Community & Economic Development
1420 Miner Street, Des Plaines, IL 60016
P: 847.391.5392 | W: desplainesil.gov

# Planning and Zoning Board Agenda
## June 10, 2025
## Room 102 – 7:00 P.M.

**Call to Order and Roll Call**

**Approval of Minutes:** None

**Public Comment**: For matters not on the agenda

**General Communications:** June 2, 2025 City Council vote on reconsideration of 2200 E. Golf Rd Assisted Living Facility Preliminary PUD and Conditional Use

**Administrative Decision:** 25-031-V – 1161 Hewitt Drive – Minor Variation to allow vinyl siding on the ground story of a detached single-family residence, where masonry materials are required – Approved

**Pending Applications:**

1. **Address:** 555 Howard Road ***(Continued from May 27, 2025)*** **Case Number:** 25-021-FPLAT

   The petitioner requests a Final Plat of Subdivision to consolidate the existing two lots into one lot of record.

   **PINs:** 09-30-400-002-0000; 09-30-400-032-0000

   **Petitioner/Owner:** Doug Klein, 9525 W. Bryn Mawr Avenue, Rosemont, IL 60018

2. **Address:** 1705 Pratt Ave **Case Number:** 25-013-CU-V

   The petitioner requests a conditional use and variations for a proposed public utility tower in the C-3 General Commercial District, and any other variations, waivers, and zoning relief as may be necessary.

   **PIN:** 09-333-020-006-0000

   **Petitioner/Owner:** Commonwealth Edison Company (represented by Scott Saef, Sidley Austin LLP), 3 Lincoln Centre, 4th Floor, Oakbrook Terrace, IL 60181

3. **Address:** 900 S. Des Plaines River Road **Case Number:** 25-022-APPEAL

   The petitioner requests an appeal of the Zoning Administrator's March 20, 2025 Minor Variation decision to approve with conditions the applicant's request for a variation from Section 12-3-11.D.a.(3).

   **PIN:** 09-20-206-035-0000

   **Petitioner:** Julie McKenzie, McKenzie Management Inc., 2720 S. Des Plaines River Road, Suite 214 Des Plaines, IL 60018

   **Owner:** Thacker House Condominium, 900 S. Des Plaines River Road, IL 60018

4. **Address:** 1345 E. Prairie Avenue ***(Petitioner Withdrawn)*** **Case Number:** 25-024-CU-V

   The petitioner is requesting the following items: (i) a conditional use for a residentially zoned assembly use and (ii) a major variation for off-street parking requirements in the R-4 Central Core Residential district.

   **PIN:** 09-17-423-011-0000

   **Petitioner:** St. Vakhtang Gorgasali Orthodox Church (Representative: Arsen Mskhvilidze, 400 E. Illinois Road, Lake Forest, IL 60045)

   **Owner:** Victor J. Grandinetti, 333 W. Kathleen Drive, Park Ridge, IL 60068

5. **Address:** 1685 E. Oakton Street ***(Petitioner Requests Continuance)*** **Case Number:** 25-025-CU Amendment

   The petitioner requests amending the Conditional Use Ordinance Z-1-25 to permit the expansion of the existing building for an Auto Service Repair Use and Auto Body Repair Use.

   **PIN:** 09-28-101-084-0000

   **Petitioner/Owner:** Vechean Shamaon, Shamaon Properties LLC, 9219 N Ashland Ave, Niles, IL 60714

**Adjournment**

**Next Agenda:** Next meeting is Tuesday, June 24, 2025.

City of Des Plaines, in compliance with the Americans With Disabilities Act, requests that persons with disabilities, who require certain accommodations to allow them to observe and/or participate in the meeting(s) or have questions about the accessibility of the meeting(s) or facilities, contact the ADA Coordinator at 847-391-5486 to allow the City to make reasonable accommodations for these persons. The public hearing may be continued to a further date, time and place without publication of a further published notice such as this notice.

**COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT**
1420 Miner Street
Des Plaines, IL 60016
P: 847.391.5380
desplaines.org

# MEMORANDUM

Date: May 22, 2025

To: Planning and Zoning Board (PZB)

From: Jonathan Stytz, AICP, Senior Planner JS

Cc: Jeff Rogers, AICP, Director of Community & Economic Development (CED) JR
Jonathan Mendel, AICP, Assistant Director of CED JM

Subject: Final Plat of Subdivision at 555 Howard Avenue, Case #25-021-FPLAT (5th Ward)

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**Issue:** The petitioner is requesting a Final Plat of Subdivision to consolidate two lots into one lot of record.

**Petitioner:** Doug Klein, 9525 W. Bryn Mawr Avenue, Rosemont, IL 60018

**Owner:** Doug Klein, 9525 W. Bryn Mawr Avenue, Rosemont, IL 60018

**Case Number:** 25-021-FPLAT

**PINs:** 09-30-400-002-0000; 09-30-400-032-0000

**Ward:** #5, Alderman Thomas Merlin

**Existing Zoning:** M-2, General Manufacturing District

**Existing Land Use:** Vacant lot (former industrial building)

**Surrounding Zoning:**
North: M-2, General Manufacturing District
South: M-2, General Manufacturing District
East: R-1, Single Family Residential District
West: M-2, General Manufacturing District

**Surrounding Land Use:**
North: Industrial buildings (Manufacturing)
South: Industrial buildings (Manufacturing)
East: Single Family Residences (Residential)
West: Industrial building (Manufacturing)

**Street Classification:** Wolf Road is a minor arterial street under Illinois Department of Transportation (IDOT) jurisdiction and Howard Avenue is a local street under City of Des Plaines jurisdiction.

**Comprehensive Plan:** The Future Land Use map designates this property as industrial.

**Project Description:**

*Overview*

Petitioner Doug Klien, on behalf of Bridge Industrial, intends to consolidate the two existing parcels into one lot of record. The subject property is zoned M-2 General Manufacturing district and located at the southwest corner of the Wolf Road and Howard Avenue intersection and is comprised of two lots totaling approximately 11.77-acres. Approximately 789 feet of the north portion of the property extends to the centerline of Howard Avenue before stair-stepping down outside of the Howard Avenue right-of-way. The subject property was improved with two main structures totaling 291,031 square feet and multiple surface parking lots with access to both Wolf Road and Howard Avenue as illustrated in the attached ALTA/NSPS Land Title Survey. However, the applicant applied for and received a demolition permit in March 2025 to remove all existing improvements on the subject property including underground utilities. The demolition is in process as illustrated in the attached Site and Context Photos.

*Proposed Improvements*

The proposal includes the redevelopment of the subject property for a new Class A industrial building with surface parking areas as noted in the attached Project Narrative. The petitioner indicates that the proposed development will be constructed as either a speculative building or as a built-to-suit for a potential tenant. While the exact building size of the future development has not been finalized, the proposal does include the installation of: (i) a new 225,606-square foot industrial building with 64 truck docks and two drive-in doors; (ii) new off-street parking areas consisting of 193 automotive stalls and 19 trucks stalls; (iii) two new underground detention vaults for stormwater run-off; and (iv) curb cut and ADA improvements for the Wolf Road/Howard Avenue intersection as detailed in the attached Excerpt of Final Engineering Plans.

## FINAL PLAT OF SUBDIVISION

**Request Description:**

*Overview*

The proposal includes the consolidation of the two existing lots into one 11.77-acre lot. The attached Final Plat of Bridge Point Des Plaines Subdivision shows the location, boundary, and size of the proposed consolidated lot. The plat also notes the dedication of the existing 789-foot-long by 40-foot-wide northwest corner of the subject property to the City of Des Plaines to provide a full 80 feet of right-of-way for roadway purposes.

*Building Lines and Easements*

The subdivision plat shows the following easements and building lines: (i) a new 65-foot front building setback line along Wolf Road where the proposed subdivision abuts the street; (ii) new 25-foot side building setback lines along the north and south side property lines of the proposed subdivision; (iii) a new 25-foot rear building setback line along the west boundary of the proposed subdivision; (iv) an 83-foot public utility easement and 82.5-foot perpetual right and easement for utilities across the northern portion of the subdivision; (v) a 10-foot ComEd easement along the west subdivision line; and (vi) a 15-foot public utility easement along the east subdivision line abutting Wolf Road.

*Subdivision Process, Required Public Improvements*
Chapter 13-3 of the Subdivision Regulations allows the City to require various right-of-way (ROW) improvements based on criteria such as traffic and effect on adjacent properties. Certain underground infrastructure is required to be installed to the standards required by Public Works and Engineering (PWE). Under Section 13-3-1, the developer is required to: (i) add new five-foot-wide sidewalk along both Wolf Road and Howard Avenue for the entire frontage of the proposed development; (ii) remove all old water services up to the city water main; and (iii) add a new looped public water main. The developer has provided PWE with an estimated cost of both private and public improvements totaling $225,439, an amount for which PWE has approved as noted in the attached PWE Approval Letter.

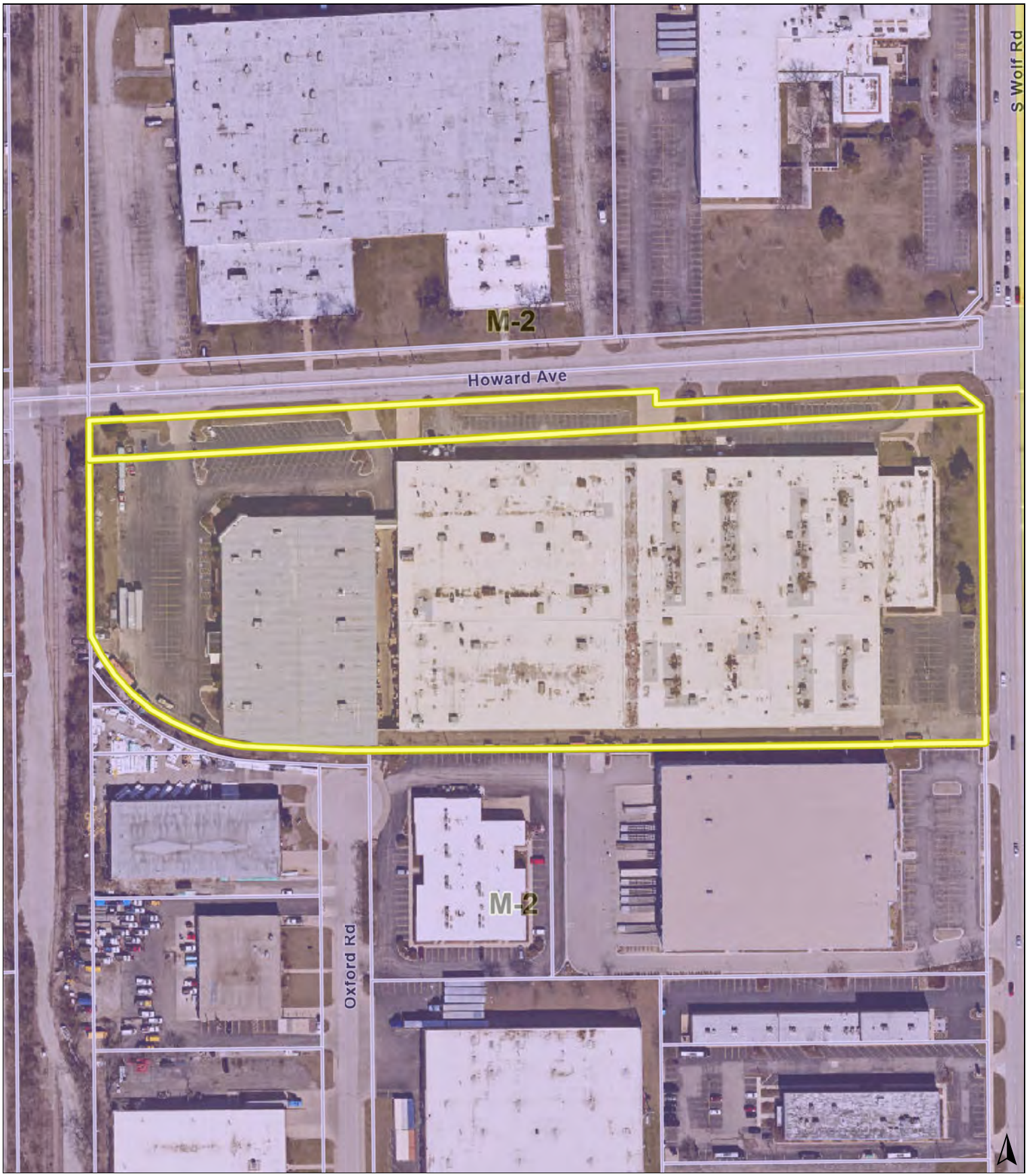
**PZB Procedure and Recommended Conditions**:
Under Section 13-2-7 (Approval of Final Plat by Planning and Zoning Board) of the Subdivision Regulations, the PZB has the authority to recommend the City Council approve, approve with conditions, or deny the Final Plat of Subdivision request at 555 Howard Avenue. City Council has the final authority on the request.

**Attachments:**
Attachment 1: Location Map
Attachment 2: Site and Context Photos
Attachment 3: ALTA/NSPS Land Title Survey
Attachment 4: Project Narrative
Attachment 5: Private Utility Company Will Serve Letters
Attachment 6: PWE Department Memo
Attachment 7: Excerpt of Final Engineering Plans[1]
Attachment 8: Final Plat of Subdivision

[1] Full copies available upon request to the Community and Economic Development department.

GISConsortium

# 555 Howard Avenue




0 200 400 ft

**Print Date: 8/6/2024**

**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.*

555 Howard Ave – Public Notice Sign Along Howard Ave

555 Howard Ave – North Property Line of Site Along Howard Ave

555 Howard Ave – Northeast Corner of Site at Wolf Rd/Howard Ave

555 Howard Ave – Northwest Corner of Site from Howard Ave

# A.L.T.A. / N.S.P.S. LAND TITLE SURVEY

PROPERTY DESCRIPTION:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE NORTH LINE OF THE SAID SOUTHEAST 1/4 WITH A LINE THAT IS 50 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE SAID WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH ALONG THE SAID PARALLEL LINE A DISTANCE OF 515.32 FEET; THENCE WEST AT RIGHT ANGLES TO SAID PARALLEL LINE, A DISTANCE OF 1163.47 FEET, MORE OR LESS TO THE EAST RIGHT WAY OF LINE OF THE DES PLAINES VILLAGE RAILROAD (NOW THE CHICAGO AND NORTHWESTERN RAILWAY COMPANY); THENCE NORTH ALONG THE EAST LINE OF SAID RIGHT OF WAY, A DISTANCE OF 463.34 FEET, MORE OR LESS TO THE NORTH LINE OF THE SAID SOUTHEAST 1/4, THENCE EAST ALONG THE NORTH LINE OF THE SAID SOUTHEAST 1/4, A DISTANCE OF 1163.20 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

EXCEPTING THEREFROM:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT INTERSECTION OF THE NORTH LINE OF SAID SOUTHEAST 1/4 OF A LINE 50.00 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE SOUTH EAST 1/4; THENCE SOUTH 00 DEGREES 10 MINUTES 38 SECONDS EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 515.32; THENCE SOUTH 89 DEGREES 49 MINUTES 22 SECONDS WEST AT RIGHT ANGLES TO SAID PARALLEL LINE, A DISTANCE OF 833.00 FEET TO THE PLACE OF BEGINNING OF THE FOLLOWING DESCRIBED TRACT LAND; THENCE NORTH 87 DEGREES 44 MINUTES 20 SECONDS WEST 94.00 FEET; THENCE NORTHWESTERLY 294.334 FEET ALONG THE ARC OF A CIRCLE OF 277.94 FEET, CONVEX TO THE SOUTHWEST, TANGENT WITH THE LAST DESCRIBED COURSE WHOSE CHORD BEARS NORTH 57 DEGREES 24 MINUTES 04.5 SECONDS WEST, TO A POINT ON THE EAST RIGHT OF WAY LINE OF THE DES PLAINES VILLAGE RAILROAD (NOW THE CHICAGO AND NORTHWESTERN RAILWAY COMPANY); THENCE SOUTH 156.0 FEET ALONG SAID EAST LINE OF THE RIGHT OF WAY TO A POINT ON A LINE DRAWN SOUTH 89 DEGREES 49 MINUTES 22 SECONDS WEST THROUGH THE HEREIN DESIGNATED PLACE OF BEGINNING, THENCE NORTH 89 DEGREES 49 MINUTES 22 SECONDS EAST, A DISTANCE OF 330.47 FEET TO THE HEREIN DESIGNATED PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

AND EXCEPTING THEREFROM:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBES AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTH LINE OF SAID SOUTHEAST 1/4 WITH A LINE 50 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST 1/2 OF SAID SOUTHEAST 1/4; THENCE SOUTH, ON SAID PARALLEL LINE, 75 FEET; THENCE NORTHWESTERLY TO A POINT ON THE SOUTH LINE OF THE NORTH 50 FEET OF SAID SOUTHEAST 1/4, 30 FEET (AS MEASURED ON SAID SOUTH LINE) WEST OF THE AFORESAID 50 FOOT PARALLEL LINE, THENCE WEST ON SAID SOUTH LINE TO A POINT 425 FEET WEST OF AND 50 FEET SOUTH OF THE NORTHEAST CORNER OF THE WEST 1/2 OF SAID SOUTHEAST 1/4 (AS MEASURED ON THE NORTH LINE THEREOF AND ON A LINE AT RIGHT ANGLES THERETO); THENCE NORTH AT RIGHT ANGLES TO THE LAST DESCRIBED COURSE TO THE SAID NORTH LINE; THENCE EAST ON SAID NORTH LINE, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

## LEGEND

| | | | |
|---|---|---|---|
| STORM SEWER | STORM MANHOLE | STREET LIGHT | BACK OF CURB |
| SANITARY SEWER | CATCH BASIN | UTILITY POLE | BUILDING CORNER |
| COMBINED SEWER | INLET | TRAFFIC SIGNAL | CATCH BASIN |
| WATER MAIN | FLARED END SECTION | TRAFFIC SIGNAL BOX | CENTER |
| GAS MAIN | ELECTRIC MANHOLE | SPRINKLER HEAD | CONTAINER CORNER |
| UNDERGROUND TELEPHONE LINE | TELEPHONE MANHOLE | BOLLARD | EDGE OF CONCRETE CORNER |
| UNDERGROUND ELECTRIC LINE | TELEPHONE UPRIGHT | MAILBOX | EDGE OF PAVEMENT |
| UNDERGROUND CATV LINE | ELECTRIC UPRIGHT | SIGN | EDGE OF PAVEMENT CORNER |
| OVERHEAD WIRES ON UTILITY POLES | CABLE TV UPRIGHT | UNIDENTIFIED MANHOLE | FENCE CORNER |
| FIBER OPTIC LINE | FIRE HYDRANT | RIGHT-OF-WAY MONUMENT | GAS MARKER |
| RAILROAD | VALVE AND VAULT | DISC | GAS VALVE |
| FENCE | WATER VALVE | IRON / STEEL ROD | POST INDICATOR VALVE |
| GUARDRAIL | B BOX | IRON PIPE | SANITARY MANHOLE |
| EDGE OF WATER | AUXILIARY VALVE | CUT CROSS | UTILITY POLE |
| METAL END LIMITS | WELL | PK / MAG NAIL | VALVE VAULT |
| | GAS VALVE | RAILROAD SPIKE | WALL CORNER |
| | HAND HOLE | FLAG POLE | ASPHALT |
| | | LANDSCAPE LIGHT | CONCRETE |
| | | | GRAVEL |

NOTES:

THIS SURVEY REFLECTS MATTERS OF TITLE AS LISTED ON A COMMITMENT FOR TITLE INSURANCE BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO./FILE NO.: NCS-1062410-CHI2 WITH AN EFFECTIVE DATE: APRIL 06, 2021.

AS REQUIRED UNDER THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, EVIDENCE ON OR ABOVE THE SURFACE OF THE SURVEYED PROPERTY OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK, WHICH EVIDENCE MAY INDICATE UTILITIES LOCATED ON, OVER OR BENEATH THE SURVEYED PROPERTY HAS BEEN SHOWN HEREON.

ALL DIMENSIONS ARE IN FEET AND DECIMAL PARTS THEREOF. NO DISTANCES OR ANGLES SHOWN HEREON MAY BE ASSUMED BY SCALING.

BEARINGS SHOWN HEREON ARE BASED ON NAD83 ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (2011 ADJUSTMENT) AND NAVD88 (GEOID 12B) UTILIZING GNSS EQUIPMENT AND REL-NET CORS RTK NETWORK.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY IN ADDITION TO THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

SPACECO, INC IS AN ILLINOIS PROFESSIONAL DESIGN FIRM REGISTERED UNDER LICENSE NUMBER 184-001157.

THE PROPERTY DESCRIPTION IN THE SURVEY IS THE SAME AS THE RECORD DESCRIPTION IN THE TITLE COMMITMENT.

THAT THE PROPERTY DESCRIPTION IN THE SURVEY AND THE RECORD DESCRIPTION IN THE TITLE COMMITMENT FORMS A MATHEMATICALLY CLOSED FIGURE WITH NO GAPS, GORES OR OVERLAPS.

THE SURVEYED PROPERTY HAS DIRECT ACCESS TO A PUBLIC RIGHT OF WAY, HOWARD STREET AND WOLF ROAD.

HOWARD STREET
HERETOFORE DEDICATED
N86°48'55"E
788.95'
NORTH LINE OF WEST 1/2 OF SE 1/4 OF SECTION 30-41-12
SOUTH LINE OF THE NORTH 50' OF WEST 1/2 OF SE 1/4 OF SECTION 30-41-12
POINT OF BEGINNING SECOND EXCEPTION
POINT OF COMMENCEMENT FIRST EXCEPTION
INTERSECTION OF THE NORTH LINE OF SE 1/4 & LINE THAT IS 50 FEET WEST OF & PARALLEL WITH EAST LINE OF WEST 1/2 OF THE SE 1/4 OF SECTION 30-41-12
S03°11'05"E 50.00'
FOUND BENT IR 20.09'N & 0.41'W
PERPETUAL RIGHT TO INSTALL A ROAD PER DOCUMENT LR1640323 & GAS PIPELINE EASEMENT PER DOCUMENT LR1757154
PERPETUAL RIGHT & EASEMENT TO CONSTRUCT UTILITIES PER DOCUMENT LR1752479
425 (R)
422.70' (M)
SECOND EXCEPTION
342.65'
N86°48'55"E
S52°23'31"E 38.15'
FOUND 3/4" IP 0.36'S & 0.06'E
NE CORNER OF WEST 1/2 OF SE 1/4 OF SECTION 30-41-12
FOUND ROW 0.74'S & 0.27'W
FOUND ROW 0.02'S & 0.41'W
FOUND ROW 0.93'S & 0.30'E
FOUND IR AT CORNER
SET IR W/CAP "SPACECO INC" ORANGE PLASTIC CAP
FOUND IR AT CORNER
FOUND 3/4" IP 0.40'S & 0.18'E
FOUND BENT IR 29.96'S & 0.08'W
FOUND CROSS AT THE WEST 1/4 CORNER OF SEC 30-41-12 PER RECOVERY TIES PER DOC. 86436974
1992.92' M
"NO TRUCK TURN AROUND"
"NO PARKING"
"AUTHORIZED VEHICLES ONLY"
"NU-WAY INDUSTRIES" METAL SIGN
"NU-WAY INDUSTRIES" METAL SIGN
"NU-WAY INDUSTRIES" METAL SIGN
"NU-WAY INDUSTRIES" METAL SIGN
"NU-WAY INDUSTRIES" METAL SIGN
"NO PARKING"
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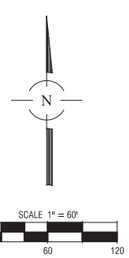
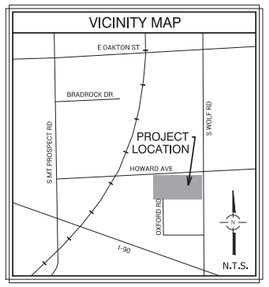
"ACCESS

# A.L.T.A. / N.S.P.S. LAND TITLE SURVEY




## LEGEND

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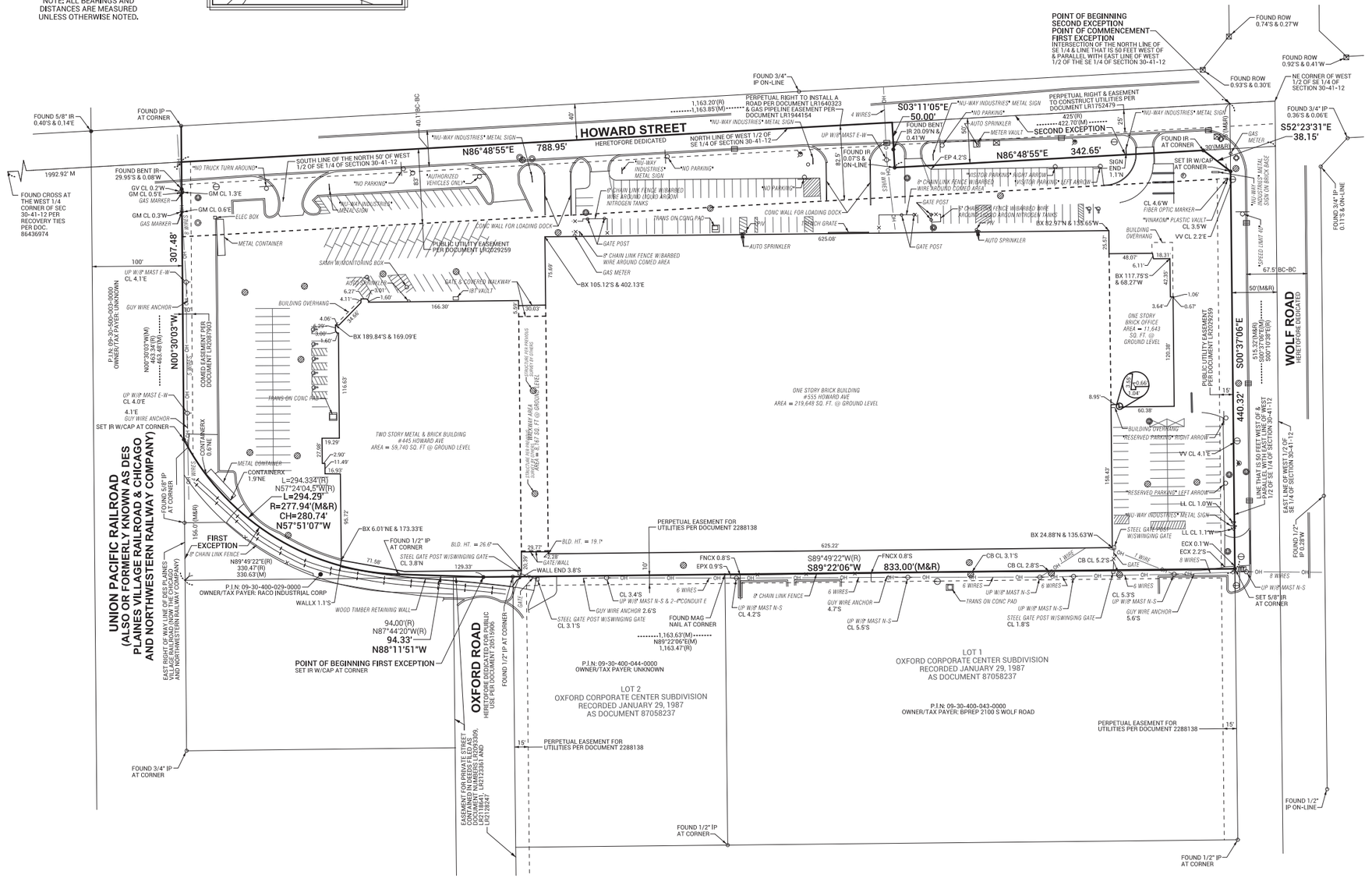
| STORM SEWER | SANITARY MANHOLE | STREET LIGHT | BC | BACK OF CURB |
| SANITARY SEWER | STORM MANHOLE | UTILITY POLE | BX | BUILDING CORNER |
| COMBINED SEWER | CATCH BASIN | TRAFFIC SIGNAL | CB | CATCH BASIN |
| WATER MAIN | INLET | TRAFFIC SIGNAL BOX | CL | CENTER |
| GAS MAIN | FLARED END SECTION | SPRINKLER RISER | CONTAINERX | CONTAINER CORNER |
| UNDERGROUND TELEPHONE LINE | ELECTRIC MANHOLE | BOLLARD | ECX | EDGE OF CONCRETE CORNER |
| UNDERGROUND ELECTRIC LINE | TELEPHONE MANHOLE | MAILBOX | EP | EDGE OF PAVEMENT |
| UNDERGROUND CATV LINE | TELEPHONE UPRIGHT | SIGN | EPX | EDGE OF PAVEMENT CORNER |
| OVERHEAD WIRES ON UTILITY POLES | ELECTRIC UPRIGHT | UNIDENTIFIED MANHOLE | FNCX | FENCE CORNER |
| FIBER OPTIC LINE | CABLE TV UPRIGHT | RIGHT-OF-WAY MONUMENT | GM | GAS MARKER |
| RAILROAD | FIRE HYDRANT | DISC | GV | GAS VALVE |
| WATER VALVE | VALVE AND VAULT | IRON / STEEL ROD | POST | POST INDICATOR VALVE |
| B BOX | IRON PIPE | IRON PIPE | SANMH | SANITARY MANHOLE |
| AUXILIARY VALVE | CUT CROSS | PK / MAG NAIL | UP | UTILITY POLE |
| WELL | PK / MAG NAIL | RAILROAD SPIKE | VV | VALVE VAULT |
| GAS VALVE | RAILROAD SPIKE | FLAG POLE | WALLX | WALL CORNER |
| WETLAND LIMITS | FLAG POLE | LANDSCAPE LIGHT | ASPHALT | |
| | LANDSCAPE LIGHT | | CONCRETE | |
| | | | GRAVEL | |




ZONING REPORT. (TABLE A ITEM 6A)

PZR REPORT

THE PLANNING & ZONING RESOURCE COMPANY
1300 South Meridian Avenue, Suite 400 • Oklahoma City, Oklahoma 73108
Telephone: (405) 840-4344 • Fax (405) 840-3608

### ZONING AND SITE REQUIREMENTS SUMMARY

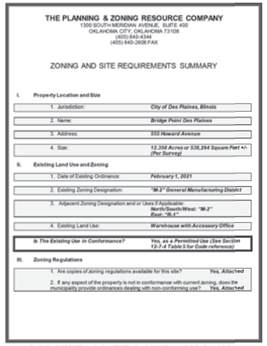
***PZR REPORT*® FOR:**
**BRIDGE POINT DES PLAINES**
**555 HOWARD AVENUE**
**DES PLAINES, COOK COUNTY, ILLINOIS**

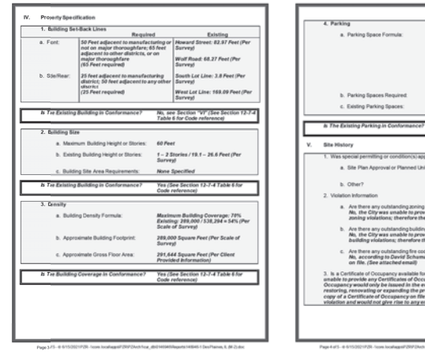
Prepared For:

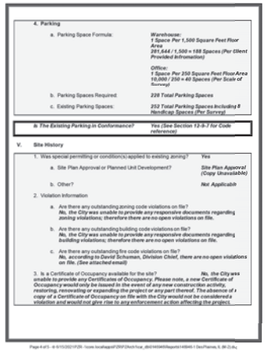
**ASSOCIATED BANK, NATIONAL ASSOCIATION**
**626 W. MONROE STREET, 24TH FLOOR**
**CHICAGO, IL 60661**
**ATTN: DANIEL BARRINS**

Date: Final (1) – 6/15/2021
PZR SITE NUMBER: 146946-1

NATIONAL PLANNING & ZONING CONSULTING SERVICE



NOTE: SEE SHEET 1 OF 2 FOR ADDITIONAL INFORMATION.

PREPARED FOR:
BRIDGE DEVELOPMENT PARTNERS
9525 W. BRYN MAWR AVENUE
SUITE 700
ROSEMONT, IL 60018

| REVISIONS: |
|---|
| 05/20/2021 COMMENTS |
| 05/26/2021 SHEET 2 |
| 06/21/2021 COMMENTS |
| |
| |
| |

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 05/06/2021
JOB NO: 11332
FILENAME: 11332ALTA-01
SHEET 2 OF 2

N:\Projects\11332\SURVEY\11332ALTA-01.dgn Sheet 2 User=cdaarte

APRIL 9, 2025

Bridge Point Des Plaines (555 Howard Ave.) – Project Narrative

Bridge Industrial is redeveloping the property located at 555 Howard Ave. The current buildings on the property are obsolete and will be demolished to accommodate a new, high-end, class A industrial building on the property.

Bridge will redevelop this property as a 225,600 SF speculative building that will house anywhere from one to five tenants. The property will feature all underground detention. Car parking will be on the north and east sides of the building contain 199 parking spaces. 18 trailer parking positions will be built on the west side of the building. 64 docks and the truck court will be on the south side of the building.

Thank you!

Sincerely,

*Douglas S. Klein*

Doug Klein | Director, Development
**Bridge Industrial**
O 630 423 7478 | C 630 803 2575
9525 W. Bryn Mawr Ave., Suite 700
Rosemont, IL 60018
dklein@bridgeindustrial.com

www.bridgeindustrial.com

August 6th, 2024

Jim Roggeman,
ARCO/Murray

WILL SERVE LETTER

Dear Mr. Jim,
This letter is in response to your request for information on the availability of AT&T services at proposed 555 Howard Ave, Des Plaines new Development.

This letter acknowledges that the above referenced project is in an area served by AT&T. Any service arrangements for this location will be subject to later discussions and agreements between the developer and AT&T. Please be advised that this letter is not a commitment by AT&T to provide service to proposed development at 555 Howard Ave, Des Plaines but an acknowledgement that we have service in this area.

Please contact me at the phone number included in this letter if you have any questions.

Thank you for contacting AT&T.

Sincerely,

**Kolade Fajimi (Engineer)**
**Mgr Osp Plng & Eng Design**
**ATO, Construction & Engineering-MW**

**AT&T**
**1000 Commerce Dr,**
**Oak Brook, IL 60523**
**M 847-226-7885** | kf129f@att.com

ComEd
1910 S. Briggs St
Joliet, IL 60433

August 6, 2024

**ATTN. Jim Roggeman**
**555 Howard Avenue, Des Plaines, IL 60018**

ComEd is the electric utility distribution company for your development at parcel 09-30-400-032-000 in Des Plaines, IL. ComEd will layout the design for your project upon receipt of completed site plans, load information, and advance engineering deposit. Additional utility easements may be required for the routing of ComEd power lines on your property. Charges may apply for any work, both on and off property, required to provide additional line capacity or new facilities, necessary to fulfill your power request. Please call ComEd's New Electric number at **866-639-3532** when you are ready to initiate the design process.

Please feel free to contact me at (779) 279-6899 if I may be of further assistance.

Sincerely,

Josh Zychal
Engineering Tech
Field Representative

Nicor Gas

August 2, 2024

Jim Roggeman
Arco Murray
3110 Woodcreek Dr
Downers Grove, IL 60515

This letter shall serve as Nicor Gas' intention and availability to serve the proposed new construction project located in 555 Howard Ave Des Plaines, IL 60018. Nicor Gas will provide 200' of gas **main** per new customer/meter and 60' of **service** line per new customer/meter at no cost. If your project exceeds these footages, we will determine the cost to you based on an economic evaluation of the project, as well as any unusual condition which may apply, i.e. directional boring charges, etc.

Nicor requires that you complete specified improvements and obtain private property rights before providing service. Curbing established, required sleeves installed at paved intersections and under all pavements for new commercial services.

Private property rights must be obtained, and any easements, rights-of-way and underground utility lines must be staked and clearly marked. All necessary permits need approved prior to all service & gas main installations.

If you have any questions, please feel free to contact me at 779-227-4011.

Best regards,

Jocelyn Hernandez
New Business Construction Consultant

**PUBLIC WORKS AND ENGINEERING DEPARTMENT**
1420 Miner Street
Des Plaines, IL 60016
P: 847.391.5390
desplaines.org

# MEMORANDUM

Date: April 11, 2025

To: Jonathan Stytz, Senior Planner

From: John La Berg, P.E., CFM, Civil engineer

Subject: 555 Howard Ave Subdivision

---

Public Works and Engineering has reviewed the final engineering plans and the EOPC for the above and has approved them as noted.

JL/jl

**KINDER MORGAN PIPELINE NOTIFICATION**

CONTRACTOR SHALL NOTIFY, MARK THORSON, DAMAGE PREVENTION SUPERVISOR, TO SCHEDULE COMPANY REPRESENTATIVES TO BE ON-SITE WHEN WORKING WITHIN THE KINDER MORGAN PIPELINE EASEMENT

EMAIL: mark_thorson@kindermorgan.com

**DEVELOPER**

BRIDGE POINT DES PLAINES, LLC
9525 W. BRYN MAWR AVENUE, SUITE 700
ROSEMONT, ILLINOIS 60018
PHONE: 312-683-7230

**ARCHITECT**

CORNERSTONE ARCHITECTS LTD.
1152 SPRING LAKE DRIVE
ITASCA, ILLINOIS 60143
PHONE: 312-917-6225

**CALL J.U.L.I.E. 1-800-892-0123**
**WITH THE FOLLOWING:**

COUNTY: COOK COUNTY
CITY, TOWNSHIP: DES PLAINES
SEC. & ¼ SEC. NO.: S30, TWP 41N, R12E

**48 HOURS BEFORE YOU DIG.**
**EXCLUDING SAT., SUN. & HOLIDAYS**

# FINAL SITE IMPROVEMENT PLANS
# for
# 555 HOWARD AVENUE

## DES PLAINES, COOK COUNTY, ILLINOIS

## PROJECT NO: 11332

Approved again JL 4-11-25

**BENCHMARK**

ELEVATION:

DESCRIPTION: SEE SHEET C3.0 FOR BENCHMARK INFORMATION

**NOTE:**

SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

IF YOU ARE CONSTRUCTING PUBLIC IMPROVEMENTS, INSPECTIONS ARE REQUIRED TO BE DONE BY PERSONNEL FROMTHE CITY OF DES PLAINES PUBLIC WORKS AND ENGINEERING DEPARTMENT. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE PUBLIC WORKS AND ENGINEERING DEPARTMENT AT 847-391-5390, TWO (2) WORKING DAYS IN ADVANCE OF ANY CONSTRUCTION OF PUBLIC IMPROVEMENTS TO ARRANGE FOR REQUIRED INSPECTION(S).

CITY STANDARDS SHALL SUPERSEDE ALL OTHERS. CONTACT ENGINEER OF RECORD FOR COORDINATION IF NECESSARY.

**MWRD JOB START NOTIFICATION**

CONTACT THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO 2 DAYS BEFORE STARTING WORK.

P: (708) 588-4055
E: WMOJOBSTART@MWRD.ORG

To the best of our knowledge and belief, the drainage of the surface waters will not be changed by the construction of this project or any part thereof, or, that if drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains approved for use by the Director of Public Works and Engineering, and that such surface waters are planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to adjoining properties because of the construction of this project.

To the best of our knowledge and belief there is no regulatory floodplain/floodway, no special flood hazard areas, riparian areas, or wetlands located on or within 100' of the project site. The project site was previously developed and graded.

LICENSED PROFESSIONAL ENGINEER — BRETT M. DUFFY — NO. 062-053198 — ILLINOIS

REGISTERED PROFESSIONAL ENGINEER

OWNER
BRIDGE POINT DES PLAINES, LLC
9525 W. BRYN MAWR AVENUE, SUITE 700
ROSEMONT, ILLINOIS 60018
PHONE: 312-683-7230

## REVISIONS

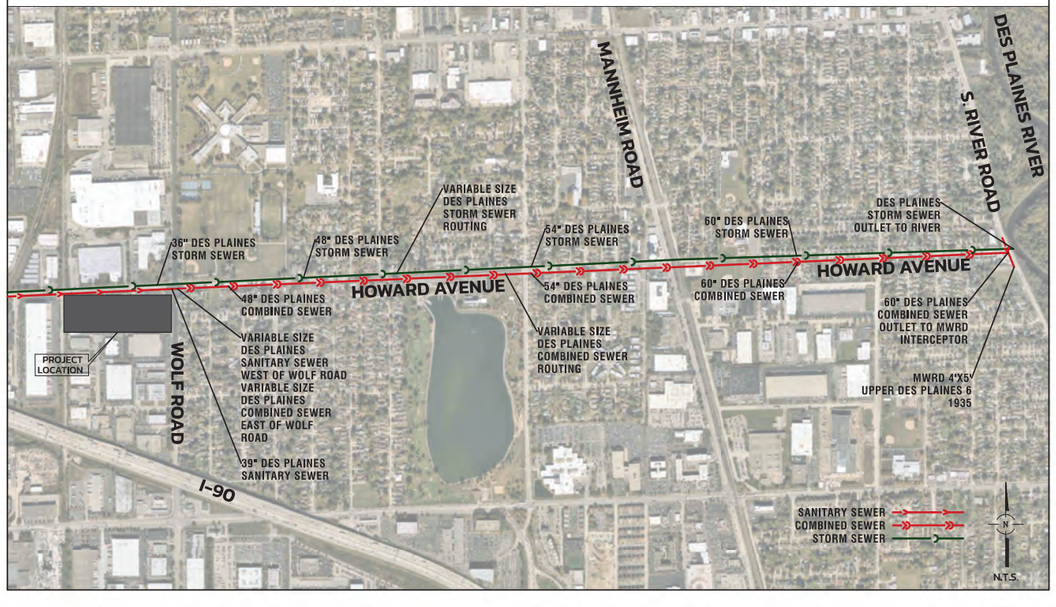
ORIGINAL PLAN DATE: DECEMBER 20, 2024

| # | SHEET # | REMARKS | DATE |
|---|---|---|---|
| 1 | 1,4,5,7,8,13-15 | DES PLAINES AND MWRD COMMENT | 02/14/25 |
| 2 | 4,8,11 | KINDER MORGAN COMMENT | 02/24/25 |
| 3 | 5-8,11,20 | OWNER BUILDING REVISIONS | 02/25/25 |
| 4 | 8 | KINDER MORGAN COMMENT | 03/05/25 |
| 5 | 6-8,11,17-20 | STORM STORAGE REVISIONS | 03/31/25 |

## INDEX


| SHEET # | SHEET I.D. | SHEET DESCRIPTION |
|---|---|---|
| 1 | C1.0 | COVER SHEET |
| 2 | C2.0 | TYPICAL SECTIONS & GENERAL NOTES |
| 3 | C3.0 | EXISTING CONDITIONS PLAN |
| 4 | C4.0 | DEMOLITION PLAN |
| 5 | C5.0 | GEOMETRIC PLAN |
| 6 | C6.0 | GRADING PLAN |
| 7 | C7.0 | UTILITY PLAN |
| 8 | C7.1 | UTILITY PROFILES |
| 9-11 | C8.0-C8.2 | SOIL EROSION AND SEDIMENT CONTROL PLANS |
| 12 | C9.0 | SPACECO SPECIFICATIONS |
| 13 | C9.1 | MWRD SPECIFICATIONS |
| 14-19 | C10.0-C10.5 | DETAILS |
| 20 | C11.0 | MWRD DRAINAGE AND OPERATIONS & MAINTENANCE EXHIBIT |
| 21-23 | C12.0-C12.2 | TRAFFIC SIGNAL MODIFICATION PLAN WOLF RD AND HOWARD ST |
| 24-25 | C13.0-C13.1 | ADA RAMP DETAILS |


## LOCATION & MWRD ROUTING MAP




ENGINEER
BRETT M. DUFFY, P.E.
ILLINOIS REGISTRATION NO.: 062-053198
EXPIRATION DATE: 11/30/2025

PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2025

03/31/2025
DATE

THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE, SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

LICENSED PROFESSIONAL ENGINEER — BRETT M. DUFFY — NO. 062-053198 — ILLINOIS

**555 HOWARD AVENUE**
**DES PLAINES, ILLINOIS**


Rosemont Office
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4060

Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com


FILENAME: 11332TITLE
DATE: 12/20/2024
JOB NO. 11332
SHEET C1.0 1 OF 25

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SOURCE BENCHMARK:
CITY OF DES PLAINES BENCHMARK SYSTEM
BENCHMARK NO. 34
MONUMENT SET IN CONCRETE AT SOUTHWEST CORNER OF HOWARD AVENUE AND THE C&NW RAILROAD 5'SOUTH OF EDGE OF PAVEMENT OF HOWARD AND 117' WEST OF RAILROAD TRACKS.
ELEVATION = 653.75 NAVD88

SITE BENCHMARK #1:
BOX CUT WITH CROSS AT THE SOUTHWEST CORNER OF A CONCRETE WATER METER WITH AUTO SPRKINLER +/-300' WEST OF THE NORTHEAST CORNER OF THE SURVEYED PROPERTY
ELEVATION = 652.04 NAVD88

SITE BENCHMARK #2:
ARROW BOLT OF FIRE HYDRANT +/-150 NORTH OF THE SOUTHEAST PROPERTY CORNER OF THE SURVEYED PROPERTY.
ELEVATION = 652.57 NAVD88

SITE BENCHMARK #3:
CUT BOX ON EAST SIDE OF CONCRETE LIGHT POLE BASE AT THE NORTHEAST CORNER OF OXFORD ROAD.
ELEVATION = 654.43 NAVD88

## LEGEND

| | | | | | |
|---|---|---|---|---|---|
| STORM SEWER | SANITARY MANHOLE | STREET LIGHT | BC | BACK OF CURB |
| SANITARY SEWER | STORM MANHOLE | UTILITY POLE | BX | BUILDING CORNER |
| COMBINED SEWER | CATCH BASIN | TRAFFIC SIGNAL | CB | CATCH BASIN |
| WATER MAIN | INLET | TRAFFIC SIGNAL BOX | CL | CENTER |
| GAS MAIN | FLARED END SECTION | SPRINKLER HEAD | CONTAINERX | CONTAINER CORNER |
| UNDERGROUND TELEPHONE LINE | ELECTRIC MANHOLE | BOLLARD | ECX | EDGE OF CONCRETE CORNER |
| UNDERGROUND ELECTRIC LINE | TELEPHONE MANHOLE | MAILBOX | EP | EDGE OF PAVEMENT |
| UNDERGROUND CATV LINE | TELEPHONE UPRIGHT | SIGN | EPX | EDGE OF PAVEMENT CORNER |
| OVERHEAD WIRE(S) ON UTILITY POLES | ELECTRIC UPRIGHT | UNIDENTIFIED MANHOLE | FNCX | FENCE CORNER |
| FIBER OPTIC LINE | CABLE TV UPRIGHT | RIGHT-OF-WAY MONUMENT | GM | GAS MARKER |
| RAILROAD | FIRE HYDRANT | DISC | GV | GAS VALVE |
| FENCE | VALVE AND VAULT | IRON / STEEL ROD | PM | POST INDICATOR VALVE |
| GUARDRAIL | WATER VALVE | IRON PIPE | SANH | SANITARY MANHOLE |
| EDGE OF WATER | B BOX | CUT CROSS | UP | UTILITY POLE |
| WETLAND LIMITS | AUXILIARY VALVE | PK / MAG NAIL | VV | VALVE VAULT |
| | WELL | RAILROAD SPIKE | WALLX | WALL CORNER |
| | GAS VALVE | FLAG POLE | | |
| | HAND HOLE | LANDSCAPE LIGHT | | ASPHALT |
| | | | | CONCRETE |
| | | | | GRAVEL |

SCALE 1" = 40'
0 40 80

SEE TRAFFIC SIGNAL MODIFICATION PLAN WOLF RD AND HOWARD ST THIS PLAN SET

CAUTION 36" EXISTING KINDER MORGAN HIGH PRESSURE GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE ALL DEMOLITION WITHIN EASEMENT WITH KINDER MORGAN

CAUTION 4" EXISTING NICOR GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE DEMOLITION WITH NICOR AS NECESSARY

83' PUBLIC UTILITY EASEMENT

82.5' ROAD AND GAS PIPELINE EASEMENT

40' PROPOSED R.O.W. DEDICATION

25' PERPETUAL RIGHT & EASEMENT FOR CONDUIT UTILITIES

CAUTION CAUTION 36" EXISTING KINDER MORGAN HIGH PRESSURE GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE ALL DEMOLITION WITHIN EASEMENT WITH KINDER MORGAN

CAUTION 4" EXISTING NICOR GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE DEMOLITION WITH NICOR AS NECESSARY

HOWARD AVENUE

S03°11'05"E 50.00'

N86°48'55"E 788.95'

N86°48'55"E 342.65'

S52°23'31"E 38.15'

307.48'

N00°36'03"W

10' COMED EASEMENT

15' PUBLIC UTILITY EASEMENT

440.32'

S00°37'06"E

WOLF ROAD

L=294.33'(R) N57°24'04.5"W(R) L=294.29' R=277.94'(M&R) CH=280.74' N57°51'07"W

S89°22'22"W(R) S89°22'06"W 833.00'(M&R)

94.00'(R) N87°44'20"W(R) 94.33' N88°11'51"W

EXISTING CONDITIONS PLAN

555 HOWARD AVENUE
DES PLAINES, ILLINOIS

| NO. | DATE | REMARKS |
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| NO. | DATE | REMARKS |
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Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com


FILENAME: 11332ET
DATE: 12/20/2024
JOB NO. 11332
SHEET C3.0
3 OF 25

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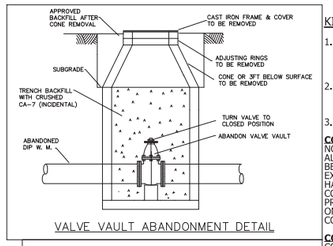
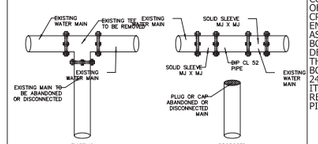



VALVE VAULT ABANDONMENT DETAIL




NOTES:
1. IF DISCONNECTED MAIN IS TO REMAIN LIVE, THE CAPPED END SHALL BE BRACED.
2. CONCRETE BLOCKING SHALL BE PLACED UNDER EACH JOINT TO PREVENT SETTLEMENT OF REPLACEMENT PIPE AREA.
3. REFER TO TRENCH BACKFILL DETAILS FOR BACKFILLING REQUIREMENTS.

WATER MAIN DISCONNECT DETAIL

## KINDER MORGAN PIPELINE NOTES:

1. CONTRACTOR SHALL NOTIFY, MARK THORSON, DAMAGE PREVENTION SUPERVISOR, TO SCHEDULE COMPANY REPRESENTATIVES TO BE ON-SITE WHEN WORKING WITHIN THE KINDER MORGAN PIPELINE EASEMENT EMAIL: MARK_THORSON@KINDERMORGAN.COM
2. CONTRACTOR SHALL SUBMIT KINDER MORGAN ENCROACHMENT INFORMATION FORM AS NECESSARY, AND AS REQUIRED BY UTILITY OWNER
3. NO BLASTING NEAR THE PIPELINE ALLOWED

**CONSTRUCTION NOTE FOR TRENCH OPEN CUT ACROSS PIPELINE:** NO MECHANICAL EQUIPMENT IS ALLOWED WITHIN 3 FT OF THE PIPELINE. ALL TRENCHING AROUND THE TOLERANCE ZONE AROUND PIPELINE SHALL BE APPROVED BY THE DAMAGE PREVENTION SUPERVISOR. ANY EXCAVATION WITHIN THE TOLERANCE ZONE SHALL BE BY HYDROVAC, HAND DIGGING, OR OTHER SOFT DIGGING TECHNIQUES. THE CONTRACTOR MUST REACH OUT TO THE KINDER MORGAN, INC. DAMAGE PREVENTION SUPERVISOR, TO ENSURE A COMPANY REPRESENTATIVE IS ON SITE DURING THE PROJECT, ANY SOIL REMOVED DURING CONSTRUCTION MAY NOT BE STORED WITHIN THE PIPELINE ROW.

**CONTRACTOR TO EXCAVATE VIEW PORTS FOR BORE / HDD DRILL** CONTRACTOR MUST HYDRO-EXCAVATE SLIT TRENCH / VIEW PIT, AT AN OFFSET DISTANCE OF 5 FEET FROM SIDE OF PIPE, FOR EACH PIPE CROSSING, FOR KINDER MORGAN DAMAGE PREVENTION INSPECTOR TO ENSURE THE BORE/DIRECTIONAL DRILL DOES NOT HIT THE SIDE OF PIPE AS WELL AS THE DEPTH OF THE BORE / HDD IS BEYOND 24 INCHES BELOW BOTTOM OF PIPE. THE DEPTH OF THE SLIT TRENCH / VIEW PIT MUST AT A DEPTH OF 24 INCHES (MIN.) BELOW BOTTOM OF PIPE. THE PURPOSE OF THE PIT IS FOR THE ONSITE INSPECTOR TO ENSURE THE DIRECTIONAL BORE DOES NOT ENTER THE SIDE OF PIPE AND IS NOT WITHIN THE 24-INCH TOLERANCE ZONE. THE BORE / HDD MUST BE AT A DEPTH THAT IT DOES NOT IMPEDE THE VIEW WITHIN THE PIT. (TYPICAL). ANY SOIL REMOVED DURING CONSTRUCTION MAY NOT BE STORED WITHIN THE PIPELINE ROW.

## NOTES:

1. COOK COUNTY EPA PERMIT (OR WAIVER OF PERMIT) MAY BE REQUIRED. THIS IS A PROPERTY OWNER'S RESPONSIBILITY TO PURSUE, AND COULD RESULT IN SUBSTANTIAL PENALTIES FROM COOK COUNTY IF NOT ACQUIRED. THE CITY OF DES PLAINES IS NOT RESPONSIBLE FOR A PROPERTY OWNER'S FAILURE TO COMPLY WITH THIS REQUIREMENT. MORE INFORMATION IS AVAILABLE AT: http://www.epa.gov/oar/oaqps/permits/
2. CUT-OFF FROM CITY WATER SERVICES (WITH PAYMENT OF $350 FEE), CONTACT PUBLIC WORKS TO REQUEST WATER METER, WATER SERVICE, AND SEWER CUT-OFF AT 847-391-5466

   WATER SERVICES SHALL BE REMOVED AT THE MAIN BY REMOVING THE TEE PIPE SECTION. REASSEMBLE MAINLINE PIPE USING A NEW D.I.P. PIPE ( +/-10 FEET LONG + CL 52 OR APPROVED EQUAL) AND MEGA-LUG FITTINGS. REMOVE VALVE & BOX.

