



## #2022-140 U Haul Final PUD Amendment Project Review for Planning and Zoning Commission

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<b><u>Meeting Date:</u></b>	December 2, 2022
<b><u>Request:</u></b>	Final PUD Amendment to allow a new storage building with variations from the maximum 70% impervious surface coverage to allow 75.6% and from the maximum 150 square feet of signage to allow 695.3 square feet.
<b><u>Location:</u></b>	4504 Northwest Highway
<b><u>Acreage:</u></b>	Approximately 8.2 acres
<b><u>Zoning:</u></b>	M PUD Manufacturing
<b><u>Surrounding Properties:</u></b>	North: M Manufacturing South: B-2 PUD General Commercial East: M PUD Manufacturing West: B-2 PUD General Commercial
<b><u>Staff Contact:</u></b>	Elizabeth Maxwell (815.356.3615)

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### **Background:**

- **Previous Approvals:**
  - The property was annexed in 2016 and zoned M PUD. They received a Special Use Permit for Bulk Inside Storage and Outside Storage.
  - June 7, 2022, they received a sign variation to paint the water tower with 260 square feet of signage.
- **Existing Use:** U Haul operates the facility for inside and outside storage.

### **Development Analysis:**

#### **Request:**

- To allow a new bulk storage building for the storing of the U Boxes, which are the pack your own portable storage and moving containers, with variations for impervious surface coverage and wall signage.
- There are requested variations for signage and impervious surface coverage.

#### **Land Use:**

- **Zoning:** The site is zoned M PUD Manufacturing. The zoning district is appropriate for the storage use.
- **Land Use:** The land use map shows the area as Commerce. This land use designation is appropriate for service and storage.

Elevations

- U-Haul provided an elevation with various materials and design elements that creates a distinct and appealing façade.
- Window bays provide relief to the wall panels.
- The building is mainly comprised of a paneling system colored Sirerra Tan, Sand Stone, and Bone White.
- The main front corner of the building includes a wood style paneling and brick veneer base.
- The “Lyrical Articulated Design Element” panels project from the façade and create interest, shade and shadow, and pick up colors from other parts of the façade.
- There is a teal top cap over the front corner which really stands out against the dark wood paneling. This teal is also repeated above the windows.

Signage:

- Wall signage is proposed on two sides of the building. The following table lists the signs and the sizes:

Sign	Square Footage	Quantity	Total Square Footage
U-Haul Logo Cabinet Sign	55.21 SF	2	110.42 SF
U-Box Cabinet Sign	168.83 SF	2	337.66 SF
Moving Containers Channel Letters	92.05 SF	2	184.1 SF
Self-Storage Channel Letters	63.125	1	63.125 SF

**Total 695.305 square feet**

- Staff is suggesting reducing the signage by eliminating duplicate signs. Since the main building already states Self-Storage and the water tower states U-Haul, these signs could be eliminated from this building. Eliminating these signs would leave the U-Box Cabinet Sign and the Moving Containers channel letters taking the signs down to 521.76 square feet.

**Findings of Fact:**

**Final Planned Unit Development Amendment**

The petitioner is requesting approval of an amendment to a Final Planned Unit Development to allow a new bulk inside storage building with variations to allow 75.6% impervious and 695.305 square feet of signage. A Planned Unit Development is a Special Use and Special Uses require separate review because of their potential to impact surrounding properties and the orderly development of the City.

