5. CITIZENS' CONCERNS AND COMMENTS – NONE

6. CONSENT ITEMS – NONE

7. ITEMS FOR REVIEW

7A. Docket No.: PSU26-0011
Applicant: New Asian Spa
Address: 747 W. Dundee Road

Request: Request for Special Use Approval for a Massage Establishment

See the Findings of Fact for Docket No. PSU26-0011

MOTION: Commissioner Myer moved, seconded by Commissioner Hyken to approve Docket No. PSU26-0011, granting Special Use approval to Ronglan Luo, in order to permit the operation of a massage establishment for New Asian Spa, located at 747 W. Dundee Road, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, and in accordance with the Petitioner's Project Description Letter prepared by Ronglan Luo, dated May 11, 2026,

Floor Plan prepared by John W. Roberson, dated May 1, 2026, and subject to the following conditions:

1. A Wheeling Business License shall be obtained prior to commencing operation of the massage establishment at the subject location, which the application submittal shall include a revised floor plan detailing/identifying all furniture and equipment to be used within the establishment for staff review.

2. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

Ms. Knysz noted that the applicant will attend the Village Board meeting on July 20, 2026, and she will send a letter on July 9, 2026.

MOTION: Commissioner Myer moved, seconded by Commissioner Karl, to approve closing Docket No. PSU26-0011.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

7B. Docket No.: PSU26-0012
Applicant: Bang DF Studio, LLC
Address: 1400 S. Wolf Road, Unit 310

Request: Request for Special Use Approval for a Recreational and Instructional Facility

See the Findings of Fact for Docket No. PSU26-0012

MOTION: Commissioner Myer moved, seconded by Commissioner Riles to approve Docket No. PSU26-0012, granting Special Use approval to permit a recreational and instructional facility for Bang DF Studio, LLC, located at 1400 S. Wolf Road, Unit 310,

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as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, in accordance with the Project Description Letter received by the Village on 6/2/2026; Floor Plan received by the Village on 6/15/2026, and subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the facility's hours of operation.

2. All activities shall be conducted entirely within the indoor facility.

3. The facility shall be used exclusively as a studio for dance, fitness, wellness instruction, classes, and related activities. No unrelated activities, parties, receptions or general events shall be permitted. Occasional workshops and studio-sponsored special events may be conducted, provided attendance does not exceed thirty (30) people including staff, volunteers and participants, and all such events shall occur entirely within the interior of the leased premises.

4. No alcoholic beverages shall be permitted at the subject premises unless a Wheeling Liquor License is obtained.

5. Food service shall be limited to bottled water and commercially pre-packaged snacks that do not require refrigeration, heating, or other temperature control. The preparation or service of any other food or beverage items shall require approval from the Village and the issuance of all applicable Health Division permits.

6. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

Ms. Knysz noted that the applicant will attend the Village Board meeting on July 20, 2026, and she will send a letter on July 9, 2026.

MOTION: Commissioner Karl moved, seconded by Commissioner Sprague, to approve closing Docket No. PSU26-0012.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None

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ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

8. APPROVAL OF MINUTES

MOTION: Commissioner Sprague moved, seconded by Commissioner Smart, to approve the Minutes of the Regular Meeting of June 24, 2026 (including the Finding of Fact for Docket No. PSU26-0010).

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague
NAYS: None
ABSENT: None
ABSTAIN: Commissioners Riles, Karl, Myer

There being four affirmative votes, the motion was approved.

9. OTHER BUSINESS

Ms. Knysz noted that there were currently no items on the upcoming agenda.

Commissioner Riles was congratulated on five years of service. Commissioner Myer was also congratulated on her service.

10. ADJOURNMENT

MOTION: Commissioner Myer moved, seconded by Commissioner Smart, to adjourn the meeting at 6:45 p.m. The motion was approved by a voice vote.

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FINDINGS OF FACT
AND RECOMMENDATION

To: Village President and Board of Trustees

From: Wheeling Plan Commission/Sign Code Board of Appeal

Date: July 8, 2026

Re: Docket No. PSU26-0011
Request for a Special Use to Permit a Massage Establishment for New Asian Spa
747 W. Dundee Road

Chairman Johnson called Docket No. PSU26-0011. Present were Commissioners Hyken, Johnson, Sprague, Riles, Myer, Karl and Smart. Also present were Village Planner Marcy Knysz and Village Attorney Mallory Milluzzi

Secretary Sprague reported that the applicant was seeking special use approval to operate a massage establishment, New Asian Spa, pursuant to Title 19 Zoning of the Wheeling Municipal Code, Chapter 19.10, for the property located at 747 W. Dundee Road, zoned MXT Transit-Oriented Mixed Use. He reviewed the special use requirements.

Ms. Knysz read the proposed conditions:

1. A Wheeling Business License shall be obtained prior to commencing operation of the massage establishment at the subject location, which the application submittal shall include a revised floor plan detailing/identifying all furniture and equipment to be used within the establishment for staff review.

2. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

Morgan Danick, representing the applicant Ronglan Luo, stepped to the podium and was sworn in. She reported that they were looking for special use approval to operate a massage therapy facility.

Chairman Johnson noted that the location was previously approved for the type of special use. He commented on the mislabeling of one of the rooms, which indicated that there were two women's restrooms. Ms. Danick confirmed that they would fix the issue and identify all of the furniture on the plan.

The Commissioners had no questions.