   THE CONTRACTOR SHALL COORDINATE SHUTDOWN OF THE WATERMAIN WITH DES PLAINES PUBLIC WORKS AND ENGINEERING AS NECESSARY
3. REMOVAL/ABANDONMENT OF DRY UTILITY SERVICES (ELECTRIC, GAS, TELEPHONE,CABLE) ARE TO BE COORDINATED WITH UTILITY COMPANIES PRIOR TO DEMOLITION. CONTRACTOR TO OBTAIN VERIFICATION IN WRITING FROM ALL UTILITIES:
   COMED 1-800-EDISON-1
   NICOR 1-800-7306514 X7771
   AT&T 1-847-759-5595
4. ALL SITES SHALL BE COMPLETELY ENCLOSED BY CONSTRUCTION FENCING UNTIL DEMOLITION IS COMPLETE. (RESIDENTIAL SITES 4 FOOT HIGH, COMMERCIAL SITES 6 FOOT HIGH CHAIN LINK.) CONSTRUCTION FENCE SHOWN FOR COORDINATION PURPOSES CONTRACTOR SHALL LOCATE AS NECESSARY FOR PHASING, ACCESS, ETC AND IN ACCORDANCE WITH DES PLAINES REQUIREMENTS
5. SILT FENCE SHOWN FOR COORDINATION AND SHALL BE LOCATED AS NECESSARY IN THE FIELD IN ACCORDANCE WITH NPDES SESC REQUIREMENTS
6. FOUNDATION SHALL BE REMOVED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CRUSHED ON-SITE AS APPLICABLE
7. BEFORE FINAL INSPECTION, ALL LOTS SHALL BE RESTORED TO APPROVED NATURAL GRADES, PLANTED WITH APPROVED GRASSES AND MAINTAINED IN ACCORDANCE WITH ADOPTED PROPERTY MAINTENANCE CODES. (EXCEPTION: WHEN CONSTRUCTION PERMITS ARE APPROVED AND NEW CONSTRUCTION WORK WILL START WITHIN 30 DAYS OF COMPLETION OF DEMOLITION.)
8. A REFUNDABLE CASH BOND WILL BE REQUIRED IN AN AMOUNT SUFFICIENT TO RESTORE GRADE AN PLANT GRASSES (MINIMUM $5,000.000). REFUND WILL BE PROCESSED ONLY AFTER FINAL INSPECTION IS APPROVED.
9. CAP/REMOVAL OF ANY WELL OR SEPTIC FIELD, INCLUDING DISPOSAL IN AN APPROVED MANNER, WITH A CERTIFICATE OF COMPLIANCE WITHIN TEN (10) DAYS OF SUCH ACTION.
10. 2' LONG NON-SHRINK CONCRETE/MORTAR PLUGS ARE REQUIRED AT MANHOLES AND STUBS WHERE SEWERS ARE REMOVED OR ABANDONED
11. CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION OF ALL ON-SITE UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICTS
12. DAMAGED PUBLIC SIDEWALK SQUARES SHALL BE REMOVED AND REPLACED FROM JOINT TO JOINT WITH 5" P.C.C. ON 4" AGGREGATE
13. ALL EXISTING ON-SITE TREES AND LANDSCAPING SHALL BE DEMOLISHED
14. ALL EXISTING ON-SITE SIGNAGE SHALL BE DEMOLISHED
15. ALL EXISTING ON-SITE BUILDINGS AND PAVEMENT ARE PROPOSED TO BE DEMOLISHED
16. PROPOSED PAVEMENT REMOVAL AND UTILITY REMOVAL IN THE R.O.W. SHALL BE RESTORED WITH TOPSOIL AND SEED OR IN ACCORDANCE WITH DES PLAINES REQUIREMENTS
17. CONTRACTOR TO DISPOSE OF OR STOCKPILE DEMOLISHED MATERIAL AS NECESSARY AND IN ACCORDANCE WITH DES PLAINES REQUIREMENTS
18. DEMOLITION PLAN TO BE USED AS A GUIDE. CONTRACTOR SHALL LOCATE AND DETERMINE EXISTING FIELD CONDITIONS AT TIME OF CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES
19. ALL DEMOLITION WORK WITHIN THE PIPELINE EASEMENT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS SET FORTH BY KINDER MORGAN AND/OR ITS REPRESENTATIVES.
20. ALL WATERMAIN, SANITARY, AND STORM SEWER SERVICES WITHIN THE KINDER MORGAN PIPELINE EASEMENT, AND THE R.O.W. THAT ARE PROPOSED TO BE DEMOLISHED SHALL BE ABANDONED AND FILLED WITH FLOWABLE FILL

## DEMOLITION LEGEND

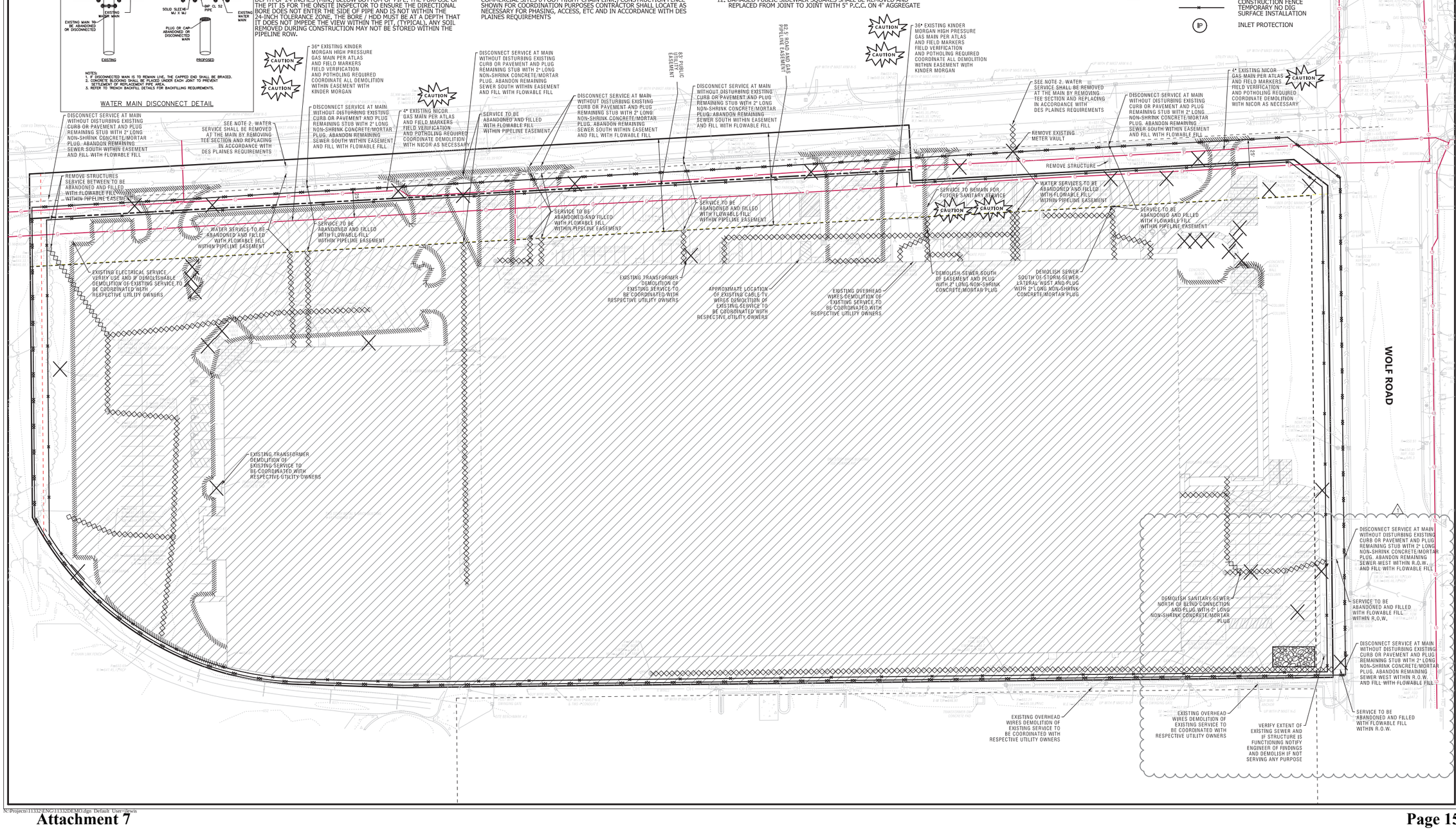
- CURB AND GUTTER AND RETAINING WALLS TO BE REMOVED
- UNDERGROUND UTILITY REMOVAL
- BUILDING/SIDEWALK REMOVAL
- SURFACE FEATURE REMOVAL

## SOIL EROSION CONTROL SYMBOL LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- CONSTRUCTION FENCE TEMPORARY NO DIG SURFACE INSTALLATION
- INLET PROTECTION

N

SCALE 1" = 40'
0 40 80




| NO. | DATE | REMARKS |
|---|---|---|
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## KINDER MORGAN PIPELINE NOTES:

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## NOTES:

1. ALL DIMENSIONS ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURBS AND GUTTERS ARE REVERSED PITCH (PITCH-OUT) B6-12 CURB AND GUTTER UNLESS OTHERWISE NOTED.
3. SEE SHEET C2.0 FOR PAVEMENT SECTION DETAILS.
4. ALL PAVEMENT MARKINGS SHALL BE PAINT AND COLOR SHALL MATCH MUNICIPAL REQUIREMENTS AND/OR INDUSTRY STANDARDS.
5. ALL ACCESSIBLE PARKING SPACES AND SIGNAGE SHALL CONFORM TO ILLINOIS ACCESSIBILITY CODE.
6. SEE ARCHITECTURAL DRAWINGS FOR DESIGN AND DETAILS OF THE BUILDINGS
7. SEE MEP DRAWINGS FOR DESIGN AND DETAILS OF THE LIGHTING, CIRCUITRY, PHOTOMETRICS, PLUMBING, ETC.
8. SEE LANDSCAPE DRAWINGS FOR DESIGN AND DETAILS OF LANDSCAPE DESIGN
9. CONTRACTOR SHALL REMOVE AND REPLACE PAVEMENT WITHIN THE R.O.W. AND EXISTING ROADWAYS AS NECESSARY FOR CURB AND UTILITY INSTALLATION. MATCH EXISTING PAVEMENT SECTION AS NECESSARY FOR PATCHING
10. ALL CURB AND GUTTER PROPOSED TO BE REMOVED AND REPLACED ALONG HOWARD AVENUE SHALL BE INSTALLED WITH A 3' EDGE GRIND AND OVERLAY

## SIGN LEGEND:

1 STOP — R1-1 30" x 30"

2 RESERVED PARKING — R7-8 (R1-7 VAN ACCESSIBLE, R1-8 FINE)

NOTE: 1/2 INDICATES SIGN 1 MOUNTED ABOVE SIGN 2

## PARKING COUNT

| | |
|---|---|
| 64 | = PROPOSED EXTERNAL DOCKS |
| 19 | = PROPOSED TRUCK STALLS |
| 2 | = PROPOSED DRIVE IN DOORS |
| 187 | = PROPOSED STANDARD AUTO STALLS |
| 6 | = PROPOSED ADA AUTO STALLS |
| 193 | = TOTAL AUTO STALLS PROVIDED |
| 155 | = TOTAL AUTO STALLS REQUIRED (1/1,500 S.F. WAREHOUSE) |

## LEGEND

- LIGHT DUTY PAVEMENT
- HEAVY DUTY PAVEMENT
- FULL DEPTH PAVEMENT REPLACEMENT (MATCH EX.)
- CONCRETE PAVEMENT OR APRON
- CONCRETE SIDEWALK
- CONCRETE SIDEWALK HC RAMP (5' WIDE UNLESS NOTED)
- STANDARD PITCH B6-12 CURB & GUTTER (PITCH-IN)
- REVERSE PITCH B6-12 CURB & GUTTER (PITCH-OUT)
- DEPRESSED B6-12 CURB & GUTTER

SCALE 1" = 40'
0 40 80

SEE TRAFFIC SIGNAL MODIFICATION PLAN WOLF RD AND HOWARD ST THIS PLAN SET

HOWARD AVENUE

WOLF ROAD

PROPOSED BUILDING
225,606 S.F.

| NO. | DATE | REMARKS |
|---|---|---|
| | | |
| | | |
| | | |
| 3 | 02/25/25 | OWNER BUILDING REVISIONS |
| 2 | 02/14/25 | DES PLAINES AND NWRD |
| 1 | | |
| NO. | DATE | REMARKS |

# GEOMETRIC PLAN

# 555 HOWARD AVENUE
## DES PLAINES, ILLINOIS


Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com


FILENAME: 11332GM
DATE: 12/20/2024
JOB NO. 11332
SHEET C5.0
5 OF 25

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## KINDER MORGAN PIPELINE NOTES:

1. CONTRACTOR SHALL NOTIFY, MARK THORSON, DAMAGE PREVENTION SUPERVISOR, TO SCHEDULE COMPANY REPRESENTATIVES TO BE ON-SITE WHEN WORKING WITHIN THE KINDER MORGAN PIPELINE EASEMENT EMAIL: MARK_THORSON@KINDERMORGAN.COM
2. CONTRACTOR SHALL SUBMIT KINDER MORGAN ENCROACHMENT INFORMATION FORM AS NECESSARY, AND AS REQUIRED BY UTILITY OWNER
3. NO BLASTING NEAR THE PIPELINE ALLOWED

**CONSTRUCTION NOTE FOR TRENCH OPEN CUT ACROSS PIPELINE:** NO MECHANICAL EQUIPMENT IS ALLOWED WITHIN 3 FT OF THE PIPELINE. ALL TRENCHING AROUND THE TOLERANCE ZONE AROUND PIPELINE SHALL BE APPROVED BY THE DAMAGE PREVENTION SUPERVISOR. ANY EXCAVATION WITHIN THE TOLERANCE ZONE SHALL BE BY HYDROVAC, HAND DIGGING, OR OTHER SOFT DIGGING TECHNIQUES. THE CONTRACTOR MUST REACH OUT TO THE KINDER MORGAN, INC. DAMAGE PREVENTION SUPERVISOR, TO ENSURE A COMPANY REPRESENTATIVE IS ON SITE DURING THE PROJECT. ANY SOIL REMOVED DURING CONSTRUCTION MAY NOT BE STORED WITHIN THE PIPELINE ROW.

**CONTRACTOR TO EXCAVATE VIEW PORTS FOR BORE / HDD DRILL** CONTRACTOR MUST HYDRO-EXCAVATE SLIT TRENCH / VIEW PIT, AT AN OFFSET DISTANCE OF 5 FEET FROM SIDE OF PIPE, FOR EACH PIPE CROSSING, FOR KINDER MORGAN DAMAGE PREVENTION INSPECTOR TO ENSURE THE BORE/DIRECTIONAL DRILL DOES NOT HIT THE SIDE OF PIPE AS WELL AS THE DEPTH OF THE BORE / HDD IS BEYOND 24 INCHES BELOW BOTTOM OF PIPE. THE DEPTH OF THE SLIT TRENCH / VIEW PIT MUST AT A DEPTH OF 24 INCHES (MIN.) BELOW BOTTOM OF PIPE. THE PURPOSE OF THE PIT IS FOR THE ONSITE INSPECTOR TO ENSURE THE DIRECTIONAL BORE DOES NOT ENTER THE SIDE OF PIPE AND IS NOT WITHIN THE 24-INCH TOLERANCE ZONE. THE BORE / HDD MUST BE AT A DEPTH THAT IT DOES NOT IMPEDE THE VIEW WITHIN THE PIT, (TYPICAL). ANY SOIL REMOVED DURING CONSTRUCTION MAY NOT BE STORED WITHIN THE PIPELINE ROW.

## NOTES:

1. SEE SHEET GM FOR STANDARD/REVERSE PITCH CURB LOCATIONS
2. ALL SPOT GRADES ALONG CURB LINE ARE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
3. ALL CURB AND GUTTER IS B-6.12 UNLESS NOTED OTHERWISE
4. ADA STALLS SHALL HAVE A MAXIMUM SLOPE OF 2.0% AS MEASURED IN ANY DIRECTION
5. ELEVATIONS SHOWN AS XXX.XX± SHALL MEET THE EXISTING GRADE. CONTRACTOR SHALL FIELD VERIFY ELEVATION PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF DISCREPANCIES

## LEGEND

| | |
|---|---|
| FF | FINISHED FLOOR |
| | DRAINAGE DIRECTION |
| x 615.30 | FINISHED GRADE |
| x 615.30± | EXISTING/MATCH EXISTING GRADE |
| 618 | EXISTING CONTOURS |
| 616 | PROPOSED CONTOURS |

N

SCALE 1" = 40'

0 40 80

CAUTION 36" EXISTING KINDER MORGAN HIGH PRESSURE GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE ALL DEMOLITION WITHIN EASEMENT WITH KINDER MORGAN

CAUTION 4" EXISTING NICOR GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE DEMOLITION WITH NICOR AS NECESSARY

83' PUBLIC UTILITY EASEMENT

25± ROAD AND GAS PIPELINE EASEMENT

40' PROPOSED R.O.W. DEDICATION

25± PERPETUAL RIGHT & EASEMENT FOR UTILITIES

HOWARD AVENUE

PROPOSED BUILDING FF=655.00

WOLF ROAD

SEE TRAFFIC SIGNAL MODIFICATION PLAN WOLF RD AND HOWARD ST THIS PLAN SET

ADJUST RIM

| NO. | DATE | REMARKS |
|---|---|---|
| 5 | 03/31/25 | STORM STORAGE REVISIONS |
| 3 | 02/25/25 | OWNER BUILDING REVISIONS |

# GRADING PLAN

# 555 HOWARD AVENUE
## DES PLAINES, ILLINOIS


Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com


FILENAME: 11332GR

DATE: 12/20/2024

JOB NO. 11332

SHEET C6.0
6 OF 25

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*NOTE:
MWRDGC AND THE VILLAGE ENGINEER MUST BE NOTIFIED A MINIMUM OF 2 DAYS IN ADVANCE OF WORK SO THEY CAN BE PRESENT FOR INSPECTIONS. SAME APPLIES FOR INSPECTION OF UNDERGROUND DETENTION.

*NOTE:
SEE SHEET C7.1 FOR PROFILES OF THE EXISTING 36" KINDER MORGAN PIPELINE, AND ALL PROPOSED UTILITIES CROSSING THE PIPELINE AND PIPELINE EASEMENT

NOTES:

1. ALL STORM SEWERS SHALL BE RCP CL-IV WITH C-361 JOINTS UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWERS SHALL BE PVC SDR 26 UNLESS NOTED OTHERWISE.

   ANY PUBLIC SEWER CONSTRUCTION SHALL NOT COMMENCE UNTIL THE APPROVED MWRD PERMIT IS ON FILE IN THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS.
3. ALL WATER MAINS SHALL BE D.I.P.-CLASS 52 WITH CEMENT MORTAR LINING WITH POLYETHELENE ENCASEMENT (OR APPROVED EQUAL) UNLESS NOTED OTHERWISE. MEGALUGS AND THRUST BLOCKS ARE REQUIRED FOR ALL WATERMAIN FITTINGS. ANY PUBLIC WATERMAIN SHALL BE POLYBAGGED AND ITS CONSTRUCTION SHALL NOT COMMENCE UNTIL THE APPROVED IEPA PERMIT IS ON FILE IN THE PUBLIC WORKS AND ENGINEERING DEPARTMENT.

   INSTALLED WATERMAINS SHALL BE PRESSURE TESTED AND CHLORINATED PER IEPA PERMIT AND CITY STANDARDS
4. »»»»»»»»»» INDICATES TRENCH BACKFILL REQUIRED.

   ALL TRENCH BACKFILL IN PUBLIC RIGHT OF WAY WILL BE FLOWABLE FILL
5. FRAME AND GRATE/LID FOR STORM SEWER STRUCTURES

   1C - MANHOLE-NEENAH R-2504-C FRAME WITH TYPE "B" CLOSED LID
   1P - INLET, CATCH BASIN-NEENAH R-2594-C WITH TYPE "G" GRATE
   1G - INLET, CATCH BASIN-NEENAH R-4340-B BEEHIVE LID
6. ELEVATIONS SHOWN AS XXX.XX± OR M/E SHALL MEET EXISTING GRADE. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
7. DESIGN OF WIRING AND CIRCUITRY OF LIGHTING WILL BE BY OTHERS.
8. ALL RESTRAINED WATER MAIN JOINTS SHALL BE U.S. PIPE "FIELD LOK" GASKET OR APPROVED EQUAL.
9. CONTRACTOR SHALL COORDINATE FINAL UTILITY SERVICE LOCATIONS, SIZES AND INVERT ELEVATION WITH MEP PLAN PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES
10. A MINIMUM OF TEN (10) FEET CLEAR HORIZONTAL SEPARATION IS REQUIRED BETWEEN SEWERS AND WATERMAIN IN ACCORDANCE WITH IEPA REQUIREMENTS. SEPARATION IS MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE. CONTRACTOR TO FIELD VERIFY PRIOR TO INSTALLATION.
11. RUBBER BOOTS CONFORMING TO ASTM C-923, SHALL BE PROVIDED FOR ALL CONNECTION BETWEEN SANITARY SEWERS AND MANHOLES, FOR ALL CONNECTION BETWEEN COMBINED SEWERS AND MANHOLES THAT ARE TRIBUTARY TO THE DISTRICTS COLLECTION SYSTEM

KINDER MORGAN PIPELINE NOTES:

1. CONTRACTOR SHALL NOTIFY, MARK THORSON, DAMAGE PREVENTION SUPERVISOR, TO SCHEDULE COMPANY REPRESENTATIVES TO BE ON-SITE WHEN WORKING WITHIN THE KINDER MORGAN PIPELINE EASEMENT EMAIL: MARK_THORSON@KINDERMORGAN.COM
2. CONTRACTOR SHALL SUBMIT KINDER MORGAN ENCROACHMENT INFORMATION FORM AS NECESSARY, AND AS REQUIRED BY UTILITY OWNER
3. NO BLASTING NEAR THE PIPELINE ALLOWED

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**CONTRACTOR TO EXCAVATE VIEW PORTS FOR BORE / HDD DRILL**
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LEGEND
- STORM SEWER
- WATERMAIN
- SANITARY SEWER
- UNDERGROUND STORM VAULT BOUNDARY

STORM STRUCTURE LEGEND
- STRUCTURE ABBREVIATION
- STRUCTURE NUMBER
- FRAME AND LID TYPE
- DIAMETER & SIZE OF STRUCTURE
- TYPE OF STRUCTURE

STORM STRUCTURE ABBREVIATIONS
I = INLET
CB = CATCH BASIN
M = MANHOLE
E = FLARED END SECTION
OCS = OUTLET CONTROL STRUCTURE

SCALE 1" = 40'
0 40 80

HOWARD AVENUE
WOLF ROAD
PROPOSED BUILDING FF=655.00
SEE TRAFFIC SIGNAL MODIFICATION PLAN WOLF RD AND HOWARD ST THIS PLAN SET
EXISTING SANITARY SEWER INSTALLED PER PERMIT 1961-0167, APPROXIMATELY 44' OF EXISTING 15" CLAY SANITARY SEWER. TELEVISE EXISTING LINE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF FINDINGS
POLYLINE EXISTING SEWER
CONSTRUCT NEW SERVICE SOUTH - ADJUST RIM R=654.40 I=641.88 N= I=641.88 C-923 BOOT REQUIRED
CONSTRUCT MANHOLE OVER EXISTING STORM SEWER M-100 A5D.1C R=654.70 I= 640.35± E,W I=632.60 S (SIPHON CONDITION)
M-101 A5D.1C R=653.85 I=640.85 S I=632.70 N SIPHON STRUCTURE
36" EXISTING KINDER MORGAN HIGH PRESSURE GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE ALL DEMOLITION WITH EASEMENT WITH KINDER MORGAN
4" EXISTING NICOR GAS MAIN PER ATLAS AND FIELD MARKERS FIELD VERIFICATION AND POTHOLING REQUIRED COORDINATE DEMOLITION WITH NICOR AS NECESSARY
83' PUBLIC UTILITY EASEMENT
82.5' ROAD RIGHT OF WAY DEDICATION
40' PROPOSED R.O.W. DEDICATION
26' PERPETUAL RIGHT & EASEMENT FOR UTILITIES
TWO SETS OF BLUE PAINT WERE ENCOUNTERED DURING SURVEY VERIFY IF NORTH WATERMAIN EXISTS
EXISTING HYDRANT
PC-1 8"X12" R=654.80
PC-2 10"X12" R=653.00
CB-246 A4D.1P R=653.90 I=649.70 S I=649.95
CB-244 A4D.1P R=653.80 I=649.20 W I=648.90 S
CB-242 A4D.1P R=653.90 I=649.70 S I=648.80 W I=648.60 E
CB-240 A5P.1P R=653.70 I=648.20 W I=648.00 E
CB-238 A5P.1P R=653.60 I=649.40 S I=647.80 W I=647.60 E
CB-236 A4D.1P R=653.60 I=647.40
CB-234 A6D.1P R=653.60 I=649.40 S I=647.10 W I=646.70 E
CB-233 A6D.1P R=653.60 I=646.65
CB-232 A6D.1P I=646.55
CB-230 A5D.1P R=653.00 I=646.40
CB-228 A5D.1P R=653.00 I=646.25
CB-226 A5D.1P R=651.00 I=645.20
CB-224 A6D.1P R=651.00 I=645.15
CB-222 A5D.1P R=649.70 I=645.50 N I=643.80 E W
CB-220 A2D.1P R=649.70
CB-218 A2D.1P R=649.70
CB-216 A2D.1P R=649.70
CB-214 A2D.1P R=649.70
CB-212 A2D.1P R=649.70
CB-210 A2D.1P R=649.70
CB-208 A2D.1P R=649.70
CB-206 A2D.1P R=649.70
CB-204 A5D.1P R=649.70 I=642.46 E I=642.00 W
CB-202 A5D.1P R=649.70 I=645.50 N I=641.66 E W
CB-200 A7D.1P R=650.60 I=641.29
CB-304 A4D.1G @0.14% R=651.50 I=647.30
CB-302 A4D.1P I=647.45
CB-402 A6D.1P R=651.45 I=647.25
CB-502 A6D.1P R=651.45 I=647.25
CB-106 A4D.1P R=653.90 I=648.00
CB-108 A4D.1P R=653.90 I=649.70 S I=648.70 E I=648.50 W
CB-110 A4D.1P R=653.90 I=649.70
M-102 A4D.1C R=653.90 I=646.20
M-104 A4D.1C R=654.45 I=649.70 S I=647.55 E I=647.40 W
INSPECTION MANHOLE S-1 R=654.40 I=644.65
FIRE DEPARTMENT CONNECTION SEE PLANS BY MEP FOR COORDINATION
ELECTRIC ROOM
PLUMBING ROOM
HEAVY DUTY CLEANOUT SEE DETAIL SHEETS R=653.80 I=642.00
24" ACCESS FRAME AND LID 1C R=652.90
10' COMED EASEMENT
OCS STRUCTURE A6D.1C R=653.10 I=642.00 S I=642.00 UNDERDRAIN I=641.00 RESTRICTOR I=640.80 N SEE DETAIL ON THE MWRD DRAINAGE AND OPERATIONS & MAINTENANCE EXHIBIT
WEST VAULT HWL=648.50' NWL=642.00' SYSTEM INVERT=641.00' 7'6" SINGLE TRAP STORMTRAP
SOUTH VAULT HWL=647.50' NWL=642.49' SYSTEM INVERT=641.00' 6'6" SINGLE TRAP STORMTRAP
ROOF DRAIN CONNECTION COORDINATE WITH M.E.P. PLANS AND NOTIFY ENGINEER OF DISCREPANCIES I=650.00
ROOF DRAIN CONNECTION COORDINATE WITH M.E.P. PLANS AND NOTIFY ENGINEER OF DISCREPANCIES I=646.00
ROOF DRAIN CONNECTION COORDINATE WITH M.E.P. PLANS AND NOTIFY ENGINEER OF DISCREPANCIES I=650.00
742' 4" UNDERDRAIN @ 0.00%
260' 4" UNDERDRAIN @ 0.00%
15' PUBLIC UTILITY EASEMENT
CROSSING WITH EXISTING FIBER UTILITY, LOCATE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF CONFLICTS
ADJUST RIM R=651.30
IF POSSIBLE ROTATE RIM OUT OF SIDEWALK
FH-1 GR=654.20
FH-2 GR=652.30
FH-3 GR=654.65
FH-4 GR=652.30
FH-5 GR=652.30
FH-6 GR=652.50
FH-7 GR=652.30

| NO. | DATE | REMARKS |
|---|---|---|
| 5 | 03/31/25 | STORM STORAGE REVISIONS |
| 3 | 02/25/25 | OWNER BUILDING REVISIONS |
| 1 | 02/14/25 | DES PLAINES AND NWRD |
| NO. | DATE | REMARKS |

UTILITY PLAN

555 HOWARD AVENUE
DES PLAINES, ILLINOIS

Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com

FILENAME: 11332UT
DATE: 12/20/2024
JOB NO. 11332
SHEET C7.0
7 OF 25

## KINDER MORGAN PIPELINE NOTES:

1. CONTRACTOR SHALL NOTIFY, MARK THORSON, DAMAGE PREVENTION SUPERVISOR, TO SCHEDULE COMPANY REPRESENTATIVES TO BE ON-SITE WHEN WORKING WITHIN THE KINDER MORGAN PIPELINE EASEMENT EMAIL: MARK_THORSON@KINDERMORGAN.COM

2. CONTRACTOR SHALL SUBMIT KINDER MORGAN ENCROACHMENT INFORMATION FORM AS NECESSARY, AND AS REQUIRED BY UTILITY OWNER

3. NO BLASTING NEAR THE PIPELINE ALLOWED

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## EROSION CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL.
4. CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PUBLIC ROADWAYS CLEAN AND FREE OF DIRT AND DEBRIS AT ALL TIMES.
5. ADDITIONAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IF A SWPPP INSPECTION OF THE SITE INDICATES A DEFICIENCY.
6. ALL CONSTRUCTION TRAFFIC TO AND FROM THE SITE SHALL BE RESTRICTED TO THE STABILIZED CONSTRUCTION ENTRANCE.
7. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED AS NECESSARY TO PERFORM AS INTENDED.
8. MAJOR AMENDMENTS TO THE SITE DEVELOPMENT AND EROSION CONTROL PLANS SHALL BE SUBMITTED TO THE DEPARTMENT OF COMMUNITY DEVELOPMENT TO BE APPROVED IN THE SAME MANNER AS THE ORIGINAL PLANS.
9. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORK DAY AND TRANSPORTED TO A CONTROLLED SEDIMENT AREA.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED WITH PERMANENT SOIL STABILIZATION MEASURES. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 7 CALENDAR DAYS FOLLOWING THE END OF ACTIVE DISTURBANCE OR RE-DISTURBANCE.
11. IF DE-WATERING DEVICES ARE USED DURING CONSTRUCTION, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM SOIL EROSION. ALL PUMPED DISCHARGES SHALL BE ROUTED THROUGH APPROPRIATELY DESIGNED SEDIMENT TRAPS OR BASINS.
12. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN THREE DAYS, THEN SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PROVIDED FOR SUCH A STOCKPILE.
13. SEEDING SPECIFICATION TO FOLLOW LANDSCAPING PLANS.
14. ALL SEDIMENT TRAPS ARE DESIGNED FOR A 1 YEAR - 24 HOUR STORM EVENT.
15. THIS PLAN IS TO BE USED AS A GUIDE ONLY. CONTRACTOR SHALL LOCATE ITEMS IN FIELD AS NECESSARY.
16. EROSION CONTROL BLANKET AT A MINIMUM SHALL BE INSTALLED IN ALL AREAS WITH SLOPES OF 6:1 OR STEEPER
17. ALL TREES WITHIN THE LIMITS OF DISTURBANCE ARE ASSUMED TO BE REMOVED. SEE PLANS BY LANDSCAPE ARCHITECT.
18. CONTRACTOR SHALL COORDINATE STABILIZATION WITH LANDSCAPE PLANS FOR FINAL LOCATIONS AND REQUIREMENTS
19. NORTH AMERICAN GREEN S-75 EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL FINISHED AREAS WHERE SLOPE IS GREATER THAN 6:1 AND AT ALL ADDITIONAL LOCATIONS INDICATED ON THE PLAN
20. ON-SITE GREENSPACE SHALL BE FINISHED WITH 6" TOPSOIL, SEED AND BLANKET

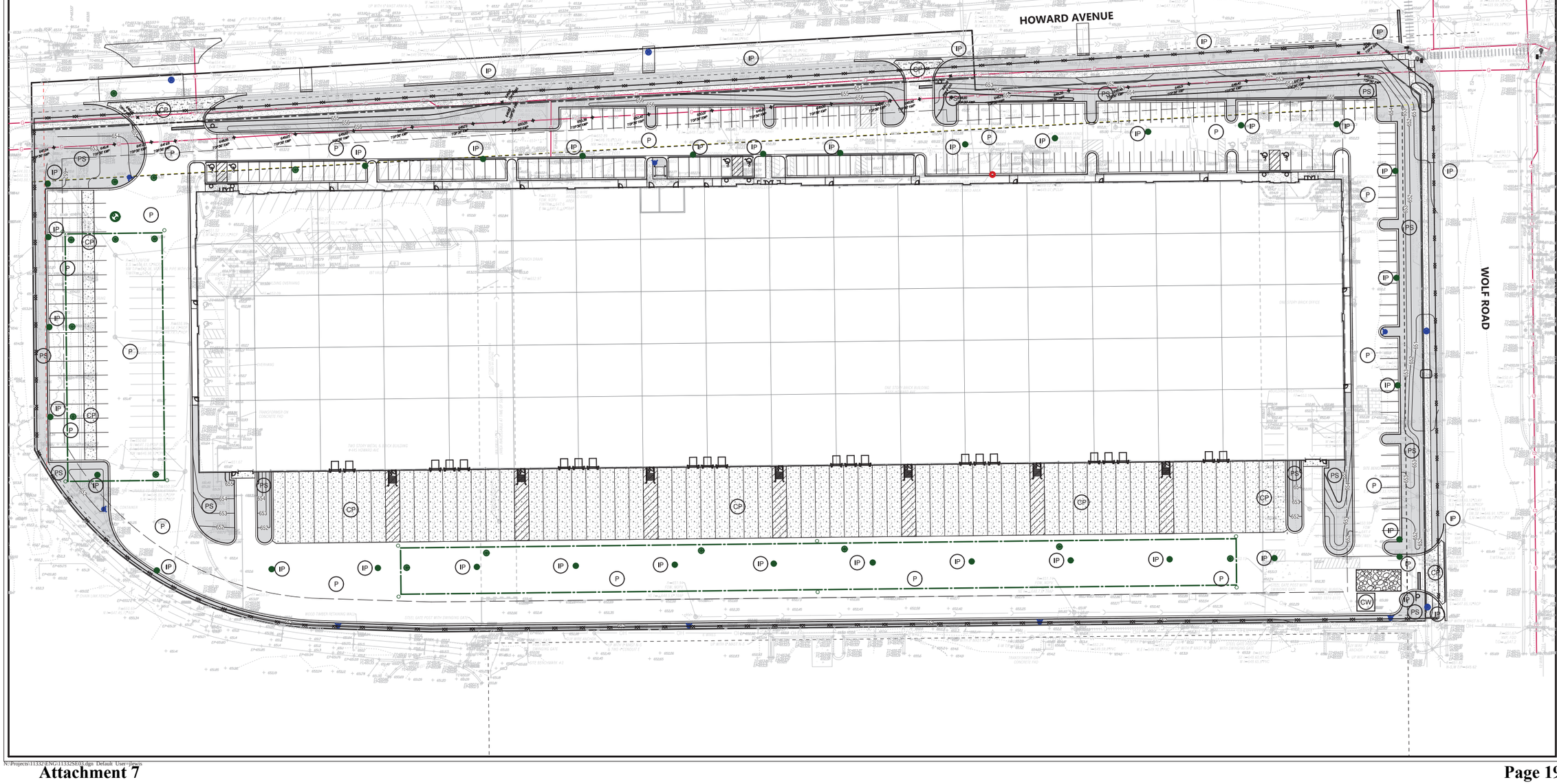
## SYMBOL LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- NORTH AMERICAN GREEN S-75 EROSION CONTROL BLANKET
- SILT FENCE
- (IP) INLET PROTECTION
- (P) PAVING
- (PS) PERMANENT SEEDING
- (CP) CONCRETE PAVEMENT
- (CW) CONCRETE WASHOUT

N

SCALE 1" = 40'

0 40 80




| NO. | DATE | REMARKS |
|---|---|---|
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| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| 5 | 03/31/25 | STORM STORAGE REVISIONS |
| 3 | 02/25/25 | OWNER BUILDING REVISIONS |
| 2 | 02/24/25 | KINDER MORGAN |

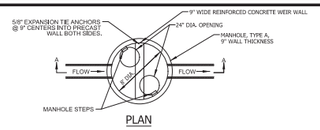
# SOIL EROSION AND SEDIMENT CONTROL PLAN

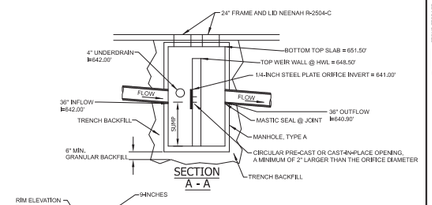
# 555 HOWARD AVENUE
## DES PLAINES, ILLINOIS

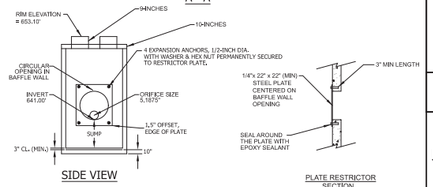

Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com


FILENAME: 11332SE03
DATE: 12/20/2024
JOB NO. 11332
SHEET C8.2
11 OF 25

N:\Projects\11332\ENG\11332SE03.dgn Default User=jlewis



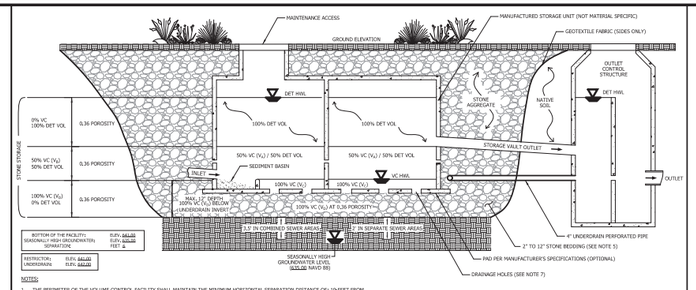




NOTES:
1. STRUCTURE AND BAFFLE WALL FABRICATED USING REINFORCED PORTLAND CEMENT CONCRETE.
2. RESTRICTORS LESS THAN 4" IN DIAMETER PROVIDE HOOD/SNOUT OR WIRE MESH
3. BAFFLE WALL PERMANENTLY INSTALLED AS PRECAST OR CAST-IN-PLACE
4. PIPE TO STRUCTURE CONNECTIONS SHALL BE ASTM C923 IN COMBINED SEWER AREAS.
5. CUTTING 4-INCH STEEL PLATE DIMENSIONS TO BEST FIT PROPOSED STRUCTURE.
6. ANCHOR EMBEDMENT SHALL BE 3-INCHES MINIMUM.
7. SEE STRUCTURAL PLANS FOR REINFORCEMENT DETAILS.

NOT TO SCALE

| TECHNICAL GUIDANCE MANUAL | 10/04/2019 |
|---|---|
| TYPICAL OUTLET CONTROL STRUCTURE (WALL) DETAIL | STD. DWG. NO.25 |
| | PAGE NO. 26 |




NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10-FEET FROM TRANSPORTATION, OR OTHER IMPERVIOUS PAVEMENT (APART FROM ROADWAY GRAVEL SHOULDER) AND 100-FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER GROUNDWATER TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN QUALITY STANDARDS, AND IT SHALL BE ENCASED WITH A WATER TIGHT CONCRETE ENCASEMENT THAT EXTENDS 10-FEET BEYOND THE ENDS SEALED.
3. MINIMUM DISTANCE OF 2 FEET (2.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF THE VOLUME CONTROL FACILITY AND SEASONALLY HIGH GROUNDWATER LEVEL.
4. STONE STORAGE OPTIONS ARE IDOT CA-1, IDOT CA-3, IDOT CA-7, OR APPROVED ALTERNATE, NO RECYCLED MATERIALS ALLOWED.
5. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. NO MORE THAN 1 UNDERDRAIN PIPE SHALL BE PLACED IN EACH TRENCH. UNDERDRAIN PIPE SHALL BE 6-INCH DIAMETER MINIMUM.
6. APPROPRIATE MAINTENANCE ACCESS SHALL BE PROVIDED TO ENSURE THAT EACH SEGMENT OF THE SYSTEM IS ACCESSIBLE BY A VACUUM, JET HOSE, OR A TELEVISING DEVICE. ACCESS IS RECOMMENDED NEAR ALL ENTRY/EXIT POINT FOR SEDIMENT REMOVAL. GUIDES RUNGS SHALL BE PROVIDED FOR SYSTEMS DEEPER THAN 4'-0-INCHES.
7. DRAINAGE OPENINGS SHOULD COVER AT LEAST 3% OF THE PADS FOOTPRINT. DESIGNER / MANUFACTURER RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE PAD AND DRAINAGE HOLES.
8. COMBINED SEWER AREAS REQUIRE BACKFLOW PREVENTER.
9. AVOID COMPACTION OF NATIVE SOILS WITHIN THE VOLUME CONTROL FOOTPRINT TO MAXIMIZE INFILTRATION.

VOLUME CONTROL SUMMARY

| VOLUME TYPE | DEPTH | POROSITY | STORAGE VOLUME | VOLUME PROVIDED |
|---|---|---|---|---|
| $V_2$ = VAULT STORAGE (BELOW THE OUTLET) | 0.00' | 1.00 | 1.09 X 0.00 X $V_2$ | WEST VAULT (SF) X.X; SOUTH VAULT (SF) X.X; |
| $V_3$ = COARSE AGGREGATE UNDER U.D. (INVERT) | 0.00' | 0.36 | 0.93 X 0.36 X $V_3$ | 0.00 A.F. |
| $V_2$ = VAULT STORAGE (BELOW U.D. INVERT) | 1.00' | 1.00 | 1.09 X $V_2$ | WEST VAULT (SF) X.X; SOUTH VAULT (SF) X.X; |
| $V_3$ = COARSE AGGREGATE (BELOW U.D. INVERT) | 0.00' | 0.36 | 0.36 X $V_3$ | 0.00 A.F. |
| * VOLUME INTENDED FOR DETENTION NOT INCLUDED * | | | TOTAL | 1.11 A.F. |

NOT TO SCALE

| TECHNICAL GUIDANCE MANUAL | 10/2/2018 |
|---|---|
| UNDERGROUND VAULT VOLUME CONTROL/DETENTION TYPICAL DETAIL | STD. DWG. NO.XX |
| | PAGE NO.XX |

PROPERTY DESCRIPTION:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE NORTH LINE OF THE SAID SOUTHEAST 1/4 WITH A LINE THAT IS 50 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE SAID WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH ALONG THE SAID PARALLEL LINE A DISTANCE OF 515.32 FEET; THENCE WEST AT RIGHT ANGLES TO SAID PARALLEL LINE, A DISTANCE OF 1163.47 FEET, MORE OR LESS TO THE EAST RIGHT WAY OF LINE OF THE DES PLAINES VILLAGE RAILROAD (NOW THE CHICAGO AND NORTHWESTERN RAILWAY COMPANY); THENCE NORTH ALONG THE EAST LINE OF SAID RIGHT OF WAY, A DISTANCE OF 463.34 FEET, MORE OR LESS TO THE NORTH LINE OF THE SAID SOUTHEAST 1/4, THENCE EAST ALONG THE NORTH LINE OF THE SAID SOUTHEAST 1/4, A DISTANCE OF 1163.20 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

EXCEPTING THEREFROM:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT INTERSECTION OF THE NORTH LINE OF SAID SOUTHEAST 1/4 OF A LINE 50.00 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE SOUTH EAST 1/4; THENCE SOUTH 00 DEGREES 10 MINUTES 38 SECONDS EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 515.32; THENCE SOUTH 89 DEGREES 49 MINUTES 22 SECONDS WEST AT RIGHT ANGLES TO SAID PARALLEL LINE, A DISTANCE OF 833.00 FEET TO THE PLACE OF BEGINNING OF THE FOLLOWING DESCRIBED TRACT LAND; THENCE NORTH 87 DEGREES 44 MINUTES 20 SECONDS WEST 94.00 FEET; THENCE NORTHWESTERLY 294.334 FEET ALONG THE ARC OF A CIRCLE OF 277.94 FEET, CONVEX TO THE SOUTHWEST, TANGENT WITH THE LAST DESCRIBED COURSE WHOSE CHORD BEARS NORTH 57 DEGREES 24 MINUTES 04.5 SECONDS WEST, TO A POINT ON THE EAST RIGHT OF WAY LINE OF THE DES PLAINES VILLAGE RAILROAD (NOW THE CHICAGO AND NORTHWESTERN RAILWAY COMPANY); THENCE SOUTH 156.0 FEET ALONG SAID EAST LINE OF THE RIGHT OF WAY TO A POINT ON A LINE DRAWN SOUTH 89 DEGREES 49 MINUTES 22 SECONDS WEST THROUGH THE HEREIN DESIGNATED PLACE OF BEGINNING; THENCE NORTH 89 DEGREES 49 MINUTES 22 SECONDS EAST, A DISTANCE OF 330.47 FEET TO THE HEREIN DESIGNATED PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

AND EXCEPTING THEREFROM:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBES AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTH LINE OF SAID SOUTHEAST 1/4 WITH A LINE 50 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST 1/2 OF SAID SOUTHEAST 1/4; THENCE SOUTH, ON SAID PARALLEL LINE, 75 FEET; THENCE NORTHWESTERLY TO A POINT ON THE SOUTH LINE OF THE NORTH 50 FEET OF SAID SOUTHEAST 1/4, 30 FEET (AS MEASURED ON SAID SOUTH LINE) WEST OF THE AFORESAID 50 FOOT PARALLEL LINE, THENCE WEST ON SAID SOUTH LINE TO A POINT 425 FEET WEST OF AND 50 FEET SOUTH OF THE NORTHEAST CORNER OF THE WEST 1/2 OF SAID SOUTHEAST 1/4 (AS MEASURED ON THE NORTH LINE THEREOF AND ON A LINE AT RIGHT ANGLES THERETO); THENCE NORTH AT RIGHT ANGLES TO THE LAST DESCRIBED COURSE TO THE SAID NORTH LINE; THENCE EAST ON SAID NORTH LINE, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

## MWRD SUMMARY

### DETAINED AREA CURVE NUMBER CALCULATIONS:

| | |
|---|---|
| CN OFFSITE TRIB TO VAULT | = 98 |
| CN ONSITE TRIB TO VAULT | = 96 |
| CN ADJUSTED | = 88.19 |
| CN UNRESTRICTED | = 80 |
| CN EMERGENCY OVERFLOW | = 98 |

### OVERFLOW SUMMARY:

| | |
|---|---|
| TOTAL 100 YEAR - 1 HR PEAK FLOW | = 90.40 CFS |
| TOTAL PROVIDED EMERGENCY OVERFLOW | = 90.40 CFS |

### TIME OF CONCENTRATION CALCULATIONS:

TIME OF CONCENTRATION = 10.0 MIN (URBAN)

### RELEASE RATE SUMMARY:

| | |
|---|---|
| ALLOWABLE FLOW PER WMO ORDINANCE | = 2.37 CFS (0.20 CFS/ACRE) |
| 100 YEAR-24HR UNRESTRICTED RELEASE | = 0.40 CFS (SEE HEC-HMS MODEL) |
| 100 YEAR PEAK ALLOWEABLE RELEASE RATE | = 1.97 CFS |

### DETENTION SUMMARY:

| | |
|---|---|
| TOTAL VOLUME PROV'D | = 5.00 AC-FT |
| DETENTION REQUIRED | = 4.59 AC-FT |

### BMP VOLUME SUMMARY:

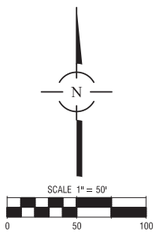
| | |
|---|---|
| VOLUME CONTROL PROVIDED | = 1.11 AC-FT |
| VOLUME CONTROL REQUIRED | = 0.88 AC-FT |

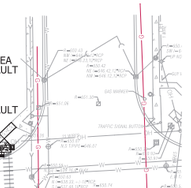
### ON-SITE AREA SUMMARY:

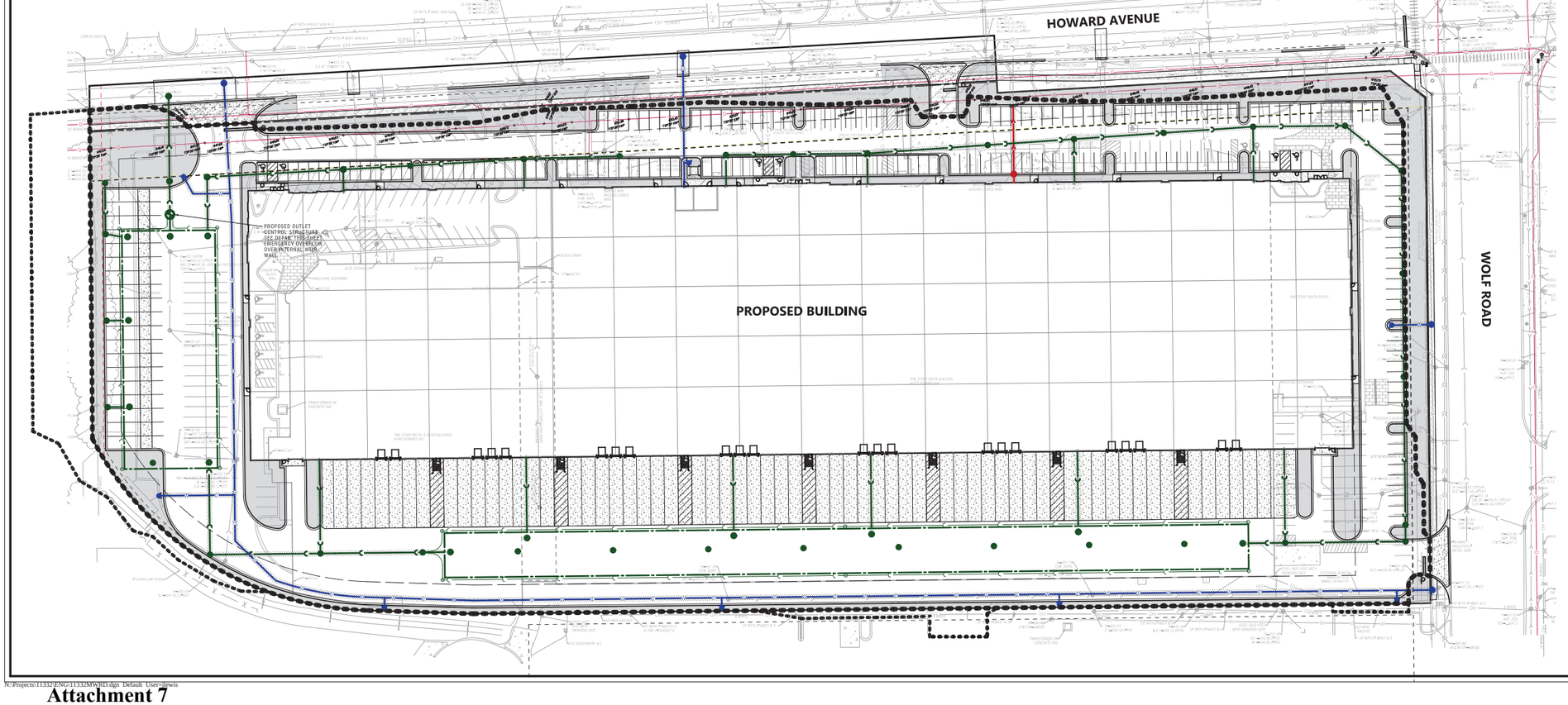
| | |
|---|---|
| TOTAL PROPERTY OWNERSHIP | = 12.36 AC |
| R.O.W. DEDICATION | = 0.73 AC |
| OFFSITE TRIBUTARY | = 0.47 AC. |
| TOTAL DEVELOPMENT AREA | = 11.83 AC |
| AREA TRIB TO DETENTION | = 11.27 AC |
| IMPERVIOUS AREA | = 10.46 AC |
| PERVIOUS AREA | = 0.81 AC |
| UNRESTRICTED AREA | = 0.56 AC |
| IMPERVIOUS AREA | = 0.14 AC |
| PERVIOUS AREA | = 0.42 AC |

LEGEND

- IMPERVIOUS AREA
- PERVIOUS AREA
- UNRESTRICTED IMPERVIOUS AREA
- UNRESTRICTED PERVIOUS AREA
- DEVELOPMENT AREA TRIBUTARY TO VAULT
- OFFSITE AREA TRIBUTARY TO VAULT




## MAINTENANCE AND MONITORING REQUIREMENTS

### Temporary Soil Erosion & Sediment Control

1. **Soil Erosion and Sediment Control**
The contractor will maintain all erosion control measures for the duration of the construction activity. Erosion control measures for the proposed development are included in the plan set. At the completion of construction, the contractor will coordinate the transfer of maintenance responsibilities. Maintenance activities will be performed in accordance with the Illinois Environmental Protection Agency Standards and Specifications for Soil Erosion and Sediment control, 1987.

Except as prevented by inclement weather conditions, all disturbed areas to remain active for more than 14 days will be stabilized by seeding, sodding, mulching, covering, or by other equivalent erosion control measures within seven days. Permanent soil stabilization shall be provided within seven days after final grading is completed.

All temporary erosion and sediment control practices will be removed and disposed of within thirty days after final stabilization is achieved or after the temporary practices are no longer needed.

### Permanent

1. **General**
Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:
- X Litter and debris shall be controlled
- X Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- X Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
- ___ Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- X Roads shall be swept, vacuumed and/or washed on a regular basis

2. **Stormwater Management Facilities**
All component of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflow to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

Side Slopes/Embankment/Emergency Overflow Structure
- X If vault is showing sign of deterioration, it shall be inspected by a professional
- X If stone base of vault has signs of growth it shall be removed or treated by a professional
- X Any breaks, hire Registered Professional Engineer for design resolution
- ___ Seed and sod any eroded areas
- X Signs of piping (leakage), repair
- ___ Signs of seepage or wet spots on the downstream face of a berm, may require toe drains or chimney drains to solve problems
- ___ Stabilize emergency overflow structure if erosion observed
- X Remove obstructions blocking emergency overflow spillway

Vegetated Areas
- X Regular mowing to control vegetation, no cutting of native vegetation
- X Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes or other vehicles, repair
- X Check for invasive vegetation, remove where possible
- X All vegetation must be maintained per the approved planting plan

Outlet Control Structure
- X Inspect restrictor and remove debris if clogged or discharge reduced
- X Remove accumulated sediment at outlet
- ___ Scour and erosion at outlet, repair and reseed
- X Any ice damage to outlet of pipe, repair if necessary
- X Condition of trash tracks, remove debris
- X Outlet channel conditions downstream

Access for Maintenance Equipment
- X Remove any obstructions placed in maintenance easements

Safety Features
- X Access controls to hazardous areas
- X Fences
- X Loose or damaged posts
- X Loose or broken wires
- X Accumulated debris in fences
- X Conditions of gates
- X Signs

Detention Volume
- X Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert off any gravity outlet pipe.

3. **Volume Control Facility**
Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:
- X Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly
- ___ Surface of permeable pavement shall be cleaned with a low-pressure power washer
- X Accumulated sediment from surface shall be vacuumed out and disposed of properly
- ___ Appropriate signage shall be repaired if damaged or illegible

4. **Stormwater Collection System**
The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspections shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes
- X Remove accumulated leaves and other debris from grates
- X Reset covers/lids on as-needed basis
- X Renove accumulated sediment from bottom of manhole when 50% of sump is filled

Storm Sewers/Culverts
- X Visually inspect pipes by removing manhole lids, make repairs as necessary
- X Storm sewers and culvers shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- ___ Restore riprap at outfalls if erosion observed
- ___ Restore riprap at outfalls
- X Replant and reseed any eroded areas

Overland Flow Routes (Ditches/Swales)
- X Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection
- X Remove any obstruction that have been placed in the drainage path
- X Seed and sod any eroded areas
- ___ Restore riprap as necessary
- X Regrade to provide positive drainage as necessary (A Professional Land Surveyor may be required to check grades to ensure positive drainage)
- X Regular mowing to control vegetation
- ___ Rototill bottom of dry swales if not drawing down within 48-hours

5. **Vegetated Areas**
- X Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established
- X Evidence of grazing, motorbiked, or other vehicles, repair
- X Check for invasive vegetation, remove when possible
- X Regular mowing to control vegetation it is recommended that native vegetation remain uncut
- X Dead or damaged non-native grassy areas repair with seeding with fertilization or seeding with mulch
- ___ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan

6. **Qualified Sewer Construction**
- X Perform manhole inspections once every five years, make repairs as necessary
- X Perform sewer inspection once every five years, make repairs as necessary
- X Perform regular sewer cleaning so that every sewer segment is cleaned once every five years
- X Remove any construction places in maintenance easements that may impede maintenance equipment access.

| NO. | DATE | REMARKS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| 5 | 03/31/25 | STORM STORAGE REVISIONS |
| 3 | 02/25/25 | OWNER BUILDING REVISIONS |

**MWRD DRAINAGE AND OPERATIONS & MAINTENANCE EXHIBIT**

**555 HOWARD AVENUE**
**DES PLAINES, ILLINOIS**


Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com


FILENAME: 11332MWRD
DATE: 12/20/2024
JOB NO. 11332
SHEET C11.0
20 OF 25

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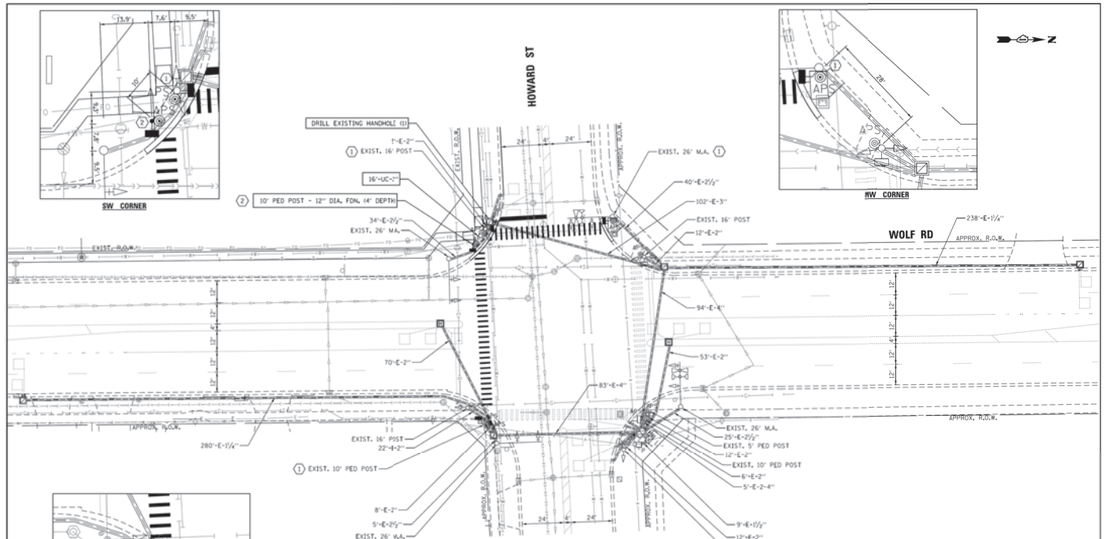



**NOTES:**

1. ALL PEDESTRIAN PUSHBUTTONS SHALL BE APS TYPE.
2. THIS LOCATION HAS BEEN DESIGNED TO BE ADA COMPLIANT, ANY DEVIATION FROM THIS PLAN FOR THE PEDESTRIAN POSTS THAT HAVE PEDESTRIAN EQUIPMENT WILL HAVE TO BE APPROVED BY THE ENGINEER TO ENSURE ADA COMPLIANCE.
3. FOR ADA DETAILS, SEE ROADWAY PLANS BY SPACECO.