Section 2-400 B General Standards for all special uses in the Unified Ordinance establishes standards for all special uses in Crystal Lake. Briefly, the criteria are as follows:

1. The use is necessary or desirable, at the proposed location, to provide a service or facility which will further the public convenience and general welfare.  
 *Meets*             *Does not meet*
2. The use will not be detrimental to area property values.  
 *Meets*             *Does not meet*
3. The use will comply with the zoning districts regulations.  
 *Meets*             *Does not meet*
4. The use will not negatively impact traffic circulation.  
 *Meets*             *Does not meet*
5. The use will not negatively impact public utilities or municipal service delivery systems. If required, the use will contribute financially to the upgrading of public utilities and municipal service delivery systems.  
 *Meets*             *Does not meet*
6. The use will not negatively impact the environment or be unsightly.  
 *Meets*             *Does not meet*
7. The use, where possible will preserve existing mature vegetation, and provide landscaping and architecture, which is aesthetically pleasing, compatible or complementary to surrounding properties and acceptable by community standards.  
 *Meets*             *Does not meet*
8. The use will meet requirements of all regulating governmental agencies.  
 *Meets*             *Does not meet*
9. The use will conform to any conditions approved as part of the issued Special Use Permit.  
 *Meets*             *Does not meet*
10. The use will conform to the regulations established for specific special uses, where applicable.  
 *Meets*             *Does not meet*

**Planned Unit Development Variation**

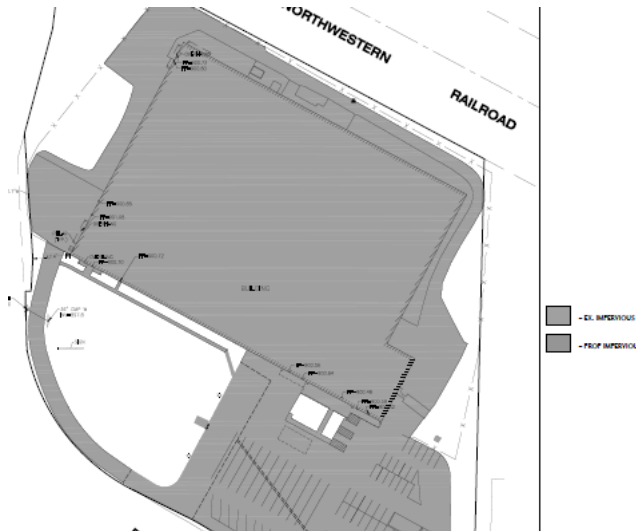
The purpose of Planned Unit Developments is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are, in the form of relief from compliance with conventional zoning ordinance site and design therefore, intended to allow substantial flexibility in planning and designing a proposal. This flexibility is often requirements.

Ideally, this flexibility results in a development that is better planned, contains more amenities, and is ultimately more desirable than one that would have been produced through compliance with typical zoning ordinance and subdivision controls.

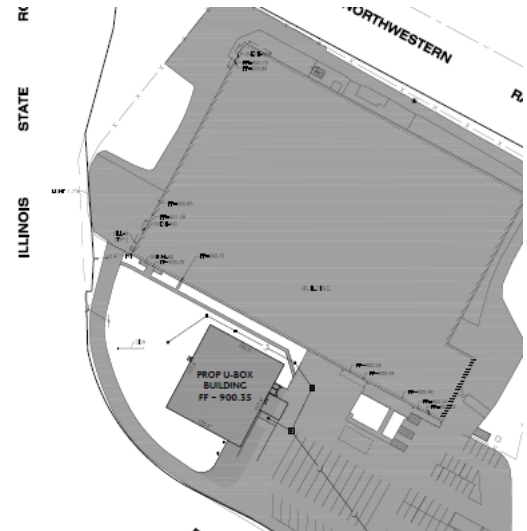
Therefore more lenient site requirements may be granted where the Planned Unit Development contains features not normally required of traditional developments. If the evidence is not found to justify such conditions, that fact shall be reported to the City Council with a recommendation that the variation request be lessened or denied.

Variations are being requested from:

- Article 3 from the maximum impervious surface coverage of 70%. The existing impervious surface coverage is 71.36%. The new building and paving to the building will increase the total impervious coverage to 75.6%, which is a variation of 5.6%.



**Existing**



**Proposed**

- U Haul is requesting a variation from Article 4-1000 Commercial Signs to allow signage on the new building at 695.305 square feet. Free-standing buildings are permitted 150 square feet.
  - Staff is suggesting reducing the signage by eliminating redundant signs “Self-Storage” and “U-Haul” bringing it to 521.76 square feet.