MOTION: Commissioner Myer moved, seconded by Commissioner Hyken to approve Docket No. PSU26-0011, granting Special Use approval to Ronglan Luo, in order to permit the operation of a massage establishment for New Asian Spa, located at 747 W. Dundee Road, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, and in accordance with the Petitioner's Project Description Letter prepared by Ronglan Luo, dated May 11, 2026, Floor Plan prepared by John W. Roberson, dated May 1, 2026, and subject to the following conditions:

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1. A Wheeling Business License shall be obtained prior to commencing operation of the massage establishment at the subject location, which the application submittal shall include a revised floor plan detailing/identifying all furniture and equipment to be used within the establishment for staff review.

2. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

Mr. Knysz noted that the applicant would attend the Village Board meeting on July 20, 2026.

MOTION: Commissioner Myer moved, seconded by Commissioner Karl, to approve closing Docket No. PSU26-0011.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

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FINDINGS OF FACT
AND RECOMMENDATION

To: Village President and Board of Trustees

From: Wheeling Plan Commission/Sign Code Board of Appeal

Date: July 8, 2026

Re: Docket No. PSU26-0012
Request for a Special Use to Permit a Recreation and Instruction Facility for Bang DF Studio, LLC
1400 S. Wolf Road, Unit 310

Chairman Johnson called Docket No. PSU26-0012. Present were Commissioners Hyken, Johnson, Sprague, Riles, Myer, Karl and Smart. Also present were Village Planner Marcy Knysz and Village Attorney Mallory Milluzzi

Secretary Sprague reported that the applicant was seeking special use approval for a recreational and instructional facility, Bang DF Studio, LLC, located at 1400 S Wolf Road, Unit 310, zoned I-1 Industrial and Office, pursuant to Title 19 Zoning of the Wheeling Municipal Code Chapter 19.10 Use Regulations and Associated Sections. He reviewed the special use requirements.

Ms. Knysz reported that Staff recommended approval.

Ms. Knysz read the proposed conditions:

1. A minimum of one (1) employee shall be on-site at all times during the facility's hours of operation.

2. All activities shall be conducted entirely within the indoor facility.

3. The facility shall be used exclusively as a studio for dance, fitness, wellness instruction, classes, and related activities. No unrelated activities, parties, receptions or general events shall be permitted. Occasional workshops and studio-sponsored special events may be conducted, provided attendance does not exceed thirty (30) people including staff, volunteers and participants, and all such events shall occur entirely within the interior of the leased premises.

4. No alcoholic beverages shall be permitted at the subject premises unless a Wheeling Liquor License is obtained.

5. Food service shall be limited to bottled water and commercially pre-packaged snacks that do not require refrigeration, heating, or other temperature control. The preparation or service of any other food or beverage items shall require approval from the Village and the issuance of all applicable Health Division permits.

6. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

Khrystyna Posheliuzhna, one of the owners of the Bang DF Studio, stepped to the podium and

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was sworn in. She reported that Bang DF Studio was a dance and wellness space offering yoga, dance, and fitness classes in a safe, welcoming environment. She stated that they were committed to being respectful neighbors and following all of the Village's rules.

Commissioner Riles had no questions.

Commissioner Smart asked if she had opened a similar studio. Khrystyna Posheliuzhna confirmed that she had been in Ukraine. Commissioner Smart asked what types of classes were offered. Khrystyna Posheliuzhna reported that they offered ballet and high heel dance. Commissioner Smart asked whether there would be capacity to have two different classes at the same time and whether there would be two employees on site in those circumstances. Khrystyna Posheliuzhna confirmed that they had two spaces and there would be two employees.

Commissioners Hyken, Sprague, Karl, and Myer had no questions.

MOTION: Commissioner Myer moved, seconded by Commissioner Riles to approve Docket No. PSU26-0012, granting Special Use approval to permit a recreational and instructional facility for Bang DF Studio, LLC, located at 1400 S. Wolf Road, Unit 310, as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-10 Use Regulations, and associated sections, in accordance with the Project Description Letter received by the Village on 6/2/2026; Floor Plan received by the Village on 6/15/2026, and subject to the following conditions:

1. A minimum of one (1) employee shall be on-site at all times during the facility's hours of operation.

2. All activities shall be conducted entirely within the indoor facility.

3. The facility shall be used exclusively as a studio for dance, fitness, wellness instruction, classes, and related activities. No unrelated activities, parties, receptions or general events shall be permitted. Occasional workshops and studio-sponsored special events may be conducted, provided attendance does not exceed thirty (30) people including staff, volunteers and participants, and all such events shall occur entirely within the interior of the leased premises.

4. No alcoholic beverages shall be permitted at the subject premises unless a Wheeling Liquor License is obtained.

5. Food service shall be limited to bottled water and commercially pre-packaged snacks that do not require refrigeration, heating, or other temperature control. The preparation or service of any other food or beverage items shall require approval from the Village and the issuance of all applicable Health Division permits.

6. A Wheeling Sign Permit shall be required prior to the installation of any exterior signage at the subject property, subject to the requirements of Title 21 - Signs.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None

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ABSTAIN: None

There being seven affirmative votes, the motion was approved.

Mr. Knysz noted that the applicant would attend the Village Board meeting on July 20, 2026.

MOTION: Commissioner Karl moved, seconded by Commissioner Sprague, to approve closing Docket No. PSU26-0012.

On the roll call, the vote was as follows:

AYES: Commissioners Hyken, Johnson, Smart, Sprague, Myer, Riles, Karl
NAYS: None
ABSENT: None
ABSTAIN: None

There being seven affirmative votes, the motion was approved.

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