**NOTES:**

1. PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON ON EXISTING POST/POLE.
2. PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON ON NEW 10' POST.

TS 5955

TS SHT NO. 9

| FILE NAME = | USER NAME = dschnabel | DESIGNED - DS | REVISED - |
|---|---|---|---|
| 25 - Signal Wolf_Howard.dgn | | DRAWN - DS | REVISED - |
| | PLOT SCALE = 40.0000 ' / in. | CHECKED - LA | REVISED - |
| | PLOT DATE = 12/26/2024 | DATE - 12/26/2024 | REVISED - |

KLOA — Planning | Development | Traffic | Transportation, Inc.

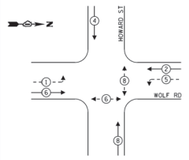
8575 West Higgins Road, Suite 400, Rosemont, Illinois 60631, P: (847) 518-9990, F: (847) 518-9987, PROJECT # 24-165

**TRAFFIC SIGNAL MODIFICATION PLAN**
**WOLF RD AND HOWARD ST**

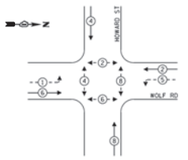
SCALE= 1"=20' | SHEET OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEET NO. |
|---|---|---|---|
| 2690 | | COOK | TS-10 TS-10 |
| | | CONTRACT NO. | |
| | | ILLINOIS FED. AID PROJECT | |

**EXISTING CONTROLLER SEQUENCE**



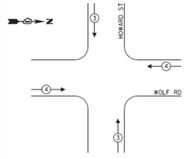

**PROPOSED CONTROLLER SEQUENCE**




**LEGEND:**

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OVERLAP

**EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE**



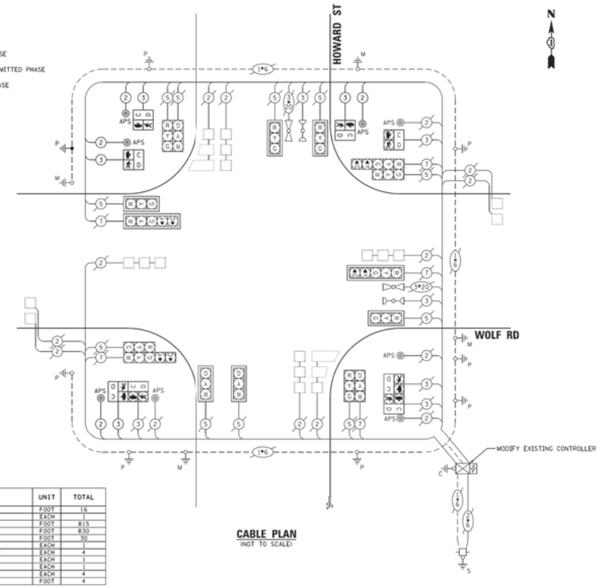

**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

| EQUIPMENT TYPE | QUANTITY | UNIT WATTAGE | TOTAL WATTAGE |
|---|---|---|---|
| SIGNAL HEAD 1 OR 3-SECTION | 12 | 11 | 132 |
| 4-SECTION | - | 14 | - |
| 5-SECTION | 4 | 13 | 52 |
| PROGRAMMABLE 3-SECTION | - | 22 | - |
| 4-SECTION | - | 32 | - |
| 5-SECTION | - | 28 | - |
| PEDESTRIAN SIGNAL | 8 | 15 | 120 |
| CONTROLLER | 1 | 150 | 150 |
| MASTER CONTROLLER | - | 100 | - |
| UPS | 1 | 25 | 25 |
| DETECTION RADAR OR VIDEO | - | 20 | - |
| BLANK-OUT SIGN | - | 25 | - |
| NETWORK SWITCH II OR III | - | 35 | - |
| CELLULAR MODEM | - | 15 | - |
| TOTAL UPS SIZING | | | 479 |
| UPS CHARGING | 1 | 225 | 225 |
| BATTERY HEATER MAT | 1 | 180 | 180 |
| CABINET HEATER | 1 | 200 | 200 |
| FLASHER | - | 15 | - |
| LED STREET NAME SIGN | - | 120 | - |
| LUMINAIRE | - | 240 | - |
| TOTAL SERVICE WIRE SIZING | | | 1084 |

ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 W CENTER CT
SCHAUMBURG, IL 60196-1096
ENERGY SUPPLY TO PHONE: 866-639-3532
COMPANY: COMED
ACCOUNT NUMBER: ---
METER NUMBER: ---

**SCHEDULE OF QUANTITIES**

| ITEM DESCRIPTION | UNIT | TOTAL |
|---|---|---|
| UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA. | FOOT | 16 |
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C | FOOT | 815 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C | FOOT | 830 |
| ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C | FOOT | 30 |
| DRILL EXISTING HANDHOLE | EACH | 1 |
| PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER | EACH | 4 |
| MODIFY EXISTING CONTROLLER | EACH | 1 |
| PEDESTRIAN SIGNAL POST, 10 FT. | EACH | 4 |
| ACCESSIBLE PEDESTRIAN SIGNALS | EACH | 4 |
| CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER | FOOT | 4 |




**CABLE PLAN**
(NOT TO SCALE)

TS SHT NO. 10

TS 5955

| FILE NAME = | USER NAME = dschnabel | DESIGNED - DS | REVISED - |
|---|---|---|---|
| 18 - Cable Wolf_Howard.dgn | | DRAWN - DS | REVISED - |
| | PLOT SCALE = 40.0000 ' / in. | CHECKED - LA | REVISED - |
| | PLOT DATE = 12/26/2024 | DATE - 12/26/2024 | REVISED - |

KLOA — Planning | Development | Traffic | Transportation, Inc.

8575 West Higgins Road, Suite 400, Rosemont, Illinois 60631, P: (847) 518-9990, F: (847) 518-9987, PROJECT # 24-165

**CABLE PLAN, PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES**
**WOLF RD AND HOWARD ST**

SCALE= | SHEET OF SHEETS | STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEET NO. |
|---|---|---|---|
| 2690 | | COOK | TS-10 TS-10 |
| | | CONTRACT NO. | |
| | | ILLINOIS FED. AID PROJECT | |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

**TRAFFIC SIGNAL MODIFCATION PLAN**
**WOLF RD AND HOWARD ST**

**555 HOWARD AVENUE**
**DES PLAINES, ILLINOIS**

Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com

FILENAME: 11332TS3
DATE: 12/20/2024
JOB NO. 11332
SHEET C12.2
23 OF 25

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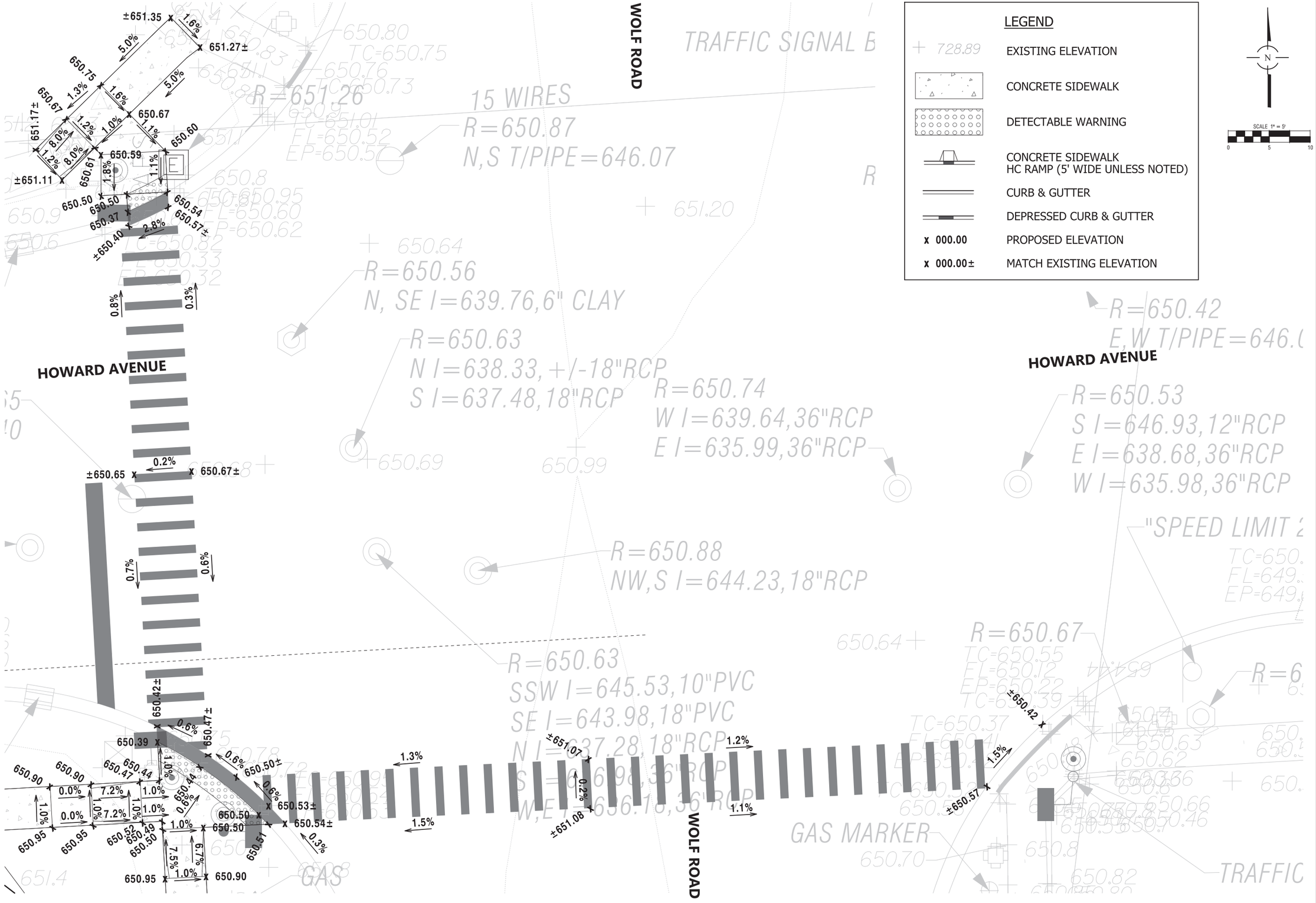


## LEGEND

| | |
|---|---|
| + 728.89 | EXISTING ELEVATION |
| | CONCRETE SIDEWALK |
| | DETECTABLE WARNING |
| | CONCRETE SIDEWALK HC RAMP (5' WIDE UNLESS NOTED) |
| | CURB & GUTTER |
| | DEPRESSED CURB & GUTTER |
| x 000.00 | PROPOSED ELEVATION |
| x 000.00± | MATCH EXISTING ELEVATION |

N

SCALE 1" = 5'
0 5 10

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

ADA RAMP DETAILS
HOWARD AVE AND WOLF RD

**555 HOWARD AVENUE**
DES PLAINES, ILLINOIS


Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com


FILENAME: 11332ADADET1
DATE: 12/20/2024
JOB NO. 11332
SHEET C13.0
24 OF 25

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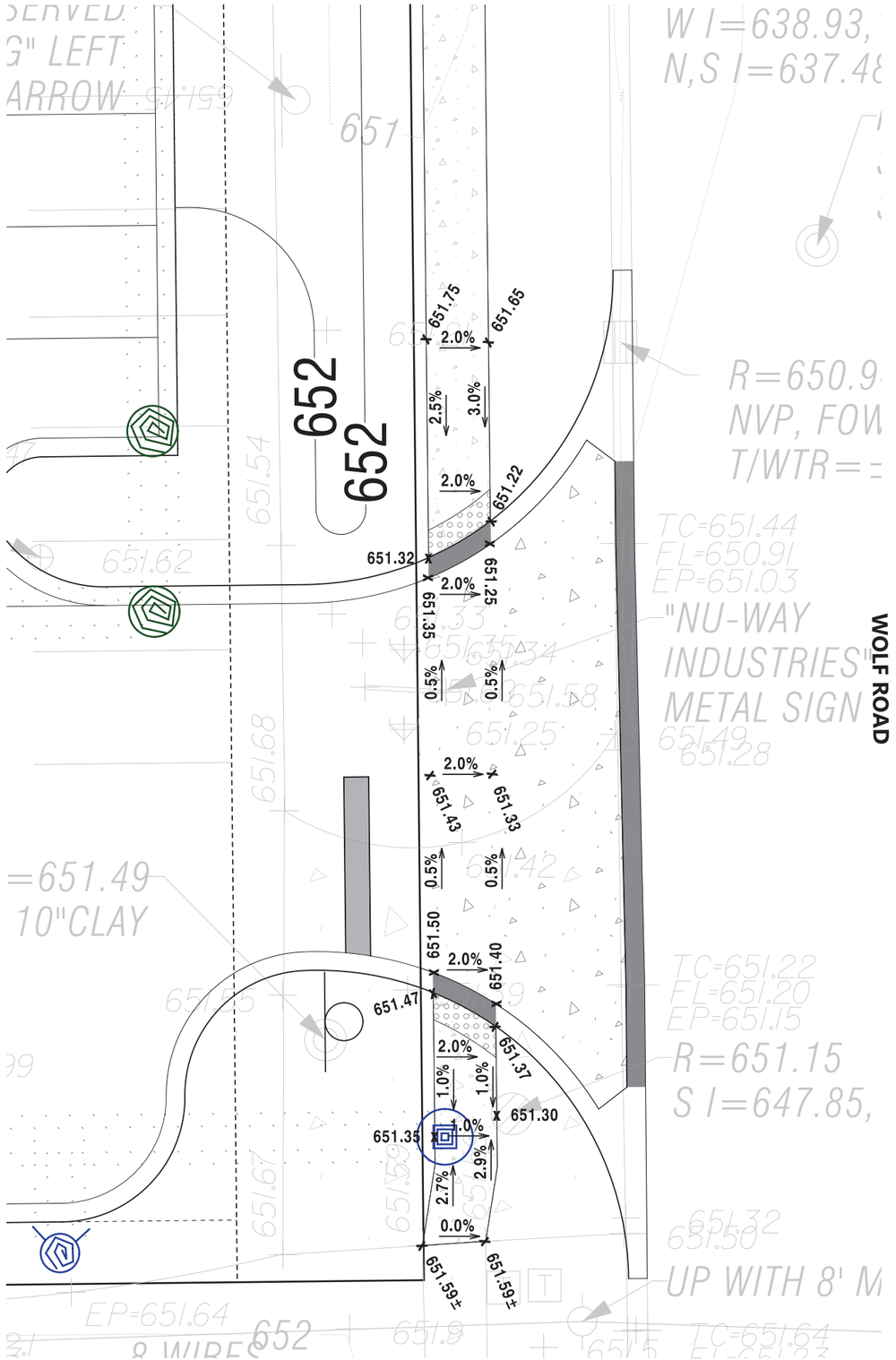


## LEGEND

| | |
|---|---|
| + 728.89 | EXISTING ELEVATION |
| | CONCRETE SIDEWALK |
| | DETECTABLE WARNING |
| | CONCRETE SIDEWALK HC RAMP (5' WIDE UNLESS NOTED) |
| | CURB & GUTTER |
| | DEPRESSED CURB & GUTTER |
| x 000.00 | PROPOSED ELEVATION |
| x 000.00± | MATCH EXISTING ELEVATION |

N

SCALE 1" = 5'
0 5 10

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

**ADA RAMP DETAILS**
**WOLF ROAD SITE ACCESS**

# 555 HOWARD AVENUE
DES PLAINES, ILLINOIS


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Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com


FILENAME: 11332ADADET2
DATE: 12/20/2024
JOB NO. 11332
SHEET C13.1
25 OF 25

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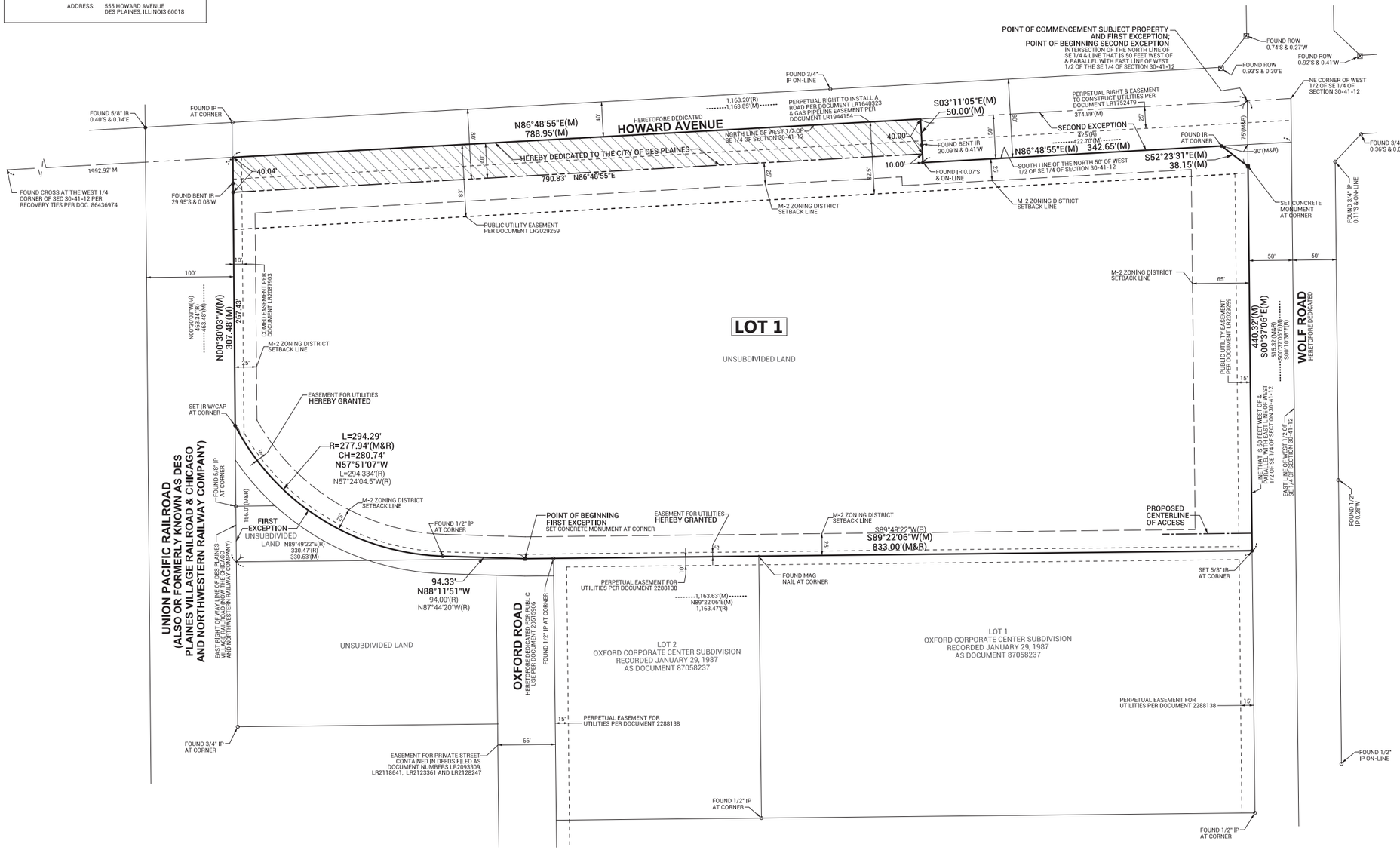
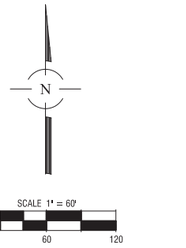
| PLAT OF SUBDIVISION | |
|---|---|
| OWNER/SUBDIVIDER: | BRIDGE POINT DES PLAINES, LLC<br>9525 W. BRYN MAWR AVENUE<br>SUITE 700<br>ROSEMONT, ILLINOIS 60018 |
| SURVEYOR: | SPACECO INC.<br>9575 WEST HIGGINS ROAD<br>SUITE 700<br>ROSEMONT, ILLINOIS 60018 |
| ENGINEERING: | SPACECO INC.<br>9575 WEST HIGGINS ROAD<br>SUITE 700<br>ROSEMONT, ILLINOIS 60018 |
| CURRENT ZONING DISTRICT: | M-2 GENERAL MANUFACTURING |
| PROPOSED ZONING DISTRICT: | M-2 GENERAL MANUFACTURING |
| ADDRESS: | 555 HOWARD AVENUE<br>DES PLAINES, ILLINOIS 60018 |

# FINAL PLAT OF SUBDIVISION
# BRIDGE POINT DES PLAINES SUBDIVISION

BEING A PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD MERIDIAN, IN COOK COUNTY, ILLINOIS

P.I.N.:
09-30-400-002-0000
09-30-400-032-0000




BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

| AREA TABLE | | |
|---|---|---|
| LOT 1 | SQ. FT.<br>506,699 | ACRES<br>11.632 |
| PROPOSED DEDICATION | 31,595 | 0.725 |
| TOTAL | 538,294 | 12.358 |

VEHICULAR ACCESS NOTES:

1. THERE WILL BE, AT MOST ONE ACCESS POINT TO WOLF ROAD FROM LOT 1, AS SHOWN HEREON.
2. ALL OTHER VEHICULAR ACCESS SHALL BE VIA INTERNAL CIRCULATION.
3. (ADDITIONAL NOTES TO BE ADDED AFTER IDOT REVIEW)

ILLINOIS DEPARTMENT OF TRANSPORTATION ACCEPTANCE

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT TO PARAGRAPH 2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

BY:_____ DATE:_____, 20_____.
JOSE RIOS, P.E.
REGION ONE ENGINEER

PREPARED FOR:
BRIDGE DEVELOPMENT PARTNERS
9525 W. BRYN MAWR AVENUE
SUITE 700
ROSEMONT, IL 60018

**FOR REVIEW PURPOSES ONLY**

| REVISIONS: |
|---|
| 03/19/2025 - CERTS |


SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065


DATE: 02/18/2025
JOB NO: 11332
FILENAME: 11332CONSOL-01
SHEET 1 OF 2

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# FINAL PLAT OF SUBDIVISION
# BRIDGE POINT DES PLAINES SUBDIVISION

BEING A PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD MERIDIAN, IN COOK COUNTY, ILLINOIS

P.I.N.:
09-30-400-002-0000
09-30-400-032-0000

OWNER'S CERTIFICATE

_____ AN ILLINOIS LIMITED LIABILITY COMPANY, AS OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADOPTS THIS PLAT OF SUBDIVISION, ESTABLISHES THE MINIMUM BUILDING RESTRICTION LINES, DEDICATES THE ROADS, STREETS, ALLEYS, WALKS, AND OTHER AREAS INDICATED THEREON TO THE PUBLIC USE; AND ESTABLISHES ANY OTHER EASEMENTS SHOWN THEREON.

THIS IS TO ALSO CERTIFY THAT AS OWNER OF THE PROPERTY DESCRIBED AS AND LEGALLY DESCRIBED ON THE PLAT OF THE SAME NAME, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

CCSD 62
MAINE TOWNSHIP HSD 207
OAKTON COMMUNITY COLLEGE DISTRICT NO. 535

IN WITNESS WHERE WE HAVE HEREUNDER SET OUR HANDS

THIS_____DAY OF_____, A.D. 20_____.

BY:_____

TITLE:_____

ADDRESS:

_____

_____

_____

NOTARY PUBLIC CERTIFICATE

STATE OF_____)
)SS
COUNTY OF_____)

I _____ A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____

OF_____, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20_____

_____
NOTARY PUBLIC

CONSENT OF MORTGAGEE

_____ WHICH IS THE HOLDER OF A MORTGAGE DATED AS OF

_____, 20___ AND RECORDED IN THE OFFICE OF THE COOK COUNTY RECORDER, ILLINOIS ON

_____, 20___ AS DOCUMENT NO. _____ ENCUMBERING THE PROPERTY DESCRIBED

ON THIS PLAT OF SUBDIVISION, HEREBY CONSENTS TO THE RECORDING OF THIS PLAT OF SUBDIVISION AND AGREES THAT ITS LIEN SHALL BE SUBJECT TO THE PROVISIONS OF THIS PLAT OF SUBDIVISION.
IN WITNESS WHEREOF, THE UNDERSIGNED HAS CAUSED THIS CONSENT TO BE EXECUTED ON _____ 20___.

ATTEST: _____, A _____

BY: _____ BY:_____

ITS: _____ ITS:_____

MORTGAGEE'S NOTARY PUBLIC

STATE OF ILLINOIS )
) SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON _____, 20___ BY

_____ THE _____ AND _____ THE _____

SECRETARY, OF _____, A _____

WHICH INDIVIDUALS ARE KNOWN TO ME TO BE THE IDENTICAL PERSONS WHO SIGNED THE FOREGOING INSTRUMENT AS SUCH OFFICERS OF THE CORPORATION FOR AND ON BEHALF OF SAID CORPORATION, AND THAT THEY EXECUTED THE SAME AS THEIR FREE AND VOLUNTARY ACT AND DEED, AND AS THE FREE AND VOLUNTARY ACT AND DEED OF THE CORPORATION, FOR THE USES AND PURPOSES THEREIN MENTIONED.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS ___ DAY OF _____, 20___.

_____
SIGNATURE OF NOTARY
SEAL

MY COMMISSION EXPIRES: _____

MAYOR AND CITY COUNCIL CERTIFICATE

APPROVED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF DES PLAINES, COOK COUNTY, ILLINOIS, ON

THIS _____ DAY OF _____, A.D. 20_____.

SIGNED: _____
MAYOR

ATTEST:_____
CITY CLERK

PLANNING AND ZONING BOARD CERTIFICATE

APPROVED BY THE CITY PLANNING AND ZONING BOARD OF THE CITY OF DES PLAINES,

COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, A.D. 20_____.

_____
SIGNED: CHAIRMAN

DIRECTOR OF FINANCE CERTIFICATE

I CERTIFY THAT THERE ARE NO DELINQUENT OR CURRENT UNPAID SPECIAL ASSESSMENTS ON THE PROPERTY SHOWN ON THIS PLAT.

DATE: _____

_____
DIRECTOR OF FINANCE

CITY DIRECTOR OF PUBLIC WORKS AND ENGINEERING CERTIFICATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING OF THE CITY OF DES PLAINES, COOK COUNTY, ILLINOIS, THIS ___ DAY OF _____ 2025.

BY: _____
TIMOTHY P. OAKLEY, P.E., DIRECTOR OF PUBLIC WORKS & ENGINEERING

RESTRICTIVE COVENANTS AND EASEMENT
FOR STORM WATER DETENTION AREA (NO HOA)

1. THE AREA OF THE PROPERTY DESIGNATED ON THIS PLAT AS "STORM WATER DETENTION AREA" SHALL BE CONTINUOUSLY MAINTAINED IN A FIRST RATE MANNER BY OWNERS OF LOT 1 (A "DETENTION AREA LOT") AND AN EASEMENT ON, UNDER AND ABOVE THE STORM WATER DETENTION AREA IS HEREBY GRANTED TO, AND FOR THE USE AND BENEFIT OF, ALL OF THE LOTS IN THIS SUBDIVISION FOR THE SOLE PURPOSE OF STORM WATER DETENTION AND DRAINAGE.

2. NO CHANGE SHALL BE MADE IN THE FINISHED GRADE OF THE LAND WITHIN THE STORM WATER DETENTION AREA, NOR SHALL ANY CONSTRUCTION OF ANY KIND WHATSOEVER BE ERECTED OR PERMITTED TO EXIST WITHIN THE STORM WATER DETENTION AREA THAT MIGHT MATERIALLY IMPEDE STORM WATER DRAINAGE THEREIN OR MATERIALLY REDUCE THE STORM WATER DETENTION CAPACITY THEREOF. TREES, SHRUBS, FENCES AND NORMAL LANDSCAPE PLANTING SHALL BE PERMITTED WITHIN THE STORM WATER DETENTION AREA ONLY WITH THE PRIOR WRITTEN APPROVAL OF THE DIRECTOR OF PUBLIC WORKS OF THE CITY OF DES PLAINES, COOK COUNTY, ILLINOIS (THE "CITY"). EACH OWNER OF A DETENTION AREA LOT SHALL MAINTAIN A GRASS COVER ON THE SURFACE OF THAT PORTION OF HIS LOT LOCATED WITHIN THE STORM WATER DETENTION AREA AND SHALL KEEP SUCH GRASS IN A NEAT AND TRIMMED CONDITION.

3. IN THE EVENT THE CITY DETERMINES, IN ITS SOLE AND ABSOLUTE DISCRETION, THAT PRIOR MAINTENANCE OF THE STORM WATER DETENTION AREA IS NOT PERFORMED AT ANY TIME, THE CITY, AFTER TEN (10) DAYS PRIOR WRITTEN NOTICE TO THE OWNERS OF THE DETENTION AREA LOTS, MAY, BUT SHALL NOT BE OBLIGATED TO, ENTER UPON ANY OR ALL OF THE DETENTION AREA LOTS FOR THE PURPOSE OF PERFORMING MAINTENANCE WORK ON AND TO THE STORM WATER DETENTION AREA.

4. IN THE EVENT THAT THE CITY SHALL CAUSE TO BE PERFORMED ANY WORK PURSUANT TO THESE PARAGRAPHS, THE CITY SHALL HAVE THE RIGHT TO CHARGE THE OWNERS OF THE DETENTION AREA LOTS AN AMOUNT SUFFICIENT TO DEFRAY THE ENTIRE COST OF SUCH WORK OR ACTION, INCLUDING ADMINISTRATIVE COSTS, EITHER BEFORE OR AFTER SUCH COST IS INCURRED. IF THE AMOUNT SO CHARGED IS NOT PAID BY THE OWNERS OF THE DETENTION AREA LOTS WITHIN THIRTY (30) DAYS FOLLOWING A DEMAND IN WRITING BY THE CITY FOR SUCH PAYMENT, SUCH CHARGE, TOGETHER WITH INTEREST AND COSTS OF COLLECTION, SHALL BECOME A LIEN UPON THE DETENTION AREA LOTS AND THE CITY SHALL HAVE THE RIGHT TO COLLECT SUCH CHARGE, WITH INTEREST AND COSTS, AND TO ENFORCE SUCH LIEN AS IN FORECLOSURE PROCEEDINGS AS PERMITTED BY LAW.

5. NOTHING IN THESE PARAGRAPHS SHALL BE CONSTRUED TO CONSTITUTE A DEDICATION OF ANY PORTION OF THE STORM WATER DETENTION AREA OR OF THE DETENTION AREA LOTS TO, OR AN ACCEPTANCE THEREOF BY, THE CITY.

6. THE CITY SHALL BE UNDER NO OBLIGATION TO EXERCISE THE RIGHTS GRANTED IN THESE PARAGRAPHS EXCEPT AS IT SHALL DETERMINE TO BE IN ITS BEST INTEREST. NO FAILURE TO EXERCISE AT ANY TIME ANY RIGHT HEREIN GRANTED TO THE CITY SHALL BE CONSTRUED AS A WAIVER OF THAT OR ANY OTHER RIGHTS.

7. THESE COVENANTS SHALL RUN WITH THE LAND IN THE SUBDIVISION SHOWN ON THIS PLAT, AND SHALL BE BINDING UPON AND INURE TO THE BENEFIT OF THE OWNERS OF ALL LOTS OF RECORD THEREIN, THEIR RESPECTIVE SUCCESSORS, ASSIGNS AND GRANTEES AND ALL PARTIES CLAIMING BY, THROUGH AND UNDER THEM. ENFORCEMENT OF THESE COVENANTS MAY BE SOUGHT BY THE OWNERS OF ANY LOTS OF RECORD IN THIS SUBDIVISION, ANY PERSON WITH AN INTEREST IN ANY OF SAID LOTS OF RECORD, OR THE CITY OF DES PLAINES BY ANY PROCEEDING AT LAW OR IN EQUITY AGAINST ANY PERSON OR PERSONS VIOLATING OR ATTEMPTING TO VIOLATE ANY COVENANT, EITHER TO RESTRAIN VIOLATION, TO COMPEL AFFIRMATIVE ACTION, OR TO RECOVER DAMAGES, AND AGAINST THE LAND TO ENFORCE ANY LIEN CREATED BY THESE COVENANTS.

EASEMENT FOR PUBLIC UTILITY (PROVISIONS)

A NON-EXCLUSIVE, PERMANENT AND PERPETUAL EASEMENT IS HEREBY GRANTED TO THE CITY OF DES PLAINES, COOK COUNTY, ILLINOIS ("CITY"), ITS SUCCESSORS AND ASSIGNS, TO SURVEY, CONSTRUCT, RECONSTRUCT, USE, OPERATE, MAINTAIN, TEST, INSPECT, REPAIR, REPLACE, ALTER, REMOVE OR ABANDON IN PLACE WATER AND SANITARY SEWER MAINS TOGETHER WITH RELATED ATTACHMENTS, EQUIPMENT AND APPURTENANCES THERETO, IN, UPON, UNDER, ALONG AND ACROSS THE AREAS DESIGNATED "EASEMENT FOR PUBLIC UTILITIES" ON THIS SUBDIVISION PLAT. THE OWNERS OF THE PROPERTY SUBDIVIDED ON THIS PLAT OR ANY PART THEREOF HEREBY RESERVE THE RIGHT TO USE THE AREAS DESIGNATED "EASEMENT FOR PUBLIC UTILITIES" AND THE ADJACENT PROPERTY IN ANY MANNER THAT WILL NOT PREVENT OR INTERFERE WITH THE EXERCISE BY THE CITY OF THE RIGHTS HEREBY GRANTED; PROVIDED, HOWEVER, THAT THE OWNERS SHALL NOT IN ANY MANNER DISTURB, DAMAGE, DESTROY, INJURE, OBSTRUCT OR PERMIT TO BE OBSTRUCTED THE "EASEMENT FOR PUBLIC UTILITIES" AT ANY TIME WHATSOEVER WITHOUT THE EXPRESS PRIOR WRITTEN CONSENT OF THE CITY. AFTER THE INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

UTILITY CERTIFICATES

AN EASEMENT FOR SERVING THIS SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC, NATURAL GAS, AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO:

COMMONWEALTH EDISON COMPANY

APPROVED BY: _____ ON THIS ___ DAY OF _____, 20_____

AT&T, ILLINOIS BELL TELEPHONE CO (AMERITECH)

APPROVED BY: _____ ON THIS ___ DAY OF _____, 20_____

NORTHERN ILLINOIS GAS COMPANY (NICOR)

APPROVED BY: _____ ON THIS ___ DAY OF _____, 20_____

COMCAST

APPROVED BY: _____ ON THIS ___ DAY OF _____, 20_____

ASTOUND

APPROVED BY: _____ ON THIS ___ DAY OF _____, 20_____

*PUBLIC UTILITY EASEMENTS PROVIDED, SHALL BE FOR THE USE OF MUNICIPAL SEWER AND WATER LINES, STORM DRAINAGE AND PUBLIC UTILITY LINES, LINES FOR ANY CABLE TELEVISION FRANCHISE GRANTED BY THE CITY, AND OTHER MUNICIPAL USES.*

**FOR REVIEW PURPOSES ONLY**

DRAINAGE CERTIFICATE

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DISCHARGE OF SURFACE WATERS INTO PUBLIC AREAS AND/OR DRAINS AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF SUBSTANTIVE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS _____ DAY OF _____, A.D. 20_____.

OWNER

_____

Name: _____

Date: _____

REGISTERED PROFESSIONAL ENGINEER

_____

Name: _____

Firm: _____

Date: _____

(SEAL)

COOK COUNTY CLERK STAMP

COOK COUNTY RECORDER'S STICKER

PROPERTY DESCRIPTION:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE NORTH LINE OF THE SAID SOUTHEAST 1/4 WITH A LINE THAT IS 50 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE SAID WEST 1/2 OF THE SOUTHEAST 1/4; THENCE SOUTH ALONG THE SAID PARALLEL LINE A DISTANCE OF 515.32 FEET; THENCE WEST AT RIGHT ANGLES TO SAID PARALLEL LINE, A DISTANCE OF 1163.47 FEET, MORE OR LESS TO THE EAST RIGHT WAY OF LINE OF THE DES PLAINES VILLAGE RAILROAD (NOW THE CHICAGO AND NORTHWESTERN RAILWAY COMPANY); THENCE NORTH ALONG THE EAST LINE OF SAID RIGHT OF WAY, A DISTANCE OF 463.34 FEET, MORE OR LESS TO THE NORTH LINE OF THE SAID SOUTHEAST 1/4; THENCE EAST ALONG THE NORTH LINE OF THE SAID SOUTHEAST 1/4, A DISTANCE OF 1163.20 FEET, MORE OR LESS, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

EXCEPTING THEREFROM:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT INTERSECTION OF THE NORTH LINE OF SAID SOUTHEAST 1/4 OF A LINE 50.00 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF SAID WEST 1/2 OF THE SOUTH EAST 1/4; THENCE SOUTH 00 DEGREES 10 MINUTES 38 SECONDS EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 515.32; THENCE SOUTH 89 DEGREES 49 MINUTES 22 SECONDS WEST AT RIGHT ANGLES TO SAID PARALLEL LINE, A DISTANCE OF 833.00 FEET TO THE PLACE OF BEGINNING OF THE FOLLOWING DESCRIBED TRACT LAND; THENCE NORTH 87 DEGREES 44 MINUTES 20 SECONDS WEST 94.00 FEET; THENCE NORTHWESTERLY 294.334 FEET ALONG THE ARC OF A CIRCLE OF 277.94 FEET, CONVEX TO THE SOUTHWEST, TANGENT WITH THE LAST DESCRIBED COURSE WHOSE CHORD BEARS NORTH 57 DEGREES 24 MINUTES 04.5 SECONDS WEST, TO A POINT ON THE EAST RIGHT OF WAY LINE OF THE DES PLAINES VILLAGE RAILROAD (NOW THE CHICAGO AND NORTHWESTERN RAILWAY COMPANY); THENCE SOUTH 156.0 FEET ALONG SAID EAST LINE OF THE RIGHT OF WAY TO A POINT ON A LINE DRAWN SOUTH 89 DEGREES 49 MINUTES 22 SECONDS WEST THROUGH THE HEREIN DESIGNATED PLACE OF BEGINNING; THENCE NORTH 89 DEGREES 49 MINUTES 22 SECONDS EAST, A DISTANCE OF 330.47 FEET TO THE HEREIN DESIGNATED PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

AND EXCEPTING THEREFROM:

THAT PART OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 41 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, BOUNDED AND DESCRIBES AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTH LINE OF SAID SOUTHEAST 1/4 WITH A LINE 50 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST 1/2 OF SAID SOUTHEAST 1/4; THENCE SOUTH, ON SAID PARALLEL LINE, 75 FEET; THENCE NORTHWESTERLY TO A POINT ON THE SOUTH LINE OF THE NORTH 50 FEET OF SAID SOUTHEAST 1/4, 30 FEET (AS MEASURED ON SAID SOUTH LINE) WEST OF THE AFORESAID 50 FOOT PARALLEL LINE. THENCE WEST ON SAID SOUTH LINE TO A POINT 425 FEET WEST OF AND 50 FEET SOUTH OF THE NORTHEAST CORNER OF THE WEST 1/2 OF SAID SOUTHEAST 1/4 (AS MEASURED ON THE NORTH LINE THEREOF AND ON A LINE AT RIGHT ANGLES THERETO); THENCE NORTH AT RIGHT ANGLES TO THE LAST DESCRIBED COURSE TO THE SAID NORTH LINE; THENCE EAST ON SAID NORTH LINE, TO THE PLACE OF BEGINNING, ALL IN COOK COUNTY, ILLINOIS.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

WE, SPACECO, INC., AN ILLINOIS PROFESSIONAL DESIGN FIRM, NUMBER 184-001157, DO HEREBY DECLARE THAT WE HAVE SURVEYED AND SUBDIVIDED THE PROPERTY AS HEREON DESCRIBED, AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

WE FURTHER DECLARE THAT STEEL RE-ENFORCING RODS (UNLESS OTHERWISE NOTED) WILL BE SET AT ALL LOT CORNERS, IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF DES PLAINES CITY CODE; THAT THE PROPERTY IS WITHIN THE CORPORATE LIMITS OF THE CITY OF DES PLAINES WHICH HAS ADOPTED AN OFFICIAL COMPREHENSIVE PLAN.

TOTAL GROSS PROPERTY SURVEYED CONTAINS 538,294 SQUARE FEET, OR 12.358 ACRES, MORE OR LESS.

WE FURTHER DECLARE THAT THE PROPERTY IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA, AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY ON THE MOST RECENT FLOOD INSURANCE RATE MAP PANEL NUMBER 17031C0218J WITH AN EFFECTIVE DATE OF AUGUST 19, 2008.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS OF PRACTICE APPLICABLE TO BOUNDARY SURVEYS.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF_____ A.D. 2025, IN ROSEMONT, ILLINOIS.

_____
JERRY P. CHRISTOPH, I.P.L.S. No. 035-3540
LICENSE EXPIRES: 11-30-2026
jchristoph@spacecoinc.com

PREPARED FOR AND SEND TAX BILLS TO:

BRIDGE DEVELOPMENT PARTNERS
9525 W, BRYN MAWR AVENUE
SUITE 700
ROSEMONT, IL 60018

AFTER RECORDING SEND TO:
SPACECO INC.
9575 WEST HIGGINS ROAD
SUITE 700
ROSEMONT, ILLINOIS 60018

REVISIONS:
03/19/2025 - CERTS

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 02/18/2025
JOB NO: 11332
FILENAME: 11332CONSOL-01
SHEET 2 OF 2

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**COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT**
1420 Miner Street
Des Plaines, IL 60016
P: 847.391.5380
desplainesil.gov

# MEMORANDUM

Date: June 5, 2025

To: Planning and Zoning Board (PZB)

From: Jonathan Stytz, AICP, Senior Planner JS

Cc: Jonathan Mendel, AICP, Assistant Director of Community and Economic Development
Jeff Rogers, AICP, Director of Community and Economic Development

Subject: Consideration of a Conditional Use and Major Variations for a Proposed Commercial Mobile Radio and Wireless Telecommunications Service Facility at 1705 Pratt Avenue

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**Issue:** The petitioner requests the following items to install a new 104-foot-tall antenna support structure in the C-3 General Commercial district adjacent to residential uses: (i) a conditional use to allow the proposed structure in the C-3 district as a secondary principal use; (ii) a major variation to reduce to required setback of the structure from the property line from 50 feet to 26 feet; (iii) a major variation to reduce to required setback of the structure from a residential district from 100 feet to 65 feet; (iv) a major variation to allow the structure to be located on the side of the principal structure instead of behind; and (v) a major variation to increase the allowable height of the structure from 50 feet to 104 feet.

**Petitioner:** Sidley Austin LLP (Representative: Scott Saef, 1 S. Dearborn Street, Chciago, IL 60603)

**Owner:** Commonwealth Edison Company (Representative: Shemeka Wesby, 3 Lincoln Centre, 4th Floor, Oakbrook Terrace, IL 60181)

**Case Number:** #25-013-CU-V

**PIN:** 09-33-302-006-0000

**Ward Number:** #6, Alderman Mark Walsten

**Existing Zoning:** C-3, General Commercial

**Existing Land Uses:** Public Utility Substation (public utility)

**Surrounding Zoning:**
North: R-1, Single Family Residential District
South: R-1, Single Family Residential District
East: R-1, Single Family Residential District
West: C-3, General Commercial District

**Surrounding Land Uses**: North: Single Family Residences (residential)
South: Single Family Residences (residential)
East: Single Family Residences (residential)
West: Shopping Center with Freestanding Restaurant (commercial)

**Street Classification:** Pratt Avenue and Sycamore Street are both local roads under City of Des Plaines jurisdiction.

**Comprehensive Plan:** The Comprehensive Plan illustrates this site as Transportation / Utilities / Communication / Other.

**Property/Zoning History:** Pursuant to City records, this property was annexed into the City in 1956 as a vacant piece of land. Since then, a public utility substation was a constructed and later expanded to the size it is today. The subject property was originally zoned R-1 Single Family Residential. However, a map amendment request was approved by City Council on May 16, 2022 through Ordinance Z-10-22 to rezone the subject property to C-3 General Commercial. Later in 2022, a minor variation was approved to allow an 11-foot-tall solid fence with one-foot of barbed wire and four 16-foot-tall camera posts to be located on the property where a maximum eight-foot-tall fence is permitted.

## CONDITIONAL USE

**Request Description:** *Overview*
The petitioner requests installing an antenna support structure—referenced as "Structure" in the petitioner's attached Project Narrative—as part of ComEd's implementation of its multi-year "smart grid" initiative, which seeks to improve reliability of the electrical grid and increase voltage efficiencies along each distribution line. See the attached Project Narrative for additional details on the proposed antenna support structure facility itself and its use.

The subject property consists of one 1.36-acre parcel located at the southwest corner of the Pratt Avenue/Sycamore Street intersection as illustrated on the attached Plat of Survey. It is currently developed with a public utility substation with two outbuildings, gravel drive aisles, and an 11-foot-tall solid fence with one-foot of barbed wire and four 16-foot-tall camera posts. The subject property borders single family residences on all sides except the west side which abuts railroad tracks and a commercial shopping center and stand-alone restaurant.

*Use Classifications*
The existing electrical substation is classified as a public utility use, as defined below, which serves as the principal use of the property. Pursuant to Section 12-7-3.K, a public utility use—with the functions explicitly noted in the definition—is permitted in the C-3 district.

> PUBLIC UTILITIES: A building or portion thereof used for providing, monitoring, and housing utilities for public consumption or use. This term shall include, but not be limited to, operations providing water, sewer, gas, public works facilities, and other uses similar in nature and impact. "Public utilities" shall not include any use that is otherwise listed specifically in a zoning district as a permitted or conditional use (Section 12-13-3 of the Zoning Ordinance).

The proposed antenna support structure is not included within the definition of public utilities. Instead, the proposed structure is a Commercial Mobile Radio and Wireless Telecommunications Service Facility as defined below:

> COMMERCIAL MOBILE RADIO AND WIRELESS TELECOMMUNICATIONS SERVICE FACILITY: An unmanned facility consisting of antennas, equipment, and equipment storage shelter used for the reception, switching, and/or transmission of wireless telecommunications including, but not limited to, paging, enhanced specialized mobile radio, personal communication services, cellular telephone, and similar technologies. A commercial mobile radio service facility may either be freestanding, roof mounted, or building mounted (Section 12-13-3 of the Zoning Ordinance).

The proposed freestanding antenna support structure is a secondary principal use since it's not part of the existing public utility use (principal use) but serves as a separate use providing communication between ComEd substations in the area.

*Commercial Mobile Radio and Wireless Telecommunications Service Facility Regulations*

The Commercial Mobile Radio and Wireless Telecommunications Service Facility use is regulated in Section 12-8-5 of the Zoning Ordinance by zoning district, property location, height, design, and operation to minimize adverse effects on surrounding developments.

- Zoning District: This use is only allowed in certain zoning districts either as a permitted use ("P") or conditional use ("C") as identified in the table. Zoning districts not listed below prohibit this use due to the intended uses of those zoning districts and potential adverse effects. The subject property is located in the C-3 district, which allows a freestanding facility serving as a secondary principal use, but only through a conditional use permit and approval from City Council.

| Zoning District | Freestanding (Principal Use) | Freestanding (Secondary Principal Use) | Roof or Building Mounted |
|---|---|---|---|
| C-1 Neighborhood Shopping | Not Allowed | Not Allowed | C |
| C-2 Limited Office Commercial | Not Allowed | C | C |
| ***C-3 General Commercial*** | ***Not Allowed*** | ***C*** | ***P*** |
| C-4 Regional Shopping | Not Allowed | C | P |
| C-5 Central Business | Not Allowed | Not Allowed | P |
| M-1 Limited Manufacturing | C | P | P |
| M-2 General Manufacturing | C | P | P |
| M-3 Special Manufacturing | C | P | P |
| I-1 Institutional | Not Allowed | C | P |
| R-4 Central Core Residential | Not Allowed | Not Allowed | C |

- Property Location: Freestanding facilities serving as a secondary principal use are required to be located behind the rear of the principal building and meet the following setback requirements:
    - Minimum 50-foot setback from all property lines; and
    - Minimum 100-foot setback from all residential districts.
- Height: Freestanding facilities within commercially zoned districts are limited to 50 feet in height.
- Design: These facilities must be designed to be compatible with neighboring buildings and uses, screened, and painted to blend or match with the host building or the environment.
- Operation: These facilities must be fully automated and unmanned except for the completion of periodic maintenance.

*Antenna Support Structure Proposal*

The petitioner proposes the antenna support structure between the existing control building and the substation electrical control equipment building and accessible from the two existing access points on Sycamore Street and roadway surface throughout the site as illustrated on the Site Plan. The attached Monopole Elevation Exhibit shows the overall height of the proposed structure along with details related to the proposed antennas.

The proposal also includes the addition of landscaping along Sycamore Street as illustrated in the attached Landscape Plan. It includes the addition of: (i) three new parkway landscape beds consisting of wood mulch groundcover and mixture of shrubs, ornamental grasses, and perennials; and (ii) six new wood mulch rings around existing parkway trees. All shrubs and perennials will not exceed three feet in height in conformance with Section 12-10-7 of the Zoning Ordinance. The proposed ornamental grasses will be four feet in height but have been approved by the Public Works and Engineering (PWE) department. Staff have added a condition of approval to require the landscaping to be installed in accordance with the attached Landscape Plan with flexibility to allow certain deviations as approved by the Zoning Administrator.

The table below analyzes how the proposed antenna support structure aligns with Section 12-8-5 of the Zoning Ordinance.

| Antenna Support Structure | | |
|---|---|---|
| **Standard** | **Requirement** | **Proposed** |
| Minimum Setback from Site Property Lines | 50 FT | North: ***28 FT**** East: 75 FT |
| Minimum Setback from Residential Districts | 100 FT | North: ***65 FT**** East: 105 FT |
| Location in Relation to Principal Building | Rear of principal bldg. | ***Side of principal bldg.**** |
| Maximum Height | 50 FT | ***104 FT**** |

***Indicates that a major variation is required.***

## MAJOR VARIATIONS

**Request Description:**

*Overview*

As noted above, the proposed antenna support structure will require multiple major variations related to its location and height:

- Structure Setback from Property Lines: The proposed structure exceeds the minimum 50-foot-setback requirement from the east property line but is positioned only 26 feet away from the north property line resulting in a 24-foot (48%) deficit in the property line setback standard.
- Structure Setback from Residential Districts: The proposed structure would be positioned 65 feet from the surrounding residential district—as measured from the proposed structure to the centerlines of the adjoining streets—which results in a 35-foot (35 percent) deficit of the residential district setback standard.
- Structure Location in Relation to the Principal Structure: The proposed structure will be positioned to the side of the principal structure (i.e., the control room) on the subject property instead of behind the principal structure as required.
- Structure Height: The proposed structure height of 104 feet more than doubles the maximum height of 50 feet for these types of facilities in commercially zoned districts.

*Request Considerations*

In their assessment of these requests, the PZB should review the following considerations for the proposed antenna support structure:

- Consideration of Existing Conditions: The subject property has been developed and operated as an electrical substation for many years. The attached Existing Conditions Photos show that multiple tall electrical poles and cables are currently installed on the premises to distribute power throughout the area. The proposed antenna support structure is similar in nature and appearance to the existing equipment and utility poles in the immediate area, which arguably does not further impact the neighboring properties than the existing electrical substation.
- Consideration of Purpose and Operation of the Structure: The attached Project Narrative and the attached Petitioner Responses for Standards provide more in-depth information on the purpose and design of the structure in addition to justification and rationale for the requested major variations. The PZB may ask for clarification on the specific design and location requirements for these types of structures as part of their overall consideration of these requests.
- Consideration of Alternatives: An alternative location of the proposed structure could be pursued to address the location-specified variation requests. However, viable alternative locations are limited based on the current development and layout of the subject property in addition to the required close proximity of the structure to the control building. Similarly, while a reduction in height of the structure could be pursued, reducing the structure height to 50 feet may limit or prevent effective operation of the proposed antenna support structure.

**Standards for Conditional Use**: Conditional Use requests are subject to the standards set forth in Section 12-3- 4(E) of the Zoning Ordinance. Rationale for how the proposed amendments would satisfy the standards is provided below and in the attached Petitioner Responses to Standards. For its rationale, the Board may use the responses provided as written, modify them, or adopt its own.

1. **The proposed Conditional Use is in fact a Conditional Use established within the specific Zoning district involved:**

   *Comment*: The proposed antenna support structure as presented is classified as a Commercial Mobile Radio and Wireless Telecommunications Service Facility use. This use is listed as a conditional use as specified in Section 12-8-5.G of the Zoning Ordinance for properties in the C-3 District.

2. **The proposed Conditional Use is in accordance with the objectives of the City's Comprehensive Plan:**

   *Comment:* The Future Land Use Map of the 2019 Comprehensive Plan designates this property as Transportation/Utilities/Communication/Other, land use designation with a specific focus on highways, commuter rail, and electrical distribution (i.e., electrical substations). The proposed antenna support structure would align with the Comprehensive Plan and further improve the existing substation currently operating on site.

3. **The proposed Conditional Use is designed, constructed, operated and maintained to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity:**

   *Comment:* The proposed antenna support structure is designed for function instead of appearance and, by its nature, is not harmonious or appropriate in appearance to surrounding residences. However, it complements the existing built environment of the substation and existing active railroad right-of-way abutting the subject property's west property line. While the proposal does add a new structure to the substation's premises, the overall design and location of the electrical substation itself will not change.

4. **The proposed Conditional Use is not hazardous or disturbing to existing neighboring uses:**

   *Comment:* Similar to the existing electrical substation, the proposed antenna support structure would not be hazardous or disturbing in its placement or operation. The existing tall fence enclosure has generally helped minimize any perceived hazardous or disturbing effects on neighboring uses. In addition, the proposed parkway landscaping along Sycamore Street will further soften the transition between the existing electrical substation/proposed antenna support structure and neighboring residents.

5. **The proposed Conditional Use is to be served adequately by essential public facilities and services, such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewer, and schools; or, agencies responsible for establishing the Conditional Use shall provide adequately any such services:**

   *Comment:* The existing electrical substation is adequately served by essential public facilities and services, which will not change with the installation of the proposed antenna support structure. Staff do not have concerns that this antenna support structure will impact the essential public facilities and services currently serving the subject property.

6. **The proposed Conditional Use does not create excessive additional requirements at public expense for public facilities and services and will not be detrimental to the economic well-being of the entire community:**

   *Comment:* The existing electrical substation provides utility services to the City that directly benefit the City as a whole. The proposed antenna support structure intends to further improve the efficiency of utility services provided by this electrical substation.

7. **The proposed Conditional Use does not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke fumes, glare or odors:**

   *Comment:* Commercial Mobile Radio and Wireless Telecommunications Service Facilities by nature are designed to be automated, unmanned, and operate with little to no noise or traffic. The petitioner confirms that the proposed antenna support structure will be unmanned, unlit, and noiseless. Aside from periodic maintenance of the proposed antenna support structure, there is no anticipated increase in the amount of traffic accessing the site. In addition, these types of facilities in the City are required to be painted in a "single color, having a flat, matte, non-gloss, nonfluorescent finish" to blend or match with the host building (i.e., control building) or its environment (i.e., electrical substation) pursuant to Section 12-8-5 of the Zoning Ordinance, thus reducing any potential glare impacts. There are no perceived impacts in relation to smoke fumes or odors associated with the operation of the proposed antenna support structure as confirmed by the petitioner.

8. **The proposed Conditional Use provides vehicular access to the property designed so that it does not create an interference with traffic on surrounding public thoroughfares:**

   *Comment:* The existing vehicular access to the electrical substation is sufficient for its operation and the proposed antenna support structure. Given that there is no change in the existing access points/circulation throughout the site and no anticipated interference from the proposed antenna support structure, staff do not have concerns related to traffic interferences on the surrounding streets.