Signs can be evaluated based on certain for the hardship:

- A. The proposed variation will not serve merely as a convenience, but alleviate some demonstrable and unusual hardship.
- B. The proposed variation will not be materially detrimental to the public welfare or injurious to other property or improvements in the neighborhood. The proposed variation will not by itself, or with other signs, contribute to the creation of a visual distraction which may lead to personal injury or a substantial reduction in the value of the property.
- C. The proposed variation is in harmony with the intent, purpose and objectives of the Ordinance.

**Comprehensive Land Use Plan 2030 Vision Summary Review:**

The Comprehensive Plan designates the subject property as Commerce, which allows for existing and future commercial and business uses. The following goals are applicable to this request:

Land Use – Commerce

**Goal: Maintain a dynamic and sustainable base of commercial uses that provides a solid tax base, goods, services and jobs to the city as well as the surrounding region through coordination in the Unified Development Ordinance, Comprehensive Land Use Plan and Economic Development Strategic Plan.**

This can be accomplished with the following supporting actions:

**Supporting Action:** Promote, retain and attract businesses that provide a diverse tax base.

**Recommended Conditions:**

If a motion is made to recommend approval of the petitioner’s request, the following conditions are recommended:

1. Approved plans, to reflect staff and advisory board comments, as approved by the City Council:
  - A. Application (Heimsoth, received 06/20/22).
  - B. Elevations (a&m, dated 11/23/22, received 11/28/22)
  - C. Sign Plans (a&m, dated 11/23/22, received 11/28/22)
  - D. Landscape Plan (HKM, dated 11/28/22, received 11/28/22)
  - E. Engineering Plans (Condon, dated 10/14/22, received 10/24/22)
  - F. Impervious Surface Exhibit (Condon, dated 10/14/22, received 10/24/22)
  - G. Engineering Report, dated 10/14/22, received 10/24/22)
2. The signage on the new U Box storage building shall be reduced to 522 square feet.
3. The colored “Lyrical Articulated Design Elements” attached to the ATAS Sandstone portion of the façade cannot be illuminated.

4. The petitioner shall comply with all of the requirements of the Community Development Department.

PIQ Map  
4504 Northwest Highway



# City of Crystal Lake Development Application

Office Use Only

File # \_\_\_\_\_

Project Title: U-Haul Crystal Lake U-Box Building

## Action Requested

- |   |  |
|---|--|
| <input type="checkbox"/> Annexation                   | <input type="checkbox"/> Preliminary PUD                 |
| <input type="checkbox"/> Comprehensive Plan Amendment | <input type="checkbox"/> Preliminary Plat of Subdivision |
| <input type="checkbox"/> Conceptual PUD Review        | <input type="checkbox"/> Rezoning                        |
| <input type="checkbox"/> Final PUD                    | <input type="checkbox"/> Special Use Permit              |
| <input type="checkbox"/> Final PUD Amendment          | <input checked="" type="checkbox"/> Variation            |
| <input type="checkbox"/> Final Plat of Subdivision    | <input type="checkbox"/> Other                           |

## Petitioner Information

Name: Brian Heimsoth  
Address: 2482 Technology Dr.  
Elgin IL 60124  
Phone: 847-920-5859  
Fax: 224-699-9650  
E-mail: brian@bcentinc.com

## Owner Information (if different)

Name: UH STORAGE DE LTD PRTNRSH  
Address: U HAUL MOVING PRTNRS INC  
PO BOX 29046  
PHOENIX, AZ, 85038-9046  
Phone: 602-263-6555 / 815-477-7389  
Fax: N/A  
E-mail: heather\_skelton@uhaul.com

## Property Information

Project Description: Construction of a 13,775 U-Box storage building with loading dock.