9. **The proposed Conditional Use does not result in the destruction, loss, or damage of natural, scenic, or historic features of major importance:**

   *Comment:* The subject property has already been developed with the electrical substation and void of any natural, scenic, or historic features of major importance. The proposed antenna support structure will not result in any further loss of these features.

10. **The proposed Conditional Use complies with all additional regulations in the Zoning Ordinance specific to the Conditional Use requested:**

    *Comment:* Aside from the major variations for location and height, the proposed antenna support structure will comply with all other requirements of the Zoning Ordinance for the C-3 General Commercial District.

**Standards for Variation:** The following is a discussion of standards for variations from Section 12-3-6(H) of the Zoning Ordinance. Rationale for how the proposed use would satisfy the standards as provided below and in the petitioner's response to standards. The PZB may use this rationale toward its recommendation, or the Board may make up its own.

1. **Hardship: No variation shall be granted pursuant to this subsection H unless the applicant shall establish that carrying out the strict letter of the provisions of this title would create a particular hardship or a practical difficulty.**

   *Comment:* It can be argued that Commercial Mobile Radio and Wireless Telecommunications Service Facilities, including facilities like the proposed antenna support structure, can be difficult to design and locate on many properties given that the nature of their function and specifications do not often align with setback and height standards, except on larger properties with limited existing development and additional space for their placement. In cases like the subject property, factors such as short lot boundaries, smaller lot sizes, and more expansive developments equate to limited space for these types of structures and often variation requests. Staff feel that these factors are present on the subject property and provide a hardship or practical difficulty preventing the petitioner from complying with all appropriate standards.

2. **Unique Physical Condition: The subject lot is exceptional as compared to other lots subject to the same provision by reason of a unique physical condition, including presence of an existing use, structure, or sign, whether conforming or nonconforming; irregular or substandard shape or size; exceptional topographical features; or other extraordinary physical conditions peculiar to and inherent in the subject lot that amount to more than a mere inconvenience to the owner and that relate to or arise out of the lot rather than the personal situation of the current owner of the lot.**

   *Comment:* The 1.34-acre subject property is not unique in size. However, it is an irregular quadrilateral in shape reducing in width from 210 feet at the north boundary to 133 feet at the south boundary, which is unique and could partially be the cause for the variation requests. While the northern portion of the subject property—where the antenna support structure is proposed—is wider overall than the southern portion, it also contains both the existing control building and accessory structure on the site, which limits viable areas for the antenna support structure to be placed. To add to this, existing transformers and other electrical equipment bisect the northern portion of the lot further reducing available space. Thus, the unique property characteristics and existing development substantially limit the location of the proposed antenna support structure making it difficult to comply with all requirements in the Zoning Ordinance.

3. **Not Self-Created: The aforesaid unique physical condition is not the result of any action or inaction of the owner or its predecessors in title and existed at the time of the enactment of the provisions from which a variance is sought or was created by natural forces or was the result of governmental action, other than the adoption of this title.**

   *Comment:* While the location, dimensions, and size are not the result of a known action by the current owner or their predecessors, the existing development and its layout can be directly attributed to the current property owner. That said, the existing electrical substation was developed several decades ago prior to the current Illinois laws for improvements such as the proposed antenna support structure, so it can be argued that while the existing development is directly caused by the current property owner it was not possible for the current property owner to have known when originally constructing the electrical substation that the improvements such as the proposed antenna support structure would be required in the future. Nonetheless, see the attached Petitioner's Project Narrative and Responses to Standards.

4. **Denied Substantial Rights: The carrying out of the strict letter of the provision from which a variance is sought would deprive the owner of the subject lot of substantial rights commonly enjoyed by owners of other lots subject to the same provision.**

   *Comment:* While it can be argued that the existing electrical substation could still operate as it does today without the approval of the proposed antenna support structure, denial of the requested variations would essentially prevent the installation of the antenna support structure, which could impact the overall efficiency of the electrical substation and prevent the property owner from abiding by the Illinois statues referred to the attached Petitioner's Project Narrative and Responses to Standards. As newer technology becomes available and laws are put in place to require its implementation in existing public utility facilities, it is important to consider the critical role that public utility facilities play in our communities and the need to allow the latest technological advances to be installed so these facilities can continue to efficiently provide necessary services.

5. **Not Merely Special Privilege: The alleged hardship or difficulty is neither merely the inability of the owner or occupant to enjoy some special privilege or additional right not available to owners or occupants of other lots subject to the same provision, nor merely the inability of the owner to make more money from the use of the subject lot.**

   *Comment:* Granting the requested variations would not be classified as a special privilege for the property owner as the subject property provides a critical service to the community. Not only that but the proposed antenna support structure will help to improve the communication between other substations in the area to reduce outages and optimize electrical distribution.

6. **Title And Plan Purposes: The variation would not result in a use or development of the subject lot that would be not in harmony with the general and specific purposes for which this title and the provision from which a variation is sought were enacted or the general purpose and intent of the comprehensive plan.**

   *Comment:* The Future Land Use Map in the Comprehensive Plan denotes the subject property as the Transportation/Utilities/Communication/Other use type, which focuses on public utility facilities such as the existing electrical substation on the subject property. The proposed antenna support structure represents a form of development that complements the existing electrical substation while also providing improvements to the electrical distribution system.

7. **No Other Remedy: There is no means other than the requested variation by which the alleged hardship or difficulty can be avoided or remedied to a degree sufficient to permit a reasonable use of the subject lot.**

   *Comment:* The *Request Considerations* section above summarizes some considerations that could be made regarding the location and height of the proposed antenna support structure. The property characteristics do substantially limit alternate locations for the antenna support structure and the 50-foot height restriction could limit the antenna support structure's ability to effectively communicate with other substations, which is its sole purpose. Nonetheless, the PZB may ask why alternative designs are not feasible.

8. **Minimum Required: The requested variation is the minimum measure of relief necessary to alleviate the alleged hardship or difficulty presented by the strict application of this title.**

   *Comment:* The variation requests for location and height would be the minimum measure of relief needed to allow the antenna support structure to be installed as specified. The proposed antenna support structure will need to follow all other portions of Sections 12-8-5 of the Zoning Ordinance.

**PZB Procedure and Recommended Conditions:** Under Section 12-3-4.D (Procedure for Review and Decision for Conditional Uses) and Section 12-3-6.G.2.b (Procedure for Review and Decision for Major Variations) of the Zoning Ordinance, the PZB has the authority to *recommend* that the City Council approve or deny the requests. Consideration of the requests should be based on a review of the information presented by the petitioner and the findings made above, as specified in Section 12-3-4.E (Standards for Conditional Use) and Section 12-3-6.H (Standards for Variations) of the Zoning Ordinance. If the PZB recommends and City Council ultimately approves the request, staff recommends the following conditions.

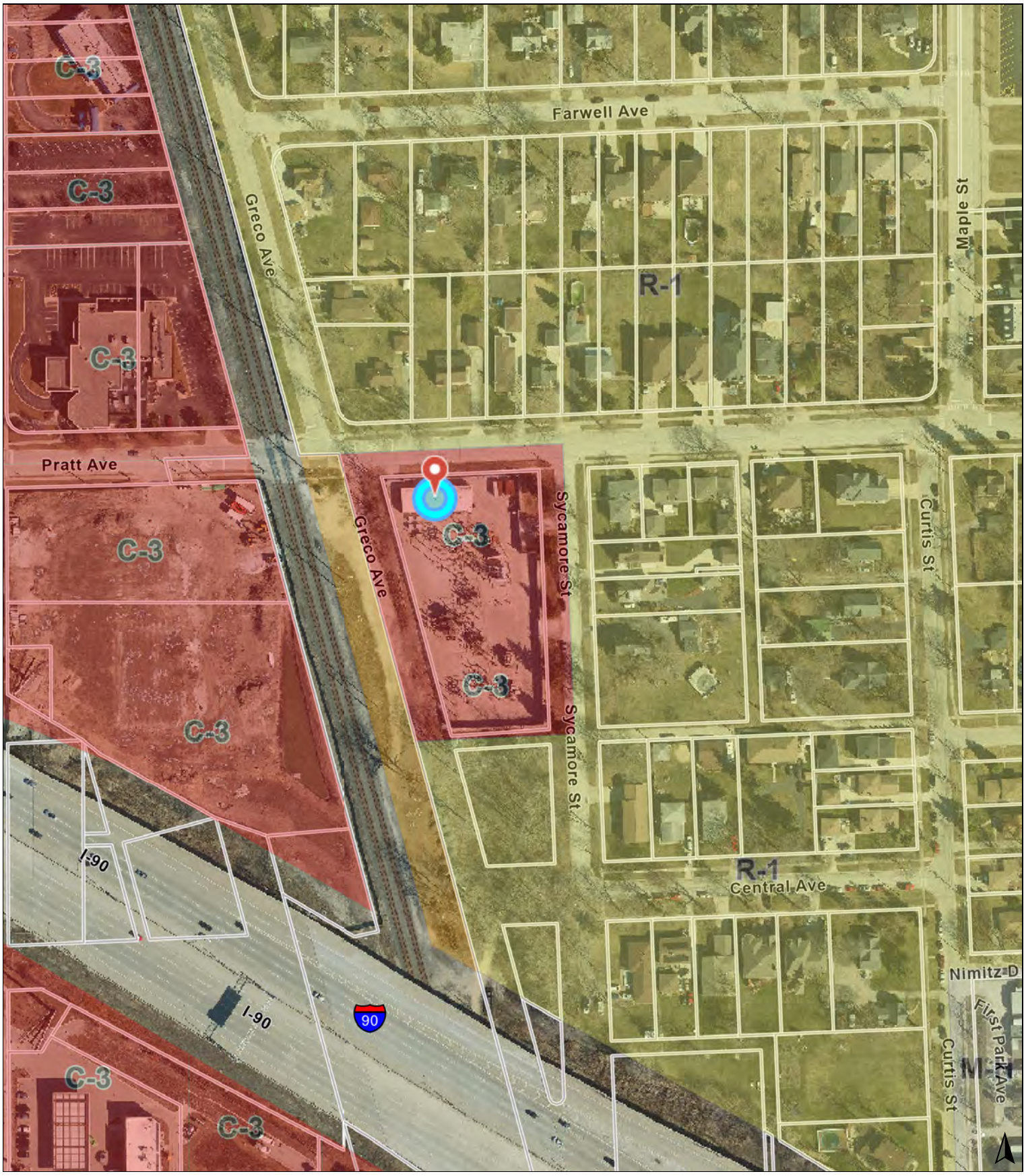
**Conditions of Approval:**

1. Landscaping must be installed in conformance with the approved Landscape Plan. Minor changes can be approved by the Zoning Administrator provided that the quantity of plantings does not decrease.
2. At time of the building permit process, the antenna support structure plans may be modified as necessary to comply with all local and state requirements, provided that the total height (including the antenna) is not increased in size and its setbacks are not decreased in distance.

**Attachments:**
Attachment 1: Location Map
Attachment 2: Site and Context Photos
Attachment 3: Photos of Existing Conditions
Attachment 4: Plat of Survey
Attachment 5: Petitioner's Project Narrative and Responses to Standards
Attachment 6: Site Plan
Attachment 7: Landscape Plan
Attachment 8: Antenna Support Structure Exhibits

GISConsortium

# 1705 Pratt Avenue




0 250 500 ft

**Print Date: 6/6/2025**

**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.*

**1705 Pratt Ave – Public Notice Sign**

**1705 Pratt Ave – Facing Southeast at Front of Control Bldg.**

**1705 Pratt Ave – Facing West at Front of Substation**

**1705 Pratt Ave – View of Substation Front from Pratt Ave**

1705 Pratt Ave – View of Substation Side from Pratt Ave

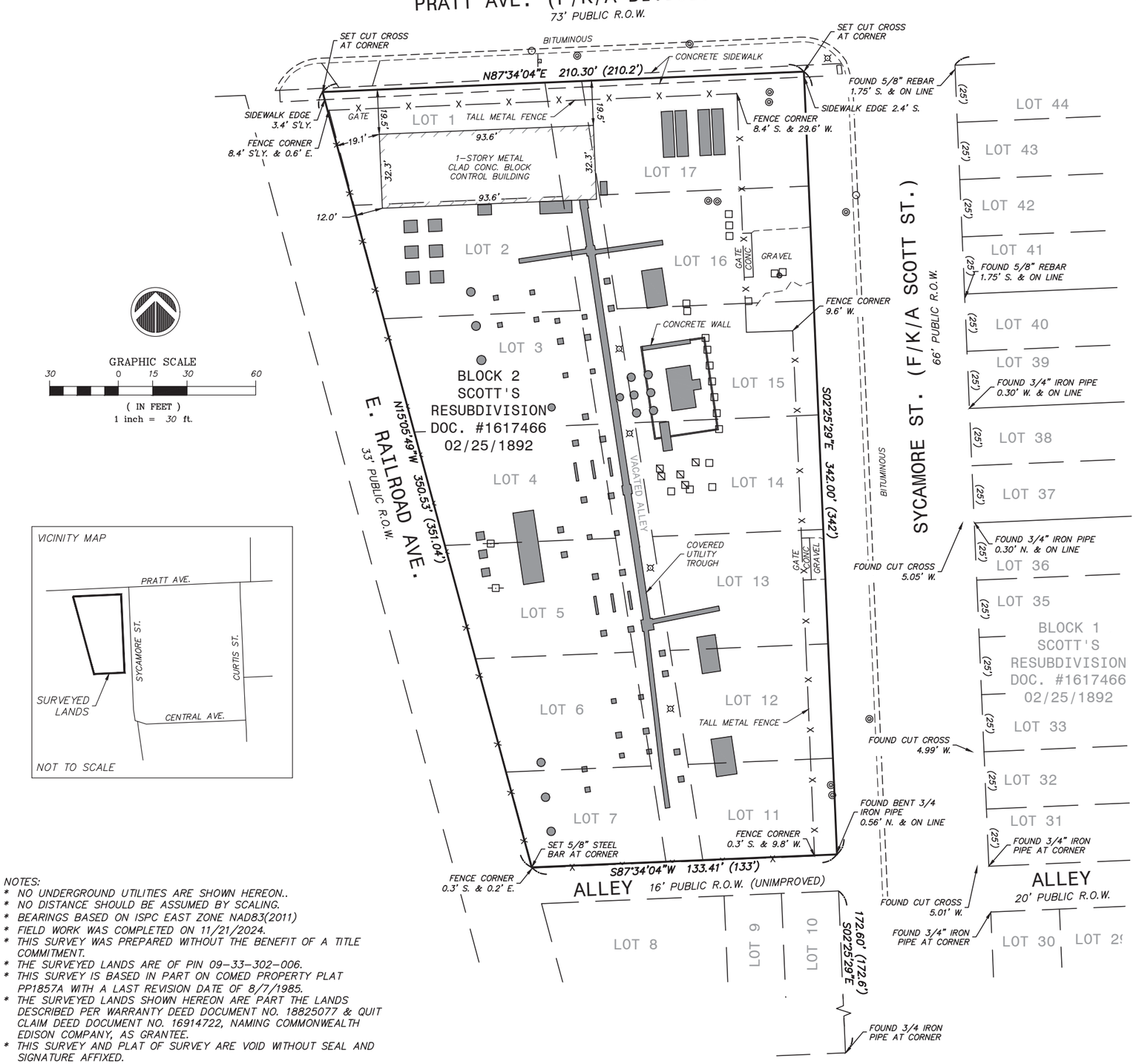
1705 Pratt Ave– View of Substation Rear from Sycamore St

1705 Pratt Ave – View of Substation Entrance No. 1 on Sycamore St

1705 Pratt Ave – View of Substation Entrance No. 2 on Sycamore St

NO
THRU
TRAFFIC
NO
PARKING
ANY
TIME

# PLAT OF SURVEY




GRAPHIC SCALE
30 0 15 30 60
( IN FEET )
1 inch = 30 ft.

VICINITY MAP




NOT TO SCALE

**LEGAL DESCRIPTION**

LOTS ONE (1) THROUGH SEVEN (7) INCLUSIVE, AND LOTS ELEVEN (11) THROUGH FIFTEEN (15) INCLUSIVE, IN BLOCK TWO (2) IN SCOTT'S RESUBDIVISION OF BLOCKS ONE (1), TWO (2) AND FOUR (4) (EXCEPT LOT 7, 9, 10, 11, 12, 13 AND 14 IN SAID BLOCK FOUR (4) AND BLOCK SIX (6) EXCEPT LOT 1, 2, 3, 7, AND 8 IN SAID BLOCK SIX (6)) IN ORCHARD PLACE, A SUBDIVISION IN THE SOUTHWEST QUARTER (SW-1/4) OF SECTION THIRTY-THREE (33), TOWNSHIP FORTY-ONE (41) NORTH, RANGE TWELVE (12) EAST OF THE THIRD PRINCIPAL MERIDIAN.

TOGETHER WITH,

LOTS SIXTEEN (16) AND SEVENTEEN (17) IN BLOCK TWO (2) IN SCOTT'S RESUBDIVISION OF BLOCKS ONE (1) AND TWO (2) AND PART OF BLOCKS FOUR (4) AND SIX (6) IN ORCHARD PLACE, IN SECTION THIRTY-THREE (33), TOWNSHIP FORTY-ONE (41) NORTH, RANGE TWELVE (12) EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO PLAT THEREOF RECORDED FEBRUARY 25, 1892, AS DOCUMENT 1617466, IN BOOK 52 OF PLATS, PAGE 19, IN COOK COUNTY, ILLINOIS.

**LAND AREA NOTE**

AREA OF SURVEYED LANDS = 1.349 ACRES, MORE OR LESS.

**LEGEND**

| | |
|---|---|
| LIGHT POLE | |
| HANDHOLE | |
| BOLLARD | |
| MANHOLE | |
| UTILITY POLE | |
| CATCH BASIN | |
| SIGN | |
| MEASURED DISTANCE | 123.45' |
| RECORD DISTANCE | (123.45') |
| RECORD = MEASURED | (R&M) |
| CONCRETE | |

NOTES:
* NO UNDERGROUND UTILITIES ARE SHOWN HEREON..
* NO DISTANCE SHOULD BE ASSUMED BY SCALING.
* BEARINGS BASED ON ISPC EAST ZONE NAD83(2011)
* FIELD WORK WAS COMPLETED ON 11/21/2024.
* THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT.
* THE SURVEYED LANDS ARE OF PIN 09-33-302-006.
* THIS SURVEY IS BASED IN PART ON COMED PROPERTY PLAT PP1857A WITH A LAST REVISION DATE OF 8/7/1985.
* THE SURVEYED LANDS SHOWN HEREON ARE PART THE LANDS DESCRIBED PER WARRANTY DEED DOCUMENT NO. 18825077 & QUIT CLAIM DEED DOCUMENT NO. 16914722, NAMING COMMONWEALTH EDISON COMPANY, AS GRANTEE.
* THIS SURVEY AND PLAT OF SURVEY ARE VOID WITHOUT SEAL AND SIGNATURE AFFIXED.

STATE OF ILLINOIS )
) S.S
COUNTY OF McHENRY )

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED AT McHENRY, McHENRY COUNTY ILLINOIS, ON DECEMBER 6, 2024.

HR GREEN, INC.

JOHN S. BOLINE (EMAIL: JBOLINE@HRGREEN.COM)
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3756
LICENSE EXPIRES: NOVEMBER 30, 2026

JOHN S BOLINE
35-03756
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
McHENRY

comed
AN EXELON COMPANY

PREPARED BY:
ILLINOIS PROFESSIONAL DESIGN FIRM #184-001322
1391 CORPORATE DRIVE, SUITE 203
McHENRY, IL 60050-7040
t. 815.385.1778 f. 815.385.1781
www.HRGREEN.com
HRGreen

| REVISIONS | | |
|---|---|---|
| NO. | DATE | DESCRIPTION |
| | | |

| REVISIONS | | |
|---|---|---|
| NO. | DATE | DESCRIPTION |
| | | |

APPROVED BY: JB
CHECKED BY: MD

PLAT OF SURVEY
TSS 198 - DES PLAINES, IL

| OFFICE | | FIELD: JB | CHD: JB | CONTRACTOR NO.: 240357.577 | COMED ORDER NO.: | SHEET NO. |
|---|---|---|---|---|---|---|
| DWG. NO.: | ELECTRONIC DWG. FILE: 240357.577_Survey | | | DATED: 12/06/24 | SCALED: 1" = 30' | 1 OF 1 |

## City of Des Plaines – Zoning Request Application Addendum

Introduction and Summary of Approvals Requested

In order to enhance ComEd's provision of reliable and efficient electrical service in the City of Des Plaines (the "City") and surrounding areas, ComEd intends to install at its "Pratt" substation (the "Substation") located at 1705 Pratt Avenue (the "Property") a 104-foot Essential Services-Antenna Support Structure (called more formally by ComEd a Smart Grid distribution automation device monitoring support structure, the "Structure"). The Substation is located in the C-3 zoning district. The City characterizes the Structure as a Commercial Mobile Radio and Wireless Telecommunications Service Facility under the City's Zoning Ordinance (the "Ordinance") subject to the provisions of Section 12-8-5 of the Ordinance.

Accordingly, to facilitate this project (the "Project") and working cooperatively with the City in an effort to improve its electric utility service within the City, ComEd is requesting that:

(1) a conditional use be approved under Sections 12-8-5(G) of the Ordinance to allow for installation of the Structure within the C-3 district,

(2) variations be approved from Sections 12-8-5(B)(1) and (2) of the Ordinance to allow for installation of the Structure 28 feet from the Substation's northern property line and approximately 65 feet from the nearest residential zoning district whose boundary runs down the center of Pratt Avenue (note the distance from the Structure to the nearest residentially zoned lot line is just over 100 feet),

(3) a variation be approved from Section 12-8-B(3) of the Ordinance to allow the Structure to be situated to the side and rear of the substation control building (assumed to be the structure housing the primary principal use of the Substation) given that the Structure's placement may not be strictly "behind the rear" of the substation control building, and

(4) a variation be approved from Section 12-8-5(F) of the Ordinance to allow for installation of a 100-foot Structure (which will hold five monitoring antennae) to which will be attached a 4-foot-long lightning rod at the top.

The installation of the Structure builds upon ComEd's Substation modernization efforts which saw in 2022 the installation of a new expanded metal fence providing enhanced security, which, together with new parkway landscaping, resulted in improved Substation screening and aesthetics. These improvements were approved by the City just after the Substation's 2022 rezoning by the City Council to the C-3 district.

To honor ComEd's commitment to cooperation, we respectfully submit this request to the City. We recognize that the core nature of this Project as a key component of the electrical grid may limit the City's land use authority concerning ComEd's implementation of the Structure at its Substation. This is because the Structure is essential to ComEd's distribution system which is generally regulated by State of Illinois regulatory entities – namely, the Illinois Commerce Commission. While acknowledging this concern, ComEd is voluntarily submitting this request in an effort to work on its project cooperatively with the City as described earlier.

Project Narrative

***A. Structure's role in and contribution to ComEd's Distribution Automation Network***

The Structure is part of the ComEd's wide-ranging implementation of its multi-year "smart grid" initiative. The smart grid initiative fulfills regulatory commitments made by ComEd under two Illinois laws, and includes an upgrading of the existing electrical distribution communication system with newer technology and infrastructure, as further explained in the letter attached to this application from one of the Project's key senior managers.

The Structure will be a key aspect of this smart grid infrastructure and technological upgrade. Key resulting community benefits will be improved reliability of the electrical grid (through the reduction of electrical outages and the duration of outages) and increased voltage efficiencies along each distribution line, resulting in smoother electrical grid operations. Each of these initiatives to which the Structure is central is explained in detail below.

***(i) Distribution Automation***

ComEd's technology and infrastructure involves the evolution of a ComEd-only radiofrequency ("RF") network in which sensors and monitoring devices being installed within 12 kV and 34 kV distribution circuits and/or on distribution poles communicate in real time with antennae support facilities like the Structure. If an abnormal operating condition occurs – such as a storm or a tree branch falling on a distribution line – a line sensor communicating with the Structure allows for expedited fault location, minimizing outage durations. In addition, devices called "reclosers," linked wirelessly to the Structure, are able to sectionalize outages to a reduced area, protecting utility equipment and enhancing its safety. Structures such as the one proposed allow for clear mesh system communications, central to the Distribution Automation system, so that the line sensors work together with the reclosers to allow ComEd's grid operators to quickly and efficiently respond to exact outage locations to restore power to impacted customers. Even further, the Distribution Automation computer systems are pre-programmed with possible outage scenarios, allows for quick power restoration of most customers without ComEd's need to mobilize and dispatch crews from regional ComEd utility yards. The Structure will only communicate with ComEd's electrical devices/equipment on the electrical grid system. It will not be used for any commercial communication services.

The benefit of the new Distribution Automation wireless technology can be explained with reference to a lightning strike and its impact on a distribution line. With "legacy" technology, a lightning strike to a distribution line would likely cause removal of a larger portion of a distribution circuit – and the customers served by such circuit – until ComEd crews could reach the affected area from a regional utility yard and then determine the precise location of the strike and re-route power around the affected area. By contrast, as described in the preceding paragraph, once the wireless technology is deployed in a particular area, the sensors in the distribution circuit – including at the top of a distribution pole – will communicate the fault to receiving antennae on the Structure, which directly links to IT infrastructure tied into ComEd's centralized command and control center. ComEd immediately learns the precise area of the fault and can efficiently dispatch crews to the fault location. Further, the proposed Structure's antennae can direct receiving

equipment on the distribution lines how to switch power around the fault so that the number of affected customers is minimized.

***(ii) Voltage Optimization***

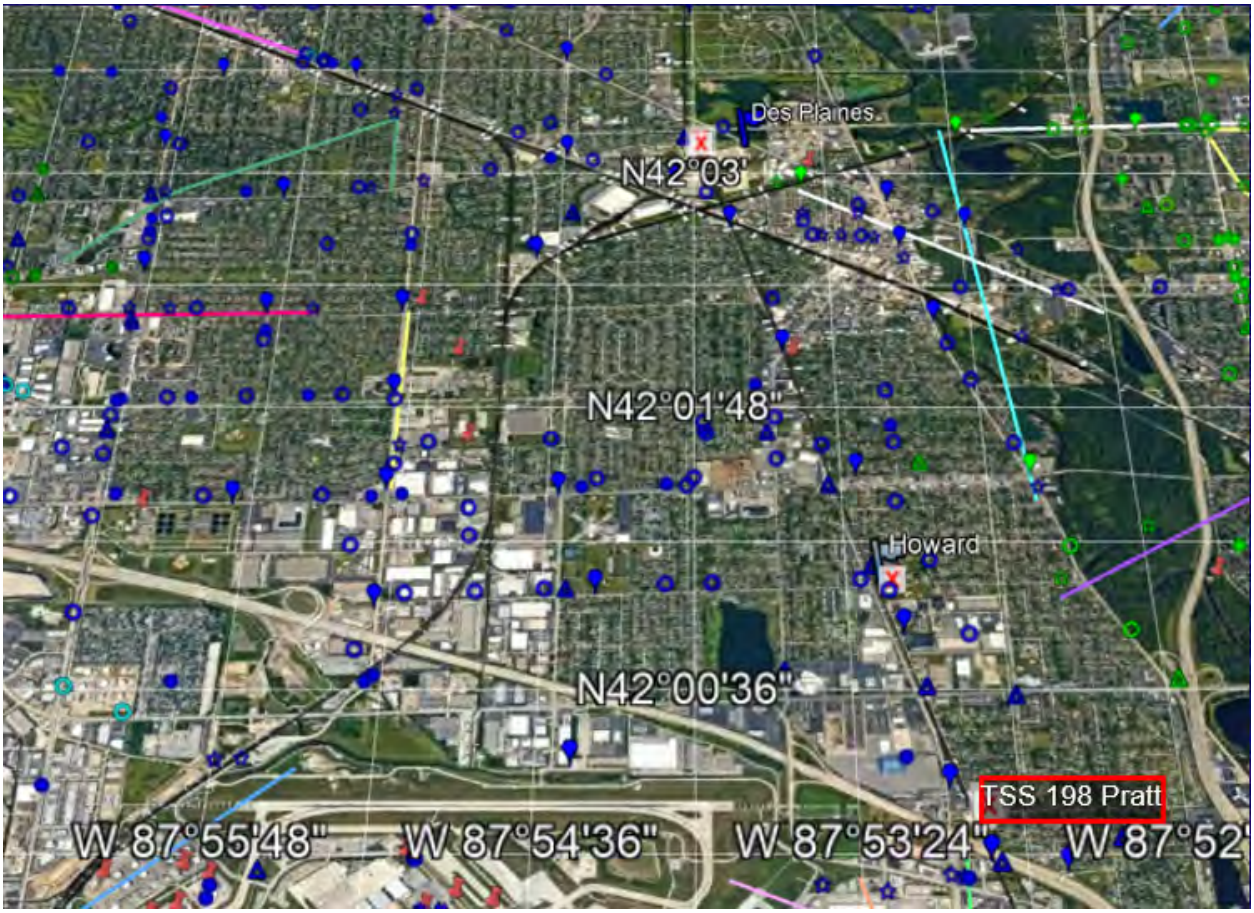
Voltage optimization ("VO") is a Smart Grid technology which uses wireless signals to activate equipment such as voltage regulators and capacitor banks at substations and along distribution circuits for the purpose of dynamically controlling and lowering voltage delivered to customers, thereby reducing the cost of energy for customers and promoting sustainability. Under normal operating conditions, VO aims to reduce energy consumption by adjusting the incoming electricity supply voltage to a level that is optimal for the connected electrical equipment, essentially allowing devices to operate at their most efficient level by minimizing unnecessary voltage fluctuations and delivering a more consistent power supply. This saves energy and potentially extends equipment lifespans. All of this occurs without any impact to the customer experience. On average, putting aside any individual customer's changing energy use habits, once VO technology is implemented on a distribution circuit and because VO ensures that electrical devices do not draw more power than needed, customer energy usage will decrease on average by 2%, resulting in carbon emission reductions and cost savings.

ComEd has already enabled VO technology within the City in the distribution circuits originating from the "Pratt" substation (in addition to VO technology having been deployed in other distribution circuits within the City). The Structure would allow customers in the southern and southeastern portions of the City to fully benefit from the VO technology and the usage reduction benefits described above as well, benefits currently potentially limited by the absence of receiving and transmitting antennae situated within the southern and southeastern portions of the City. The Structure would enable full, consistent functioning of the enabled VO technology.

The efficacy of the new technology depends on clear, clean wireless communication and strong security given the criticality of the electrical grid to the nation's infrastructure system. Existing electrical substations have been selected for locations of the antenna support structures since they offer necessary security, along with the indispensable link to ComEd's high-speed existing IT backbone network. The necessary IT equipment accompanying the Structure will be housed in the existing substation control building, so no new equipment enclosure is required, thereby minimizing any external "footprint" resulting from the upgraded technology. (Note that ComEd's request for setback variations for the Structure is driven by this technological requirement that the Structure be located in close proximity to the control building to house its IT equipment, but out of the way of the numerous underground lines connecting the control building to other electrical equipment within the Substation.) Finally, electrical substations are already locations which often contain (or are near to) pre-existing taller electrical infrastructure (and/or community expectations for such taller infrastructure), mitigating visual concerns.

ComEd's request for a height variation for the Structure is related to the need for five receiving and transmitting antennae on the Structure (each antenna mount is a very thin two inches in diameter, just under 5 feet long (including the length of both the antenna and antenna mount) and installed only 2 feet or so from the Structure) to support existing and to-be-newly-added monitoring and sensing devices in Des Plaines-area distribution circuits.

Below is a computerized graphic which shows the current status of the ComEd distribution automation device monitoring network in Des Plaines. The colored "flags" indicate existing communication structures and the proposed structure on Pratt Avenue is located at bottom right with a red square around it.




The existing antennae in the area are located on a support structure in the ComEd substation in northern Des Plaines along Rand Road (blue flag). The corresponding blue-colored "dots" are existing sensors and monitoring devices operating on ComEd's RF network which are communicating wirelessly to this support structure in northern Des Plaines. The antennae on this structure are reaching capacity limits very quickly and in such circumstances would not provide optimum RF coverage for sensors and monitoring devices within the City already. This condition will only be aggravated as additional devices are installed within Des Plaines-area distribution circuits over the next two years. The graphic above dramatically illustrates the important role in the network that will be carried out by the proposed Structure at the Substation, given that many of the sensors and monitoring devices currently communicating with the northern Des Plaines support structure will be re-routed to begin communicating with the proposed Structure upon its completion.

The five antennae proposed for the Structure are needed for proper RF capacity, since a reduced number of antennae on the Structure installed at lower heights would result in an overburdened and less effective mesh communication system (resulting in numerous "dropped" or

"blocked" calls to use cellular telephone analogies) or "garbled" communications related to foliage interference. For proper system functioning, the lowest antenna should be installed at a minimum height of approximately 40 feet, as is proposed in this case, to avoid foliage blockage. Each additional antenna must be installed a minimum of 15 feet away vertically to avoid technological interference. It is this required minimum spacing and the need for five antennae for effective network functioning which forms the basis for the Structure's 100-foot height. A reduced number of antennae is not enough to allow for seamless functioning of the Des Plaines-area wireless technology currently imbedded in (or to be imbedded in) the distribution circuits and on distribution poles.

Delving further into key technical details of the system, ComEd has engineered the Structure and its height in a manner which allows for seamless smart grid coverage of the electrical distribution network. Each antenna on the Structure has a capacity of approximately 40-50 sensing devices per antenna. ComEd considered the impact of installing at the Substation one or more Structures of less overall height – and by extension fewer antennae – yet has concluded that there is insufficient area for multiple structures and device communication would become compromised due to overcapacity of the antennae to be installed. This, in turn, leads to a gap in radiofrequency coverage since the support structures in ComEd's network and their attached antennae are generally evenly spaced to allow for effective coverage. A height reduced from 100 feet (5 antennae) essentially precludes regional effectiveness of ComEd's smart grid distribution automation network.

ComEd is careful and judicious in its selection of locations for new support structures. To the greatest extent feasible, ComEd installs its antennae on ComEd existing taller structures (other than transmission towers where such installation is not feasible), such as taller rooftops or existing taller microwave towers – this is the case at ComEd's substation on Rand Road mentioned above. ComEd cannot co-locate its antennae on existing third-party owned towers, nor can it permit third-party users to co-locate antennae on its structures, due to the need for its antennae to be located within secure substations with direct and secure connections to the ComEd IT backbone. New structures are placed at substations which have physical space within the existing footprint (so that a physical expansion of the outer substation footprint can be avoided), space within an existing substation control building (so that development of a new equipment enclosure is obviated) and a secure link to the ComEd IT backbone. The Substation meets all of these criteria.

***B. Depiction of similar existing Structures and Structure functioning***

Please see the Technical Appendix for a depiction of similar structures which have been installed in the Chicago metropolitan area by ComEd and for additional detail in particular on how the Structure and antennae will function in accordance with FCC and FAA regulations.

***C. Site Plan***

The proposed Structure will be situated in the north portion of the Property at a location which simultaneously offers the required close proximity to the Structure's IT equipment to be housed in the existing control building while providing adequate equipment clearance and avoiding drive paths and underground obstructions. As can be noted on the Site Plan provided with this Narrative, the Structure will be located approximately 28 feet south of the northern property

line along Pratt Avenue and approximately 310 feet north of the southern property line. The Structure's base will be set back approximately 76 feet from the eastern property line along Sycamore Street and approximately 124 feet from the western property line. The Structure will be set back greater than its height (101 feet) to the southern property line of the nearest residential homes and approximately 130 feet from the nearest home.

The proposed Structure has been carefully placed within the Substation so as to maintain the required close distance to the substation control building in which the electronic equipment will be housed. This placement will minimize signal degradation while also avoiding impacts to either existing substation electrical equipment (including below grade equipment and above grade clearance issues) or areas set aside for either driveways or future equipment expansion (so that the Substation continues to maintain adequate space to serve growth in the area's electrical demand without the need for additional and new property acquisition for construction of an entirely new and different substation). The Modified Site Plans provided with this Narrative (both plan and aerial views) show how this proposed location is essentially the only feasible location within the Substation that the Structure can be placed, taking into account the factors set forth above.

The Structure should have limited impact on surrounding properties. The Substation is a long-standing existing use on the Property, where taller electrical infrastructure and/or community expectations of seeing such infrastructure already exist on the Property itself or immediately west of it. The City Council's approval of the Property's rezoning in 2022 from a legacy residential district (in which public utility uses are not authorized uses) to the C-3 district (in which public utility uses are permitted as of right) was, practically speaking, a formal confirmation that Pratt Avenue is an appropriate location for the Substation and its associated infrastructure.

The Property is bordered to its west by a railroad right-of-way (a similar utility-type use) along which ComEd has installed various utility poles and towers of similar height to the Structure (110 feet just to the west and northwest and 80 feet to the southwest). The trend of commercial and/or light industrial uses continues farther west past the railroad tracks, and mature trees on the Substation's western edge will help largely screen views of the Structure from this area. Residential districts exist both across Pratt Avenue to the Property's north and Sycamore Street to the Property's east. While the upper portion of the Structure may be visible from these neighboring properties, the Structure's base is screened by the tall dense-mesh security fence and the Structure's upper portion should be visually consistent and blend in with the other pieces of gray electrical infrastructure at the Substation and just beyond it which have long been visible from these properties. Renderings of the Structure within the Substation from varying vantage points illustrating these points are attached.

The Structure's steel material and gray coloring will also limit its possible visual impact given the compatibility of this coloring with other Substation electrical equipment. Additionally, the Structure is unlit and will not require any additional parking or signage at the Substation. The Structure, per its approval from the FAA (attached), will not be required to have a beacon and/or designated paint. Finally, to enhance aesthetics at the Substation, increased plantings will be placed along the Substation's eastern side and the gravel driveways will be converted to a hard surface.

## Standards for Conditional Use

*Sec. 12-3-4(E)(1). The proposed conditional use is in fact a conditional use established within the specific zoning district involved.*

Freestanding commercial mobile radio and wireless telecommunications service facilities which are a secondary principal use are a conditional use in the C-3 zoning district where the Property is located.

*Sec. 12-3-4(E)(2). The proposed conditional use is in accordance with the objectives of the City's comprehensive plan and the Ordinance.*

As part of its Future Land Use Map, the City's Comprehensive Plan designates the Substation's zoning lot for utility and communication uses (see Figure 2.1), both of which will be furthered by the proposed Structure. By helping improve the reliability and efficiency of the local electrical grid, the Structure plays an important role in minimizing outages, important for resiliency of the grid within the City and of key benefit both to its residents and to its non-residential electrical users, and also has a critical role in promoting economic development initiatives in the City's industrial and commercial sectors, which is another stated goal of the Comprehensive Plan (see Chapter 3). Section 12-1-3 of the Ordinance states that one of the Ordinance's purposes is to "support the goals, objectives and policies of the comprehensive plan and other plans adopted by the City of Des Plaines."

*Sec. 12-3-4(E)(3). The proposed conditional use is designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity.*

The Structure will be compatible with similar structures in the Substation's general vicinity, including the pieces of electrical infrastructure which have long existed at the Substation and various utility poles and towers in the railroad right-of-way directly west, all of which have become key features of the existing character of the vicinity. The Structure's gray color will match the existing Substation electrical equipment, it will be unlit, and all associated electronics equipment will be housed inside an existing building, minimizing any new external facilities within the Substation. Finally, the base of the Structure will be screened from nearby properties both by the substation control building and the Substation's 11-foot-tall, 75%-opaque expanded metal fence and the additionally proposed plantings and driveway paving at the Substation that will occur in connection with building the Structure will all help keep the Structure's appearance harmonious and appropriate with the general vicinity's existing character.

*Sec. 12-3-4(E)(4). The proposed conditional use is not hazardous or disturbing to existing neighboring uses.*

The proposed Structure will not be hazardous or disturbing to existing neighboring uses because it will function as an integral but unmanned part of the Substation, just like any other piece of taller electrical infrastructure, with screening of the Structure's base provided in part by the expanded metal fence at the Substation. Other than the Structure, the additional plantings and planned driveway paving, no additional adjustments to the

Substation are proposed in connection with the Project, thus minimizing any external effects.

Further, the very low (1 watt or less) output power of the Structure's antennae coupled with their intermittent operation (along with compliance with all of the other applicable federal regulations) will allow ComEd's Structure to operate in a manner protective of public health and safety in that radiofrequency emissions are highly attenuated.

*Sec. 12-3-4(E)(5). The proposed conditional use is to be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewer, and schools; or the persons or agencies responsible for the establishment of the proposed conditional use shall provide adequately any such services.*

The Property has adequate public facilities for its current substation use, which use will not change after installation of the unmanned Structure.

*Sec. 12-3-4(E)(6). The proposed conditional use does not create excessive additional requirements at public expense for public facilities and services and not be detrimental to the economic welfare of the community.*

The Property has existing adequate public facilities necessary for installation and operation of the Structure, and no additional requirements at public expense will be created by its installation or operation.

*Sec. 12-3-4(E)(7). The proposed conditional use does not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors.*

The Structure will be unmanned, unlit and noiseless and will not have any emissions or odors – its operation will not be detrimental to any persons, property or the general welfare.

*Sec. 12-3-4(E)(8). The proposed conditional use provides vehicular access to the property designed that does not create an interference with traffic on surrounding public thoroughfares.*

The Substation's current vehicular ingress and egress design will be continue to be suitable for its operation following installation of the Structure.

*Sec. 12-3-4(E)(9). The proposed conditional use does not result in the destruction, loss, or damage of a natural, scenic, or historic feature of major importance.*

The Substation is not located next to any natural, scenic, or historic feature of major importance which could potentially be affected by installation of the Structure.

Further, the Property on which the Substation sits has long been developed and used for public utility purposes and itself contains no natural, scenic or historic features of major importance.

*Sec. 12-3-4(E)(10). The proposed conditional use complies with all additional regulations in this title specific to the conditional use requested.*

The Structure will comply with all requirements for freestanding commercial mobile radio and wireless telecommunications service facilities located in the C-3 zoning district except for the height and setback requirements for which ComEd is requesting variation relief as part of this zoning application (see Standards for Variations below).

## Standards for Variation

*Sec. 12-3-6(H)(1). Hardship: No variation shall be granted pursuant to this subsection H unless the applicant shall establish that carrying out the strict letter of the provisions of this title would create a particular hardship or a practical difficulty.*

If the height of the Structure is reduced from 104 feet in order to meet the strict letter of the provisions of the Ordinance (which is a 50-foot height limit), then the Structure will not be able to accommodate five antennae, meaning the ComEd distribution automation device monitoring system will not be able to effectively function due to overcapacity resulting from a reduced number of antennae, thereby potentially compromising device communication. This, in turn, would lead to a gap in radiofrequency coverage since the system's support structures and their attached antennae are generally evenly spaced and of a generally standardized height to allow for effective coverage. This gap would essentially preclude continued regional effectiveness of ComEd's smart grid distribution automation network.

Further, in terms of the requested setback variation requests, the Structure must be located (i) at a location which provides physical security for the Structure and a link to ComEd's high-speed existing IT backbone network, of which electrical substations like the Substation on Pratt Avenue are perfect examples, and (ii) in a position within the Substation close to its existing substation control building, where the necessary IT equipment accompanying the Structure will be housed. The Modified Site Plans provided with this Narrative show how the Structure's proposed location, while within the otherwise-required setback for wireless telecommunications service facilities, is essentially the only feasible location within the Substation that the Structure can be placed, taking into account various aboveground and underground obstructions.

*Sec. 12-3-6(H)(2). Unique Physical Condition: The subject lot is exceptional as compared to other lots subject to the same provision by reason of a unique physical condition, including presence of an existing use, structure, or sign, whether conforming or nonconforming; irregular or substandard shape or size; exceptional topographical features; or other extraordinary physical conditions peculiar to and inherent in the subject lot that amount to more than a mere inconvenience to the owner and that relate to or arise out of the lot rather than the personal situation of the current owner of the lot.*

ComEd places antenna support structures like the Structure within existing substations like the Substation because they have the unique physical condition of existing security infrastructure (like the Substation's upgraded secure fence installed in 2022) and an existing connection to ComEd's high-speed IT backbone network. The Substation also has two unique physical conditions requiring placement of the Structure in its proposed location within the Substation. First, the Structure must be placed within close distance to the existing substation control building in which its electronic equipment will be housed, which will minimize signal degradation. Second, while maintaining such close distance to the control building, the Structure must also avoid impacts to both the Substation's existing electrical equipment (including below grade equipment and above grade clearance issues) and areas set aside for either driveways or potential future equipment expansion. Finally,

there is insufficient physical space for more than one Structure with multiple antennae on each, necessitating the single proposed Structure greater than 50' with five antennae.

*Sec. 12-3-6(H)(3). Not Self-Created: The aforesaid unique physical condition is not the result of any action or inaction of the owner or its predecessors in title and existed at the time of the enactment of the provisions from which a variance is sought or was created by natural forces or was the result of governmental action, other than the adoption of this title.*

ComEd did not create the necessity for its variation requests. The height variation is necessitated by state law mandates on ComEd to make new technological investments to "build the grid of the future" and to implement voltage optimization measures and, as well, ComEd's commitments to the Illinois Commerce Commission under this statutory mandate to make Smart Grid upgrades including distribution automation. The applicable 50-foot height limit allows the Structure to hold at most one antenna when the system is being standardized at five antennae per Structure (with a standard Structure height of 100 feet as is proposed for the Property). Due to current technological limitations, any support structure built to a height below 100 feet cannot hold five antennae, and thus cannot meet the standards for effective and seamless grid monitoring which is what governmental action requires. And, as described elsewhere in these Standards, there is insufficient room for more than one Structure at the Substation and even if two were constructed, there would be only two antennae total at the Substation.

ComEd's setback requests and request to situate the Structure to the side (not rear) of the control building are similarly dictated by governmental action and standards. First, the Structure must be located near the Substation's existing control building which will house its IT equipment, a modern need which ComEd could not have reasonably anticipated when it first constructed the control building in its current location many years ago. ComEd is prevented by safety standards from situating the Structure further to the south in the Substation because of interference and conflicts with above-grade and below-grade electrical equipment already serving customers per ComEd's mandates as a public utility to provide reliable electrical service within the City.

Next, responding to its unique status as a public utility with ongoing mandatory service obligations, ComEd must avoid placing the Structure further to the south so as to create a conflict for replacement and modernization of the Substation's electrical infrastructure. ComEd has the unique need too as a regulated public utility to prudently plan within the Substation's existing footprint for potentially necessary future upgrades to its substation infrastructure to meet ever-expanding electrical capacity needs with existing physical constraints further limiting the area of the Substation in which the Structure may be placed.

*Sec. 12-3-6(H)(4). Denied Substantial Rights: The carrying out of the strict letter of the provision from which a variance is sought would deprive the owner of the subject lot of substantial rights commonly enjoyed by owners of other lots subject to the same provision.*

As noted earlier, if ComEd is not granted a height variation which allows for five antennae on the Structure, it cannot fully carry out its regulatory obligations as an electric public utility subject to statutory and Illinois Commerce Commission mandates and oversight.

These obligations include seamless and reliable implemented Smart Grid monitoring technology which can only be effectively carried out with five antennae given the existing and growing number of receiving devices and system standardization.

Similarly, without the setback variations, ComEd could not feasibly install the Structure and effectively carry out its Smart Grid Distribution Automation and Voltage Optimization programs as the distance from the Structure to the IT equipment in the control building mandated by the full setback distances and "rear"-of-principal-building placement could cause both signal degradation and also require removal of electrical equipment which ComEd is required to keep in operation to service the City's electrical customers.

*Sec. 12-3-6(H)(5). Not Merely Special Privilege: The alleged hardship or difficulty is neither merely the inability of the owner or occupant to enjoy some special privilege or additional right not available to owners or occupants of other lots subject to the same provision, nor merely the inability of the owner to make more money from the use of the subject lot.*

The height and setback variations are not intended to grant ComEd any special privileges or additional rights, nor to generate extra revenue from the Property. The sole purpose is to enhance ComEd's ability to provide stable and efficient electric power to the City, as mandated by its status as a regulated utility. This necessity does not apply to other properties in the same district.

*Sec. 12-3-6(H)(6). Title And Plan Purposes: The variation would not result in a use or development of the subject lot that would be not in harmony with the general and specific purposes for which the Ordinance and the provision from which a variation is sought were enacted or the general purpose and intent of the comprehensive plan.*

As part of its Future Land Use Map, the City's Comprehensive Plan designates the Substation's zoning lot for utility and communication uses (see Figure 2.1), both of which are harmonious with building the proposed Structure at the necessary proposed height and location which are the subject of these variation requests. By helping improve the reliability and efficiency of the local electrical grid, the Structure can also play a role in promoting economic development initiatives in the City's industrial and commercial sectors, which is another stated goal of the Comprehensive Plan (see Chapter 3). Section 12-1-3 of the Ordinance states that one of the Ordinance's purposes is to "support the goals, objectives and policies of the comprehensive plan and other plans adopted by the City of Des Plaines."

*Sec. 12-3-6(H)(7). No Other Remedy: There is no means other than the requested variation by which the alleged hardship or difficulty can be avoided or remedied to a degree sufficient to permit a reasonable use of the subject lot.*

ComEd must place a new stand-alone support structure within the southeastern portion of the City in order to keep its distribution automation device monitoring system and voltage optimization programs effectively functioning and avoid present and future overcapacity in this system in and around the City. Unlike ComEd's Rand Road substation, there are no taller microwave towers already located at the Substation on which to install monitoring

antennae for the system, so ComEd must build the Structure to hold such antennae at the height and location which are the subject of these variation requests.

*Sec. 12-3-6(H)(8). Minimum Required: The requested variation is the minimum measure of relief necessary to alleviate the alleged hardship or difficulty presented by the strict application of this title.*

These variation requests are the minimum measure of relief necessary to build the Structure at the Substation to ComEd's necessary, standardized height for stand-alone support structures across its service territory and at a location within the Substation which is close enough to the Substation's existing control building while avoiding all current and potential future obstructions.

## Technical Appendix

### *Depiction of similar existing Structures*

Similar 104-foot Smart Grid Distribution Automation Device Monitoring support structures can be found at ComEd's Willow Springs substation and its substation in Pleasant Hills (near West Chicago).

*Willow Springs*

The Willow Springs substation carries the common address of 8600 Willow Spring Road in Willow Springs, but it is actually located on the south side of an industrial access road (leading to Valvoline's Willow Springs facility) across the street from a Speedway gas station and just south of the Tri-State Fire Protection District station which is situated at 8259 Willow Springs Road in Willow Springs.

A picture of the structure as located at the Willow Springs substation is set forth below.

The structure is located to the rear of the substation control building. Note that if one visits the Willow Springs substation, one will see a cellular telephone facility outside the boundaries of the substation but adjacent to it. Know that, as noted and described earlier, the five antennae on ComEd's proposed Structure will only be used for ComEd-only grid-related monitoring and functioning communications.

*Pleasant Hills*

The Pleasant Hills substation is located on the east side of Pleasant Hill Road just south of the Great Western Trail and St. Charles Road and a short distance south of North Avenue. The substation is north of Geneva Road, north of the Village of Winfield and south of the Village of Carol Stream. (The address assigned to the substation for property tax purposes is 1N701 Pleasant Hill Road, Winfield. Our experience is that this address does not show up on common mapping applications such as Google Maps. The street address of the business to the north is 26W115 St. Charles Road in Carol Stream to provide a Google-friendly geographic reference point.)

A picture of the structure as located at the Pleasant Hill substation is set forth below. This structure, like the Willow Springs structure, attaches antennae with a single-mounted bracket whereas the Structure uses a double-bracket mounting system which is the current ComEd standard.

The structure in the Pleasant Hills substation is located on the north side of the substation just west of the substation control building. Like in Willow Springs, there is a cellular telephone facility outside of the substation itself. Again, by contrast, a commercial cellular telephone facility does not exist at the Substation and is not proposed whatsoever.

***Technical, Regulatory and Permitting Information***

The antennae proposed for use on the Structure will operate in the frequency range of 902-928 MHz with a center frequency of 915 MHz. These frequencies are a small part of the designated industrial, scientific and medical ("ISM") radio bands. The FCC opened these ISM frequency bands for wireless communications in 1985. Parties using this frequency range in the manner of ComEd are not generally required to obtain use, structure or antenna licenses from the FCC (and are not so required in ComEd's specific situation), but must comply with Federal Communications Commission ("FCC") regulations (47 CFR Part 15) on how the frequencies are used, including the maximum output power of the antennae on the Structure. The output power of the ComEd antennae will be extremely low, at 1 Watt or less. Further, the antennae will only operate intermittently and will not continuously transmit. By observing these two key operating criteria, along with compliance with all of the other applicable federal regulations, ComEd's Structure will operate in a manner protective of public health and safety, in that RF emissions are highly attenuated.

Other wireless devices operate in the frequency range of 902-928 MHz, with a center frequency of 915 MHz – most notably, ComEd's smart meters. The Structure will not be used for smart meter functions. Although certain household wireless equipment operates at 915 MHz, most notably certain cordless phones, baby monitors, and wireless home security systems, most household wireless equipment now operates within the 2.4-GHz frequency band.

Like any system which chooses to operate with the ISM radio bands, ComEd's Smart Grid Distribution Automation Device Monitoring System must tolerate the potential for occasional interference from other wireless devices in use. At the same time, ComEd has engineered its system to minimize any potential interference through incorporation of specific technical features such as signal encryption and security which, like the smart meter system using the same frequency range, have a now-proven record of safe, effective, reliable operation without material impact to existing household wireless devices. In addition to these specific technical features, in accordance with FCC regulations and as a technique to ensure minimal interference, the electronic equipment used in the Distribution Automation Device Monitoring System utilize a protocol called "frequency hopping" within subchannels spread evenly across the frequency range of 902-928 MHz. Such "frequency hopping" allows for efficient use of the full range of the allowable spectrum while minimizing interference risk.

The FCC is not required to review the specific siting of the proposed Structure. Instead, parties such as ComEd may use the frequency range involved in the antennae on the Structure without a specific license granted by the FCC so that as compliance with the detailed ISM radio band regulations (47 CFR Part 15) is maintained. In addition, in terms of compliance with the federal National Environmental Policy Act (to which the FCC is subject), the FCC has delegated to each applicant the responsibility of determining whether a proposed structure is "categorically excluded" from environmental review under the National Environmental Policy Act ("NEPA") when there is minimal or no impact on the environment, or whether an Environmental Assessment needs to be prepared.

FCC rules categorically exclude all actions – including ComEd's proposed Structure – from detailed environmental review unless such a structure: (a) is located in a wilderness area or wildlife preserve; (b) might affect threatened or endangered species or their habitat; (c) might

affect properties included in or eligible for inclusion in the National Register of Historic Places or Indian religious or cultural sites; (d) will be located in a floodplain; (e) involve construction involving significant changes in surface features, such as effects on wetlands, water, ground disturbances, deforestations, etc.; (f) structures of over 450 feet potentially affecting migratory birds; or (g) structures involving high-intensity lighting in a residential area or those which would cause RF radiation in excess of FCC-established limits.

ComEd, through its consultant team, determined that the placement of the Structure within an existing developed substation will have none of these impacts and therefore that the proposed Structure is appropriately categorically excluded from NEPA review.

The proposed Structure will not be required to have a beacon and/or designated paint. This is because ComEd received a determination from the Federal Aviation Administration ("FAA") as of November 17, 2023 that no lighting or special markings are required. Further, the proposed Structure is not planned to be illuminated in any way or painted any special color.

ComEd will be applying for a building permit from the City. No additional known governmental permits are necessary. ComEd will secure any additional necessary permits which may be identified during the building permit process.

198E–SKETCH

SYCAMORE ST.

CURB LINE

EAST PROPERTY LINE

NORTH PROPERTY LINE

SOUTH PROPERTY LINE

FENCE ALIGNS WITH SOUTH PROPERTY LINE

CONCRETE SIDEWALK

GATE

GATE

8'–5"

75'–10"

9'–10"

SUBSTATION ELECTRICAL EQUIPMENT

1712

1710

1700

1678

129'–6"

101'–0"

139'–10"

310'–0"

10'–6"

28'–0"

15'–0"

ANTENNA SUPPORT STRUCTURE: 104 FT. (25.75 IN. DIA. BASE)

SUBSTATION ELECTRICAL EQUIPMENT

123'–9"

CONTROL BUILDING

PRATT AVE.

E. RAILROAD AVE.

FENCE ALIGNS WITH WEST PROPERTY LINE

WEST PROPERTY LINE

73'–0"

19'–6"

NORTH RIGHT OF WAY

LEGEND: GRADING AND EROSION

PROPERTY BOUNDARY

11' TALL SECURITY FENCE PLUS 1' BARBED WIRE

CONCRETE SIDEWALK

CONCRETE PATH

| REV | DATE | DESCRIPTION | TECH. | ENG. |
|---|---|---|---|---|
| 1 | | | | |

comed AN EXELON COMPANY

Commonwealth Edison Co.
Chicago, Illinois

SITE PLAN
1705 PRATT AVE
DES PLAINES, IL 60018

TSS 198 DES PLAINES DC 00 SC

SCALE 1"=20' DATE 06–16–2020

DRAWN BY DSC

ENG. BY DSC

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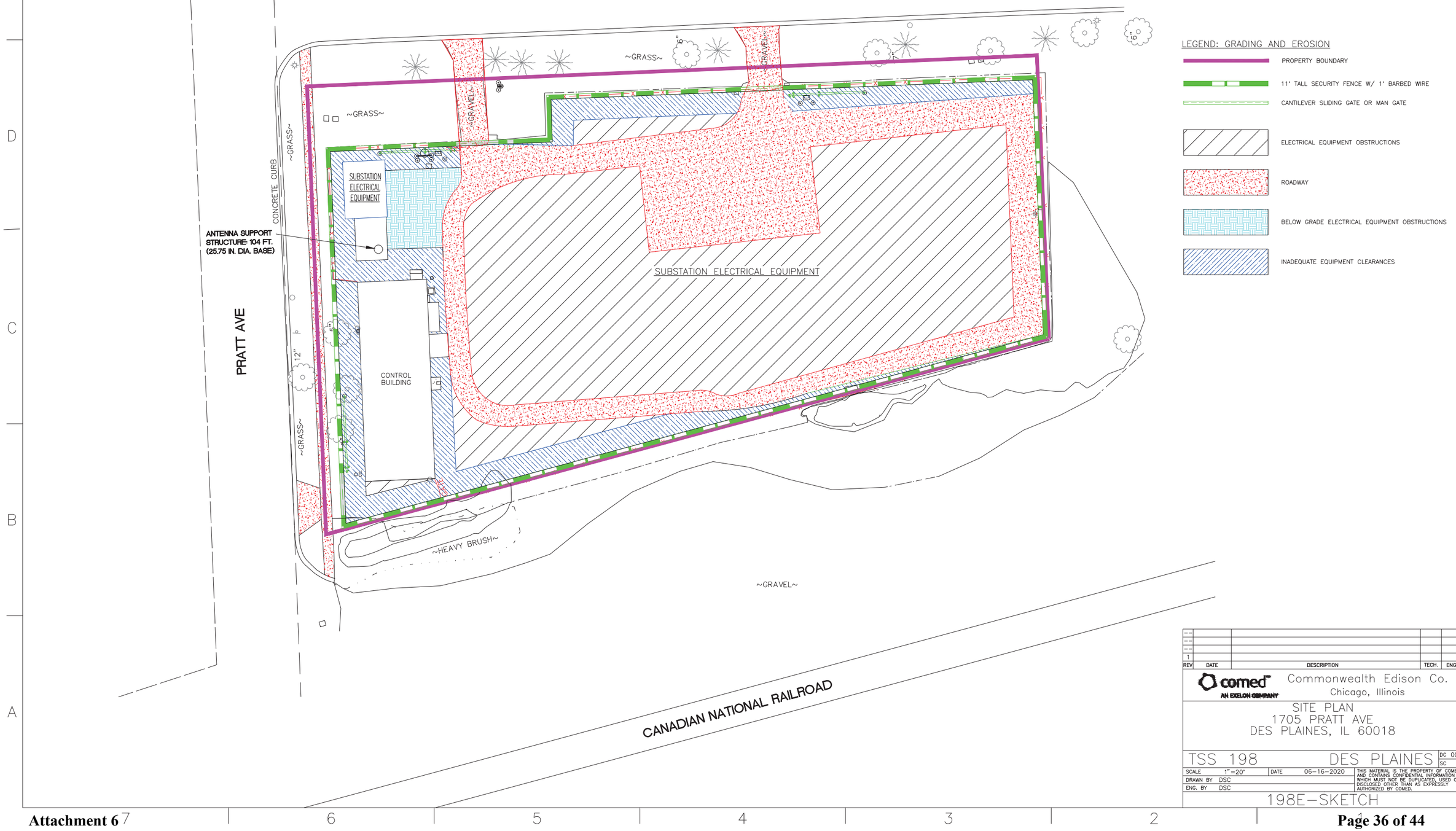
198E–SKETCH

Revised as of 6-5-25

SYCAMORE STREET

20' ALLEY

GRAPHIC SCALE
20' 0 20' 40'
( IN FEET )
1 inch = 20 ft.




LEGEND: GRADING AND EROSION

- PROPERTY BOUNDARY
- 11' TALL SECURITY FENCE W/ 1' BARBED WIRE
- CANTILEVER SLIDING GATE OR MAN GATE
- ELECTRICAL EQUIPMENT OBSTRUCTIONS
- ROADWAY
- BELOW GRADE ELECTRICAL EQUIPMENT OBSTRUCTIONS
- INADEQUATE EQUIPMENT CLEARANCES

| REV. | DATE | DESCRIPTION | TECH. | ENG. |
|---|---|---|---|---|
| -- | | | | |
| -- | | | | |
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| 1 | | | | |

comed AN EXELON COMPANY

Commonwealth Edison Co.
Chicago, Illinois

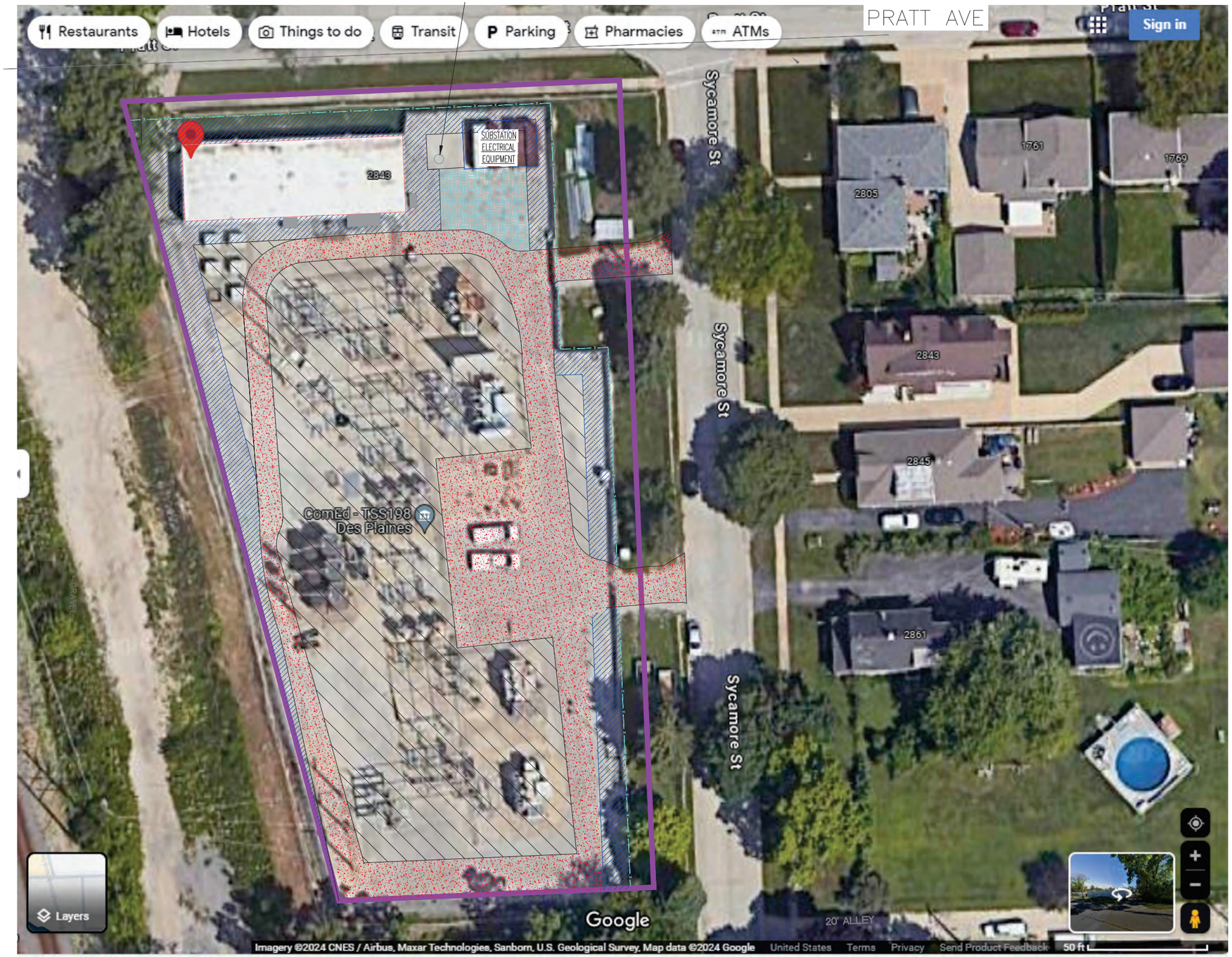
SITE PLAN
1705 PRATT AVE
DES PLAINES, IL 60018

TSS 198 DES PLAINES DC 00 SC

| | | |
|---|---|---|
| SCALE 1"=20' | DATE 06–16–2020 | THIS MATERIAL IS THE PROPERTY OF COMED AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATED, USED OR DISCLOSED OTHER THAN AS EXPRESSLY AUTHORIZED BY COMED. |
| DRAWN BY DSC | | |
| ENG. BY DSC | | |

198E–SKETCH

198E–SKETCH




LEGEND: GRADING AND EROSION

- PROPERTY BOUNDARY
- 11' TALL SECURITY FENCE W/ 1' BARBED WIRE
- ELECTRICAL EQUIPMENT OBSTRUCTIONS
- ROADWAY
- BELOW GRADE ELECTRICAL EQUIPMENT OBSTRUCTIONS
- INADEQUATE EQUIPMENT CLEARANCES

| REV | DATE | DESCRIPTION | TECH. | ENG. |
|---|---|---|---|---|

comed AN EXELON COMPANY

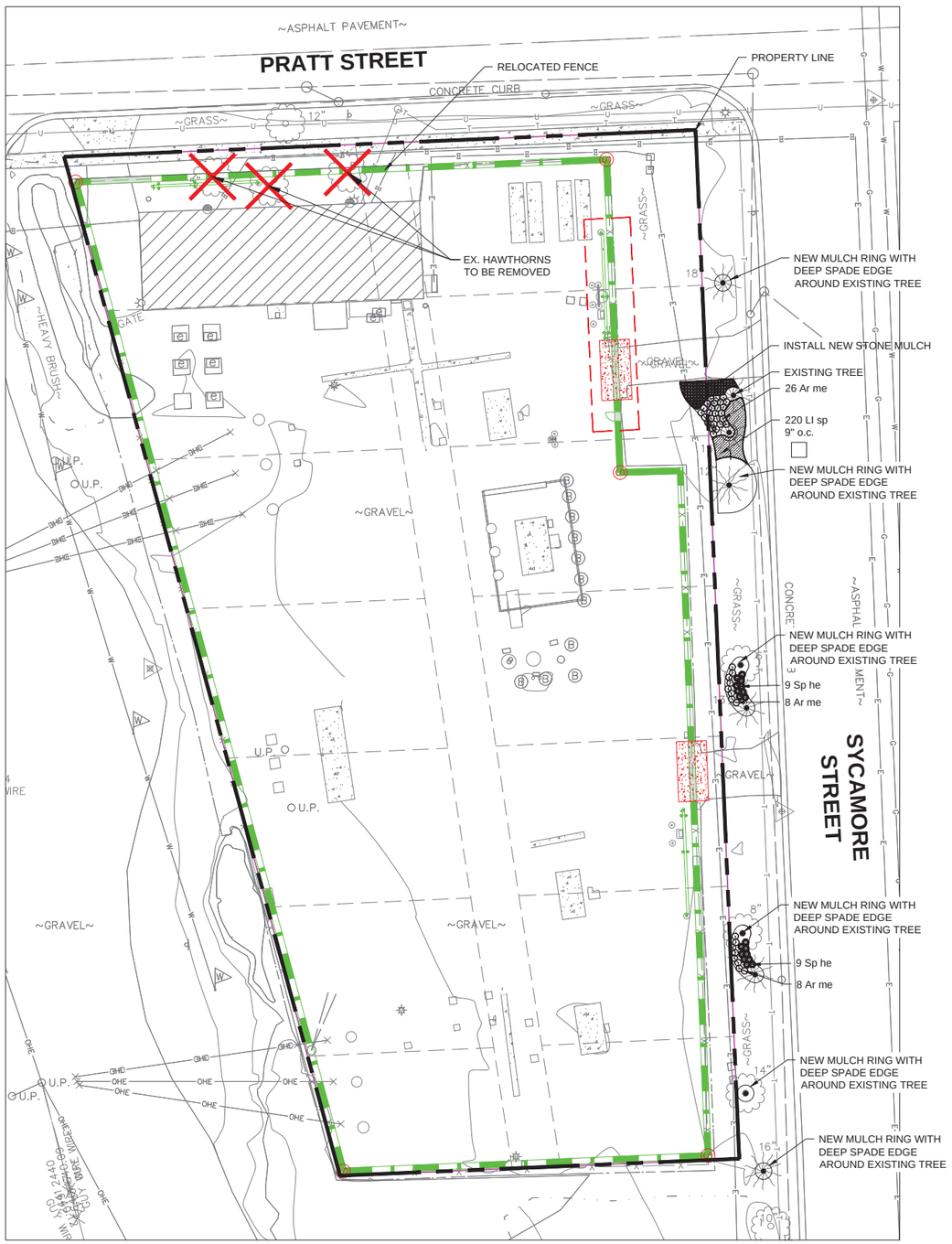
Commonwealth Edison Co.
Chicago, Illinois

SITE PLAN
1705 PRATT AVE
DES PLAINES, IL 60018

TSS 198 DES PLAINES DC 00 SC

| | | |
|---|---|---|
| SCALE 1"=20' | DATE 06–16–2020 | THIS MATERIAL IS THE PROPERTY OF COMED AND CONTAINS CONFIDENTIAL INFORMATION WHICH MUST NOT BE DUPLICATED, USED OR DISCLOSED OTHER THAN AS EXPRESSLY AUTHORIZED BY COMED. |
| DRAWN BY DSC | | |
| ENG. BY DSC | | |

198E–SKETCH




LANDSCAPE PLAN

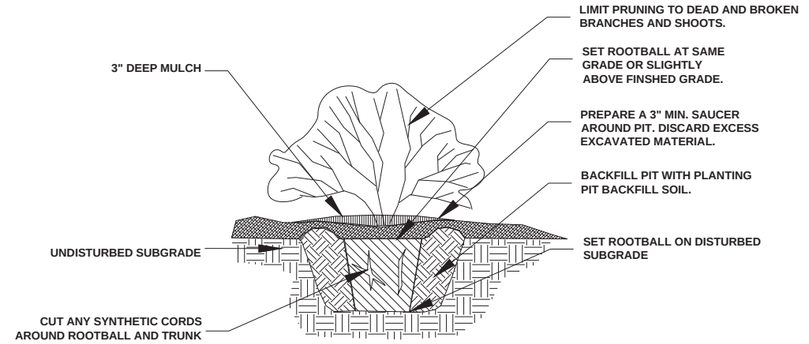
Low Scape Mound (Aronia melanocarpa 'UCONNAM165')

Creeping Lily Turf (Liriope spicata)

Prairie Dropseed (Sporobolus heterolepis)

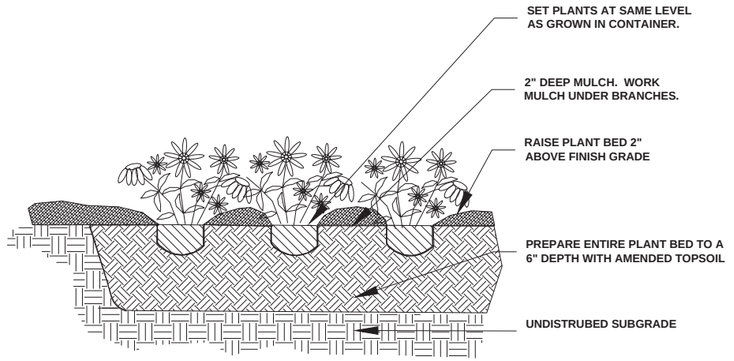
## PLANT LIST

| Sym. | Botanical Name | Common Name | Qty. | Size | Cond. | Spac. |
|---|---|---|---|---|---|---|
| | Deciduous Shrubs | | | | | |
| | | | | | | |
| | Perennials and Grasses | | | | | |
| | | | | | | |
| | | | | | | |




## SHRUB PLANTING DETAIL

NO SCALE




## PERENNIAL, AND GRASSE DETAIL

NO SCALE

| REV | DATE | DESCRIPTION | TECH. | ENG. |
|---|---|---|---|---|
| 1A | 11-11-20 | ISSUED FOR CONSTRUCTION W.O. #14860451 | NW | DB |

DASHIELL ENGINEERS CONSTRUCTORS www.dashiell.com

| REV | DATE | DESCRIPTION | TECH. | ENG. |
|---|---|---|---|---|

ComEd An Exelon Company
Commonwealth Edison Co.
Chicago, Illinois
Transmission and Distribution Operations

PLAN OF SURVEY
138KV SWITCHYARD

TSS 198 DES PLAINES DC_00 SC

| REV | DATE | DESCRIPTION | TECH. | ENG. | PROJ. |
|---|---|---|---|---|---|
| 3A | 10-19-20 | ISSUED FOR CONSTRUCTION W.O.#14860451 | TH | CH | TK |
| 2A | 09-18-20 | ISSUED FOR 90% REVIEW W.O.#14860451 | TH | CH | TK |
| 1A | 07-17-20 | ISSUED FOR 90% REVIEW W.O.#14860451 | TH | CH | LW |

SCALE 1"=20' DATE 06-16-2020
DRAWN BY DSC
ENG. BY DSC

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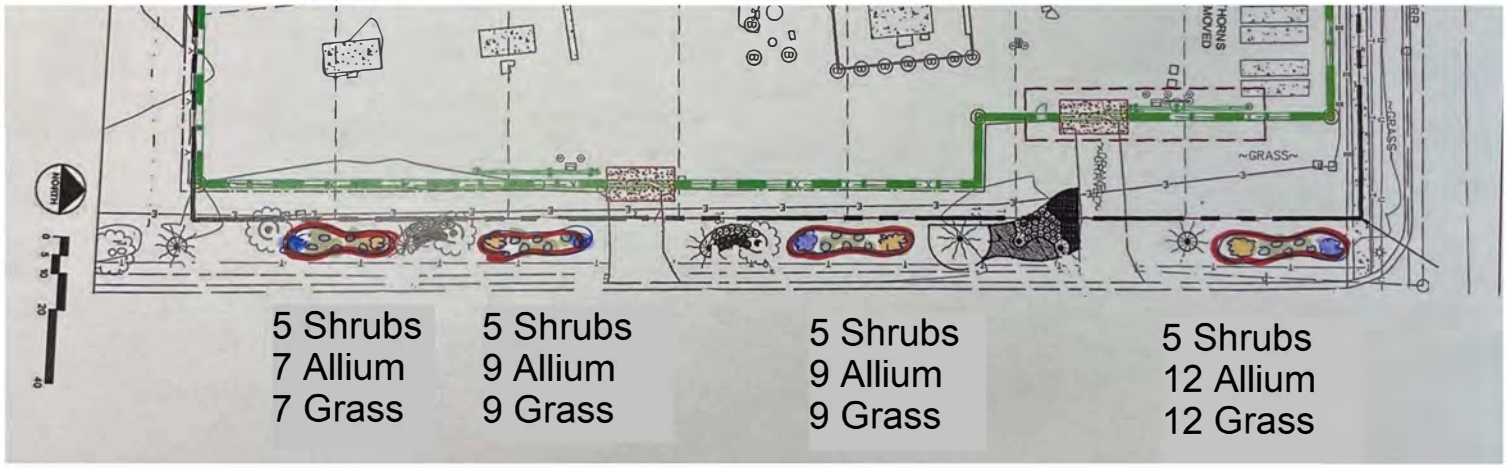
198.10-1_S2020-0622

DAVID MASON + ASSOCIATES davidmason.com

5/23/22

# COMED DES PLAINES TSS 198 Additional Plants (Revised as of 6-5-25)

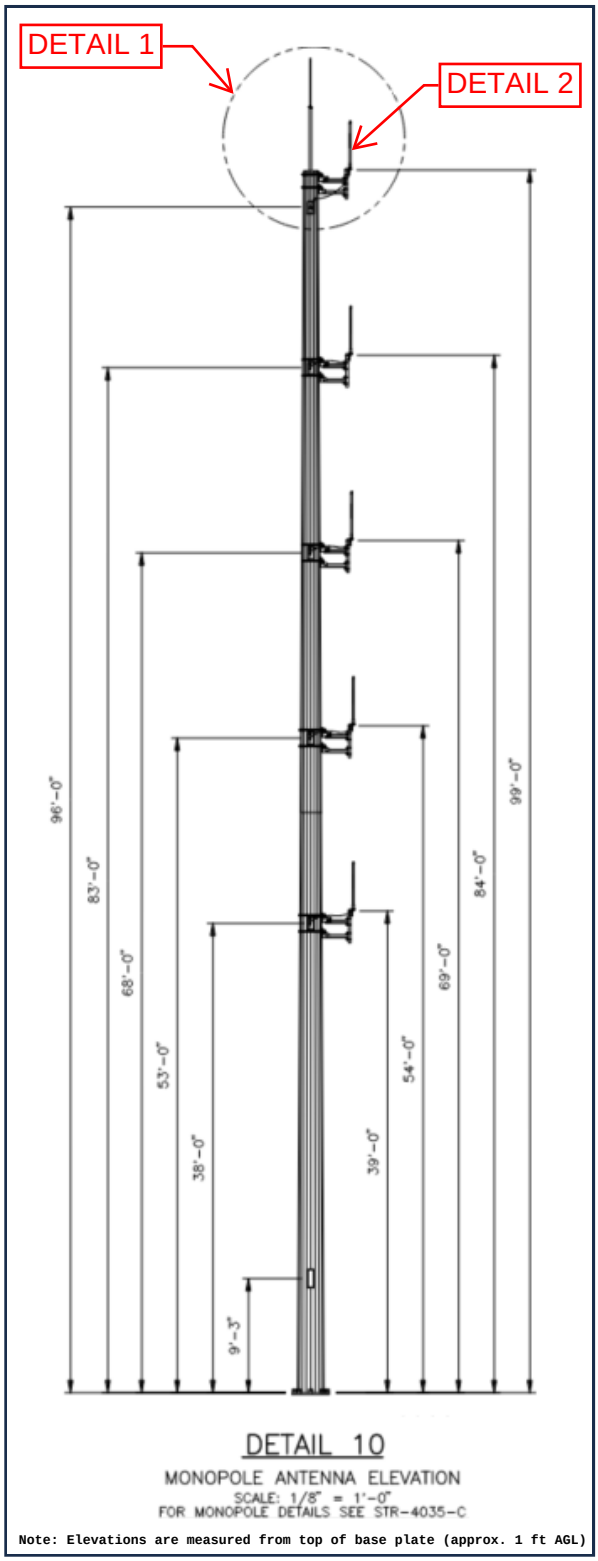


**Gro Lo Sumac**
Hardy shrub, 2-3' tall by 4-6' wide'
Drought tolerant, red fall color

**Feather Reed Grass**
Upright grass 4'
Dried plumes for winter interest

**Summer Beauty Allium**
Hardy perennial 12-18" tall
blooms July-Aug, attractive form

# ComEd TSS 198 - 1705 Pratt Avenue, Des Plaines, IL - Structure Exhibit



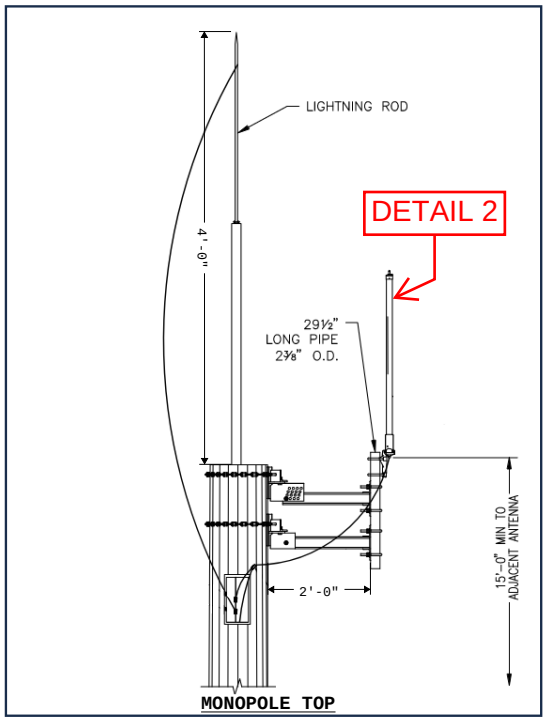

DETAIL 10

MONOPOLE ANTENNA ELEVATION

SCALE: 1/8" = 1'-0"

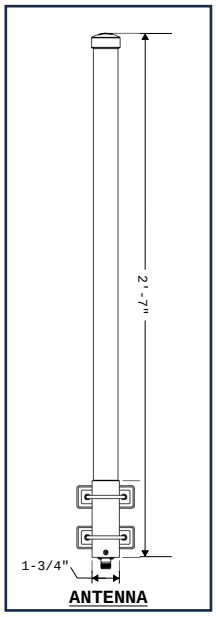
FOR MONOPOLE DETAILS SEE STR-4035-C

Note: Elevations are measured from top of base plate (approx. 1 ft AGL)



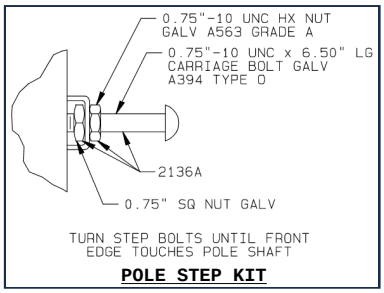

MONOPOLE TOP

DETAIL 1

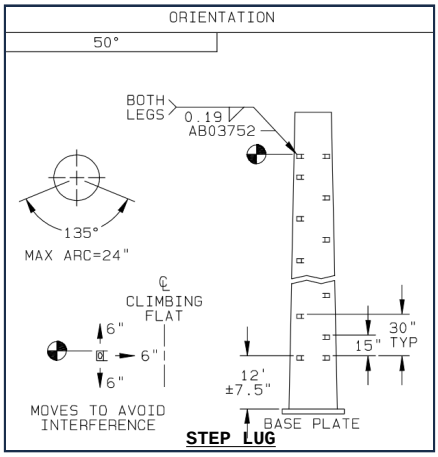



ANTENNA

DETAIL 2




POLE STEP KIT




STEP LUG

DETAIL 3

| ANTENNA DIRECTION TABLE | |
|---|---|
| ANTENNA NO. | ANTENNA DIRECTION |
| ANTENNA #1 | SOUTHWEST |
| ANTENNA #2 | SOUTHWEST |
| ANTENNA #3 | SOUTHWEST |
| ANTENNA #4 | SOUTHWEST |
| ANTENNA #5 | SOUTHWEST |

**Note:**
**Two sets of climbing step lugs, Detail 3, to be installed after pole is set. One set facing northeast and one set facing west.**

| DATE | DESCRIPTION | PREPARED | REVIEWED | APPROVED |
|---|---|---|---|---|
| 01-15-25 | STRUCTURE EXHIBIT-W.O.#19052927 | MJF | MJF | MJF |
| 02-14-25 | STRUCTURE ELEVATION-W.O.#19052927 | MJF | MJF | MJF |

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Chicago, Illinois
Transmission and Distribution Operations

UTILITY INFRASTRUCTURE SOLUTIONS
hbk ENGINEERING
A QUANTA SERVICES COMPANY

# View of Substation

Looking east from Greco

# View of Substation

Looking southwest from Pratt

# View of Substation

Looking east from Pratt

# View of Substation

Looking west from Sycamore

**COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT**
1420 Miner Street
Des Plaines, IL 60016
P: 847.391.5380
desplainesil.gov

# MEMORANDUM

Date: June 10, 2025

To: Planning and Zoning Board (PZB)

From: Jeff Rogers, AICP, Director Community &Economic Development

Subject: Consideration of an Appeal of the March 20, 2025 Minor Variation decision to conditionally approve fiber cement board instead of brick on an existing multi-family building's ground floor

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**Issue:** Appeal of March 20, 2025 Minor Variation Administrative Decision Approval with condition

**Petitioner:** Julie McKenzie, McKenzie Management Inc., 2720 S. Des Plaines River Road, Suite 214, Des Plaines, IL 60018

**Owner:** Thacker House Condominium, 900 S. Des Plaines River Road, IL 60018

**Case Number:** 25-022-APPEAL

**PIN:** 09-20-206-035-0000

**Ward:** #2, Alderman Colt Moylan

**Existing Zoning:** R-4, Central Core Residential District

**Existing Land Use:** Multi-family building

**Surrounding Zoning:**
North: R-4, Central Core Residential District
South: R-4, Central Core Residential District
East: R-1, Single Family Residential District
West: R-4, Central Core Residential District

**Surrounding Land Use:**
North: Multi-family building
South: Multi-family building
East: Cook County Forest Preserve
West: Multi-family building

**Comprehensive Plan:** "Multi-Family Residential" is the use illustrated in the Comprehensive Plan.

**Zoning/Property History:** Based on aerial imagery, the subject property was developed in the early 1970s.

**Project Background:**

The following is a summary of events and actions leading to this appeal request:

- *February 2024* – Petitioner submitted a permit application to repair the subject property's twenty-three ground floor exterior structural columns. In April and May 2024, the permit was approved conditionally requiring the use of masonry exterior finish on the columns in accordance with exhibits provided by the petitioner. See the attached exhibit depicting the proposed masonry. See the attached Petitioner's April and May 2024 Permit Plans.

- *November 2024* – Petitioner requested changes to the approved permit requesting textured wood grained fiber cement board as the exterior finish material for the columns. See the attached November 2024 amended permit plans. Pursuant to Section 12-3-11 (Building Design Review), fiber cement board is not a permitted ground floor exterior finish material for the subject property. Assistant Director Mendel met with the petitioner's representative and proposed using fiber cement board with a smooth exterior finish to match the existing smooth exterior finish of the metal cladding to be replaced as part of the planned repair. Although fiber cement board for this repair would require a minor variation regardless of the texture or appearance, the Zoning Administrator is able to grant this variation with conditions, such as allowing a specific type of material like the smooth exterior finish material.

- *Between November 2024 and February 2025* – Petitioner conducted repairs and finished the repair using textured wood grained exterior finished fiber cement panel without permit approval by the City.

- *February 24, 2025* – Petitioner submitted a Minor Variation application requesting a variation to keep the already installed wood grain finished fiber cement board. Please see the attached Petitioner's Minor Variation Application Variation Standards Responses.

- *March 20, 2025* – The Zoning Administrator and staff reviewed the Minor Variation request and approved the request to use fiber cement board as the exterior finish material on the subject columns with the condition that the Petitioner use fiber cement board with a smooth exterior finish instead of the wood grain exterior finish. This condition of approval was included because the smooth finished fiber cement board would most directly simulate the smooth exterior finish of the original metal cladding of the columns without appearing out of harmony with the character of the immediate neighborhood. No other wood or woodgrain finishes exist on the building. See the attached March 20, 2025 Minor Variation Decision sheet.

**Request Description:**

As permitted by Sec. 12-3-9 - Appeals of the City Code, the Petitioner has appealed the Zoning Administrator's March 20, 2025 Minor Variation decision to approve with the condition regarding a smooth finish. As outlined in the Petitioner's attached Appeal Request Letter, they assert that replacement or modification of the existing cladding would constitute an additional financial hardship and overly burden the property owners who are seeking to make the necessary structural repairs to protect both the building and the health, safety, and welfare of the occupants.

**Zoning Administrator decision analysis under Standards for Variation – March 20, 2025 Minor Variation approval with conditions**

The following is a discussion of standards for zoning amendments from Section 12-3-4.H of the Zoning Ordinance. Rationale for how a variation from the terms of this title shall not be granted unless the reviewing authority makes specific written findings of fact directly based on the standards and conditions imposed by this section and any conditions imposed by the reviewing authority, to the extent each may be applicable.

1. **Hardship: No variation shall be granted pursuant to this subsection H unless the applicant shall establish that carrying out the strict letter of the provisions of this title would create a particular hardship or a practical difficulty.**

   **Zoning Administrator decision analysis:** Granting the Minor Variation permitted the fiber cement board finish in lieu of the previously approved brick on the twenty-three columns was predicated on selecting a fiber cement board material that would be indistinguishable outside the property compared to the previous columns' smooth finished metal cladding exterior. The request was to permit fiber cement board with an exterior woodgrain finish. However, upon review, the Zoning Administrator determined a hardship existed, thereby adding a condition of approval for the minor variation that the cement fiber board exterior material must have a smooth finish exterior to mimic the original metal cladding's smooth exterior finish. There is no woodgrain exterior finishes on the remainder of the building's structural elements and this material may be out of character with the remainder of the building.

2. **Unique Physical Condition: The subject lot is exceptional as compared to other lots subject to the same provision by reason of a unique physical condition, including presence of an existing use, structure, or sign, whether conforming or nonconforming; irregular or substandard shape or size; exceptional topographical features; or other extraordinary physical conditions peculiar to and inherent in the subject lot that amount to more than a mere inconvenience to the owner and that relate to or arise out of the lot rather than the personal situation of the current owner of the lot.**

   **Zoning Administrator decision analysis**: Granting the Minor Variation occurred due to the unique nature of the unknown material failure of the twenty-three columns' materials.

3. **Not Self-Created: The aforesaid unique physical condition is not the result of any action or inaction of the owner or its predecessors in title and existed at the time of the enactment of the provisions from which a variance is sought or was created by natural forces or was the result of governmental action, other than the adoption of this title.**

   **Zoning Administrator decision analysis:** Granting the Minor Variation accounted for the fact that the materials composing the twenty-three structural columns' exteriors were part of the building's original construction and not self-created by the current owners.

4. **Denied Substantial Rights: The carrying out of the strict letter of the provision from which a variance is sought would deprive the owner of the subject lot of substantial rights commonly enjoyed by owners of other lots subject to the same provision.**

**Zoning Administrator decision analysis:** Granting the Minor Variation with the condition of approval accepted the fact that the strict application of the building materials regulation could deny the petitioner substantial rights in their effort to repair critical structural portions of the building while also maintaining the subject building's exterior façade aesthetics and the longstanding character of this immediate neighborhood.

5. **Not Merely Special Privilege: The alleged hardship or difficulty is neither merely the inability of the owner or occupant to enjoy some special privilege or additional right not available to owners or occupants of other lots subject to the same provision, nor merely the inability of the owner to make more money from the use of the subject lot.**

   **Zoning Administrator decision analysis**: Granting the Minor Variation with condition of approval understood the proposed construction work's structural necessity and conceded the need and appropriateness of using fiber cement board to finish the columns' repairs, but required that the cost-effective materials mimic the smooth exterior finish of the columns' metal cladding, if the brick approved in May 2024 would not be used.

6. **Title And Plan Purposes: The variation would not result in a use or development of the subject lot that would be not in harmony with the general and specific purposes for which this title and the provision from which a variation is sought were enacted or the general purpose and intent of the comprehensive plan.**

   **Zoning Administrator decision analysis:** Granting the Minor Variation allowed a non-permitted building material, with the condition of approval that a specific smooth finish fiber cement board exterior material be used that would be harmonious with the regulation's general and specific purpose. Requiring a smooth exterior finished fiber cement board versus the proposed and installed wood grain finished materials reinforced the subject property's harmony with its immediate surroundings and the existing building's finishes.

7. **No Other Remedy: There is no means other than the requested variation by which the alleged hardship or difficulty can be avoided or remedied to a degree sufficient to permit a reasonable use of the subject lot.**

   **Zoning Administrator decision analysis:** Granting the Minor Variation with the condition of approval accepted the alleged hardship existed necessitating the use of fiber cement board, but with a smooth exterior finish.

8. **Minimum Required: The requested variation is the minimum measure of relief necessary to alleviate the alleged hardship or difficulty presented by the strict application of this title.**

   **Zoning Administrator decision analysis:** Granting the Minor Variation with the condition of approval provided the minimum measure of relief necessary to alleviate the alleged hardship. In order to protect the safety of the subject property's occupants due to the failing material composing the 23 structural columns, permitting the use of cost effective fiber cement board on the columns' exterior alleviated the hardship related to complying with the strict application of Section 12-3-11 (Building Design Review), but requiring a smooth exterior finish on the fiber cement board would maintain the subject property's compatibility with the neighborhood character.

**PZB Procedure and Recommended Conditions:**
Pursuant to Section 12-3-9.D.3.b of the City Code, the Planning and Zoning Board may affirm or reverse, wholly or in part, or modify the order of the Zoning Administrator's March 20, 2025 decision to approve the Minor Variation with the following condition of approval.

**Attachments:**
Attachment 1: Petitioner's Appeal Request Narrative
Attachment 2: Petitioner's April and May 2024 Permit Plans
Attachment 3: Petitioner's November 2024 Amended Permit Plans
Attachment 4: March 20, 2025 Minor Variation Decision sheet
Attachment 5: Petitioner's Minor Variation Application Variation Standards Responses

Waldman engineering consultants

17 April 2025

City of Des Plaines
Community & Economic Development
Attn: Jeff Rogers, AICP Director of Community and Economic Development
1420 Miner Street
Des Plaines, IL 60016

**Re: Thacker House Condominium Association**
**900 South River Road, Des Plaines IL, 60016**
**Appeal to Variance Determination 20 March 2025 related to Case 25-107-V**
**Column Repair Project – Building Permit BLDC-2024-0015**
**WEC Project No: 23C-206.2**

Dear Mr. Rogers:

I am writing to express our sincere apologies for any miscommunication and confusion we may have created as it concerns the cladding of the columns at the above referenced property in Des Plaines, IL. As the engineer of record for this structural column repair, WEC has been working with the Thacker House Condominium Association to implement "make-safe" repairs to the steel columns around the perimeter of the building. We are writing to plead on behalf of the owners for your consideration in granting a variance for the installed column cladding to the structurally repaired columns.

As you may already know, the Thacker House Condominium Association undertook this project, at great financial cost, to repair concealed corrosion and structural damage to twenty-three (23) steel columns at the ground floor level of the building. The columns were, as manufactured by Firetrol®, wrapped with fireproofing material in a metal cladding, which historically has performed poorly when exposed to moisture. During the course of the project an interpretation of the plans by the general contractor led to an error in the quoted price for the re-cladding of the columns. Specifically, the final phase of the project was to involve over-cladding the repaired structural steel columns with a brick veneer, as shown in the approved for permit set of drawings. After discovering the error, the contractor submitted a change order for approximately $40,000 to install the brick veneer. This was in addition to nearly $17,000 in additional costs to make welding repairs to the steel columns, which had previously not been quantified due to the columns having been concealed by the fireproofing material. The brick re-cladding change order by the contractor caused a work stoppage and delay in a project that otherwise would have been completed as specified, on time, and within budget.

WEC prepared more than six (6) alternative options for weather proofing of the columns and protection of the newly repaired steel which could be completed before the winter season arrived. After examining the options, the board at the Thacker House Condominium Association elected to pursue a woodgrain fiber cement outer cladding on a poured concrete base. The fiber cement product was chosen because of the proven performance in exterior building envelope construction, as well as being a commercially available product which could be installed, maintained, and potentially undergo future repairs as needed. The cladding material was selected with the considerations of product cost and availability, shorter lead times, no minimum order

requirements or need for specialized tools that would otherwise lead to additional financial burdens compared to other cladding material options we evaluated.

Upon finalization of our new plan of repair with a new contractor, the modified drawings were submitted, in person, to the City of Des Plaines Building Department where these intentions were discussed with Emmanuel Bustamante on October 17, 2024 at the Des Plaines city offices and electronically to the same on October 18, 2024 with the intentions of making weather tight repairs expressly described. Work on the column cladding began approximately one month later.

When the concerns of the planning office were first raised, work was paused and discussed at a meeting on November 22, 2024 with Pawel Matyja and Jonathan Mendel at the City of Des Plaines offices. However, in an effort to enclose the work areas before winter weather, with the urgency of providing protection of the structure in mind, the decision was made to move forward with the purchased materials currently delivered and being stored on-site and work with the building department after winter weather concluded to address the concerns of the City planning office. We deeply regret this course of action was taken, as our focus and intent was only to protect the best interests of the residents and their property.

We are requesting and pleading for consideration from the city on behalf of the 25 owners at 900 South River Road, to approve the existing material as installed. Replacement or modification of the existing cladding would constitute an additional financial hardship on top of the burdens the owners have already endured in the process of making the necessary structural repairs to protect not only the building but the health, safety, and welfare of the occupants.

Once again, we deeply regret the unfortunate circumstances that unfolded in the course of this structural repair project and would greatly appreciate your assistance in avoiding additional financial hardship for the residents of 900 South River Road.

Sincerely,
**Waldman Engineering Consultants, Inc.**

Christopher Hedberg
Sr. Inspection Engineer

Mark A. Waldman, S.E., P.E.
Principal Engineer

**Re: Thacker House Condominium Association Appeal Statement**
**900 South River Road, Des Plaines IL, 60016**
**Appeal to Variance Determination 20 March 2025 related to Case 25-107-V**
**Column Repair Project – Building Permit BLDC-2024-0015**
**WEC Project No: 23C-206.2**

Des Plaines Office of Community and Economic Development:

It is our understanding that Thacker House Condominium was and remains a 'non-conforming' structure, as the building construction predates the adoption of the current zoning code (12-3-11D.2.a.3), which, along with neighboring buildings, does allow for materials that may not otherwise be permitted in newer construction if such alterations do not increase the degree of nonconformity. (Zoning Code 12-5-6B). As the former steel shells were a 10" by 10" full height product, and the new cladding is 10" by 10" cladding on an 8" concrete base, the amount of non-conforming material has decreased. We believe that the slight wood grain texture of the fiber cement, while an aesthetic choice, conforms to the spirit of the existing code, and that a smooth metallic finish was not and would not in it of itself be a conforming finish today either. However, similar woodgrain fiber cement or equivalent exterior claddings were found to have been widely employed at the Lexington Point Condominiums and Townhomes Association on Lee Street (Constructed in 2019) And the Welkin Apartments at 1425 Ellinwood St. opposite city Hall (Constructed in 2023).

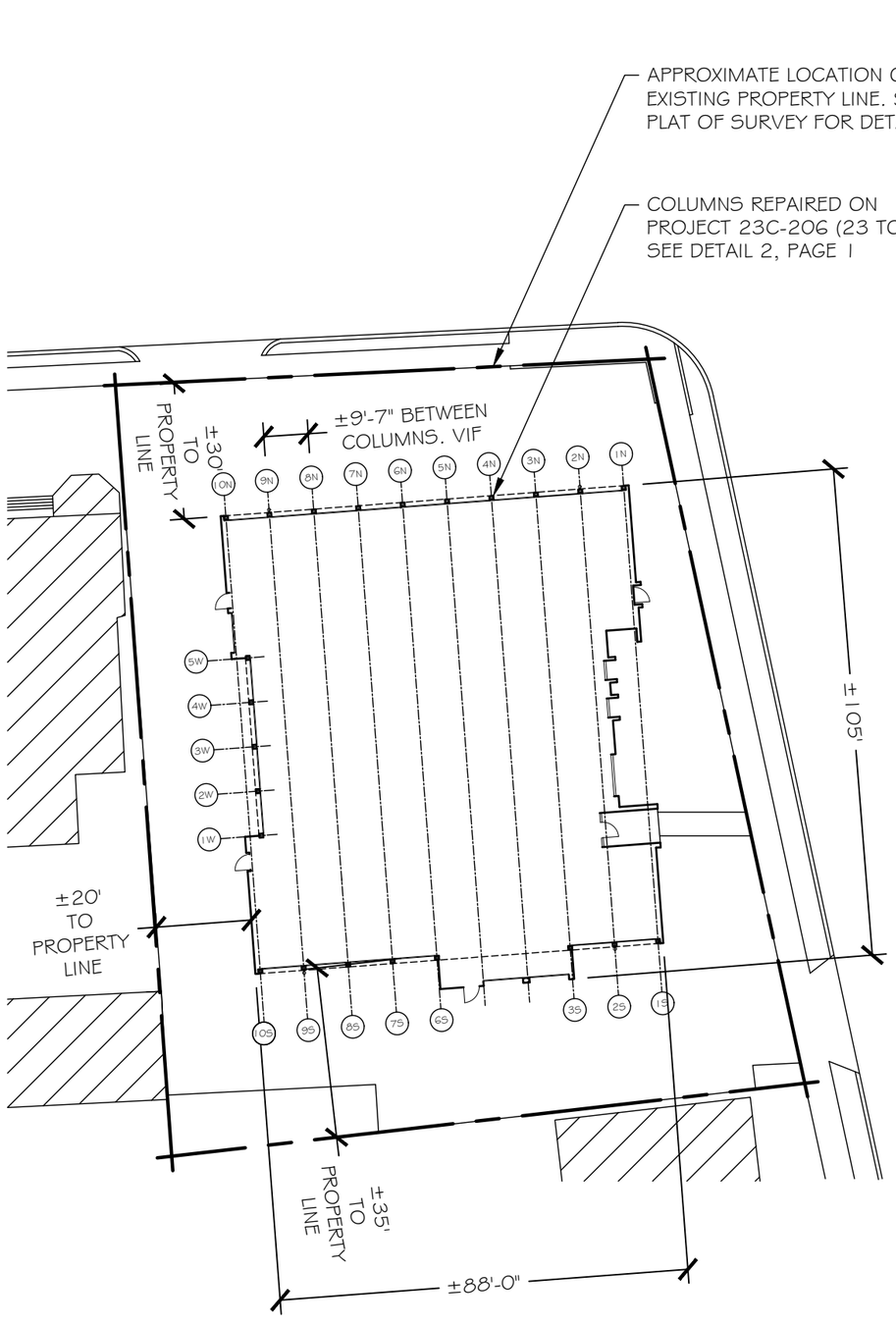
Per City code12-3-11A, the purpose of the building design review is (in part) to improve the design and appearance of existing buildings and properties. We have removed a material that was deteriorating due to a design flaw that holds moisture and deteriorates the material from the inside out. And worse, the outer steel cladding directly deteriorates structural members below by means of a galvanic reaction which robs the underlying structural members of load bearing steal, one ion at a time. While the new concrete base protects the underlying structural steel from both ponding water and physical impact, and is a Des Plaines Compliant material, the Fiber Cement Cladding is used to a lesser extent than the previous steel cladding, does not actively contribute to deterioration of structural members, is an aesthetically more pleasing material than the previous deteriorating steel and is a proven quality construction façade. Furthermore, A smooth variant of this material is a special order. Requiring longer lead times and larger minimum orders, which at a minimum, increases maintenance and repair costs creating an economic hardship for the owners of the property, but also potentially leaving the underlying structural components of the building exposed to weather waiting on delivery of special-order products, when a matching wood grain product can be purchased at most hardware stores the same day.

Des Plaines River Rd
AUTHORIZED
VEHICLES ONLY
North Shore Towing

90
100
110
120
140
150
4
5

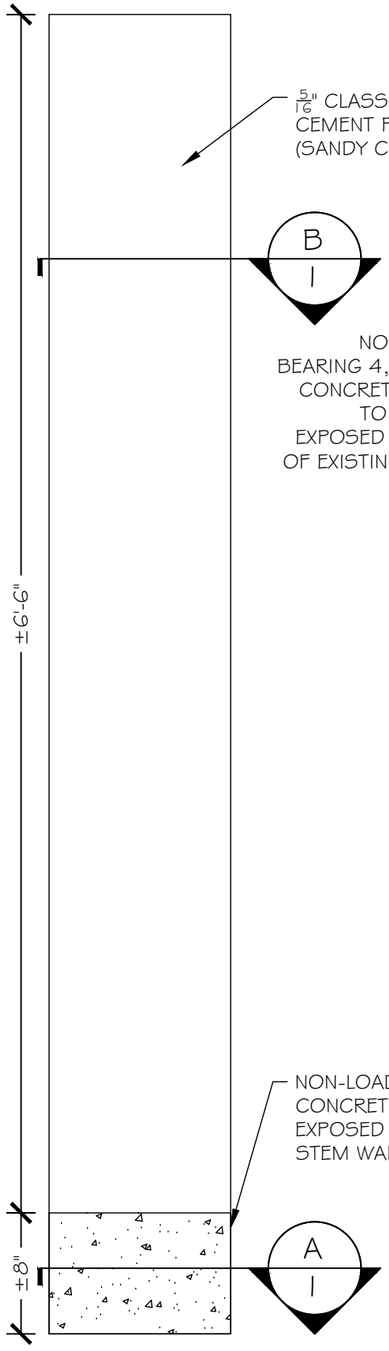
ABSOLUTE
DIGIMATIC

Prefinish
Wood Sid
LP Sm
TRIM &
Lap Siding
Panel Siding
Shake Siding
Color Matched Trim
Finish Warranty: 15-yea
finish warranty and a premiu
paint finish warranty
aint
limited



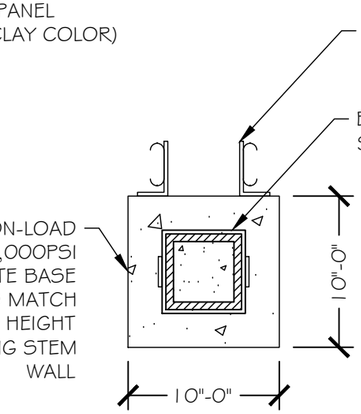

1 900 S. RIVER SITE PLAN

FOR REFERENCE ONLY.
SEE PLOT OF SURVEY FOR PROPERTY DETAILS



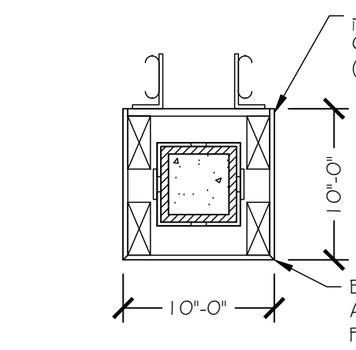

2 COLUMN DETAIL

SCALE: NTS




A COLUMN BASE CROSS SECTION

SCALE: NTS




B COLUMN CROSS SECTION

SCALE: NTS

WALDMAN ENGINEERING CONSULTANTS, INC

4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
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WEB: www.WaldmanEng.com

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| REVISIONS | | |
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| 1 | ADDENDUM 1 | 10-4-23 |
| 2 | ADDENDUM 2 | 2-1-24 |
| 3 | REVISED PER JURISDICTION | 2-19-24 |
| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
| 5 | WELDED STEEL REPAIR | 5-28-24 |
| 6 | FIBER CEMENT COLUMN | 9-16-24 |
| | | |
| | | |
| | | |
| NO | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

SITE PLAN AND COLUMN DETAIL

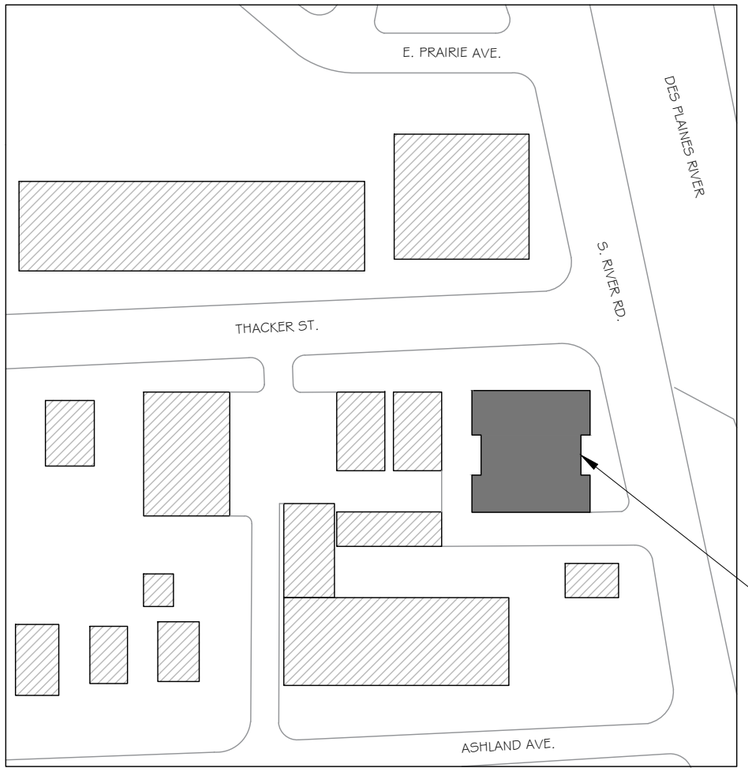
900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 1 |

# SUPPORT COLUMN REPAIR PROJECT

## 900 S. RIVER ROAD, DES PLAINES, ILLINOIS 60016

## ADDENDUM 4




1 SITE PLAN
SCALE: NTS

| LIST OF DRAWINGS | | | |
|---|---|---|---|
| DWG # | DESCRIPTION | REV. # | REV. DATE |
| 1 | TITLE SHEET | | |
| 2 | DAMAGE LOCATION PLAN | | |
| 3 | DAMAGE CLASSIFICATIONS | | |
| 4 | COLUMN REPAIR SECTIONS | 4 | 4.3.2024 |
| 5 | COLUMN REPAIR SECTIONS | 3 | 2.19.2024 |
| 6 | GENERAL NOTES | 3 | 2.19.2024 |
| 7 | ALTERNATE ITEM FOR BID | 4 | 4.3.2024 |
| 8 | SPECIAL INSPECTION NOTES | 4 | 4.3.2024 |

## ADOPTED BUILDING CODES

ALL WORK IS TO BE PERFORMED IN STRICT ACCORDANCE WITH THE FOLLOWING:

1. INTERNATIONAL BUILDING CODE, 2015 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
2. INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
3. INTERNATIONAL ENERGY CONSERVATION CODE, CURRENT EDITION AND THE CITY OF DES PLAINES AMENDMENTS
4. NATIONAL ELECTRICAL CODE, 2014 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
5. INTERNATIONAL FIRE CODE, 2015 EDITION AND THE THE CITY OF DES PLAINES AMENDMENTS
6. ILLINOIS STATE PLUMBING CODE, LATEST EDITION AND THE THE CITY OF DES PLAINES AMENDMENTS
7. INTERNATIONAL MECHANICAL CODE, 2015 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
8. INTERNATIONAL PROPERTY MAINTENANCE CODE, 2015 EDITION AND THE THE CITY OF DES PLAINES AMENDMENTS

PERMIT

CITY OF DES PLAINES
BUILDING DEPARTMENT
☐ APPROVED
☑ APPROVED AS NOTED
☐ NOT APPROVED REVISIONS REQUIRED
Date 4/26/2024 BY: pmatyja

City of Des Plaines Approval Comments:

1. Special Inspections are required. Special inspection reports shall be available on site at time of inspection.

2. Brick specifications for the brick type to be used shall be submitted to the city for review and approval prior to installation. Brick must meet the requirements listed in detail #10 on sheet A7.