Project Address/Location: 4504 Northwest Hwy. Crystal Lake, IL 60014

PIN Number(s): 19-03-451-001, 002



**Development Team**

Please include address, phone, fax and e-mail

Developer: B+C Enterprises, Inc. 2482 Technology Drive, Elgin, IL 60124 Brian Heimsoth  
815-482-5722 brian@bcentinc.com; heather@bcentinc.com

Architect: RB Custom Designs, Inc. Rick Bierman 2108 Johnson Rd, Johnsonburg, IL 60051  
815-759-9459 rbcusdesgn@comcast.net

Attorney: UHAHL Legal Department, 2727 N. Central Ave., Phoenix, AZ 800-528-0463  
85004-1120  
J. Condon & Associates, Inc. Meghan Michel, P.E. 5415 Business Parkway, Ringwood IL 60072  
815-404-1358 mmichel@jcondoninc.com

Engineer: \_\_\_\_\_

Landscape Architect: HKM Architects + Planners; Mark Kurensky - mkurensky@hkm-arch.com  
847-392-9200 - 43 S. Vail Ave; Arlington Heights, IL 60005

Planner: \_\_\_\_\_

Surveyor: Vanderstappen Land Surveying, Inc. Arthur Gritmacker artg@vandersinc.com (815) 337-8310  
1316 N. Madison Street Woodstock IL 60098

Other: \_\_\_\_\_

**Signatures**

Brian Heimsoth 6/20/22  
PETITIONER: Print and Sign name (if different from owner) Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.

Heather Skelton 6/10/22  
OWNER: Print and Sign name Date

NOTE: If the property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

PUBLIC NOTICE BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY  
OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE PETITION OF  
UH Storage DE LTD Partnership

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance of the City of Crystal Lake, Illinois that a public hearing will be held before the Planning and Zoning Commission upon the application by Heather Skelton, representing UH Storage DE LTD Partnership for a Final Planned Unit Development Amendment, relating to the property at 4504 Northwest Highway in Crystal Lake, Illinois 60014. PIN: 19-03-451-001.

This application is filed for the purpose of seeking an amendment to an approved Final Planned Unit Development to allow a new storage building with variations from the maximum 70% impervious surface coverage to allow 76.06% and from the maximum 150 square feet of signage to allow 726.5 square feet and any other changes as presented at the hearing, pursuant to Article 3, Article 4 and Article 9. Plans for this project can be viewed at the Crystal Lake Community Development Department at City Hall.

A public hearing before the Planning and Zoning Commission for this request will be held at 7:00 p.m. on Wednesday November 2, 2022, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Jeff Greenman, Chairperson  
Planning and Zoning Commission  
City of Crystal Lake

(Published in the Northwest Herald on October 15, 2022) 2025143



# PRELIMINARY ELEVATIONS

***CRYSTAL LAKE, IL***



# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014



# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014



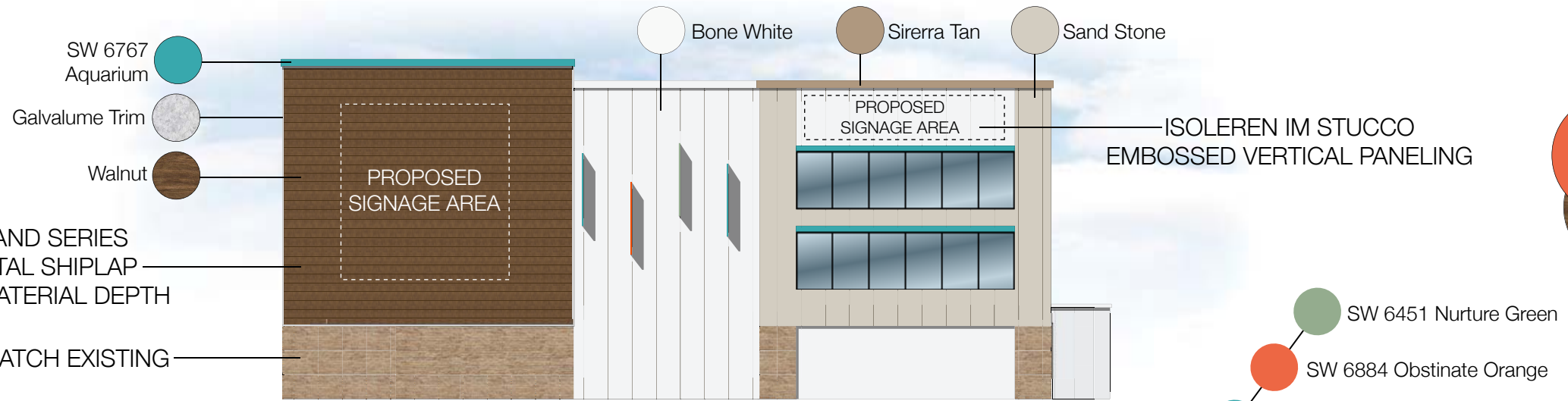
IMP EXCEEDS SUSTAINABLE LEED STANDARDS BY PROVIDING SUPERIOR R-VALUE INSULATION FOR GREATER THERMAL EFFICIENCY