GENERAL NOTES:

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- ALL WORK TO BE PERFORMED IN WORKMAN LIKE MANNER MEETING ALL APPLICABLE INDUSTRY STANDARDS

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS
11/30/2024
Expires

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
WEB: www.WaldmanEng.com

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| 3 | REVISED PER JURISDICTION | 2-19-24 |
| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

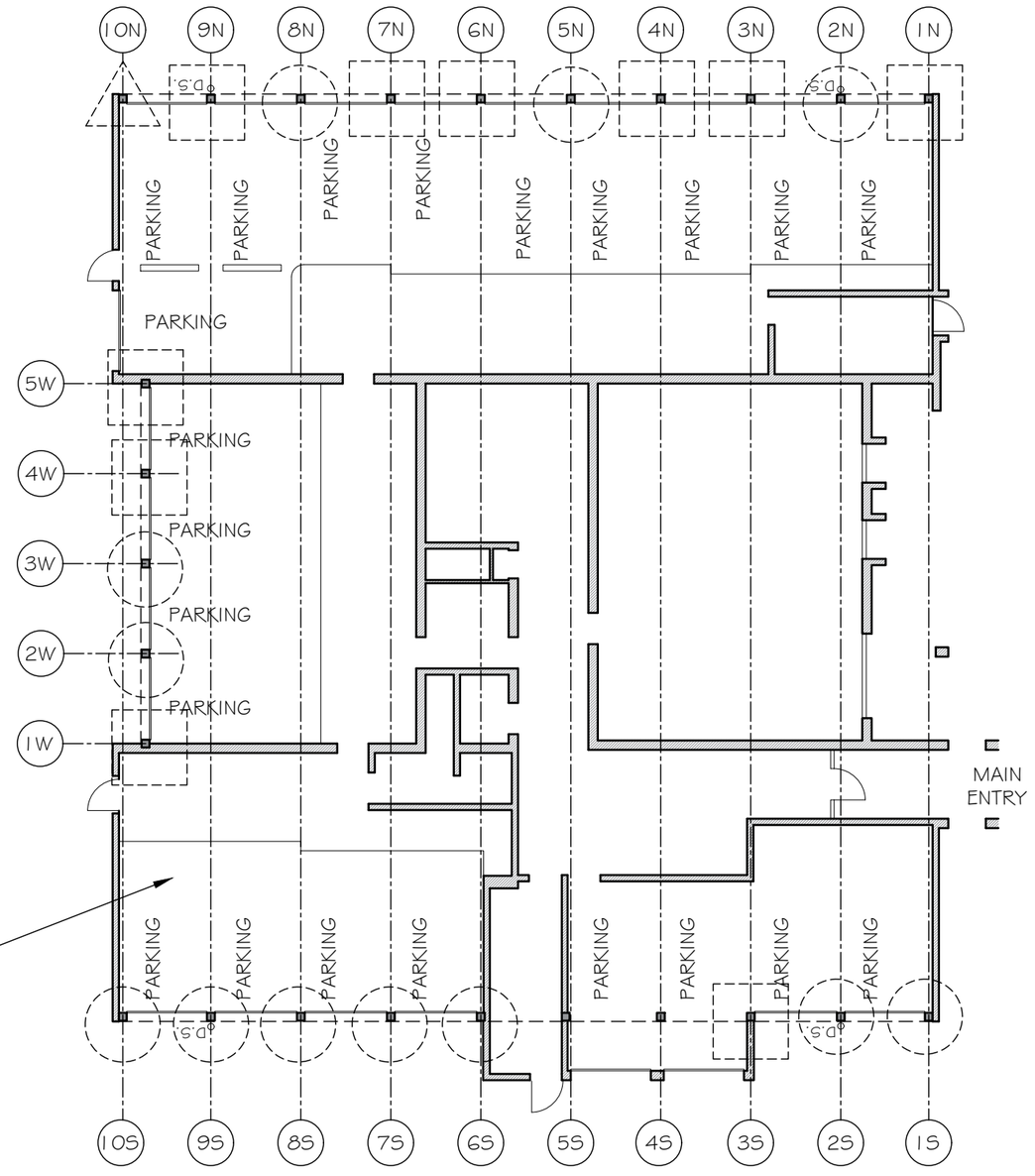
TITLE SHEET

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

PROJECT #: 23C-206.1
DRAWN BY: BMB
REVIEWED BY: CSH/MAW
DATE: 09-8-2023
SHEET NO: 1

| COLUMN DAMAGE SPREAD SHEET | | | | | | |
|---|---|---|---|---|---|---|
| | COLUMN # | SHELL IN SLAB | CONDITION OF COLUMN | NOTES | COLUMN SIZE* (V.I.F.) | PHASE |
| NORTH SIDE GARAGE | 1N | YES | MARGINAL | | 5X5X3/8" | 1 |
| | 2N | YES | POOR | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 |
| | 3N | YES | MARGINAL | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 |
| | 4N | YES | MARGINAL | | 5X5X3/8" | 1 |
| | 5N | YES | POOR | | 5X5X3/8" | 1 |
| | 6N | YES | MARGINAL | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 |
| | 7N | YES | MARGINAL | | 5X5X3/8" | 1 |
| | 8N | YES | POOR | | 5X5X3/8" | 1 |
| | 9N | YES | MARGINAL | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 |
| | 10N | YES | MODERATE | INVESTIGATIVE OPENING** | 5X5X3/8" | 2 |
| | | | | | | |
| WEST SIDE GARAGE | 1W | YES | MARGINAL | | 5X5X3/8" | 1 |
| | 2W | YES | POOR | | 5X5X3/8" | 1 |
| | 3W | YES | POOR | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 |
| | 4W | YES | MARGINAL | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 |
| | 5W | YES | MARGINAL | | 5X5X3/8" | 1 |
| | | | | | | |
| SOUTH SIDE GARAGE | 1S | YES | POOR | | 5X5X3/8" | 1 |
| | 2S | YES | POOR | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 |
| | 3S | YES | MARGINAL | | 5X5X3/8" | 1 |
| | 4S | YES | SATISFACTORY | INVESTIGATIVE OPENING** | 5X5X3/8" | 2 |
| | 5S | YES | SATISFACTORY | INVESTIGATIVE OPENING** | 5X5X3/8" | 2 |
| | 6S | YES | POOR | | 5X5X3/8" | 1 |
| | 7S | YES | POOR | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 |
| | 8S | YES | POOR | | 5X5X3/8" | 1 |
| | 9S | YES | POOR | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 |
| | 10S | YES | POOR | | 5X5X3/8" | 1 |

*THICKNESS TO BE FIELD VERIFIED
** BASE BID COST




2 DAMAGE LOCATION PLAN
SCALE: 1/16" = 1'-0"

3 GROUND FLOOR GARAGE AREA WITH NO OVERHEAD FIRE SPRINKLER SYSTEM

KEY:

POOR - EXCESSIVE CORROSION

MARGINAL - NOTED CORROSION

MODERATE - SURFACE CORROSION ONLY

GENERAL NOTES:

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MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS
11/30/2024
Expires

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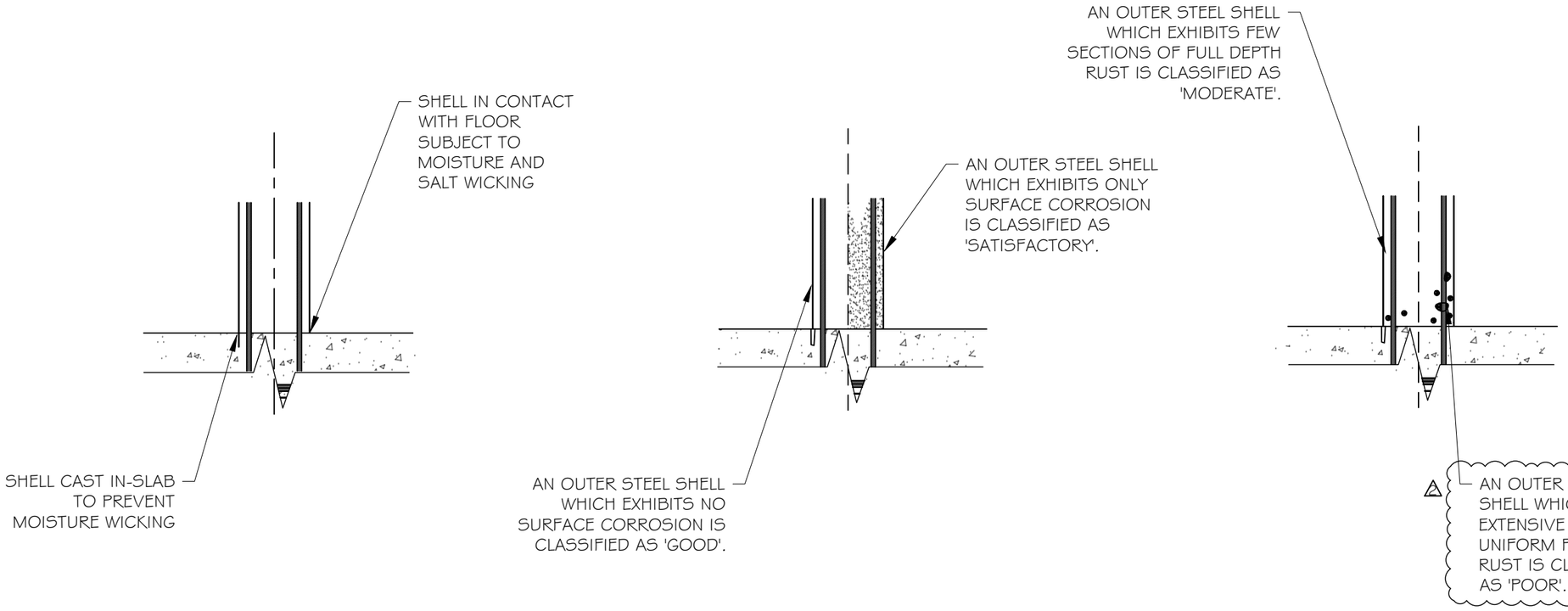
| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
| | | |
| | | |
| | | |
| | | |
| | | |
| NO | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

DAMAGE LOCATION PLAN

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

PROJECT #: 23C-206.1
DRAWN BY: BMB
REVIEWED BY: CSH/MAW
DATE: 09-8-2023
SHEET NO: 2




3 DAMAGE CLASSIFICATIONS (SCHEMATIC)
SCALE: NTS

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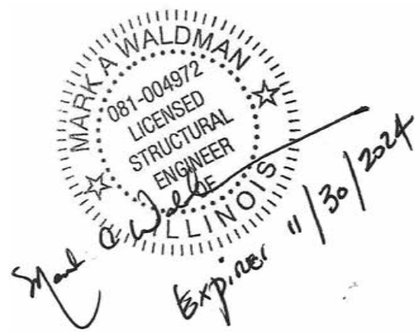


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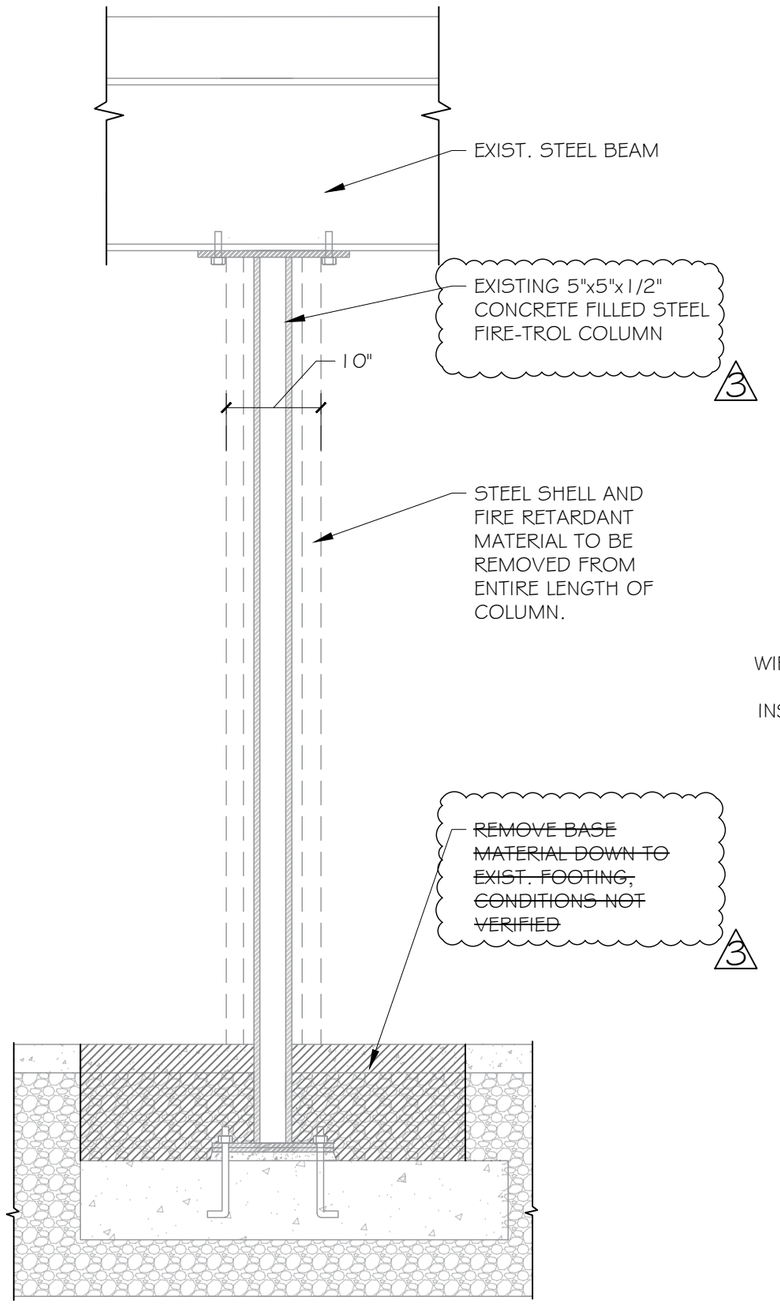
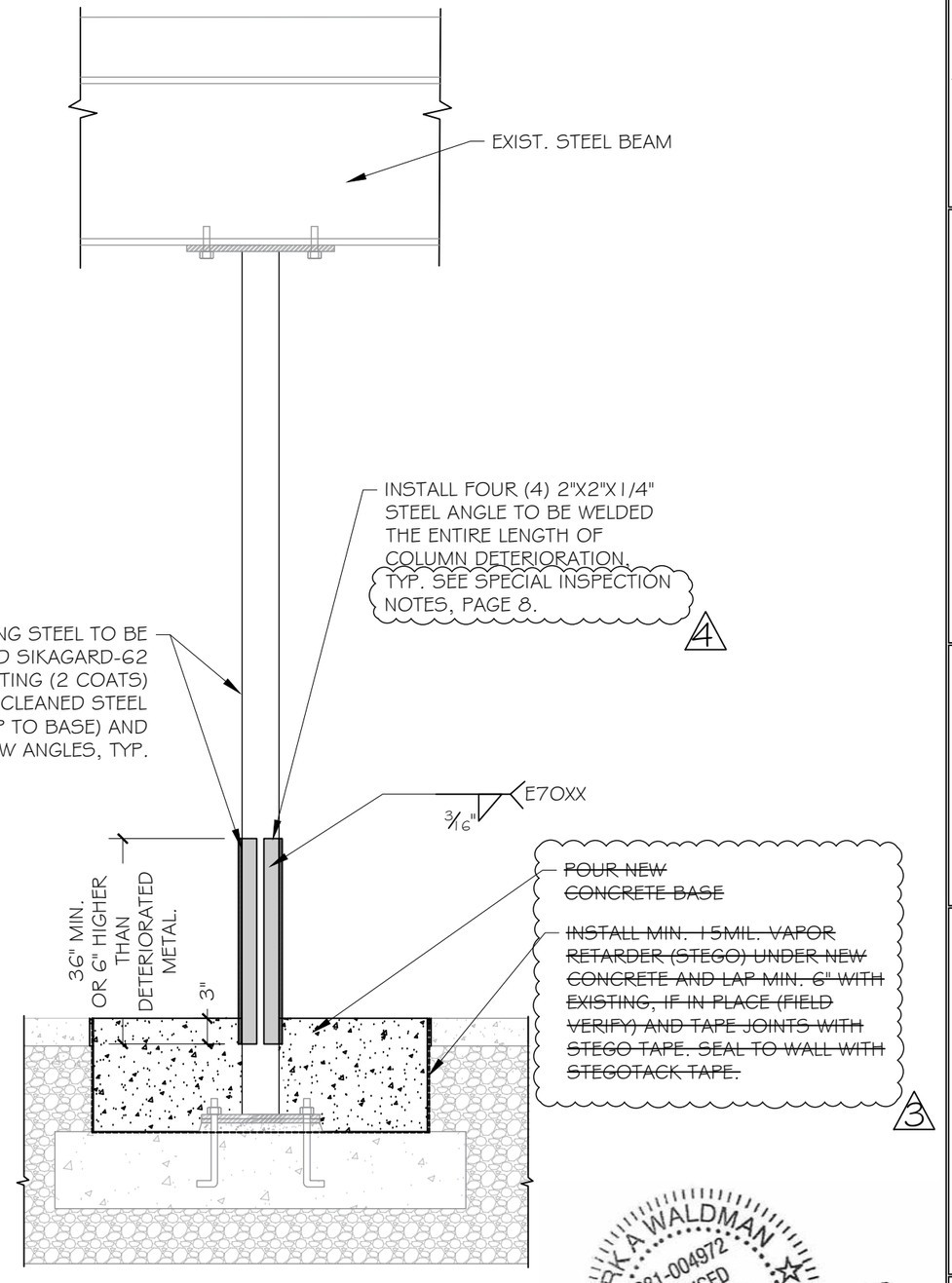
SUPPORT COLUMN REPAIR PROJECT
DAMAGE CLASSIFICATIONS
900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 3 |




4 EXIST. COLUMN (DEMOLITION)
SCALE: 3/4" = 1'-0"




5 COLUMN REPAIRS AT BASE
SCALE: 3/4" = 1'-0"

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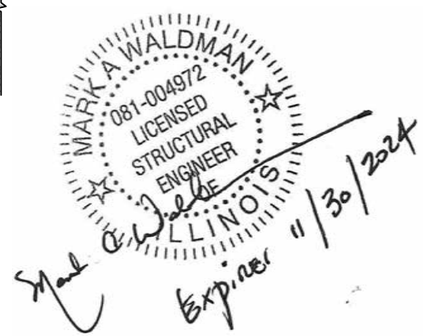


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| REVISIONS | | |
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| 2 | ADDENDUM 2 | 2-1-24 |
| 3 | REVISED PER JURISDICTION | 2-19-24 |
| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
| | | |
| | | |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

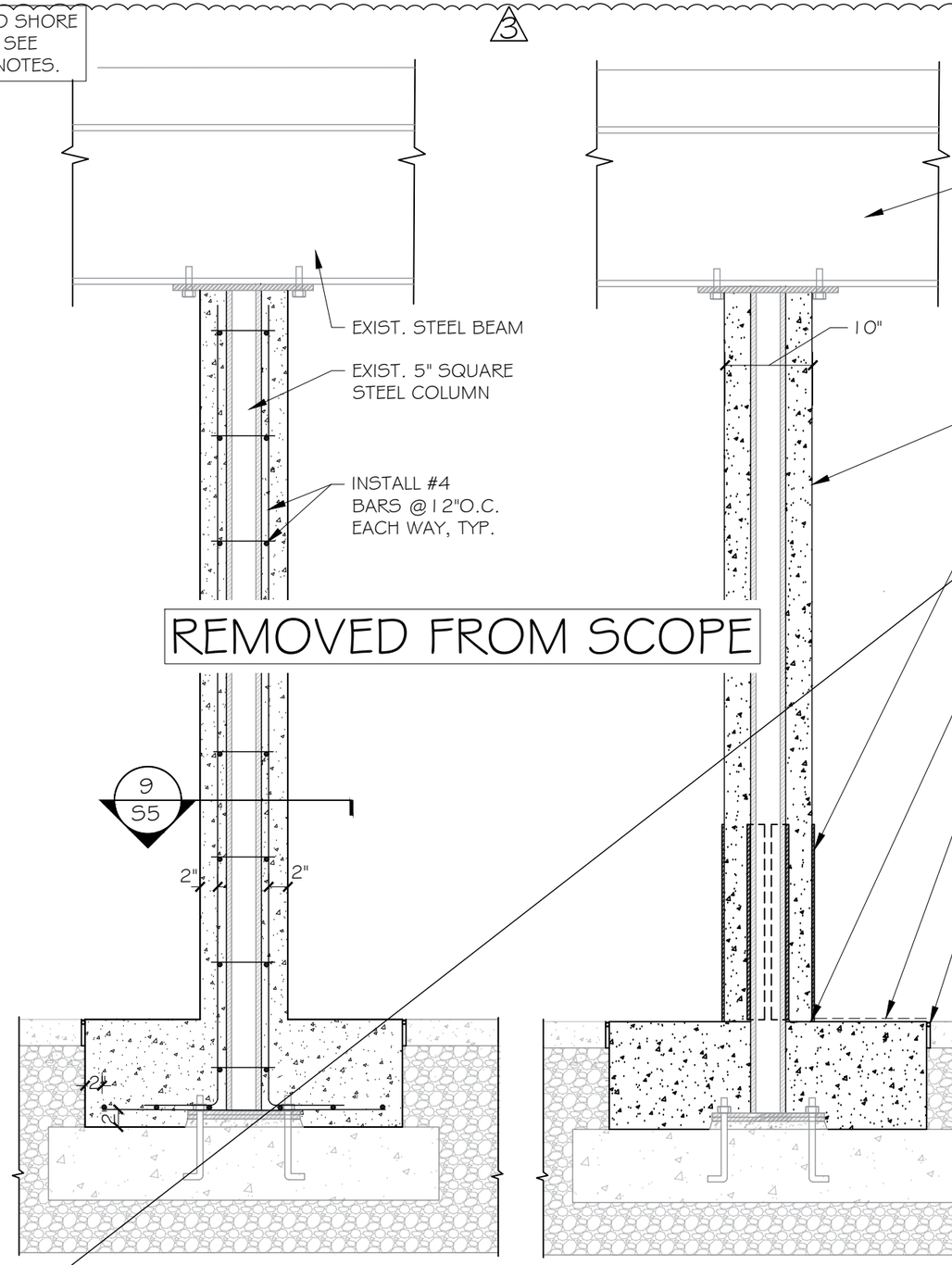
SUPPORT COLUMN REPAIR PROJECT

COLUMN REPAIR SECTIONS

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

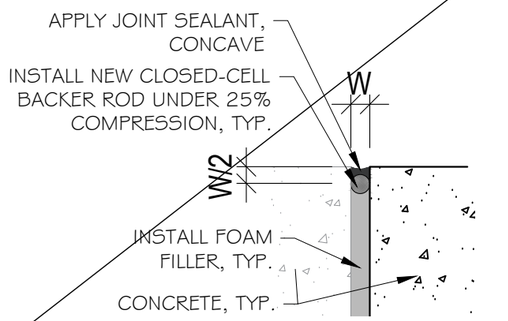
| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 4 |

CONTRACTOR TO SHORE AS NECESSARY. SEE ALSO GENERAL NOTES.



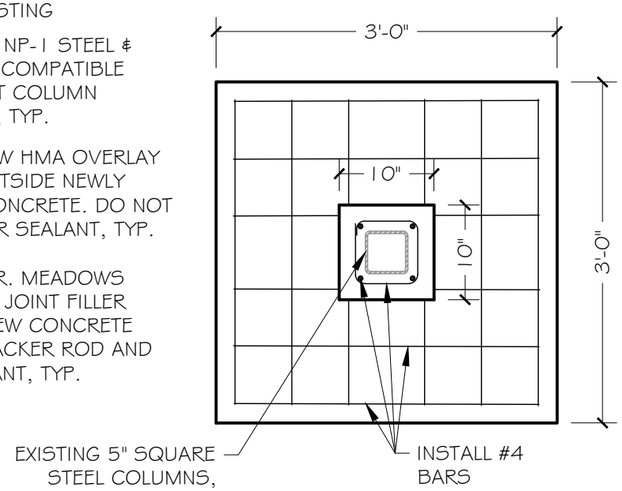

6 COLUMN REPAIRS
SCALE: 3/4" = 1'-0"

7 COLUMN REPAIRS
SCALE: 3/4" = 1'-0"




SEALANT WIDTH = 1/2", TYP. FIELD VERIFY
SEALANT DEPTH = 1/2 WIDTH OF JOINT
MIN. SEALANT DEPTH = 1/4-INCH
MAX. SEALANT DEPTH = 1/2-INCH

8 EXPENSION JT. DETAIL
SCALE: NTS




9 COLUMN REINFORCEMENT
SCALE: 3/4" = 1'-0"

GENERAL NOTES:
- CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND MATERIAL QUANTITIES BEFORE CONTRACT IS PREPARED. DO NOT SCALE MEASUREMENTS OFF THE DRAWINGS.
- THESE DRAWINGS TO BE WORKED WITH PROJECT SPECIFICATIONS DATED SEPTEMBER 8, 2023.
- CONTACT ENGINEER SHOULD DISCREPANCY BETWEEN DRAWINGS AND WRITTEN SPECIFICATIONS BE DISCOVERED
- ALL WORK TO COMPLY WITH CODES ADOPTED BY THE VILLAGE OF DES PLAINES AS SHOWN IN PROJECT SPECIFICATIONS UNDER SECTION 01 10 00 SUMMARY OF WORK
- ALL WORK TO BE PERFORMED IN WORKMAN LIKE MANNER MEETING ALL APPLICABLE INDUSTRY STANDARDS

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
WEB: www.WaldmanEng.com

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| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
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| | | |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

COLUMN REPAIR SECTIONS

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

MARK A WALDMAN
081-004972
LICENSED STRUCTURAL ENGINEER
ILLINOIS
11/30/2024
Expires

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 5 |

## General Notes:

1. This project involves repairing columns at 900 S. River Rd., Des Plaines, Illinois. The scope shall also include the following: (3)
   A. Remove approx. 7 feet of existing steel shell from the columns, floor to ceiling.
   B. Manually or mechanically remove fireproofing material from the surface of the columns.
   C. Clean the surface of each steel column with a wire wheel and install (2) coats of Sikagard-62 to steel columns after removing defective material.
   D. Install #4 rebar for the column enclosure and new concrete base over min. 15mil. Vapor Retarder (Stego) under new concrete and lap min. 6" with existing, if in place (field verify) and tape joints with Stego Tape. Seal to wall with StegoTack Tape.
   E. Install a reinforced concrete encasement around steel columns.
   F. Install continuous 1/2" Masterseal B1 foam filler and closed cell backer rod and NP-1 sealant at new concrete to exist. concrete intersections.
   G. Install NP-1 sealant around the new concrete columns.
   H. Install a new steel shell at the base to match existing in height.
   I. ~~Paint column and base shell to match existing.~~
   J. Install new HMA on the driveway side. (3)
   K. ~~Investigative openings of (3) columns (Base~~ Bid). Based on conditions, repair columns as shown above or close to prior conditions w/ engineer's pre-approval only (Unit Cost).
2. All work shall conform to the applicable codes of the local jurisdiction, and the State of Illinois at the time of permit and construction.
3. The contractor shall verify, in field, all dimensions, angles and existing conditions before proceeding with any work.
4. Variations in the field conditions relative to the contract documents shall be reported to the engineer in writing. Work shall not progress until clarification from architect/engineer is obtained.
5. All work shall be erected plumb, level and true and in accordance with details.
6. "Job copy" original permit drawings and original permit card to be kept at the job site and accessible to inspector at all times.
7. No substitutions will be allowed without prior written approval of the engineer.
8. These drawings indicate the intent, general character requirements and approximate locations of the work shown. The contractor shall be expected to work with unforeseen field conditions requiring minor design adjustments and shall be expected to fully level the floor slab.

## Structural Notes:

1. Allowable unit stresses shall be in accordance with the latest specifications of the AISC, ACI, and City of Des Plaines, IL, Building Code requirements.
2. Design Loads as follows:
   Floor Live Load: 40 PSF
   Snow Load: 25 PSF
   Dead Load: 20 PSF
   Soil: 3 tons/SF
3. Concrete:
   * All concrete to be normal weight having a minimum compressive strength of 4,000 psi at 7 days and should contain 5 to 8 percent air entrainment admixture. Air entrainment admixtures to conform to ASTM C260.
   * Concrete shall not have any chloride additive.
   * Concrete to have a slump of 4" without exceeding a water-cement ratio of 0.45.
   * All reinforcing bars shall be ASTM A615 Grade 60.
4. All structural steel shall conform to the latest edition of AISC "Specification for Design, Fabrication, and Erection of Structural Steel for Buildings" and latest Edition of AISC "Code of Standard Practice of Steel Buildings".
5. All structural steel shall be coated with a rust prohibitive primer with a minimum of 3mils unless noted otherwise.

## Shoring & Reshoring:

Comply with ACI 318 (ACI 318M) and ACI 301 (ACI 301M) for design, installation, and removal of shoring and reshoring.

1. Do not remove shoring or reshoring until measurement of column tolerances is complete. In multistory construction, extend shoring or reshoring over a sufficient number of stories to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.
2. Plan sequence of removal of shores and re-shore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

## Products:

1. Rust Prohibitive Coating: Sikagard-62
2. Vapor Retarder (Stego), 15mm and Stego Tape.
3. Foam Filler: MasterSeal B1
4. Backer Rod: MasterSeal 920
5. Sealant: MasterSeal NP-1

All materials to be applied in strict accordance with the newest manufacturer's installation instructions.

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS
11/30/2024
Expires

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LISLE, ILLINOIS 60532
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| | | |
| | | |
| NO. | DESCRIPTION | |

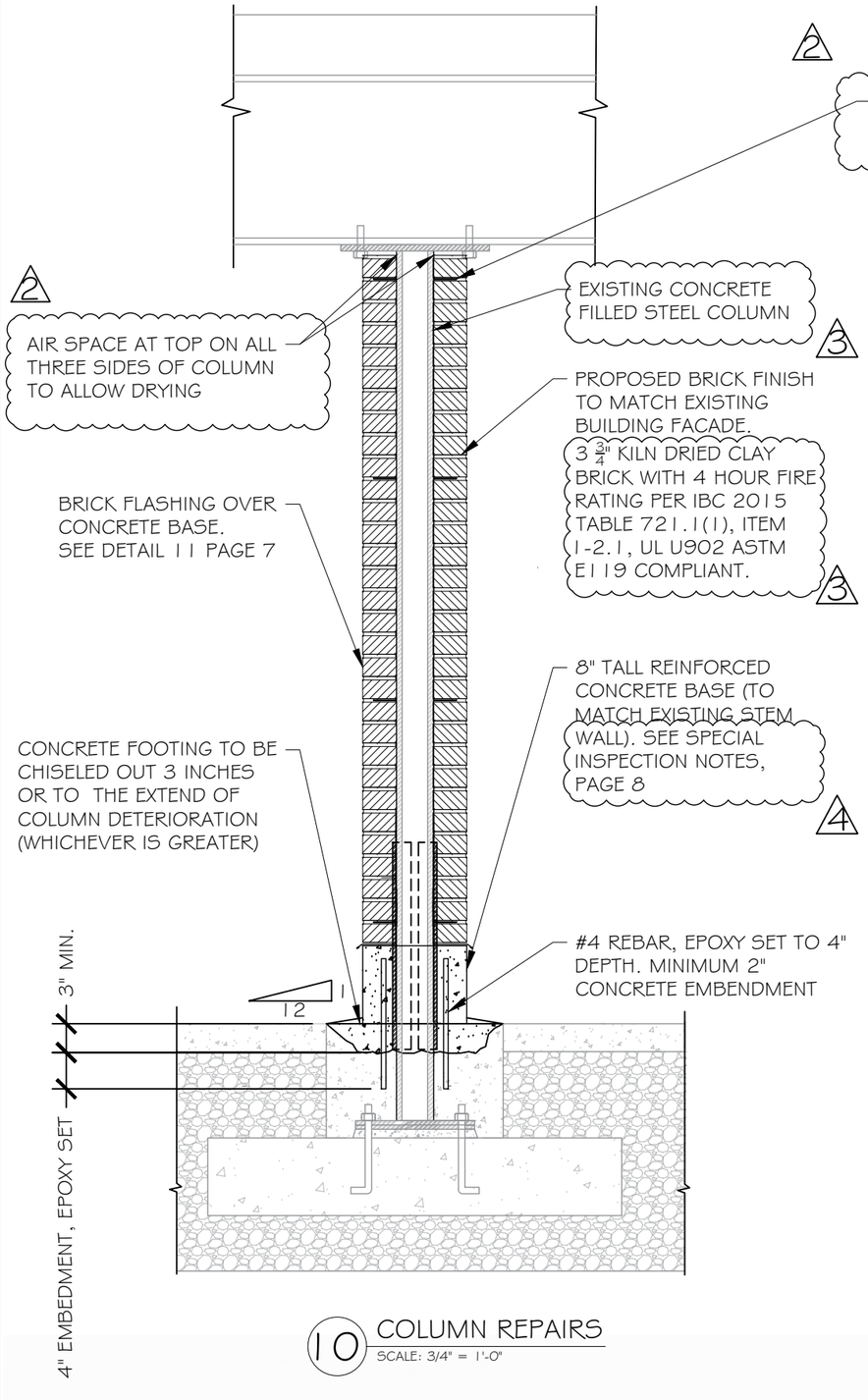
SUPPORT COLUMN REPAIR PROJECT

GENERAL NOTES

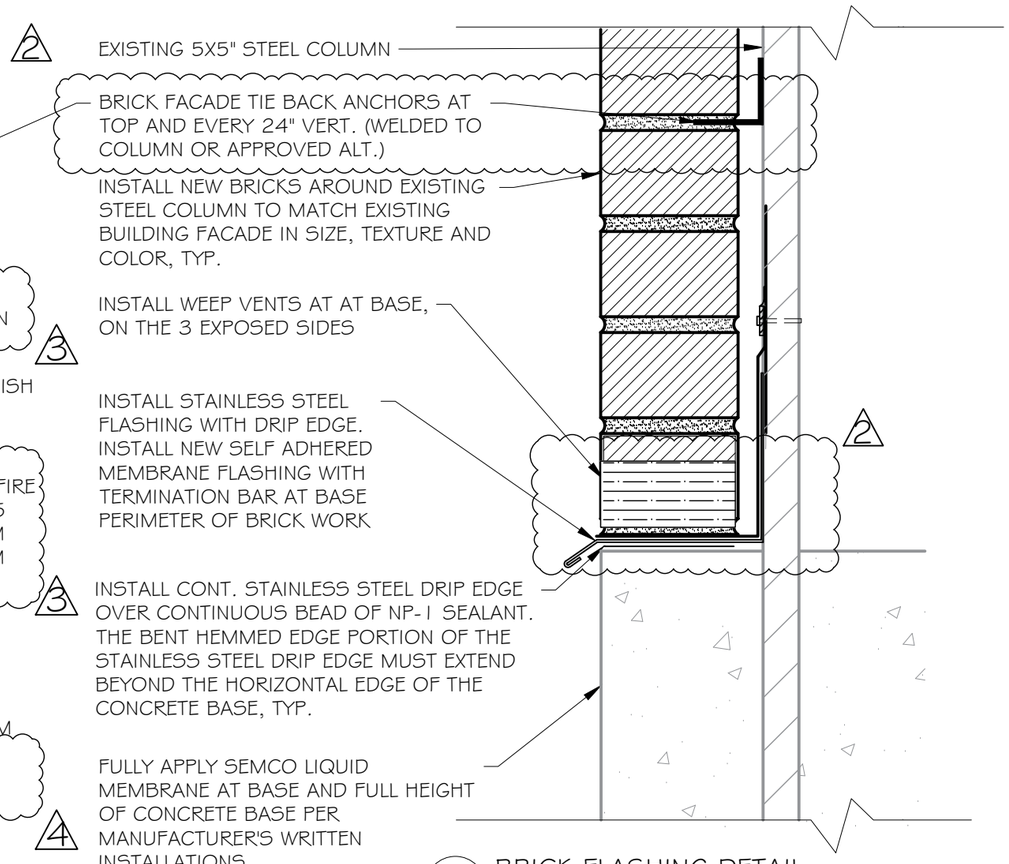
900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 6 |

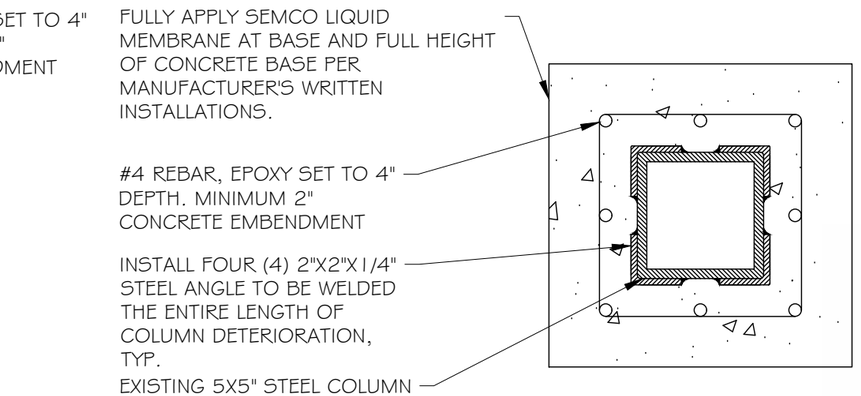
# ALTERNATE ITEM 1




10 COLUMN REPAIRS
SCALE: 3/4" = 1'-0"




11 BRICK FLASHING DETAIL
SCALE: NTS




12 BRICK FLASHING DETAIL
SCALE: NTS

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS
11/30/2024
Expires

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4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
WEB: www.WaldmanEng.com

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| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

ALTERNATE ITEM 1

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 7 |

Special Inspections:

Structural Welding:

- Special inspection by Testing Service Corporation (TSC) per contract.
- Testing to be completed by a qualified technician under the supervision, observation of and reporting by TSC's Registered Professional Engineer.
- Ultrasonic Flaw Detector and/or Magnetic Particle Yoke testing to be performed as determined by technician on site.
- Testing to be completed prior to application of sealant, per IBC 2015, Chapter 17, Section 1705.2 and per AISC 360.

Concrete:

- Special inspection by Flood Testing Laboratories, Inc. (FTL) per contract.
- Testing to be completed by a qualified technician under the supervision, observation of and reporting by FTL's Registered Professional Engineer.
- Compressive test specimens to be collected in sets of no less than 5 cylinders at 4" by 8" for independent testing.
- Concrete cylinder testing to be performed per IBC 2015, Chapter 17, Table 1705.3, Items 5, 6, 7, 8 and 12.
- Concrete testing to be performed prior to construction of brick facade or application of liquid membrane sealant.

| INSPECTION SHEDULE | | | | | |
|---|---|---|---|---|---|
| | TYPE: | CONTINUOUS SPECIAL INSPECTION | PERIODIC SPECIAL INSPECTION | REFERENCED STANDARD | IBC REFERENCE |
| REINFORCING WELDS | A. Verify weldability of materials if other than ASTM A 706 | - | X | AWS D1.4 | - |
| | B. Inspect single-pass fillet welds of less than $\frac{5}{16}$" | - | X | AISC 360 | 1705.2 |
| | C. Inspect other welds as needed (TBD) | X | - | AISC 360 | - |
| | | | | | |
| CONCRETE | A. Inspect adhesive anchors post-installed in hardened concrete members | X | - | ACI 318: 17.8.2.4 | - |
| | B. Verify use of required design mix | - | X | ACI 318: Ch. 19, 26.4.3, 23.4.4 | 1705.3, 1705.5, 1705.6, 1705.7 |
| | C. Prior to concrete placement, fabricate specimens for strength tests and determine temperature of concrete | X | - | ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12 | 1705.12 |
| | D. Inspect concrete placement for proper application techniques | X | - | ACI 318: 26.4.5 | 1705.6, 1705.7, 1705.8 |
| | E. Verify maintenance of specified curing temperatures and techniques | - | X | ACI 318: 26.10.2 | - |
| | F. Inspect formwork for shape, location and dimensions of the concrete member being fomred | - | X | ACI 318: 26.10.1(b) | - |

4

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER OF ILLINOIS

Expires 11/30/2024

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4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
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| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

SPECIAL INSPECTION NOTES

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 8 |

Thacker House Brick Sample

CITY OF DES PLAINES
BUILDING DEPARTMENT
☑ APPROVED
☐ APPROVED AS NOTED
☐ NOT APPROVED REVISIONS REQUIRED
Date 5/10/2024 BY: pmatyja

Brick shall be min 3 3/4" thick and shall have the voids filled with brick and mortar fill per specified 2015 IBC 721.1(1) Item 1-2.1 on permit plans.

| | | | |
|---|---|---|---|
| 1-2.1 | Clay or shale brick with brick and mortar fill.[a] | $3^3/_4$ | – |

CLEMSON UNIVERSITY
THE BISHOP MATERIALS LABORATORY

# TEST REPORT

100 Clemson Research Blvd.
Anderson, SC 29625
(864) 656-1094
Fax: (864) 656-1095
www.brickandtile.org

IAS ACCREDITED Testing Laboratory

***Results of Tests on brick Conducted in accordance with C67/C67M - 23a Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile***

02/26/2024

| | | | |
|---|---|---|---|
| Name: | The Bowerston Shale Company<br>P. O. Box 199<br>Bowerston, OH 44695 | Plant: | The Bowerston Shale Company |
| | | Sampled Date: | 2/8/2024 |
| | | Received Date: | 2/8/2024 |
| Phone: | 740-269-2921 | Fired Date: | 2/8/2024 |
| Fax: | 740-269-5456 | Product Code: | |
| Report Number: | 12466-30922 | Lot Number: | H23274 |

Description: **White/Gray Clay Series**

| **Absorption** | **1** | **2** | **3** | **4** | **5** | **Average** | **Test Date** |
|---|---|---|---|---|---|---|---|
| *24 Hour Cold Water (%)* | 4.9 | 4.9 | 4.1 | 4.6 | 4.6 | 4.6 | 2/15/2024 |
| *5 Hour Boiling Water (%)* | 6.1 | 6.3 | 5.4 | 6.1 | 5.8 | 5.9 | |
| *Saturation Coefficient* | 0.79 | 0.78 | 0.76 | 0.77 | 0.78 | 0.78 | |

| **Compressive Strength** | **1** | **2** | **3** | **4** | **5** | **Average** | **Test Date** |
|---|---|---|---|---|---|---|---|
| *psi* | 21,140 | 19,790 | 21,780 | 17,360 | 20,830 | 20,180 | 2/23/2024 |

| **IRA (Oven Dried Method)** | **6** | **7** | **8** | **9** | **10** | **Average** | **Test Date** |
|---|---|---|---|---|---|---|---|
| *g/min/30 in.²* | 6.2 | 7.8 | 8.9 | 9.0 | 6.3 | 7.6 | 2/16/2024 |

| **Efflorescence** | **11** | **12** | **13** | **14** | **15** | **Test Date** |
|---|---|---|---|---|---|---|
| Efflorescence Detection | Not Effloresced | Not Effloresced | Not Effloresced | Not Effloresced | Not Effloresced | 2/23/2024 |

| **Void Area** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **Average** | **Test Date** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Void Area (%) | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 20 | 19 | 19 | 19 | 2/16/2024 |

***The brick represented by the test results shown here comply with the physical property requirements of the standards listed below:***

ASTM C32 - 23 Standard Specification for Sewer and Manhole Brick (Made From Clay or Shale)
Grades: SS, SM / MS, MM

ASTM C62 - 23 Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)
Class: SW, MW, NW

ASTM C216 - 23 Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)
Grade: SW, MW

*White/Gray Clay Series Lot H23274:*
*#300, #340, #345, #360, #806, #825, #925, #925-3, #923, #924, #926, #938, #940, #942, #940-3; White, Light Gray, Medium Gray, Dark Gray, Ivory*

Katherine Hill, Quality Manager

**The temperature and humidity of the Bishop Materials Laboratory is constantly kept between 60 -90F, and 30-70% RH*
*The results shown above apply only to the samples tested, which are provided by the customer.*
*This test report shall not be reproduced except in full, without written approval of the laboratory.*

Lab Reference: 12466.30922

THE BRICK INDUSTRY ASSOCIATION
TECHNICAL NOTES on Brick Construction 16
1850 Centennial Park Drive, Reston, Virginia 20191 | www.gobrick.com | 703-620-0010
March 2008

# Fire Resistance of Brick Masonry

**Abstract:** This *Technical Note* presents information about the fire resistance of brick masonry assemblies in loadbearing and veneer applications. Fire resistance ratings of several brick masonry wall assemblies tested using ASTM E119 procedures are listed. For untested wall assemblies, procedures are presented for calculating a fire resistance rating.

**Key Words:** balanced design, building codes, equivalent thickness, fire, fire resistance period, fire resistance rating, fire test.

## SUMMARY OF RECOMMENDATIONS:

**Fire Resistance Requirements**
- Use the building code to determine the fire resistance rating required for separations, corridors, exterior walls and other building features
- Use fire control systems, compartmentalization of space or other "balanced design" approaches to lower required fire resistance ratings
- Determine whether fire resistance is needed for one side or two sides of fire exposure

**Assembly with Tested Fire Resistance Rating**
- Use wall construction prescribed by the building code or testing agency to achieve fire resistance rating
- For wall construction not prescribed by the building code, include reference for test results in design documents

**Assembly with Calculated Fire Resistance Rating**
- Determine minimum equivalent thickness required of brick unit from tables in the building code or ACI 216.1/ TMS 0216 [Ref. 5]
- Specify brick standard, brick size and void area to meet the minimum equivalent thickness requirements
- For multi-wythe masonry walls, determine contributions from other wall components such as concrete, concrete masonry, air spaces and plaster

**Construction Details**
- Where assemblies with a fire resistance rating are supported by other assemblies, specify that the support assembly have an equal or greater fire resistance rating
- Seal penetrations through assemblies with a fire resistance rating with appropriate sealants or details to maintain fire resistance rating

## INTRODUCTION

Building codes and other local ordinances require critical building components to have a certain level of fire resistance to protect occupants and to allow a means of escape. Several factors contribute to the level of fire resistance required of a wall, floor or roof assembly, including whether combustible (wood) or noncombustible (steel, concrete and masonry) construction is used. Other factors include the building's use, floor area and height, the location of the assembly, and whether a fire suppression system such as stand pipes or sprinklers is installed.

## Definitions

**Fire Resistance.** The property of a building element, component or assembly that prevents or retards the passage of excessive heat, hot gases or flames under conditions of use.

**Fire Resistance Period.** A duration of time determined by a fire test or method based on a fire test that a building element, component or assembly maintains the ability to confine a fire, continues to perform a given structural function or both.

**Fire Resistance Rating.** A duration of time not exceeding 4 hours (as established by the building code) that a building element, component or assembly maintains the ability to confine a fire, continues to perform a given structural function or both. A legal term defined in building codes for various types of construction and occupancies. A fire resistance rating is based on a fire resistance period and usually given in half-hour or hourly increments. As an example, a wall with a fire resistance period of 2 hours and 25 minutes may only attain a fire resistance rating of 2 hours. It is also referred to as a fire rating, fire resistance classification or hourly rating.

© 2008 Brick Industry Association, Reston, Virginia

# Determining a Fire Resistance Rating

Traditionally, a fire resistance rating has been established by testing. The most common test method used is ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials* [Ref. 3]. In this test, a sample of the wall must perform successfully during exposure to a controlled fire for the specified period of time, followed by the impact of a stream of water from a hose.

This standard test, along with other ASTM fire test standards, is used to measure and describe the response of materials, products or assemblies to heat and flame under controlled conditions, but does not by itself replicate actual fire conditions in a building. Rather, the intent of the test is to provide comparative performance to specific fire-test conditions during the period of exposure. Further, the test is valid only for the specific assembly tested.

Fire testing is expensive because each specific assembly must be tested by constructing a large specimen, placing multiple monitoring devices on that specimen and subjecting the specimen to both a fire and a hose stream. As a result, a calculated fire resistance method developed jointly by The Masonry Society and the American Concrete Institute and based on past ASTM E119 tests has largely replaced further fire resistance testing for masonry and concrete materials [Ref. 5].

# FIRE RESISTANCE TESTING

## ASTM E119 Test Method

The test methods described in ASTM E119 are applicable to assemblies of masonry units and to composite assemblies of structural materials for buildings, including bearing and other walls and partitions, columns, girders, beams, slabs and composite slab and beam assemblies for floors and roofs.

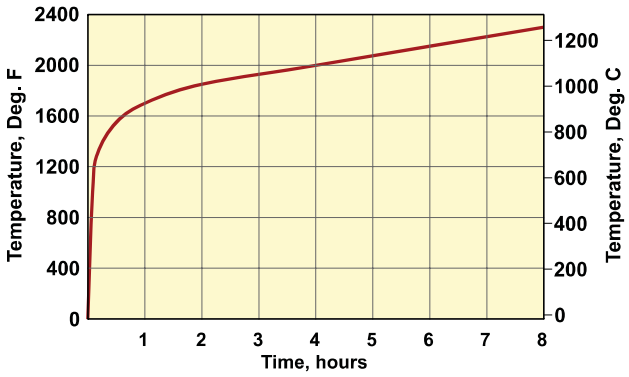



**Figure 1**
**Time-Temperature Curve for ASTM Standard E119**

When fire testing a wall assembly according to ASTM E119, a sample of the wall is built using the materials and details of the assembly to be used in construction. The specimen is then subjected to a controlled fire until a failure occurs (termination point is reached) or a designated extent of time passes. ASTM E119 requires that the air temperature at a distance of 6 in. (152 mm) from the exposed (fire) side of the specimen conform to the standard time-temperature curve, as shown in Figure 1.

**Wall Specimens.** The area exposed to the fire must be at least 100 sq ft (9.3 $m^2$) with no dimension less than 9 ft (2.7 m). Non-bearing walls and partitions are restrained at all four sides, but bearing walls and partitions are not restrained at the vertical edges. Nine thermocouples are placed on the side of the wall unexposed to the fire to measure temperature rise.

**Protected Steel Column Specimens.** If the fire resistant material protecting the column is structural, the column specimen must be at least 9 ft (2.7 m) tall, and acceptance is based on its ability to carry an axial load for the duration of the fire test. If the fire resistant material is not structural, the minimum column height is 8 ft (2.4 m), and acceptance is based on temperature rise on the surface of the column. Temperature rise is measured by placing a minimum of three thermocouples on the column surface (behind the fire resistant material) at each of four levels.

**Hose Stream Test.** For most fire resistance ratings ASTM E119 requires that walls be subjected to both a fire endurance test and a hose stream test. The hose stream test subjects a specimen to impact, erosion and cooling effects over the entire surface area that has been exposed to the fire. The procedure stipulates nozzle size, distance, duration of application and water pressure at the base of the nozzle. Some of these requirements vary with the fire resistance rating. The hose stream test may be performed on a duplicate wall specimen that has been subjected to a fire endurance test for one-half of the period determined by the fire test (but not more than 1 hour); or the hose stream test may be performed on the wall specimen immediately after the full duration of fire exposure. The latter option is typically used to test brick walls because the test termination point is almost always a temperature rise rather than a failure by passage of hot gases or collapse where there is a degradation of the brick wythe from the hose stream test. Some other materials rely on the duplicate specimen to meet certain fire ratings.

**Loading.** Throughout the fire endurance and hose stream tests, a superimposed load is applied to bearing specimens. The applied load is required to be the maximum load condition allowed by nationally recognized structural design criteria or by limited design criteria for a reduced load.

Columns are loaded to simulate the maximum load condition allowed by nationally recognized structural design criteria or by limited design criteria for a reduced load. The column is then subjected to the standard fire on all sides. Where the fire protection is not designed to carry loads, an alternate test method in which the column is not loaded may be used.

## Conditions of Acceptance

The number of criteria considered as termination points for a fire test on an assembly depends on whether the assembly is loadbearing or not.

**Non-Bearing Walls and Partitions.** The test is successful and a fire resistance rating is assigned to the construction if all of the following criteria are met:

1. The assembly withstands the fire endurance test without passage of flame or gases hot enough to ignite cotton waste for a period equal to that for which classification is desired.
2. The assembly withstands the fire endurance test without passage of flame and the hose stream test without passage of water from the hose stream. If an opening develops in the wall specimen that permits a projection of water beyond the surface of the unexposed side during the hose stream test, the assembly is considered to have failed the test.
3. The average rise in temperature of nine thermocouples on the unexposed surface is not more than 250 ºF (139 ºC) above their average initial temperature, and the temperature rise of a single thermocouple is not more than 325 ºF (181 ºC) above its initial temperature.

**Bearing Walls.** The conditions of acceptance for bearing walls are the same as for non-bearing walls and partitions (above), with the following addition:

4. The specimen must also sustain the applied load during the fire endurance and hose stream tests.

The first three criteria relate to providing a barrier against the spread of fire by penetration of the assembly; the fourth relates to structural integrity. The termination point for fire tests of brick masonry walls is almost invariably due to temperature rise (heat transmission) of the unexposed surface. Brick masonry walls successfully withstand the load during the fire endurance test and the hose stream test conducted immediately after the wall has been subjected to the fire exposure. This structural integrity of brick masonry walls is attested to in many fires where the masonry walls have remained standing when other parts of the building have been destroyed or consumed during the fire.

**Columns.** Columns with integral structural fireproofing are assigned a fire resistance rating when they support the superimposed load during the fire endurance test. For columns with fireproofing not designed to carry loads, a fire resistance rating is assigned when the average temperature rise does not exceed 1000 ºF (556 ºC) or the maximum temperature rise does not exceed 1200 ºF (667 ºC) at any one point.

# FIRE RESISTANCE RATINGS OF WALLS

There are several sources of fire resistance ratings for brick masonry assemblies that will typically satisfy the requirements of the local building official. Model building codes contain results based on testing. Private laboratories report fire test results. Individual associations and companies sponsor fire tests and make the results available.

# Building Codes

Table 1 presents fire resistance ratings for various masonry wall assemblies, as taken from the 2006 International Building Code Table 720.1(2) [Ref. 1]. Note that for item numbers 1.1-1 through 1.1-3, 1-2.1, and 2-1.1 through 2-1.2, the required thickness of clay brick masonry is the equivalent thickness, i.e. the thickness is the volume of clay in a unit divided by the face area. Table 2 presents fire resistance ratings for brick veneer/steel stud wall assemblies as taken from Table 721.4.1(2) of the same code.

**TABLE 1**
**Fire Resistance Ratings (Periods) for Various Walls and Partitions**

| Material | Item Number | Construction | Minimum Finished Thickness, Face-to-Face, in. (mm) | | | |
|---|---|---|---|---|---|---|
| | | | 4 hr | 3 hr | 2 hr | 1 hr |
| 1. Brick of clay or shale[2] | 1-1.1 | Solid brick of clay or shale[1] | 6.0 (152) | 4.9 (124) | 3.8 (97) | 2.7 (69) |
| | 1-1.2 | Hollow brick, not filled | 5.0 (127) | 4.3 (109) | 3.4 (86) | 2.3 (58) |
| | 1-1.3 | Hollow brick unit wall, grouted solid or filled with perlite vermiculite or expanded shale aggregate | 6.6 (168) | 5.5 (140) | 4.4 (112) | 3.0 (76) |
| | 1-2.1 | 4 in. (102 mm) nominal thick units at least 75 percent solid backed with hat-shaped metal furring channel ¾ in. (76 mm) thick formed from 0.021 in. (0.53 mm) sheet metal attached to the brick wall at 24 in. (610 mm) o.c. with approved fasteners, and ½ in. (12.7 mm) Type X gypsum wallboard attached to the metal furring strips with 1 in. (25.4 mm) long Type S screws spaced at 8 in. (203 mm) o.c. | — | — | 5[3] (127) | — |
| 2. Combination of clay brick and loadbearing hollow clay tile[2] | 2-1.1 | 4 in. (102 mm) solid brick and 4 in. (102 mm) tile (at least 40 percent solid) | — | 8 (203) | — | — |
| | 2-1.2 | 4 in. (102 mm) solid brick and 8 in. (203 mm) tile (at least 40 percent solid) | 12 (305) | — | — | — |
| 15. Exterior or interior walls[4,5,6] | 15-1.5[7] | 2¼ × 3¾ in. (57 × 95 mm) clay face brick with cored holes over ½ in. (12.7 mm) gypsum sheathing on exterior surface of 2 × 4 in. (51 × 102 mm) wood studs at 16 in. (406 mm) o.c. and two layers ⅝ in. (15.9 mm) Type X gypsum wallboard on interior surface. Sheathing placed horizontally or vertically with vertical joints over studs nailed 6 in. (152 mm) on center with 1¾ in. (44 mm) by No. 11 gage by 7⁄16 in. (11.1 mm) head galvanized nails. Inner layer of wallboard placed horizontally or vertically and nailed 8 in. (203 mm) on center with 6d cooler or wallboard nails. Outer layer of wallboard placed horizontally or vertically and nailed 8 in. (203 mm) on center with 8d cooler or wallboard nails. All joints staggered with vertical joints over studs. Outer layer joints taped and finished with compound. Nail heads covered with joint compound. 0.035 in. (0.89 mm) (No. 20 galvanized sheet gage) corrugated galvanized steel wall ties ¾ × 6⅝ in. (19.1 × 168 mm) attached to each stud with two 8d cooler or wallboard nails every sixth course of bricks. | — | — | 10 (254) | — |

1. For units in which the net cross-sectional area of cored brick in any plane parallel to the surface containing the cores is at least 75 percent of the gross cross-sectional area measured in the same plane.
2. Thickness shown for brick and clay tile are nominal thicknesses unless plastered, in which case thicknesses are net. Thickness shown for clay masonry is equivalent thickness defined by Equation 3. Where all cells are solid grouted or filled with silicone-treated perlite loose-fill insulation; vermiculite loose-fill insulation; or expanded clay, shale or slate lightweight aggregate, the equivalent thickness shall be the thickness of the brick using specified dimensions. Equivalent thickness may also include the thickness of applied plaster and lath or gypsum wallboard, where specified.
3. Shall be used for non-bearing purposes only.
4. Staples with equivalent holding power and penetration shall be permitted to be used as alternate fasteners to nails for attachment to wood framing.
5. For all of the construction with gypsum wallboard described in this table, gypsum base for veneer plaster of the same size, thickness and core type shall be permitted to be substituted for gypsum wallboard, provided attachment is identical to that specified for the wallboard, and the joints on the face layer are reinforced and the entire surface is covered with a minimum of 1⁄16 in. (1.6 mm) gypsum veneer plaster.
6. For properties of cooler or wallboard nails, see ASTM C514, ASTM C547 or ASTM F1667.
7. The design stress of studs shall be reduced to 78 percent of allowable $F'_c$ with the maximum not greater than 78 percent of the calculated stress with studs having a slenderness ratio *l/d* of 33.

**TABLE 2**
**Fire Resistance Ratings for Brick Veneer/Steel Stud Assemblies**

| Wall or Partition Assembly | Plaster Side Exposed (hours) | Brick Faced Side Exposed (hours) |
|---|---|---|
| **Outside facing of steel studs:** ½ in. (12.7 mm) wood fiberboard sheathing next to studs, ¾ in. (19.1 mm) air space formed with ¾ × 1⅝ in. (19.1 × 41 mm) wood strips placed over the fiberboard and secured to the studs; metal or wire lath nailed to such strips, 3¾ in. (95 mm) brick veneer held in place by filling ¾ in. (19.1 mm) air space between the brick and lath with mortar. **Inside facing of studs:** ¾ in. (19.1 mm) unsanded gypsum plaster on metal or wire lath attached to 5/16 in. (7.9 mm) wood strips secured to edges of the studs. | 1.5 | 4 |
| **Outside facing of steel studs:** 1 in. (25.4 mm) insulation board sheathing attached to studs, 1 in. (25.4 mm) air space, and 3¾ in. (95 mm) brick veneer attached to steel frame with metal ties every fifth course. **Inside facing of studs:** ⅞ in. (22.2 mm) sanded gypsum plaster (1:2 mix) applied on metal or wire lath attached directly to the studs. | 1.5 | 4 |
| Same as above except use ⅞ in. (22.2 mm) vermiculite — gypsum plaster — or 1 in. (25.4 mm) sanded gypsum plaster (1:2 mix) applied to metal or wire. | 2 | 4 |
| **Outside facing of steel studs:** ½ in. (12.7 mm) gypsum sheathing board, attached to studs, and 3¾ in. (95 mm) brick veneer attached to steel frame with metal ties every fifth course. **Inside facing of studs:** ½ in. (12.7 mm) sanded gypsum plaster (1:2 mix) applied to ½ in. (12.7 mm) perforated gypsum lath securely attached to studs and having strips of metal lath 3 in. (76 mm) wide applied to all horizontal joints of gypsum lath. | 2 | 4 |

# UL Listings

Underwriters Laboratories is a resource recognized throughout the building industry that has thousands of published fire resistance rated designs and product certifications that appear in the *UL Fire Resistance Directory* [Ref. 7] and are typically accepted without modification by building officials. The UL certification is based on an assembly complying with the ASTM E119 test, as described previously. The directory lists several masonry wall assemblies with various potential alternates in materials as shown in Table 3.

**TABLE 3**
**UL Fire Resistance Ratings for Brick Masonry Walls**

| Design Number | Rating[1] | Assembly |
|---|---|---|
| **Brick Veneer/Wood Stud, Loadbearing** | | |
| U302 | 2 hr | • (2) layers ⅝ in. (15.9 mm) thick gypsum wallboard or nominal 3/32 in. (2.4 mm) thick gypsum veneer plaster on Classified veneer baseboard<br>• (1) layer ½ in. (12.7 mm) thick exterior gypsum sheathing<br>• 1 (25.4 mm) in. (51 × 102 mm) air space<br>• nominal 2 × 4 in. wood studs spaced at 16 in. (406 mm) o.c.<br>• nominal 4 in. (102 mm) clay facing brick laid in mortar with ¾ in. (19.1 mm) wide × 6⅝ in. 168 mm) long 20 MSG corrugated wall ties spaced at 16 in. (406 mm) o.c. each way |

1. Unless noted otherwise, fire resistance rating applies to both sides of assembly.

**TABLE 3 (continued)**
**UL Fire Resistance Ratings for Brick Masonry Walls**

| Design Number | Rating[1] | Assembly |
|---|---|---|
| **Brick Veneer/Wood Stud, Loadbearing (continued)** | | |
| U356 | 1 hr | • (1) layer ⅝ in. (15.9 mm) thick gypsum board<br>• nominal 2 × 4 in. (51 × 102 mm) wood studs spaced at 16 in. (406 mm) o.c., with 3½ in. (89 mm) thick glass fiber batt or spray applied cellulose insulation<br>• 7/16 in. (11.1 mm) min. thick wood structural panels or min. ½ in. (12.7 mm) thick mineral and fiber boards<br>• 1 in. (25.4 mm) air space<br>• nominal 4 in. (102 mm) brick veneer with corrugated metal wall ties spaced not more than each sixth course of brick and max. 32 in. (813 mm) o.c. horizontally |
| U371 | 1 hr | • (2) layer ⅝ in. (15.9 mm) thick gypsum board<br>• nominal 2 × 4 in. (51 × 102 mm) wood studs spaced at 16 in. (406 mm) o.c. with min. 3 in. (76 mm) mineral wool batt insulation<br>• (1) layer ⅝ in. (15.9 mm) thick gypsum board<br>• 1 in. (25.4 mm) air space<br>• nominal 4 in. (102 mm) brick veneer with corrugated metal wall ties attached with screws and spaced not more than each fourth course and a max. 24 in. (610 mm) o.c. horizontally |
| **Brick Veneer/Steel Stud, Loadbearing** | | |
| U418 | 45 min<br>1 hr<br>2 hr | • (45 min): (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>(1 hr): (2) layers ½ in. (12.7 mm) thick gypsum wallboard<br>(2 hr): (3) layers ½ in. (12.7 mm) thick gypsum wallboard<br>• 3½ or 5½ in., (89 or 140 mm) 18 gage, steel studs, spaced at 24 in. (610 mm) o.c., with 3½ in. (89 mm) thick glass fiber batt insulation<br>• (1) layer ½ in. (12.7 mm) thick exterior gypsum sheathing<br>• 1 in. (25.4 mm) air space<br>• 4 in. (102 mm) nominal clay facing brick laid in mortar with metal ties at 24 in. (610 mm) o.c. horizontally and 16 in. (406 mm) o.c. vertically |
| U424 | 45 min<br>1 hr<br>1½ hr<br>2 hr | • (45 min): (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>(1 hr): (2) layers ½ in. (12.7 mm) thick gypsum wallboard<br>(1½ hr): (2) layers ⅝ in. (15.9 mm) thick gypsum wallboard<br>(2 hr): (3) layers ½ in. (12.7 mm) or (2) layers ¾ in. (19.1 mm) thick gypsum wallboard<br>• 3½ in. (89 mm), 20 gage steel studs, spaced up to 24 in. (610 mm) o.c., with 3½ in. (89 mm) thick glass fiber or mineral wool batt or blanket insulation<br>• (1) layer ½ or ⅝ in. (12.7 or 15.9 mm) thick exterior gypsum sheathing<br>• Air space thickness not specified<br>• 3¾ in. (95 mm) min. brick veneer with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick |
| U425 | 45 min<br>1 hr<br>1½ hr<br>2 hr | • (45 min): (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>(1 hr): (2) layers ½ in. (12.7 mm) thick gypsum wallboard<br>(1½ hr): (2) layers ⅝ in. (15.9 mm) thick gypsum wallboard<br>(2 hr): (3) layers ½ in. (12.7 mm) or (2) layers ¾ in. (19.1 mm) thick gypsum wallboard<br>• 3½ in. (89 mm), 20 gage steel studs, spaced up to 24 in. (610 mm) o.c., with 3½ in. (89 mm) thick glass fiber or mineral wool batt or blanket insulation<br>• (1) layer ½ or ⅝ in. (12.7 or 15.9 mm) thick exterior gypsum sheathing<br>• Air space thickness not specified<br>• 3¾ in. (95 mm) brick veneer with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick |

1. Unless noted otherwise, fire resistance rating applies to both sides of assembly.

**TABLE 3 (continued)**
**UL Fire Resistance Ratings for Brick Masonry Walls**

| Design Number | Rating[1] | Assembly |
|---|---|---|
| **Brick Veneer/Steel Stud, Loadbearing (continued)** | | |
| V434 | 1 hr | • (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>• 3½ in. (89 mm), 20 gage, steel studs with max. spacing at 24 in. (610 mm) o.c., with 3½ in. (89 mm) thick glass fiber batt insulation<br>• 2 in. (51 mm) max. thick foamed plastic<br>• 1 in. (25.4 mm) min. air space<br>• 4 in. (102 mm) nominal brick veneer with wall anchor ties attached to studs at max. 24 in. (610 mm) o.c. |
| V454 | 1 hr | • (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>• 3½ in. (89 mm), 20 gage, steel studs at max. spacing of 24 in. (610 mm) o.c.<br>• (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>• 4 in. (102 mm) max. thick rigid polystyrene insulation<br>• 1 in. (25.4 mm) min. air space<br>• 4 in. (102 mm) nominal brick veneer with wall anchor ties attached to studs at max. 24 in. (610 mm) o.c. |
| V458 | 45 min | • (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard bearing UL Classification Mark<br>• 3⅝ in. (92 mm) 18 gage steel studs at max. spacing of 24 in. (610 mm) o.c. with nominal 3.5 pcf mineral wool batt<br>• (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>• 1 in. (25.4 mm) min. air space<br>• 3¾ in. (95 mm) min. thick brick veneer with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick |
| **Brick Veneer/Steel Stud, Non-Loadbearing** | | |
| V414 | 3 hr, interior<br>1 hr, exterior | • (1) layer ⅝ in. (15.9 mm) thick gypsum wallboard<br>• 3⅝ in. (92 mm) wide, 1⅝ in. (41 mm) legs, 20 gage steel studs, spaced 16 in. (406 mm) o.c., studs cut ¾ in. (19.1 mm) less than assembly height<br>• 2 in. (51 mm) thick foamed plastic (rigid insulation)<br>• 2 in. (51 mm) air space<br>• 4 in. (102 mm) nominal clay facing brick laid in mortar with metal ties at 16 in. (406 mm) o.c. max. each way |
| **Brick/Concrete Masonry, Loadbearing** | | |
| U902 | 4 hr | • 4 in. (102 mm) nominal loadbearing concrete masonry unit laid with full mortar beds and with 9 gage joint reinforcement at 16 in. (406 mm) o.c. vertically<br>• min. 1 in. (25.4 mm) air space with up to 4 in. (102 mm) foamed plastic (rigid insulation) as option<br>• ¾ in. (19.1 mm) wide, 7 in. (178 mm) long, 26 gage corrugated metal ties spaced at 8 in. (203 mm) o.c. horizontally and 16 in. (406 mm) o.c. vertically or truss or ladder type joint reinforcement of 9 gage wire for full width of wall assembly, cross wires at 16 in. (406 mm) o.c., spaced at 16 in. (406 mm) o.c. vertically<br>• 4 in. (102 mm) nominal clay facing brick laid in mortar |

1. Unless noted otherwise, fire resistance rating applies to both sides of assembly.

## Other

In addition to assemblies listed above, there are several other assemblies previously tested with results published in past building codes or other publications. A selection of these appears in Table 4.

**TABLE 4**
**Fire Resistance Ratings for Other Brick Masonry Wall Assemblies[1]**

| Test | Rating[2] | Assembly |
|---|---|---|
| | | **Brick Veneer/Wood Stud** |
| 1 | 1 hr | • (1) layer ½ in. (12.7 mm) thick gypsum wallboard<br>• 2 × 4 in. (51 × 102 mm) wood studs spaced at 16 in. (406 mm) o.c. with 3½ in. (89 mm) glass fiber batt insulation between studs<br>• (1) layer ½ in. (12.7 mm) thick wood fiberboard sheathing<br>• (1) layer No. 15 asphalt felt paper<br>• 1 in. (25.4 mm) air space<br>• 3½ in. (89 mm) actual width hollow clay brick with void area of 34.5% (equivalent thickness of 2.3 in. (58 mm)), laid in mortar with ⅞ in. (22.2 mm) wide, 22 gage corrugated wall ties spaced at 24 in. (610 mm) o.c. horizontally and 16 in. (406 mm) o.c. vertically |
| 2 | 1 hr | • (1) layer ½ in. (12.7 mm) thick gypsum wallboard<br>• 2 × 4 in. (51 × 102 mm) wood studs spaced at 16 in. (406 mm) o.c. with 3½ in. (89 mm) glass fiber batt insulation between studs<br>• (1) layer ½ in. (12.7 mm) thick wood fiberboard sheathing<br>• (1) layer No. 15 asphalt felt paper<br>• 1 in. (25.4 mm) air space<br>• 2⅞ in. (73 mm) actual width hollow clay brick with void area of 36% (equivalent thickness of 1.8 in. (46 mm)), laid in mortar with ⅞ in. (22.2 mm) wide, 22 gage corrugated wall ties spaced at 24 in. (610 mm) o.c. horizontally and 16 in. (406 mm) o.c. vertically |
| 3 | 1 hr | • (1) layer ½ in. (12.7 mm) thick gypsum wallboard<br>• 2 × 4 in. (51 × 102 mm) wood studs spaced at 16 in. (406 mm) o.c. with 3½ in. (89 mm) glass fiber batt insulation between studs<br>• (1) layer ½ in. (12.7 mm) thick wood fiberboard sheathing<br>• (1) layer No. 15 asphalt felt paper<br>• 1 in. (25.4 mm) air space<br>• 1¾ in. (44 mm) actual width[3] hollow clay brick with void area of 26.9% (equivalent thickness of 1.3 in. (32 mm)), laid in mortar with ⅞ in. (22.2 mm) wide, 22 gage corrugated wall ties spaced at 24 in. (610 mm) o.c. horizontally and 16 in. (406 mm) o.c. vertically |

1. As tested by the Southwest Research Institute [Ref. 4].
2. Fire resistance rating applies to brick (exterior) side only. Test stopped at 1 hour.
3. Width not in compliance with 2006 IBC veneer requirements; however, complies with 2006 IRC [Ref. 2] veneer requirements.

# CALCULATED FIRE RESISTANCE

## Theory and Derivation

The extent of fire resistance provided by a clay masonry wall is a function of the wall's mass or thickness. This well-established fact is based on the results of many fire resistance tests conducted on walls of solid and hollow clay units. During the ASTM E119 fire test, the fire resistance period of clay masonry walls is usually established by the temperature rise on the unexposed side of the wall specimen. Few masonry walls have failed due to loading or thermal shock of the hose stream.

The method for calculating a fire resistance period is described in NBS BMS 92, *Fire-Resistance Classifications of Building Construction* [Ref. 6]. The construction must be similar to others for which the fire resistance periods are known or of composite construction for which the fire resistance period of each component is known. The calculated fire resistance formulas are based on the temperature rise on the unexposed side of the wall.

Heat transmission theory states that when a wall made of a given material is exposed to a heat source that maintains a constant temperature at the surface of the exposed side and the unexposed side is protected against heat loss, the unexposed side will attain a given temperature rise inversely proportional to the square of the wall's thickness.

In the standard fire test, the time required to attain a given temperature rise on the unexposed side will be different than when the temperature on the exposed side remains constant. This is because the fire in the standard fire test increases the temperature at the exposed surface of the wall as the test proceeds. Based on fire test data collected from many fire tests, the following formula has been derived to express the fire resistance period of a wall based on its thickness:

$$R = (cV)^n \quad \text{Eq. 1}$$

where:
R = fire resistance period, hr
c = coefficient depending on the material, design of the wall, and the units of measurement of R and V
V = volume of solid material per unit area of wall surface, and
n = exponent depending on the rate of increase of temperature at the exposed face of the wall

For walls of a given material and design, an increase of 50 percent in volume of solid material per unit area of wall surface results in a 100 percent increase in the fire resistance period. This relationship results in a value of 1.7 for n. The lower value for n compared with 2 for the theoretical condition should be anticipated since a rising temperature at the exposed surface will shorten the fire resistance period of a wall.

For a wall composed of layers of multiple materials, the fire resistance period may be expressed as follows:

$$R = (c_1V_1 + c_2V_2 + c_3V_3)^n$$
$$= (R_1^{1/n} + R_2^{1/n} + R_3^{1/n})^n$$

Substituting 1.7 for n and 0.59 for 1/n, the general formula for calculating a fire resistance period becomes:

$$R = (R_1^{0.59} + R_2^{0.59} + R_3^{0.59} \ldots + R_i^{0.59})^{1.7} \quad \text{Eq. 2}$$

where:
$R_1$, $R_2$, $R_3$, … $R_i$ = known fire resistance period of each component layer, hr

Where available, the fire resistance period (the full duration of the fire test before a termination point is reached) should be used. Where this period is not available (many brick wall tests are stopped after the desired rating time period elapses), the fire resistance rating (typically truncated to be the highest full hour of fire test duration) can be used. However, using the fire resistance rating for a component layer will generally result in a lower calculated fire resistance period for the overall assembly than using the fire resistance period for each component layer.

The calculated fire resistance, calculated using either the fire resistance period or fire resistance rating of each layer, can then be used to verify that the wall assembly equals or exceeds the fire resistance rating required by the building code. The theory proposed and derived in NBS BMS 92 has been incorporated into *Code Requirements for Determining Fire Resistance of Concrete and Masonry Assemblies* (ACI 216.1/TMS-0216) [Ref. 5].

## Calculations

The 2006 International Building Code (IBC) [Ref. 1] permits the fire resistance of masonry assemblies to be calculated in accordance with TMS-0216. In addition, the IBC also includes methods for calculating the fire resistance of a masonry assembly that are based on and very similar to those in TMS-0216. The methods discussed below are taken from TMS-0216 unless noted otherwise.

**Equivalent Thickness of a Single Wythe.** The average thickness of the solid material (i.e., minus cores or cells) in a masonry unit as placed in the wall is the equivalent thickness of the masonry unit. This is determined by measuring the total volume of the masonry unit, subtracting the volume of the core or cell spaces and dividing by the area of the exposed face of the masonry unit, which is expressed as follows:

$$T_e = V_n / LH \quad \text{Eq. 3}$$

where:
$T_e$ = equivalent thickness of the masonry unit, in.
$V_n$ = net volume of the masonry unit, $in.^3$
L = specified length of the masonry unit, in.
H = specified height of the masonry unit, in.

Equation 3 can be simplified as follows:

$$T_e = [WLH \times (1 - P_v)] / LH$$
$$= (1 - P_v) \times W \quad \text{Eq. 4}$$
$$= P_s \times W \quad \text{Eq. 5}$$

where:
W = specified width of the masonry unit, in.
$P_v$ = percent void of the masonry unit
$P_s$ = percent solid of the masonry unit

For ungrouted and partially grouted construction, the equivalent thickness should be determined according to Equation 3. The equivalent thickness should be taken as the actual thickness of the masonry unit for solid grouted construction or brickwork constructed of hollow brick units complying with ASTM C652 and filled with one of the following:

- Sand, pea gravel, crushed stone or slag complying with ASTM C33
- Pumice, scoria, expanded shale, clay, slate, slag or fly ash; or cinders complying with ASTM C331
- Perlite complying with ASTM C549
- Vermiculite complying with ASTM C516

**Fire Resistance of a Single Wythe.** The minimum equivalent thickness required to achieve a given fire resistance rating with a clay masonry wythe is listed in Table 5. The table is organized by material type and hourly fire resistance ratings. For fire resistance periods that are between the hourly increments listed in the table, the minimum equivalent thickness may be determined by linear interpolation. Where combustible members such as wood floor joists are framed into the wall, the thickness of solid material between the end of each member and the opposite face of the wall, or between members set in from opposite sides is allowed to be no less than 93 percent of the thickness shown in Table 5.

**TABLE 5**

**Fire Resistance Ratings of Clay Masonry Walls**

| Material Type | Minimum Equivalent Thickness for Fire Resistance, in. (mm)[1,2,3] | | | |
|---|---|---|---|---|
| | 1 hr | 2 hr | 3 hr | 4 hr |
| Solid brick of clay or shale[4] | 2.7 (69) | 3.8 (97) | 4.9 (124) | 6.0 (152) |
| Hollow brick or tile of clay or shale, unfilled | 2.3 (58) | 3.4 (86) | 4.3 (109) | 5.0 (127) |
| Hollow brick or tile of clay or shale, grouted or filled with materials specified | 3.0 (76) | 4.4 (112) | 5.5 (140) | 6.6 (168) |

1. Equivalent thickness as determined from Equations 3, 4 or 5.
2. Calculated fire resistance between the hourly increments listed shall be determined by linear interpolation.
3. Where combustible members are framed into the wall, the thickness of solid material between the end of each member and the opposite face of the wall, or between members set in from opposite sides, shall not be less than 93% percent of the thickness shown.
4. Units in which the net cross-sectional area of cored or deep frogged brick in any plane parallel to the surface containing the cores or deep frogs is at least 75 percent of the gross cross-sectional area measured in the same plane.

**Multiple Wythe Walls.** For walls with multiple wythes of brick, concrete masonry or concrete, the calculated fire resistance formula is:

$$R = (R_1^{0.59} + R_2^{0.59} + \dots R_n^{0.59} + A_1 + A_2 + \dots A_n)^{1.7} \quad \text{Eq. 6}$$

where:

$R$ = calculated fire resistance period of the assembly, hr

$R_1, R_2 \dots R_n$ = fire resistance periods of the individual wythes, hr

$A_1, A_2 \dots A_n$ = 0.30; the air factor for each continuous air space having a distance of ½ to 3½ in. (12.7 to 89 mm) between wythes

The fire resistance period used in Equation 6 for each individual wythe or layer is determined from Table 5 for a wythe made of clay units, from Table 6 for a wythe made of concrete masonry units and from Table 7 and Figure 2 for a concrete layer.

**TABLE 6**

**Fire Resistance Periods of Concrete Masonry Walls**

| Aggregate Type | Minimum Equivalent Thickness for Fire Resistance Rating in. (mm)[1,2] | | | | | | |
|---|---|---|---|---|---|---|---|
| | ½ hr | ¾ hr | 1 hr | 1½ hr | 2 hr | 3 hr | 4 hr |
| Calcareous or siliceous gravel (other than limestone) | 2.0 (51) | 2.4 (61) | 2.8 (71) | 3.6 (91) | 4.2 (107) | 5.3 (135) | 6.2 (157) |
| Limestone, cinders, or air-cooled slag | 1.9 (48) | 2.3 (58) | 2.7 (69) | 3.4 (86) | 4.0 (102) | 5.0 (127) | 5.9 (150) |
| Expanded clay, expanded shale or expanded slate | 1.8 (46) | 2.2 (56) | 2.6 (66) | 3.3 (84) | 3.6 (91) | 4.4 (112) | 5.1 (130) |
| Expanded slag or pumice | 1.5 (38) | 1.9 (48) | 2.1 (53) | 2.7 (69) | 3.2 (81) | 4.0 (102) | 4.7 (119) |

1. Fire resistance periods between the hourly fire resistance rating listed shall be determined by linear interpolation based on the equivalent thickness value of the concrete masonry assembly.
2. Minimum required equivalent thickness corresponding to the fire resistance rating for units made with a combination of aggregates shall be determined by linear interpolation based on the percent by dry-rodded volume of each aggregate used in manufacturing the units.

## TABLE 7
**Fire Resistance Periods of Normal-Weight Concrete Panels**

| Aggregate Type | Minimum Equivalent Thickness for Fire Resistance Rating, in. (mm) | | | | |
|---|---|---|---|---|---|
| | 1 hr | 1½ hr | 2 hr | 3 hr | 4 hr |
| Siliceous | 3.5 (89) | 4.3 (109) | 5.0 (127) | 6.2 (157) | 7.0 (178) |
| Carbonate | 3.2 (81) | 4.0 (102) | 4.6 (117) | 5.7 (145) | 6.6 (168) |
| Semi-lightweight | 2.7 (69) | 3.3 (84) | 3.8 (97) | 4.6 (117) | 5.4 137) |
| Lightweight | 2.5 (64) | 3.1 (79) | 3.6 (91) | 4.4 (112) | 5.1 (130) |

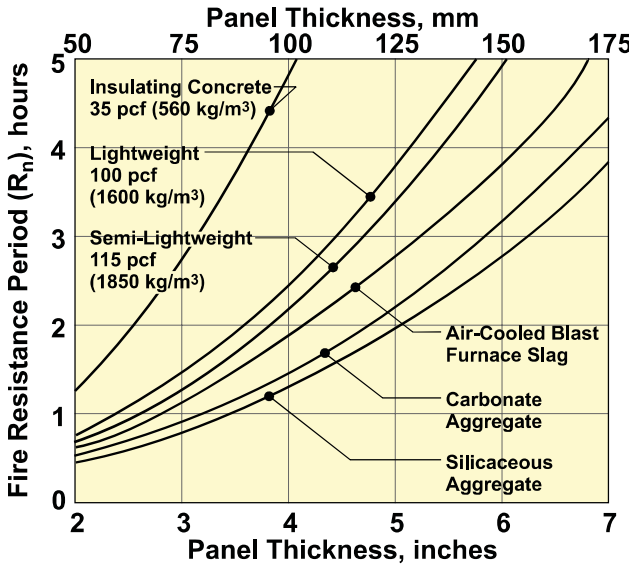



**Figure 2**
**Fire Resistance Periods for Other Concrete Panels**

**Finish Materials.** When drywall, stucco or plaster finishes are applied to a masonry wall, the fire resistance of the wall is increased. Where finish materials are used to attain a required fire resistance rating, the fire resistance provided by the masonry alone must be a minimum of half the required fire resistance rating to ensure the structural integrity of the wall.

For finishes applied to the non-fire exposed side of a wall, the finish is converted to an equivalent thickness of brickwork. This adjusted thickness is then calculated by multiplying the thickness of the finish by the applicable factor from Table 8 established by the durability of the finish and the wall material. The adjusted finish thickness is then added to the base equivalent thickness of the wall used in Table 5.

## TABLE 8
**Multiplying Factor for Finishes on Non-Fire Exposed Side of Masonry and Concrete Walls**

| Type of Material Used in Slab or Wall | Type of Finish Applied to Slab or Wall | | | |
|---|---|---|---|---|
| | Portland Cement-Sand Plaster[1] or Terrazzo | Gypsum-Sand Plaster | Gypsum-Vermiculite or Perlite Plaster | Gypsum Wallboard |
| Clay masonry – solid brick of clay or shale | 1.00 | 1.25 | 1.75 | 3.00 |
| Clay masonry – hollow brick or tile of clay or shale | 0.75 | 1.00 | 1.50 | 2.25 |
| Concrete masonry – siliceous, calcareous, lime-stone, cinders, sir-cooled blast-furnace slag | 1.00 | 1.25 | 1.75 | 3.00 |
| Concrete masonry – made with 80% of more by volume of expanded shale, slate or clay, expanded slag, or pumice | 0.75 | 1.00 | 1.25 | 2.25 |
| Concrete – siliceous, carbonate, air-cooled blast-furnace slag | 1.00 | 1.25 | 1.75 | 3.00 |
| Concrete – semi-lightweight | 0.75 | 1.00 | 1.50 | 2.25 |
| Concrete – lightweight, insulating concrete | 0.75 | 1.00 | 1.25 | 2.25 |

1. For portland cement-sand plaster ⅝ in. (15.9 mm) or less in thickness and applied directly to clay masonry on the non-fire exposed side of the wall, the multiplying factor shall be 1.0.

For finishes on the fire exposed side of the wall, a time is assigned to the finish according to Table 9, which is the length of time the finish will contribute toward the fire resistance rating of the fire exposed side of the wall. This time is added to the fire resistance rating determined for the base wall and non-fire exposed finish.

**TABLE 9**
**Time Assigned to Finish Materials on Fire Exposed Side of Wall**

| Finish | Thickness | Time (minutes) |
|---|---|---|
| Gypsum wallboard | ⅜ in. (9.5 mm) | 10 |
| | ½ in. (12.7 mm) | 15 |
| | ⅝ in. (15.9 mm) | 20 |
| | Two layers of ⅜ in. (9.5 mm) | 25 |
| | One layer of ⅜ in. (9.5 mm) and one layer of ½ in. (12.7 mm) | 35 |
| | Two layers of ½ in. (12.7 mm) | 40 |
| Type X gypsum wallboard | ½ in. (12.7 mm) | 25 |
| | ⅝ in. (15.9 mm) | 40 |
| Direct-applied portland cement-sand plaster | See Note 1 | |
| Portland cement-sand plaster on metal lath | ¾ in. (19.1 mm) | 20 |
| | ⅞ in. (22.2 mm) | 25 |
| | 1 in. (25.4 mm) | 30 |
| Gypsum-sand plaster on ⅜ in. (9.5 mm) gypsum lath | ½ in. (12.7 mm) | 35 |
| | ⅝ in. (15.9 mm) | 40 |
| | ¾ in. (19.1 mm) | 50 |
| Gypsum-sand plaster on metal lath | ¾ in. (19.1 mm) | 50 |
| | ⅞ in. (22.2 mm) | 60 |
| | 1 in. (25.4 mm) | 80 |

1. For purposes of determining the contribution of portland cement-sand plaster to the equivalent thickness of concrete or masonry for use in Tables 5, 6 or 7, it shall be permitted to use the actual thickness of the plaster or ⅝ in. (15.9 mm), whichever is smaller.

# Examples

**Example 1, Cavity Wall with Air Space.** A multi-wythe cavity wall consists of a wythe of 4 in. (102 mm) nominal solid brick units complying with ASTM C216 and cored at 25 percent, a 2 in. (51 mm) air space and a wythe of 8 in. (203 mm) nominal concrete masonry unit made of calcareous gravel. The concrete masonry unit has actual dimensions of 7⅝ × 7⅝ × 15⅞ inches (194 × 194 × 397 mm) and is 53 percent solid. The fire resistance rating is determined by Equation 6 as follows:

a. From Equation 4, the equivalent thickness of the solid brick is:
$T_e = (1 - 0.25) \times 3.625$ in. (92 mm) = 2.71 in. (69 mm)

b. From Table 5, the fire resistance period for the clay unit is:
$R_1 = 1.0$ hr

c. For a 2 in. (51 mm) air space:
$A = 0.30$

d. From Equation 5, the equivalent thickness of the concrete masonry unit is:
$T_e = 0.53 \times 7.625$ in. (194 mm) = 4.0 in. (102 mm)

e. Interpolating from Table 7, the fire resistance period of the concrete masonry is:
$R_2 = 1.5$ hr + 0.5 hr $[(4.0 - 3.6) / (4.2 - 3.6)]$ = 1.5 hr + 0.5 hr (0.67) = 1.8 hr

f. From Equation 6, the fire resistance rating of the entire wall assembly is:
$R = [(1.0)^{0.59} + (1.8)^{0.59} + 0.3]^{1.7} = 5.5$ hr → Fire Resistance Rating = 4 hr

**Example 2, Composite Wall.** A multi-wythe composite wall consists of 4 in. (102 mm) nominal hollow brick complying with ASTM C652 with a mortared collar joint and 4 in. (102 mm) siliceous aggregate concrete wall. The gross volume of the hollow brick includes 36 percent void. The fire resistance rating is determined as follows:

a. From Equation 4, the equivalent thickness of the hollow brick is:
$T_e = (1 - 0.36) \times 3.625$ in. (92 mm) = 2.3 in. (58 mm)

b. From Table 5, the fire resistance period for the hollow brick is:
$R_1 = 1.0$ hr

c. From Figure 2, the fire resistance period for the concrete wall with siliceous aggregate is:
$R_2 = 1.3$ hr

d. Using Equation 6, the fire resistance rating of the wall assembly is:
$R = [(1.0)^{0.59} + (1.3)^{0.59}]^{1.7} = 3.7$ hr → Fire Resistance Rating = 3 hr

**Example 3, Composite Wall with Gypsum Wallboard.** Determine the fire resistance rating for the composite wall of Example 2 when ½ in. (12.7 mm) thick gypsum wallboard is applied to the interior side of the wall. The fire resistance rating will apply to only the exterior side of the wall.

a. Using Table 8, the multiplying factor for a siliceous concrete wall and gypsum wallboard is 3.00. The equivalent thickness of concrete for the gypsum wallboard on the unexposed side is:
$T_e$ (finish) = 3.00 × 0.5 (12.7 mm) in. = 1.5 in. (38 mm)

b. The equivalent thickness of concrete for the gypsum wallboard finish and concrete is:
$T_e$ (finish) + $T_e$ (concrete) = 1.5 in. (38 mm) + 4 in. (102 mm) = 5.5 in. (140 mm)

c. From Figure 2, the fire resistance period for a 5.5 in. (140 mm) thick concrete wall of siliceous aggregate is:
$R_2 = 2.4$ hr

d. Using Equation 6, the fire resistance rating of the wall assembly is:
$R = [(1.00)^{0.59} + (2.4)^{0.59}]^{1.7} = 5.3$ hr → Fire Resistance Rating = 4 hr

**Example 4, Composite Wall with Gypsum Wallboard.** Determine the fire resistance rating for the composite wall of Example 3 when the fire resistance rating will apply to both sides of the wall. Since the fire resistance rating will be applied to both sides, a calculation for fire exposure on each side of the wall must be performed.

*Gypsum Board Side (Interior) Exposed to Fire*

a. Using Table 9, the contribution of the ½ in. (12.7 mm) thick gypsum wallboard to the fire resistance is:
$R_f = 15$ min / 60 min/hr = 0.25 hr

b. Using the fire resistance period determined in Example 2, the fire resistance period for the interior side of the wall assembly is:
R (interior) = 3.7 hr + 0.25 hr = 3.9 hr

*Brick Side (Exterior) Exposed to Fire*

c. The fire resistance period determined in Example 3 for exposing the exterior side of the wall assembly to fire is:
R (exterior) = 5.3 hr

*Wall Assembly*

d. The fire resistance rating for the wall assembly is the lower of the fire resistance periods calculated from the interior and the exterior:
3.9 hr < 5.3 hr → Fire Resistance Rating = 3 hr

# DESIGN AND DETAILING

## Support of Brick Masonry Rated for Fire Resistance

Walls with a fire resistance rating should be supported by assemblies with a similar or better fire resistance rating. This prevents collapse of a rated assembly by an unrated support that burns through long before the required fire resistance period. Thus for a second-story wall with a 2-hour fire resistance rating, the floor-ceiling assembly providing support for the wall must also have a 2-hour fire resistance rating.

Where steel columns provide the support, clay masonry can be used as fireproofing of those columns. Table 10, taken from TMS 0216, gives the equivalent thickness required to provide various levels of column protection, based on the steel shape used for the column.

**TABLE 10**

**Fire Resistance of Clay-Masonry-Protected Steel Columns[1]**

| W Shapes | | | | | |
|---|---|---|---|---|---|
| Column Size | Clay Masonry Density, lb/ft³ (kg/m³) | Minimum equivalent thickness for fire-resistance rating of clay masonry protection assembly, in. (mm) | | | |
| | | 1 hour | 2 hours | 3 hours | 4 hours |
| W14 × 82 | 120 (1926) | 1.23 (31) | 2.42 (61) | 3.41 (87) | 4.29 (109) |
| | 130 (2087) | 1.40 (36) | 2.70 (69) | 3.78 (96) | 4.74 (120) |
| W14 × 68 | 120 (1926) | 1.34 (34) | 2.54 (65) | 3.54 (90) | 4.43 (113) |
| | 130 (2087) | 1.51 (38) | 2.82 (72) | 3.91 (99) | 4.87 (124) |
| W14 × 53 | 120 (1926) | 1.43 (36) | 2.65 (67) | 3.65 (93) | 4.54 (115) |
| | 130 (2087) | 1.61 (41) | 2.93 (74) | 4.02 (102) | 4.98 (126) |
| W14 × 43 | 120 (1926) | 1.54 (39) | 2.76 (70) | 3.77 (96) | 4.66 (118) |
| | 130 (2087) | 1.72 (44) | 3.04 (77) | 4.13 (105) | 5.09 (129) |
| W12 × 72 | 120 (1926) | 1.32 (34) | 2.52 (64) | 3.51 (89) | 4.40 (112) |
| | 130 (2087) | 1.50 (38) | 2.80 (71) | 3.88 (99) | 4.84 (123) |
| W12 × 58 | 120 (1926) | 1.40 (36) | 2.61 (66) | 3.61 (92) | 4.50 (114) |
| | 130 (2087) | 1.57 (40) | 2.89 (73) | 3.98 (101) | 4.94 (125) |
| W12 × 50 | 120 (1926) | 1.43 (36) | 2.65 (67) | 3.66 (93) | 4.55 (116) |
| | 130 (2087) | 1.61 (41) | 2.93 (74) | 4.02 (102) | 4.99 (127) |
| W12 × 40 | 120 (1926) | 1.54 (39) | 2.77 (70) | 3.78 (96) | 4.67 (119) |
| | 130 (2087) | 1.72 (44) | 3.05 (77) | 4.14 (105) | 5.10 (130) |
| W10 × 68 | 120 (1926) | 1.27 (32) | 2.46 (62) | 3.46 (88) | 4.35 (110) |
| | 130 (2087) | 1.44 (37) | 2.75 (70) | 3.83 (97) | 4.80 (122) |
| W10 × 54 | 120 (1926) | 1.40 (36) | 2.61 (66) | 3.62 (92) | 4.51 (115) |
| | 130 (2087) | 1.58 (40) | 2.89 (73) | 3.98 (101) | 4.95 (126) |
| W10 × 45 | 120 (1926) | 1.44 (37) | 2.66 (68) | 3.67 (93) | 4.57 (116) |
| | 130 (2087) | 1.62 (41) | 2.95 (75) | 4.04 (103) | 5.01 (127) |
| W10 × 33 | 120 (1926) | 1.59 (40) | 2.82 (72) | 3.84 (98) | 4.73 (120) |
| | 130 (2087) | 1.77 (45) | 3.10 (79) | 4.20 (107) | 5.13 (130) |
| W8 × 40 | 120 (1926) | 1.47 (37) | 2.70 (69) | 3.71 (94) | 4.61 (117) |
| | 130 (2087) | 1.65 (42) | 2.98 (76) | 4.08 (104) | 5.04 (128) |
| W8 × 31 | 120 (1926) | 1.59 (40) | 2.82 (72) | 3.84 (98) | 4.73 (120) |
| | 130 (2087) | 1.77 (45) | 3.10 (79) | 4.20 (107) | 5.17 (131) |
| W8 × 24 | 120 (1926) | 1.66 (42) | 2.90 (74) | 3.92 (100) | 4.82 (122) |
| | 130 (2087) | 1.84 (47) | 3.18 (81) | 4.82 (122) | 5.25 (133) |
| W8 × 18 | 120 (1926) | 1.75 (44) | 3.00 (76) | 4.01 (102) | 4.91 (125) |
| | 130 (2087) | 1.93 (49) | 3.27 (83) | 4.37 (111) | 5.34 (136) |

1. Tabulated values assume a 1 in. (25.4 mm) air gap between masonry and steel section.

## TABLE 10 (continued)
## Fire Resistance of Clay-Masonry-Protected Steel Columns[1]

| Square structural tubing | | | | | |
|---|---|---|---|---|---|
| Nominal tube size, in. (mm) | Clay masonry density, lb/ft³ (kg/m³) | Minimum equivalent thickness for fire-resistance rating of clay masonry protection assembly, in. (mm) | | | |
| | | 1 hour | 2 hours | 3 hours | 4 hours |
| 4 × 4 × ½ (102 × 102 × 12.7) | 120 (1926) | 1.44 (37) | 2.72 (69) | 3.76 (96) | 4.68 (119) |
| | 130 (2087) | 1.62 (41) | 3.00 (76) | 4.12 (105) | 5.11 (130) |
| 4 × 4 × ⅜ (102 × 102 × 9.5) | 120 (1926) | 1.56 (40) | 2.84 (72) | 3.88 (99) | 4.78 (121) |
| | 130 (2087) | 1.74 (44) | 3.12 (79) | 4.23 (107) | 5.21 (132) |
| 4 × 4 × ¼ (102 × 102 × 6.4) | 120 (1926) | 1.72 (44) | 2.99 (76) | 4.02 (102) | 4.92 (125) |
| | 130 (2087) | 1.89 (48) | 3.26 (83) | 4.37 (111) | 5.34 (136) |
| 6 × 6 × ½ (152 × 152 × 12.7) | 120 (1926) | 1.33 (34) | 2.58 (66) | 3.62 (92) | 4.52 (115) |
| | 130 (2087) | 1.50 (38) | 2.86 (73) | 3.98 (101) | 4.96 (126) |
| 6 × 6 × ⅜ (152 × 152 × 9.5) | 120 (1926) | 1.48 (38) | 2.74 (70) | 3.76 (96) | 4.67 (119) |
| | 130 (2087) | 1.65 (42) | 3.01 (76) | 4.13 (105) | 5.10 (130) |
| 6 × 6 × ¼ (152 × 152 × 6.4) | 120 (1926) | 1.66 (42) | 2.91 (74) | 3.94 (100) | 4.84 (123) |
| | 130 (2087) | 1.83 (46) | 3.19 (81) | 4.30 (109) | 5.27 (134) |
| 8 × 8 × ½ (203 × 203 × 12.7) | 120 (1926) | 1.27 (32) | 2.50 (64) | 3.52 (89) | 4.42 (112) |
| | 130 (2087) | 1.44 (37) | 2.78 (71) | 3.89 (99) | 4.86 (123) |
| 8 × 8 × ⅜ (203 × 203 × 9.5) | 120 (1926) | 1.43 (36) | 2.67 (68) | 3.69 (94) | 4.59 (117) |
| | 130 (2087) | 1.60 (41) | 2.95 (75) | 4.05 (103) | 5.02 (128) |
| 8 × 8 × ¼ (203 × 203 × 6.4) | 120 (1926) | 1.62 (41) | 2.87 (73) | 3.89 (99) | 4.78 (121) |
| | 130 (2087) | 1.79 (45) | 3.14 (80) | 4.24 (108) | 5.21 (132) |
| **Steel pipe** | | | | | |
| Column size, diameter × thickness, in. (mm) | Clay masonry density, lb/ft³ (kg/m³) | Minimum equivalent thickness for fire-resistance rating of clay masonry protection assembly, in. (mm) | | | |
| | | 1 hour | 2 hours | 3 hours | 4 hours |
| 4 × 0.674 (102 × 17.1) | 120 (1926) | 1.26 (32) | 2.55 (65) | 3.60 (91) | 4.52 (115) |
| | 130 (2087) | 1.42 (36) | 2.82 (72) | 3.96 (101) | 4.95 (126) |
| 4 × 0.337 (102 × 8.6) | 120 (1926) | 1.60 (41) | 2.89 (73) | 3.92 (100) | 4.83 (123) |
| | 130 (2087) | 1.77 (45) | 3.16 (80) | 4.28 (109) | 5.25 (133) |
| 4 × 0.237 (102 × 6.0) | 120 (1926) | 1.74 (44) | 3.02 (77) | 4.05 (103) | 4.95 (126) |
| | 130 (2087) | 1.92 (49) | 3.29 (84) | 4.40 (112) | 5.37 (136) |
| 5 × 0.750 (127 × 19.1) | 120 (1926) | 1.17 (30) | 2.44 (62) | 3.48 (88) | 4.40 (112) |
| | 130 (2087) | 1.33 (34) | 2.72 (69) | 3.84 (98) | 4.83 (123) |
| 5 × 0.375 (127 × 9.5) | 120 (1926) | 1.55 (39) | 2.82 (72) | 3.85 (98) | 4.76 (121) |
| | 130 (2087) | 1.72 (44) | 3.09 (78) | 4.21 (107) | 5.18 (132) |
| 5 × 0.258 (127 × 6.6) | 120 (1926) | 1.71 (43) | 2.97 (75) | 4.00 (102) | 4.90 (124) |
| | 130 (2087) | 1.88 (48) | 3.24 (82) | 4.35 (110) | 5.32 (135) |
| 6 × 0.864 (152 × 21.9) | 120 (1926) | 1.04 (26) | 2.28 (58) | 3.32 (84) | 4.23 (107) |
| | 130 (2087) | 1.19 (30) | 2.60 (66) | 3.68 (93) | 4.67 (119) |
| 6 × 0.432 (152 × 11.0) | 120 (1926) | 1.45 (37) | 2.71 (69) | 3.75 (95) | 4.67 (119) |
| | 130 (2087) | 1.62 (41) | 2.99 (76) | 4.10 (104) | 5.08 (129) |
| 6 × 0.280 (152 × 7.1) | 120 (1926) | 1.65 (42) | 2.91 (74) | 3.94 (100) | 4.84 (123) |
| | 130 (2087) | 1.82 (46) | 3.19 (81) | 4.30 (109) | 5.27 (134) |

1. Tabulated values assume a 1 in. (25.4 mm) air gap between masonry and steel section.

## Penetrations

All penetrations through an assembly with a fire resistance rating must conform to building code requirements for those penetrations. Codes typically require doors and windows to have a fire resistance rating, though depending on application, the fire resistance ratings of the doors and windows may be less than that of the surrounding wall construction. For mechanical ducts, fire dampers are typically required. For smaller penetrations, such as for drainage pipes and conduits, the space around the pipes is typically required to be filled with a fire resistant material and sealed to the surrounding masonry with a sealant rated for a specific fire resistance. In all cases, products used to seal penetrations should be carefully researched, selected and installed to ensure that the fire resistance rating of a wall is not compromised.

## Other Details

In fire resistant construction, the intent is to provide fire resistance that surrounds a three-dimensional, occupied space. Where a wall with a fire resistance rating meets an interior wall or floor/ceiling assembly, the integrity of the wall's fire resistance rating should be maintained. In closely spaced buildings, a brick veneer wall assembly with a 1-hour fire resistance rating on the exterior side is typically unaffected by the intersection of interior partition walls. However, in a brick veneer wall assembly with a 2-hour fire resistance rating, the interior wallboard is a required component and may have to be installed prior to framing the interior partitions. Each project and circumstance may require specific details to maintain the fire resistance rating of the masonry assemblies described above.

## SUMMARY

Brick masonry has traditionally been used to provide superior fire resistance and safety for occupants. The fire resistance rating required by the building code for a wall will depend on many factors including the type of construction, the use of building, and the location of the wall within the building. Brick wall assemblies of varying styles have been tested to provide designers with standard wall sections and details that comply with the various fire resistance ratings. Alternatively, for non-standard assemblies, calculation methods presented herein can provide the fire resistance rating of the proposed wall sections based on the results of previously tested assemblies.

> *The information and suggestions contained in this* Technical Note *are based on the available data and the experience of the engineering staff and members of the Brick Industry Association. The information contained herein must be used in conjunction with good technical judgment and a basic understanding of the properties of brick masonry. Final decisions on the use of the information discussed in this* Technical Note *are not within the purview of the Brick Industry Association and must rest with the project architect, engineer and owner.*

## REFERENCES

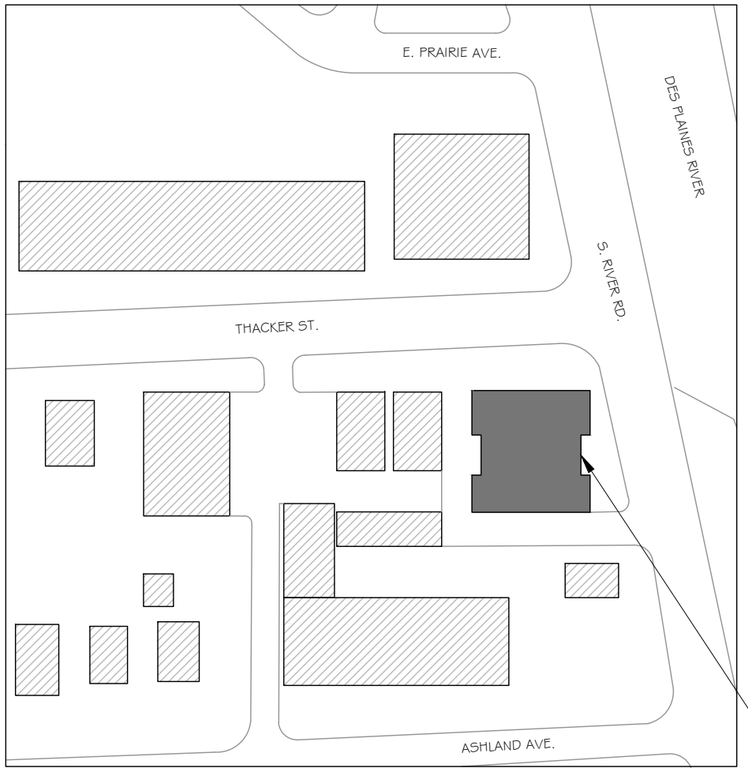

1. 2006 *International Building Code*, International Code Council, Inc., Country Club Hills, IL, 2006.
2. 2006 *International Residential Code*, International Code Council, Inc. Country Club Hills, IL, 2006.
3. ASTM E119-07, Standard Test Methods for Fire Tests of Building Construction and Materials, *Annual Book of Standards*, Vol. 04.07, ASTM International, West Conshohocken, PA, 2007.
4. Borchelt, J.G., and Swink, J.E., "Fire Resistance Tests of Brick Veneer/Wood Frame Walls," Proceedings of the 14th International Brick and Block Masonry Conference, University of Newcastle, Callaghan, Australia, 2008.
5. *Code Requirements for Determining Fire Resistance of Concrete and Masonry Construction Assemblies*, (ACI 216.1-07 / TMS-0216-07), The Masonry Society, Boulder, CO, 2007.
6. *Fire-Resistance Classifications of Building Constructions*, BMS92, National Bureau of Standards, Washington, D.C., 1942.
7. *UL Fire Resistance Directory*, Underwriters Laboratories, Northbrook, IL, 2007.