CHANGE IN MATERIALS TO PROVIDE VISUAL SEPARATION TO THE ELEVATION

ARCHITECTURAL FENESTRATION TO ENHANCE RETAIL UNIFORMITY IN THE AREA

# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014



## SOUTH ELEVATION

Scale: 1" = 20'



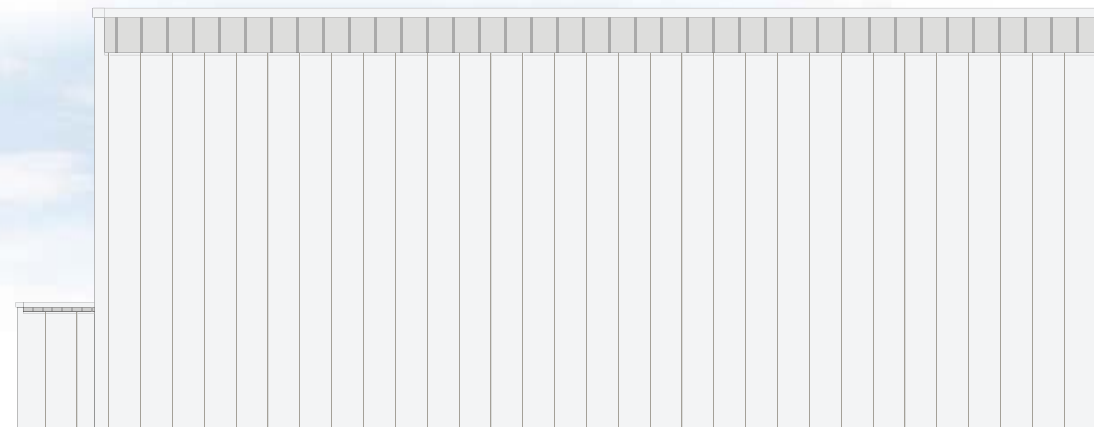
## EAST ELEVATION

Scale: 1" = 20'



## WEST ELEVATION

Scale: 1" = 20'