CITY OF DES PLAINES
BUILDING DEPARTMENT
☐ APPROVED
☐ APPROVED AS NOTED
☑ NOT APPROVED REVISIONS REQUIRED
Date 11/19/2024 BY: pmatyja

# SUPPORT COLUMN REPAIR PROJECT

## 900 S. RIVER ROAD, DES PLAINES, ILLINOIS 60016

## ⚠6 ADDENDUM 6




1 SITE PLAN
SCALE: NTS

COLUMN REPAIRS
AT 900 S. RIVER RD., DES PLAINES, IL
5-STORY BRICK APARTMENT BUILDING

| LIST OF DRAWINGS | | | |
|---|---|---|---|
| DWG # | DESCRIPTION | REV. # | REV. DATE |
| 1 | TITLE SHEET | | |
| 2 | DAMAGE LOCATION PLAN | 5 | 5.28.2024 |
| 3 | DAMAGE CLASSIFICATIONS | | |
| 4 | COLUMN REPAIR SECTIONS | 4 | 4.3.2024 |
| 5 | COLUMN REPAIR SECTIONS | 6 | 9.16.2024 |
| 6 | GENERAL NOTES | 3 | 2.19.2024 |
| 7 | ALTERNATE ITEM FOR BID | 6 | 9.16.2024 |
| 8 | SPECIAL INSPECTION NOTES | 5 | 5.28.2024 |
| 9 | CLAM SHELL REPAIR | 5 | 5.28.2024 |
| 10 | OVER SHELL REPAIR | 5 | 5.28.2024 |
| 11 | FIBER CEMENT COLUMN | 6 | 9.16.2024 |

## ADOPTED BUILDING CODES

ALL WORK IS TO BE PERFORMED IN STRICT ACCORDANCE WITH THE FOLLOWING:
1. INTERNATIONAL BUILDING CODE, 2015 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
2. INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
3. INTERNATIONAL ENERGY CONSERVATION CODE, CURRENT EDITION AND THE CITY OF DES PLAINES AMENDMENTS
4. NATIONAL ELECTRICAL CODE, 2014 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
5. INTERNATIONAL FIRE CODE, 2015 EDITION AND THE THE CITY OF DES PLAINES AMENDMENTS
6. ILLINOIS STATE PLUMBING CODE, LATEST EDITION AND THE THE CITY OF DES PLAINES AMENDMENTS
7. INTERNATIONAL MECHANICAL CODE, 2015 EDITION AND THE CITY OF DES PLAINES AMENDMENTS
8. INTERNATIONAL PROPERTY MAINTENANCE CODE, 2015 EDITION AND THE THE CITY OF DES PLAINES AMENDMENTS

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- ALL WORK TO BE PERFORMED IN WORKMAN LIKE MANNER MEETING ALL APPLICABLE INDUSTRY STANDARDS

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11/30/2024
Expires

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| REVISIONS | | |
|---|---|---|
| ⚠1 | ADDENDUM 1 | 10-4-23 |
| ⚠2 | ADDENDUM 2 | 2-1-24 |
| ⚠3 | REVISED PER JURISDICTION | 2-19-24 |
| ⚠4 | SPECIAL INSPECTION DATA | 4-3-24 |
| ⚠5 | WELDED STEEL REPAIR | 5-28-24 |
| ⚠6 | FIBER CEMENT COLUMN | 9-16-24 |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT
TITLE SHEET
900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

PROJECT #: 23C-206.1
DRAWN BY: BMB
REVIEWED BY: CSH/MAW
DATE: 09-8-2023
SHEET NO: 1

5

COLUMN DAMAGE SPREAD SHEET

| | COLUMN # | SHELL IN SLAB | CONDITION OF COLUMN | NOTES | COLUMN SIZE* (V.I.F.) | PHASE | Original plan | REPAIR TYPE |
|---|---|---|---|---|---|---|---|---|
| NORTH SIDE GARAGE | 1N | YES | MARGINAL | | 5X5X3/8" | 1 | FULL | CLEAN AND PAINT |
| | 2N | YES | POOR | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 3N | YES | MARGINAL | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 4N | YES | MARGINAL | | 5X5X3/8" | 1 | FULL | CLAMSHELL |
| | 5N | YES | POOR | | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 6N | YES | MARGINAL | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 7N | YES | MARGINAL | | 5X5X3/8" | 1 | FULL | CLAMSHELL |
| | 8N | YES | POOR | | 5X5X3/8" | 1 | FULL | CLAMSHELL |
| | 9N | YES | MARGINAL | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 | FULL | CLAMSHELL |
| | 10N | YES | MODERATE | INVESTIGATIVE OPENING** | 5X5X3/8" | 2 | FULL | ANGLE WELDS |
| | | | | | | | | |
| WEST SIDE GARAGE | 1W | YES | MARGINAL | | 5X5X3/8" | 1 | FULL | 2 ANGLE WELDS |
| | 2W | YES | POOR | | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 3W | YES | POOR | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 | FULL | CLAMSHELL |
| | 4W | YES | MARGINAL | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 5W | YES | MARGINAL | | 5X5X3/8" | 1 | FULL | SINGLE ANGLE |
| | | | | | | | | |
| SOUTH SIDE GARAGE | 1S | YES | POOR | | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 2S | YES | POOR | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 3S | YES | MARGINAL | | 5X5X3/8" | 1 | FULL | CLEAN AND PAINT |
| | 4S | YES | SATISFACTORY | INVESTIGATIVE OPENING** | 5X5X3/8" | 2 | INVESTIGATE | NO REPAIR |
| | 5S | YES | SATISFACTORY | INVESTIGATIVE OPENING** | 5X5X3/8" | 2 | INVESTIGAE | NO REPAIR |
| | 6S | YES | POOR | | 5X5X3/8" | 1 | FULL | CLEAN AND PAINT |
| | 7S | YES | POOR | INVASIVE OPENING - INSPECTION | 5X5X3/8" | 1 | FULL | ANGLE WELDS |
| | 8S | YES | POOR | | 5X5X3/8" | 1 | FULL | PLATE WELD |
| | 9S | YES | POOR | ADJACENT DOWNSPOUT | 5X5X3/8" | 1 | FULL | CLAMSHELL |
| | 10S | YES | POOR | | 5X5X3/8" | 1 | FULL | ANGLE WELDS |

*THICKNESS TO BE FIELD VERIFIED
** BASE BID COST

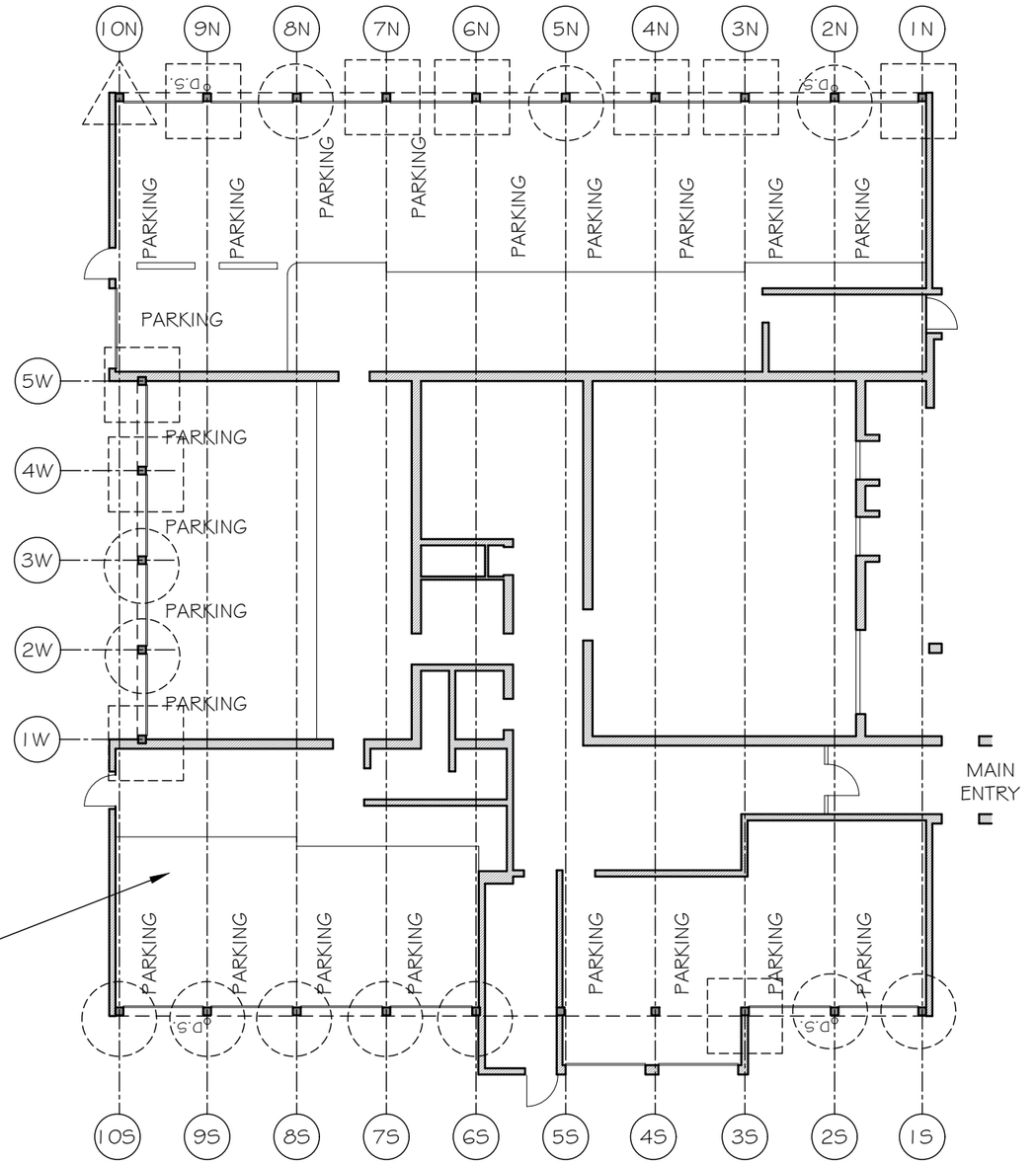
3 GROUND FLOOR GARAGE AREA WITH NO OVERHEAD FIRE SPRINKLER SYSTEM

KEY:

POOR - EXCESSIVE CORROSION

MARGINAL - NOTED CORROSION

MODERATE - SURFACE CORROSION ONLY




2 DAMAGE LOCATION PLAN
SCALE: 1/16" = 1'-0"

GENERAL NOTES:

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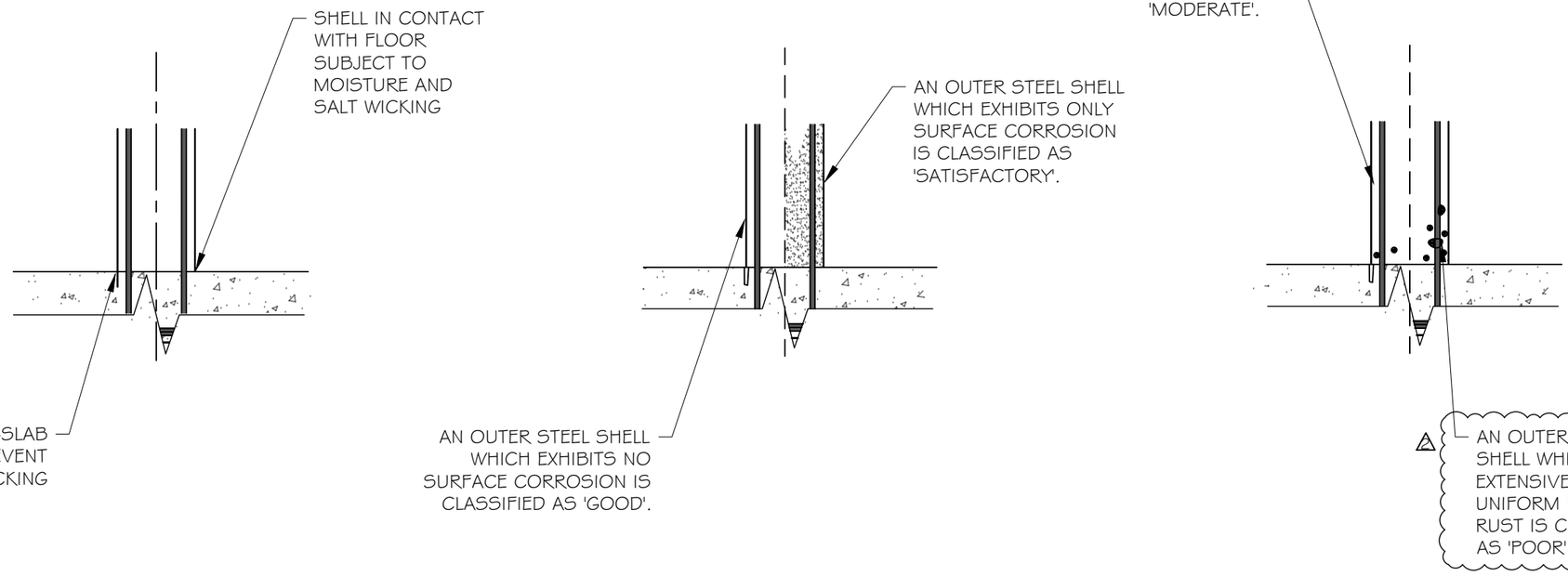
| 1 | ADDENDUM 1 | 10-4-23 |
| 2 | ADDENDUM 2 | 2-1-24 |
| 3 | REVISED PER JURISDICTION | 2-19-24 |
| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
| 5 | WELDED STEEL REPAIR | 5-28-24 |
| 6 | FIBER CEMENT COLUMN | 9-16-24 |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

DAMAGE LOCATION PLAN

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 2 |




3 DAMAGE CLASSIFICATIONS (SCHEMATIC)
SCALE: NTS

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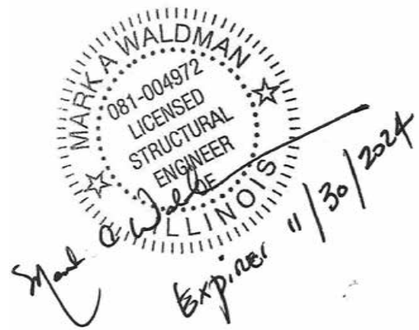


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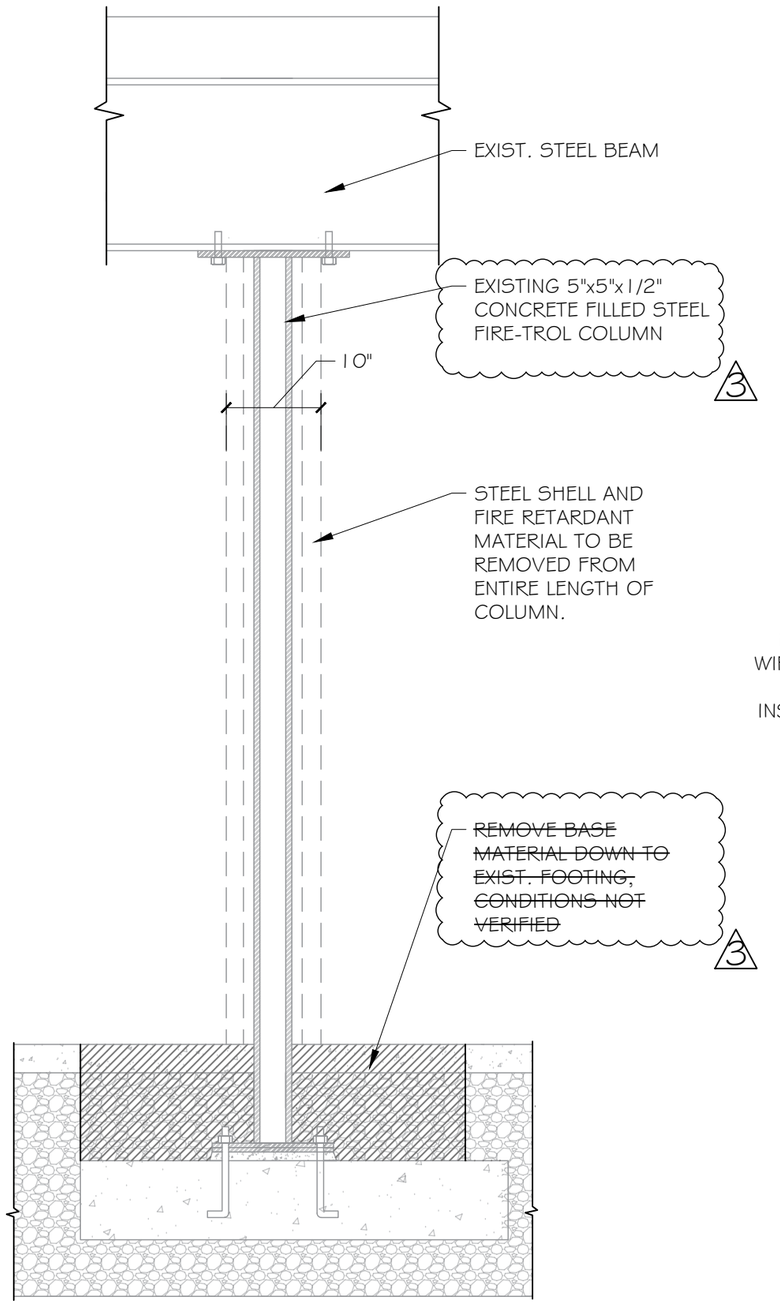
| 6 | FIBER CEMENT COLUMN | 9-16-24 |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

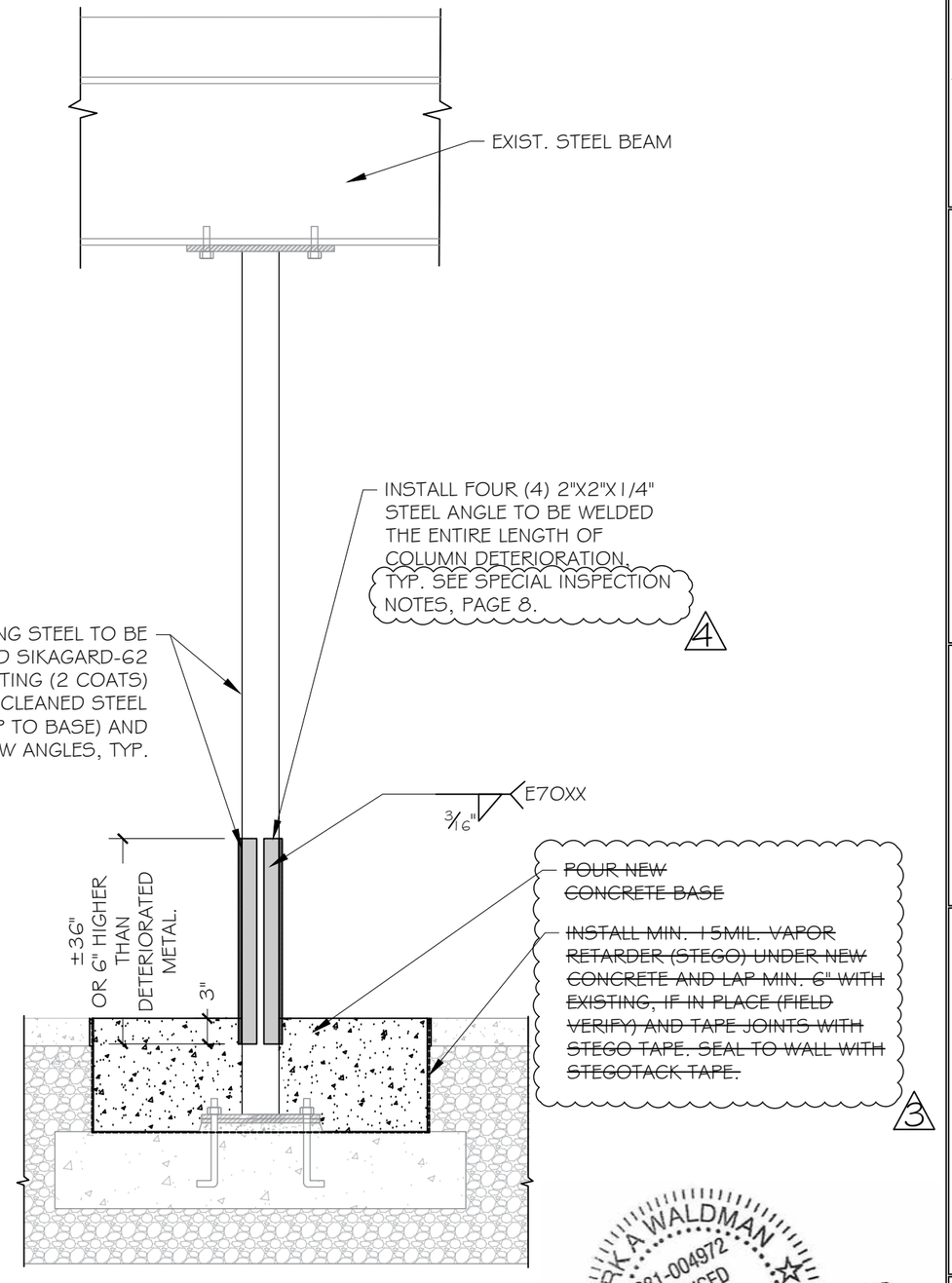
DAMAGE CLASSIFICATIONS

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 3 |




4 EXIST. COLUMN (DEMOLITION)
SCALE: 3/4" = 1'-0"




5 COLUMN REPAIRS AT BASE
SCALE: 3/4" = 1'-0"

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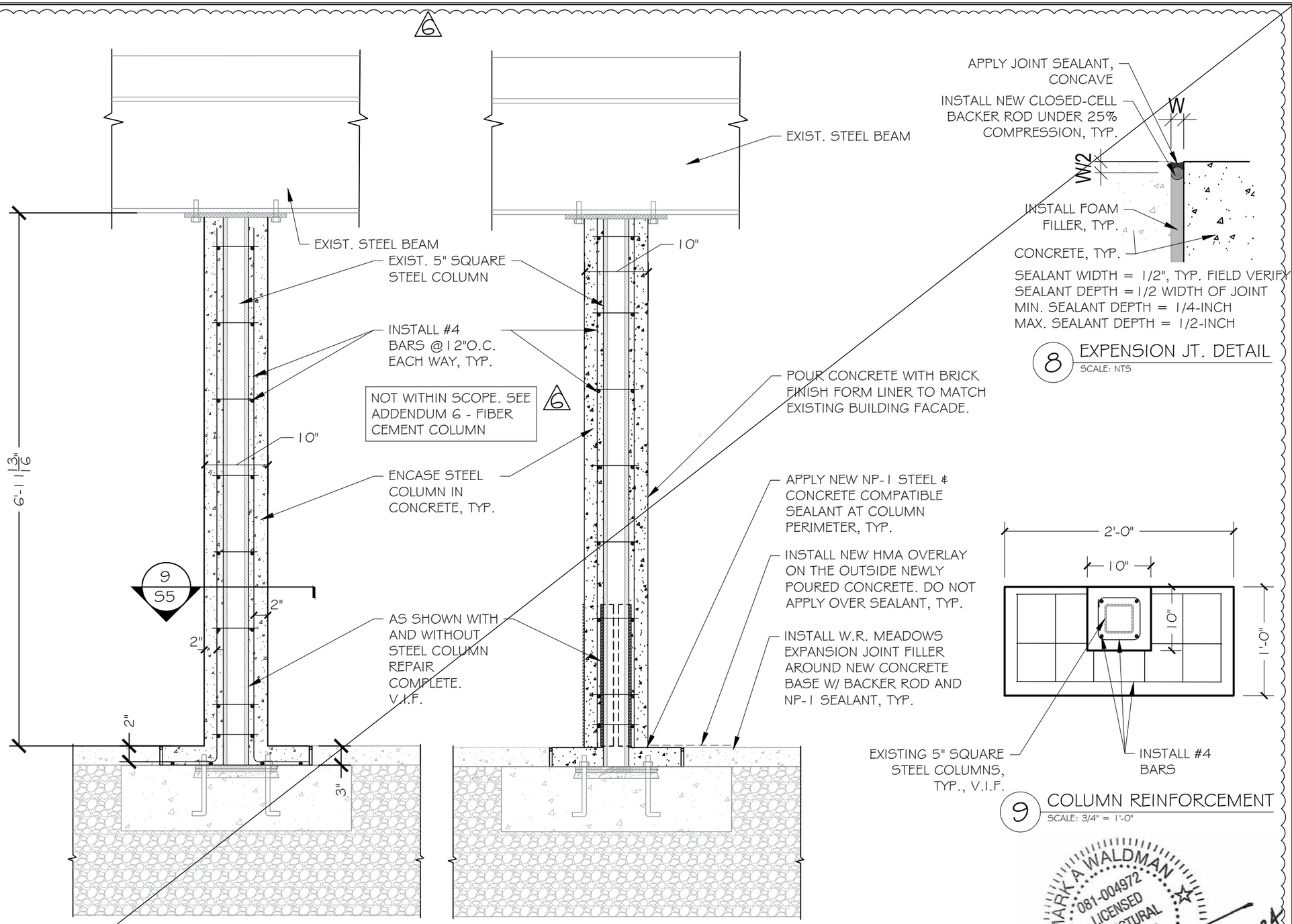
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

COLUMN REPAIR SECTIONS

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 4 |




6 COLUMN REPAIRS
SCALE: 3/4" = 1'-0"

7 COLUMN REPAIRS WITH FORM LINER
SCALE: 3/4" = 1'-0"




SEALANT WIDTH = 1/2", TYP. FIELD VERIFY
SEALANT DEPTH = 1/2 WIDTH OF JOINT
MIN. SEALANT DEPTH = 1/4-INCH
MAX. SEALANT DEPTH = 1/2-INCH

8 EXPENSION JT. DETAIL
SCALE: NTS




9 COLUMN REINFORCEMENT
SCALE: 3/4" = 1'-0"

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| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

COLUMN REPAIR SECTIONS

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 5 |

## General Notes:

1. This project involves repairing columns at 900 S. River Rd., Des Plaines, Illinois. The scope shall also include the following: (3)
   A. Remove approx. 7 feet of existing steel shell from the columns, floor to ceiling.
   B. Manually or mechanically remove fireproofing material from the surface of the columns.
   C. Clean the surface of each steel column with a wire wheel and install (2) coats of Sikagard-62 to steel columns after removing defective material.
   D. Install #4 rebar for the column enclosure and new concrete base over min. 15mil. Vapor Retarder (Stego) under new concrete and lap min. 6" with existing, if in place (field verify) and tape joints with Stego Tape. Seal to wall with StegoTack Tape.
   E. Install a reinforced concrete encasement around steel columns.
   F. Install continuous 1/2" Masterseal B1 foam filler and closed cell backer rod and NP-1 sealant at new concrete to exist. concrete intersections.
   G. Install NP-1 sealant around the new concrete columns.
   H. Install a new steel shell at the base to match existing in height.
   I. ~~Paint column and base shell to match existing.~~
   J. Install new HMA on the driveway side. (3)
   K. ~~Investigative openings of (3) columns (Base~~ Bid). Based on conditions, repair columns as shown above or close to prior conditions w/ engineer's pre-approval only (Unit Cost).
2. All work shall conform to the applicable codes of the local jurisdiction, and the State of Illinois at the time of permit and construction.
3. The contractor shall verify, in field, all dimensions, angles and existing conditions before proceeding with any work.
4. Variations in the field conditions relative to the contract documents shall be reported to the engineer in writing. Work shall not progress until clarification from architect/engineer is obtained.
5. All work shall be erected plumb, level and true and in accordance with details.
6. "Job copy" original permit drawings and original permit card to be kept at the job site and accessible to inspector at all times.
7. No substitutions will be allowed without prior written approval of the engineer.
8. These drawings indicate the intent, general character requirements and approximate locations of the work shown. The contractor shall be expected to work with unforeseen field conditions requiring minor design adjustments and shall be expected to fully level the floor slab.

## Structural Notes:

1. Allowable unit stresses shall be in accordance with the latest specifications of the AISC, ACI, and City of Des Plaines, IL, Building Code requirements.
2. Design Loads as follows:
   Floor Live Load: 40 PSF
   Snow Load: 25 PSF
   Dead Load: 20 PSF
   Soil: 3 tons/SF
3. Concrete:
   * All concrete to be normal weight having a minimum compressive strength of 4,000 psi at 7 days and should contain 5 to 8 percent air entrainment admixture. Air entrainment admixtures to conform to ASTM C260.
   * Concrete shall not have any chloride additive.
   * Concrete to have a slump of 4" without exceeding a water-cement ratio of 0.45.
   * All reinforcing bars shall be ASTM A615 Grade 60.
4. All structural steel shall conform to the latest edition of AISC "Specification for Design, Fabrication, and Erection of Structural Steel for Buildings" and latest Edition of AISC "Code of Standard Practice of Steel Buildings".
5. All structural steel shall be coated with a rust prohibitive primer with a minimum of 3mils unless noted otherwise.

## Shoring & Reshoring:

Comply with ACI 318 (ACI 318M) and ACI 301 (ACI 301M) for design, installation, and removal of shoring and reshoring.

1. Do not remove shoring or reshoring until measurement of column tolerances is complete. In multistory construction, extend shoring or reshoring over a sufficient number of stories to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.
2. Plan sequence of removal of shores and re-shore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

## Products:

1. Rust Prohibitive Coating: Sikagard-62
2. Vapor Retarder (Stego), 15mm and Stego Tape.
3. Foam Filler: MasterSeal B1
4. Backer Rod: MasterSeal 920
5. Sealant: MasterSeal NP-1

All materials to be applied in strict accordance with the newest manufacturer's installation instructions.

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS
11/30/2024
Exp. 11/30

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
WEB: www.WaldmanEng.com

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| REVISIONS | | |
|---|---|---|
| 1 | ADDENDUM 1 | 10-4-23 |
| 2 | ADDENDUM 2 | 2-1-24 |
| 3 | REVISED PER JURISDICTION | 2-19-24 |
| 4 | SPECIAL INSPECTION DATA | 4-3-24 |
| 5 | WELDED STEEL REPAIR | 5-28-24 |
| 6 | FIBER CEMENT COLUMN | 9-16-24 |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

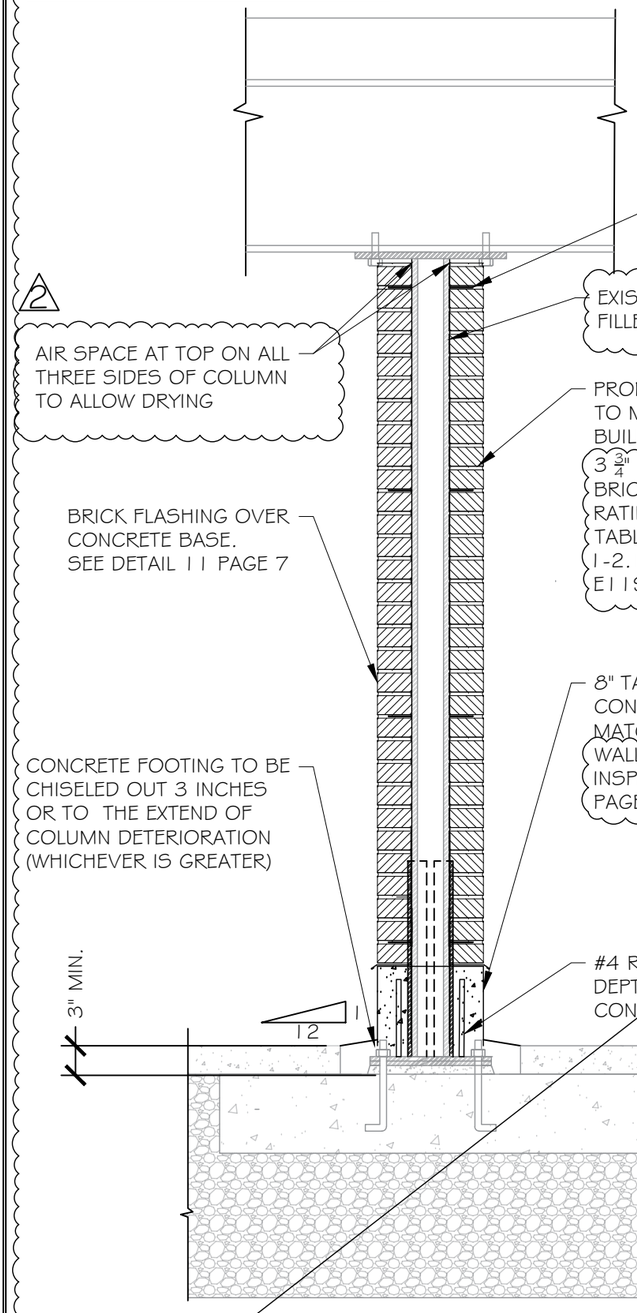
SUPPORT COLUMN REPAIR PROJECT

GENERAL NOTES

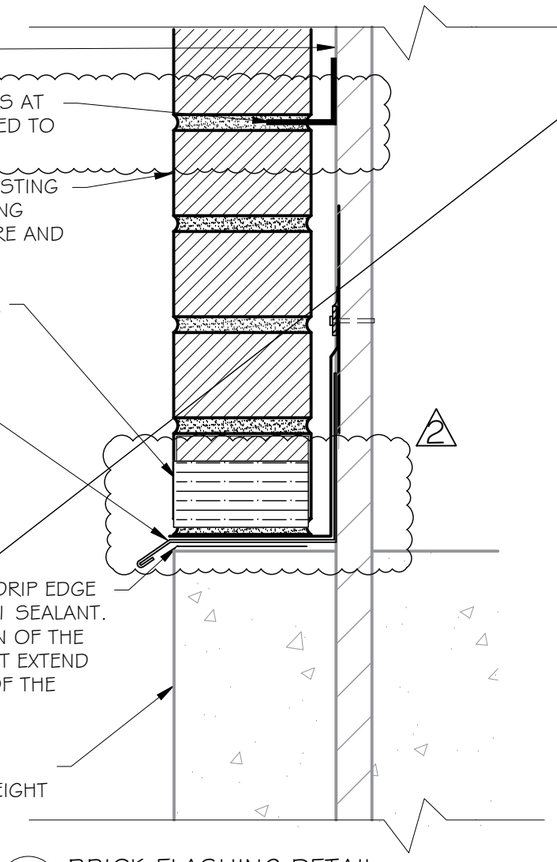
900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 6 |

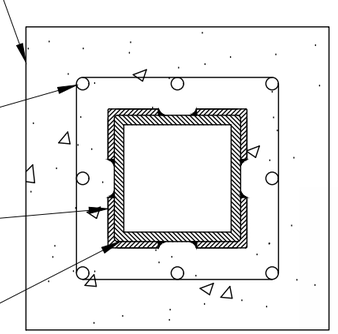
# ALTERNATE ITEM 1




10 COLUMN REPAIRS
SCALE: 3/4" = 1'-0"




11 BRICK FLASHING DETAIL
SCALE: NTS




12 CONCRETE FOOTING DETAIL
SCALE: NTS

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS
Expires 11/30/2024

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
WEB: www.WaldmanEng.com

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| 6 | FIBER CEMENT COLUMN | 9-16-24 |
| | | |
| | | |
| | | |
| NO. | DESCRIPTION | |

SUPPORT COLUMN REPAIR PROJECT

ALTERNATE ITEM 1

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 7 |

Special Inspections:

Structural Welding:

- Special inspection by ~~Testing Service Corporation (TSC)~~ Waldman Engineering Consultants, Inc. (WEC) per contract.
- Inspection to be completed by a qualified technician under the supervision, observation of and reporting by ~~TSC's~~ WEC's Registered Professional Engineer.
- Inspection to be performed as determined by technician on site.
- Inspection to be completed prior to application of sealant, per IBC 2015, Chapter 17, Section 1705.2 and per AISC 360.

Concrete:

- Special inspection by ~~Flood Testing Laboratories, Inc. (FTL)~~ Waldman Egineering Consutants, Inc. (WEC) per contract.
- Testing to be completed by a qualified technician under the supervision, observation of and reporting by ~~FTL's~~ WEC Registered Professional Engineer.
- Compressive test specimens to be collected in sets of no less than 5 cylinders at 4" by 8" for independent testing.
- Concrete cylinder testing to be performed per IBC 2015, Chapter 17, Table 1705.3, Items 5, 6, 7, 8 and 12.
- Concrete testing to be performed prior to construction of brick facade or application of liquid membrane sealant.

5

5

4

INSPECTION SHEDULE

| | TYPE: | CONTINUOUS SPECIAL INSPECTION | PERIODIC SPECIAL INSPECTION | REFERENCED STANDARD | IBC REFERENCE |
|---|---|---|---|---|---|
| REINFORCING WELDS | A. Verify weldability of materials if other than ASTM A 706 | - | X | AWS D1.4 | - |
| | B. Inspect single-pass fillet welds of less than $\frac{5}{16}$" | - | X | AISC 360 | 1705.2 |
| | C. Inspect other welds as needed (TBD) | X | - | AISC 360 | - |
| | | | | | |
| CONCRETE | A. Inspect adhesive anchors post-installed in hardened concrete members | X | - | ACI 318: 17.8.2.4 | - |
| | B. Verify use of required design mix | - | X | ACI 318: Ch. 19, 26.4.3, 23.4.4 | 1705.3, 1705.5, 1705.6, 1705.7 |
| | C. Prior to concrete placement, fabricate specimens for strength tests and determine temperature of concrete | X | - | ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12 | 1705.12 |
| | D. Inspect concrete placement for proper application techniques | X | - | ACI 318: 26.4.5 | 1705.6, 1705.7, 1705.8 |
| | E. Verify maintenance of specified curing temperatures and techniques | - | X | ACI 318: 26.10.2 | - |
| | F. Inspect formwork for shape, location and dimensions of the concrete member being fomred | - | X | ACI 318: 26.10.1(b) | - |

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS

11/30/2024

Expires

WALDMAN ENGINEERING CONSULTANTS, INC

4300 COMMERCE PLACE, SUITE 310

LISLE, ILLINOIS 60532

TEL: 630-922-3000

FAX: 922-3003

WEB: www.WaldmanEng.com

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| 6 | FIBER CEMENT COLUMN | 9-16-24 |

SUPPORT COLUMN REPAIR PROJECT

SPECIAL INSPECTION NOTES

900 S. RIVER ROAD
DES PLAINES
ILLINOIS 60016

| | |
|---|---|
| PROJECT #: | 23C-206.1 |
| DRAWN BY: | BMB |
| REVIEWED BY: | CSH/MAW |
| DATE: | 09-8-2023 |
| SHEET NO: | 8 |

PROJECT: 23C-206 PAGE 9

TITLE: CLAM SHELL REPAIR

DRAWN BY: CSH
REVIEWED BY: MAW

# THACKER HOUSE COLUMN REPAIR

DATE: 5.28.2024

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
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5

PROPOSED 5X5X$\frac{3}{8}$" ASTM A500 GR. B STRUCTURAL TUBING COLUMN BISECTED AND WELDED TOP AND BOTTOM. BREAK EDGE TOP AND BOTTOM BEFORE WELDING.

$\frac{3}{16}$" $\frac{3}{16}$" E70XX (TYP.)

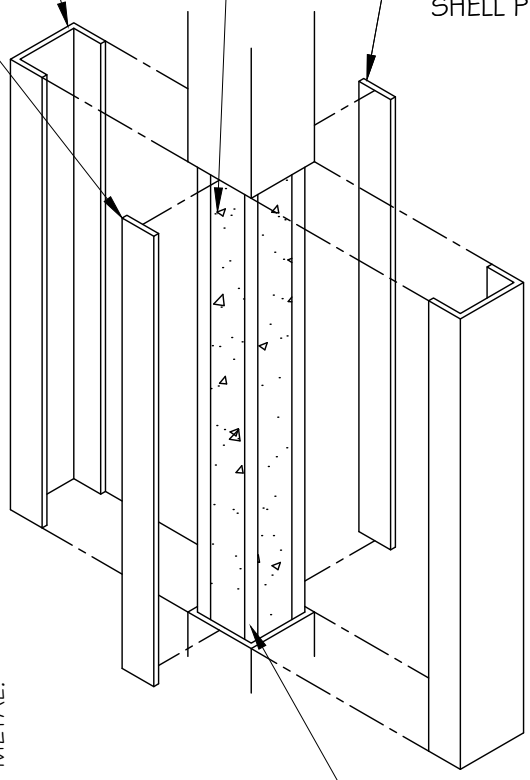
PROPOSED 3X1/4" A36 STEEL PLATE WELDED ON ALL 4 EDGES. CUT 2 INCHES LONGER THAN SHELL PLATES

SECTION A-A

MECHANICALLY ABRATE CONCRETE SURFACE PER ICRI NO. 03732 AND TROWEL COAT WITH SIKACRETE BEFORE APPLYING NEW SHELL.

MECHANICALLY ABRATE CONCRETE SURFACE PER ICRI NO. 03732 AND TROWEL COAT WITH SIKACRETE BEFORE APPLYING NEW SHELL.

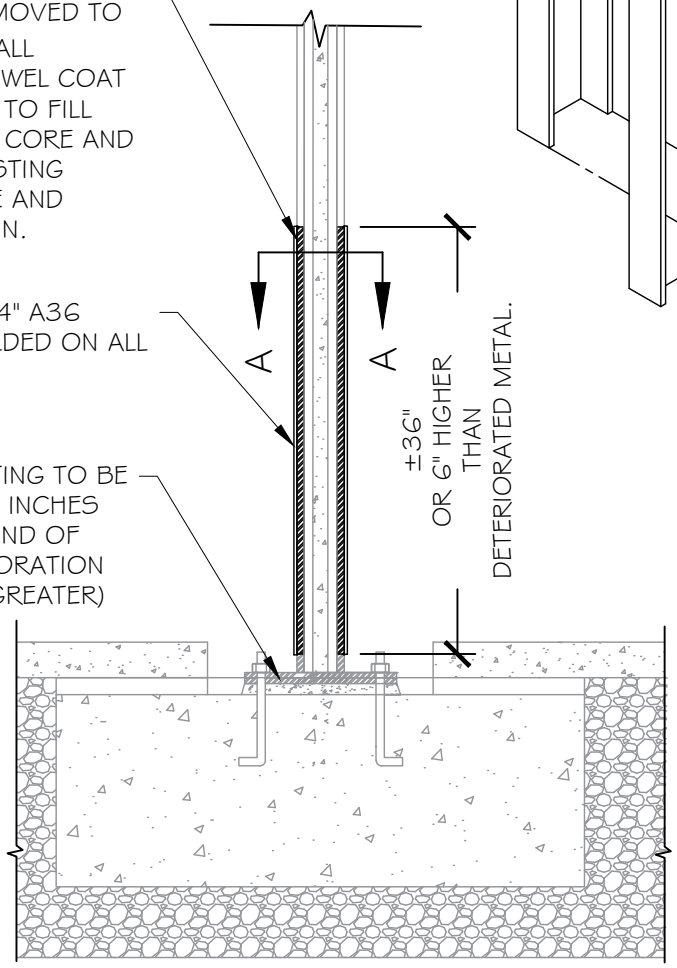
PROPOSED 3X1/4" A36 STEEL PLATE WELDED ON ALL 4 SIDES. CUT 2 INCHES LONGER THAN SHELL PLATES



EXISTING DETERIORATED STEEL SHELL REMOVED TO A MINIMUM $\frac{1}{4}$" WALL THICKNESS. TROWEL COAT WITH SIKACREET TO FILL VOIDS BETWEEN CORE AND NEW SHELL - EXISTING CONCRETE CORE AND REBAR TO REMAIN.

PROPOSED 3X1/4" A36 STEEL PLATE WELDED ON ALL 4 EDGES

CONCRETE FOOTING TO BE CHISELED OUT 3 INCHES OR TO THE EXTEND OF COLUMN DETERIORATION (WHICHEVER IS GREATER)




EXISTING STEEL REBAR TO BE WIRE BRUSHED ON ALL EXPOSED SURFACES AND SATURATED WITH SIKA BRAND RUSTOFF-100

MARK A WALDMAN
081-004972
LICENSED STRUCTURAL ENGINEER
ILLINOIS

11/30/2024
Expires

PROJECT: 23C-206 PAGE 10

TITLE: OVER SHELL REPAIR

DRAWN BY: CSH
REVIEWED BY:

# THACKER HOUSE COLUMN REPAIR

DATE: 5.28.2024

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
WEB: www.WaldmanEng.com

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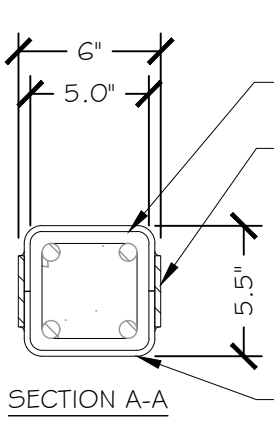
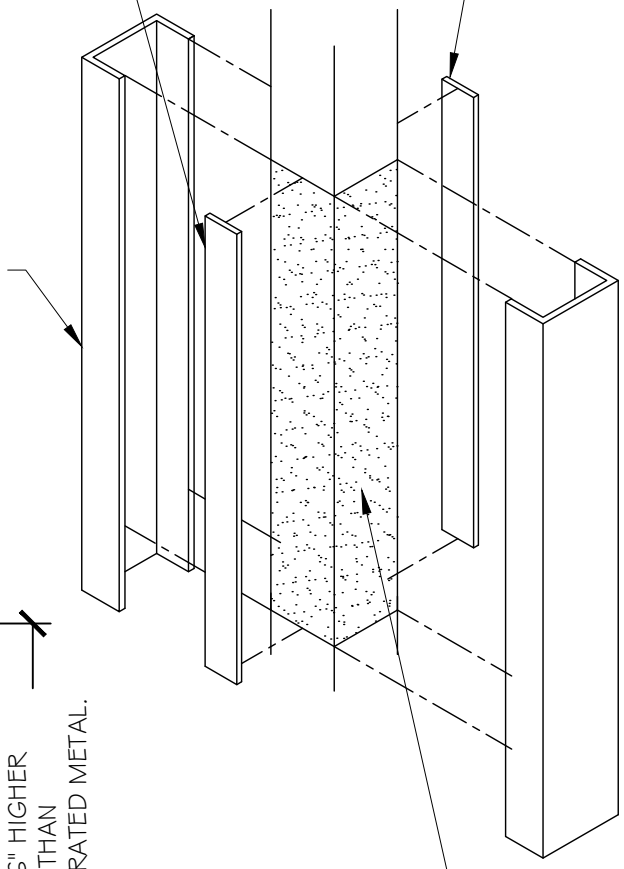
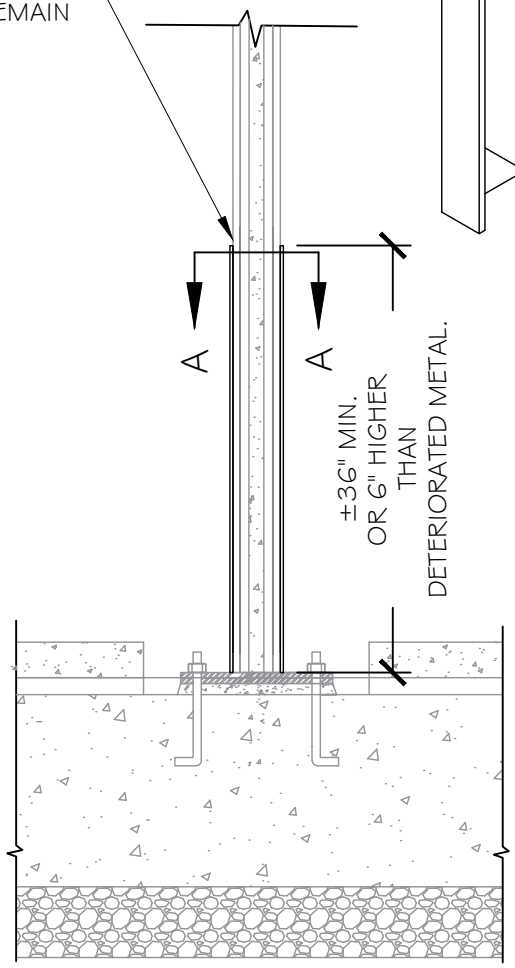



SECTION A-A

1/4" THICK A36 FIELD FORMED STEEL SHELL AROUND EXISTING DETERIORATED STEEL




EXISTING DETERIORATED STEEL SHELL TO REMAIN



11/30/2024
Expires

Building review comments:

Specification sheets for the 3m firestop sheet have not been submitted; the plan review was performed with information available for 3m CS-195+ product. The actual product to be used must be provided on the plans.

1. Provide the specific manufacturer and product line to be used to provide the protection for the columns. The 3m CS-195+ has been evaluated as a firestop system (tested to ASTM E814 and ANSI/UL 1479) but it does not appear that it has been evaluated to ASTM E119/UL 263 which is the standard used for evaluation of fire resistance rating of assemblies, including columns.

2015 IBC 703.2 Fire-resistance ratings.
The fire-resistance rating of building elements, components or assemblies shall be determined in accordance with the test procedures set forth in ASTM E 119 or UL 263 or in accordance with Section 703.3. The fire-resistance rating of penetrations and fire-resistant joint systems shall be determined in accordance Sections 714 and 715, respectively.

# CKER HOUSE
# UMN REPAIR

WALDMAN ENGINEERING CONSULTANTS, INC
4300 COMMERCE PLACE, SUITE 310
LISLE, ILLINOIS 60532
TEL: 630-922-3000
FAX: 922-3003
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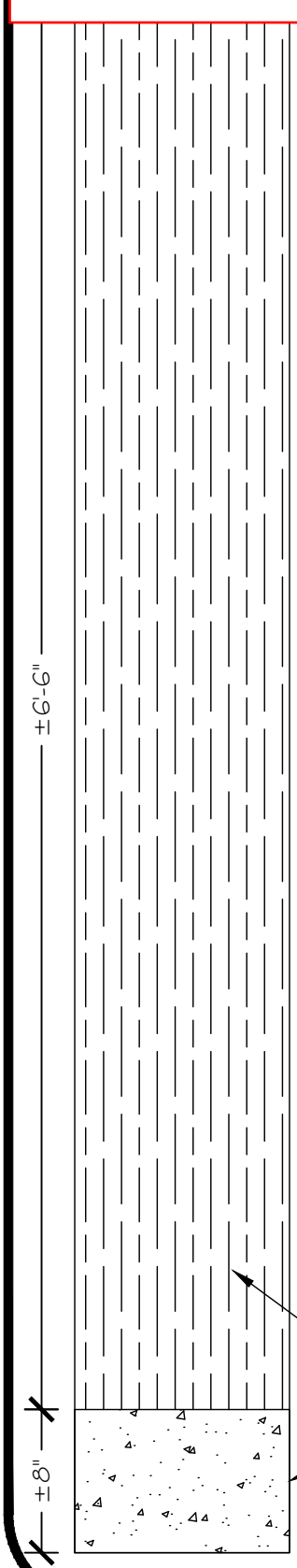
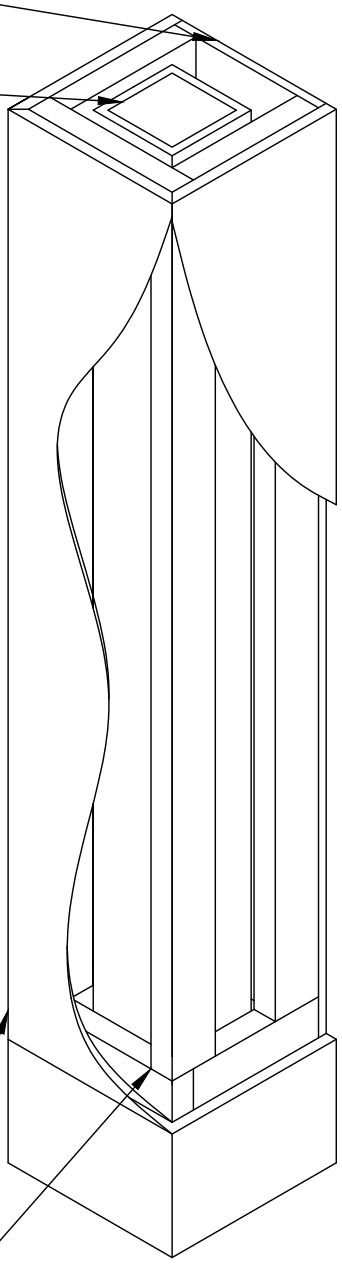
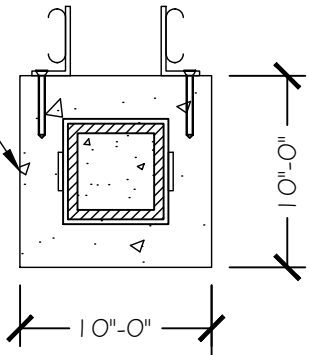


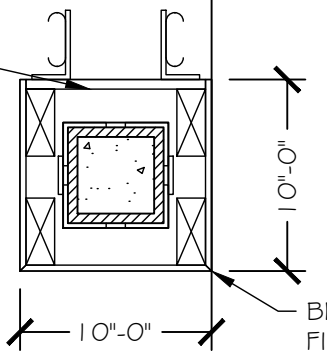

M 4 HOUR RATED INTUMECENT FIRETSTOP SHEET

EXISTING REPAIRED STEEL COLUMN



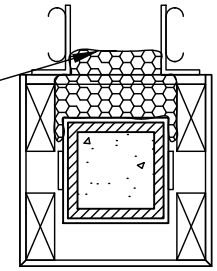



NON-LOAD BEARING 4,000PSI CONCRETE BASE TO MATCH EXPOSED HEIGHT OF EXISTING STEM WALL




3M 4 HOUR RATED INTUMECENT FIRETSTOP SHEET

BEVEL CUT FIBER CEMENT AT CORNERS FOR CLEAN FINISH



APPROXIMATE EXTENTS OF INTUMECENT FIRE PROTECTION EXPANSION

Resubmit - Zoning jmendel 11/18/24
1. Proposed columns' finish material not permitted by zoning code Section 12-3-11.D.2.a.3 & Table 1 (Building Design Review)

5/16" WOOD TEXTURE CLASS A FIRE RATED FIBER CEMENT PANEL (SANDY CLAY COLOR)

2X4 PRIMED PINE FRAME AND STUDS

5/16" WOOD TEXTURE CLASS A FIRE RATED FIBER CEMENT PANEL (SANDY CLAY COLOR)

NON-LOAD BEARING 4,000PSI CONCRETE BASE TO MATCH EXPOSED HEIGHT OF EXISTING STEM WALL

MARK A WALDMAN 081-004972 LICENSED STRUCTURAL ENGINEER ILLINOIS
11/30/2024
Expires

DES PLAINES ILLINOIS

Community & Economic Development
1420 Miner Street, Des Plaines, IL 60016
P: 847.391.5380 | W: desplainesil.gov

Property Owner Name: **Thacker House Condominium Assocaition** Project Address: **900 S. Des Plaines River Rd.**

Case: **25-017-V** Zoning District: **R-4** Use: **Multi-Family Building**

Proposal: **To vary the permitted elevation materials for an attached single and multi-family residential building required by Section 12-3-11.D.a.(3) permitting repairs to existing ground floor columns to use cement fiber board siding on all street facing and side elevations.**

**Relief Requested:** **X** Minor Variation ☐ License Agreement

**Site Characteristics**

Lot Size: **19,571.59 sq. ft.** **X** Conforming ☐ Nonconforming

Lot Width: **50 ft** **X** Conforming ☐ Nonconforming

Lot Dimensions: **161.65 feet x 180.22 feet**

**Decision:**

☐ Approved **X** Approved with Conditions (see below) ☐ Denied

**Condition of Approval: The cement fiber board siding material must have a smooth exterior finish. Wood grain exterior finish is not permitted.**

Jeff Rogers, AICP
Director of Community and Economic Development

3-20-25
Date

DES PLAINES
ILLINOIS

COMMUNITY AND ECONOMIC DEVELOPMENT
1420 Miner Street
Des Plaines, IL 60016
P: 847.391.5306
desplaines.org

## DEVELOPMENT APPLICATION (3 pages)

Do not write in this space – Office use only

Case Number: _____ Date Filed: _____

Type of Request: _____

Fee Paid Amount: _____ Receipt Number: _____ Date: _____

Legal Notice Publication Date & Paper: _____

Scheduled Hearing Date: _____ Property in: ☐ Floodway ☐ Floodplain ☐ Neither

Action by Zoning Administrator/Planning & Zoning Board/City Council: _____

**Property Address:** 900 South Des Plaines River Rd. **Date:** _____

**Requested Action:**

- ☑ Variation
  - ☑ Minor
  - ☐ Standard
  - ☐ Major
  - ☐ Sign
- ☐ Conditional Use
- ☐ Planned Unit Development
  - ☐ Preliminary
  - ☐ Final
- ☐ Plat of Subdivision
  - ☐ Tentative
  - ☐ Final
- ☐ Map Amendment
- ☐ Text Amendment
- ☐ License Agreement
- ☐ Other _____

**Description of the request:**

Following structural repairs to support columns, the column cladding has been repaired with a fiber cement board which has a slight wood grain texture vs. the previous, deteriorated steel cladding. The owners request variance to retain the the fiber cement cladding in lieu of sanding the cladding smooth to appear metalic.

**PIN(s):** 09-20-206-035

**Legal Description:** (please attach and submit electronically in Word document)

**Zoning Classification of Property:** R-4 Central Core Residential

**Proposed Zoning Classification of Property (if applicable):** _____

**Current Use of Property:** Residential Condominium Building

**Proposed Use of Property:** No proposed change

**Applicant Name (printed):** Julie McKenzie

**Applicant Signature:** Julie McKenzie

**Applicant's Interest in Property:** ☐ Owner ☐ Lessee ☐ Contract Purchaser ☑ Authorized Agent

☐ Other (explain) _____

**Applicant's Address:** McKenzie Management Inc. 2720 S. River Road, Suite 214, Des Plaines, IL 60018

**Phone Number:** 847-813-5939 **Email Address:** julie@mckenziemanagement.com

**Property Owner Name (printed):** Thacker House Condominium Association

**Property Owner Signature*:** [signature]

*Or submit an original letter of authorization from the property owner of record

**Property Owner's Address:** 900 S. Des Plaines River Road, Des Plaines, IL 60018

**Phone Number:** 847-297-2095 **Email Address:** _____

**Contact Person:** ☐ Applicant ☐ Owner ☑ Other: Board President

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**TRUST INFORMATION (required if property is in a trust)**

**Name(s) of Trust Beneficiary(ies)*** _____

**Address(es) of Trust Beneficiary(ies)*** _____

*All applications involving property held by a land trust must be signed by the trust officer of the institution holding the trust as the owner of the property. Additionally, the trust beneficiary and his/her current address must be disclosed on this form. The application must also be accompanied by the following:

1) A certified copy of the trust agreement.
2) A letter from the trustee certifying that the beneficiary as shown on this application is correct and disclosing any beneficiary changes or lack thereof during the 12 months preceding the filing of this application.

I hereby certify that all of the above statements and those contained in any papers or plans submitted herewith are true to the best of my knowledge and belief. Furthermore, I consent to the entry in or upon the premises described in the application, by any authorized official of the City of Des Plaines, for the purpose of posting, maintaining, and removing public hearing notices as may be required, as well as conducting a site analysis.

**Applicant's Signature:** Julie McKenzie

**Applicant Name (Printed):** Julie McKenzie **Date:** 2/21/2025

**Owner's Signature:** Greg Fulara

**Owner Name (Printed):** Greg Fulara **Date:** 2.21.2025

Variance Statement:

1. Hardship: No variation shall be granted pursuant to this subsection H unless the applicant shall establish that carrying out the strict letter of the provisions of this title would create a particular hardship or a practical difficulty. – The property completed repairs over the summer of 2024 which included the necessary removal of steel cladding around support columns which were deteriorating and rusting due to the use of steel on exterior elevations in contact with moisture from years of flooding related to the Des Plaines River and snow melting products to keep the driveway safe. In agreement with the zoning and planning office and in an effort to complete the work of protecting those repairs and seal the building before the winter weather season using the materials available and on site, 23 columns around the perimeter of the structure have been re-clad in fiber cement panels which largely approximate the original appearance of the building. The cement panels have a wood grain texture which is approximately 1/8 raised from the surface which is not visible from more than a few feet away.

The zoning department reviewers have suggested that smoothing of the column cladding may be required to, as closely as possible, match the previously installed steel cladding system. This is not ideal as it would compromise the integrity of the existing cement panels and would require additional labor and funding to complete a project that has already exceeded the funding allocated for the project.

2. Unique Physical Condition: The subject lot is exceptional as compared to other lots subject to the same provision by reason of a unique physical condition, including presence of an existing use, structure, or sign, whether conforming or nonconforming; irregular or substandard shape or size; exceptional topographical features; or other extraordinary physical conditions peculiar to and inherent in the subject lot that amount to more than a mere inconvenience to the owner and that relate to or arise out of the lot rather than the personal situation of the current owner of the lot. - It is our understanding that Thacker House Condominium was and remains a 'non-conforming' structure, as the building construction predates the adoption of the current zoning code (12-3-11D.2.a.3), which, along with neighboring buildings, does allow for materials that may not otherwise be permitted in newer construction. (Zoning Code 12-5-6B). We believe that the slight wood grain texture of the fiber cement, while an aesthetic choice, conforms to the spirit of the existing code, and that a smooth metallic finish is not required.

3. Not Self-Created: The aforesaid unique physical condition is not the result of any action or inaction of the owner or its predecessors in title and existed at the time of the enactment of the provisions from which a variance is sought or was created by natural forces or was the result of governmental action, other than the adoption of this title. – As a nonconforming structure as defined in zoning code 12-5-6B, we feel the fiber cement panels very closely match the appearance of the steel cladding original to the structure in all but very close examination. The use substantially maintains the original aesthetic and is not noticeably different.

4. Denied Substantial Rights: The carrying out of the strict letter of the provision from which a variance is sought would deprive the owner of the subject lot of substantial rights commonly enjoyed by owners of other lots subject to the same provision. - The fiber cement panels are not intended by the manufacturer to be sanded down or otherwise modified. It is unknown what the finished product may look like and could create an undesirable aesthetic or future financial burdens with unknown effects on the maintenance of the product.

5. Not Merely Special Privilege: The alleged hardship or difficulty is neither merely the inability of the owner or occupant to enjoy some special privilege or additional right not available to owners or occupants of other lots subject to the same provision, nor merely the inability of the owner to make more money from the use of the subject lot. The fiber cement panels were chosen for their virtues of achieving a very similar aesthetic as the original columns, being widely available for quick replacement in the event of damage, and as a well-tested weather resistant product which will not deteriorate or contribute to the deterioration of the underlying structure, as the previous steel cladding had. To modify the panels to a flat surface is likely to cause accelerated deterioration of the product and shorten the anticipated useful life. Further, the practice of sanding the panels would constitute a required additional step any time a panel needs to be replaced, such as in the event of a vehicle strike.

6. Title And Plan Purposes: The variation would not result in a use or development of the subject lot that would be not in harmony with the general and specific purposes for which this title and the provision from which a variation is sought were enacted or the general purpose and intent of the comprehensive plan. – Thacker house is and intends to remain a residential condominium association. We believe the columns visually maintain the original aesthetic from any casual distance, and in the long term, the cement panels will remain in good condition for a longer period of time and require less cleaning and repairs than the previous steel cladding, to the benefit of the neighborhood.

7. No Other Remedy: There is no means other than the requested variation by which the alleged hardship or difficulty can be avoided or remedied to a degree sufficient to permit a reasonable use of the subject lot. - As previously stated, the mechanical smoothing of the columns would likely jeopardize the integrity of the product which was chosen specifically to be a long lasting, low-maintenance material. The damage caused to the cladding and the expected useful life is an unknown variable which may have unforeseen and costly consequences in the future. Not to mention this would require additional labor which the association has not budgeted for.

8. Minimum Required: The requested variation is the minimum measure of relief necessary to alleviate the alleged hardship or difficulty presented by the strict application of this title. – To allow the columns to simply remain as is, requires the least amount of effort and the least amount of funding. Using a product as it is intended maintains the product in the physical state which gives the façade the longest, most durable and desirable appearance at the lowest possible cost in terms of both time and money.

**COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT**
1420 Miner Street
Des Plaines, IL 60016
P: 847.391.5306
desplainesil.gov

# MEMORANDUM

Date: June 6, 2025

To: Planning and Zoning Board (PZB)

From: Jeff Rogers, Director of Community and Economic Development

CC: Jonathan Mendel, AICP, Assistant Director of CED

Subject: Request to Continue 25-025-CU: Conditional Use Amendment for Auto Service Repair and Auto Body Repair Uses at 1685 E. Oakton Street

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In order to provide ample time to prepare new revisions to the proposed plans for the subject property, the petitioner has requested to continue the hearing to the Board's regular meeting on Tuesday, June 24, 2025, which is attached.