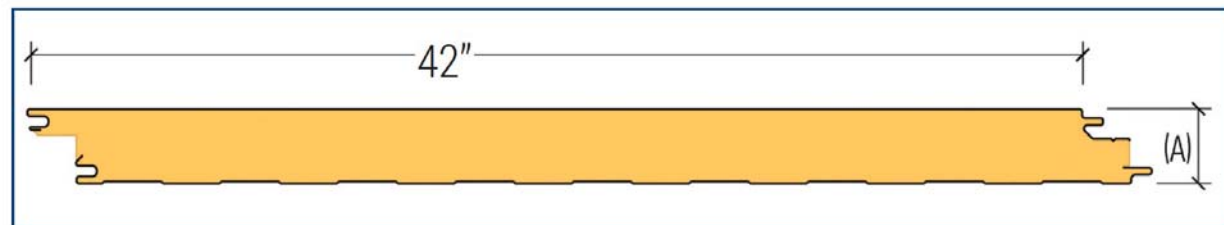
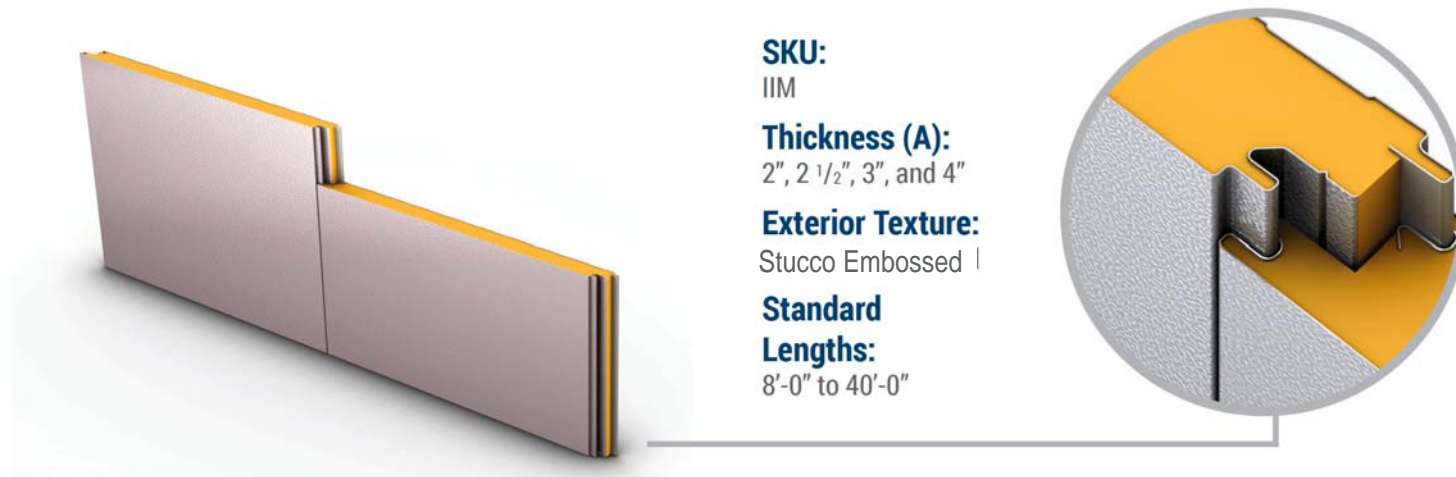


## NORTH ELEVATION

Scale: 1" = 20'



# Isoleren IM (or Equivalent IMP)

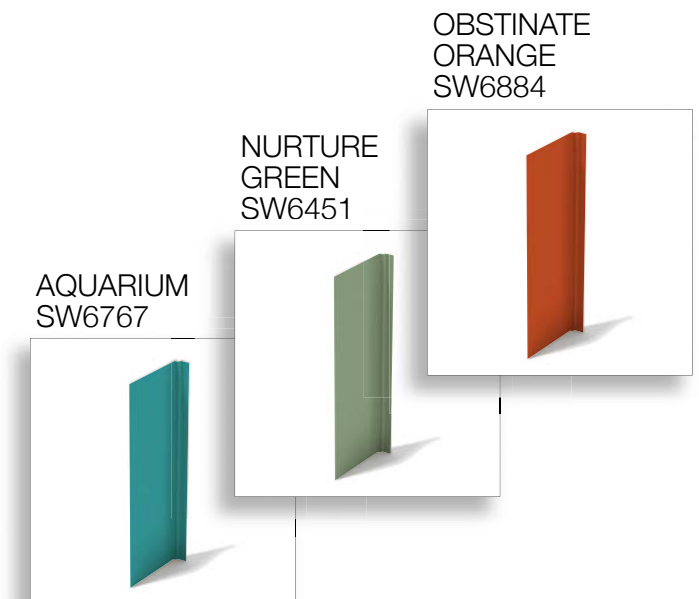


**WOODLAND SERIES**  
HORIZONTAL LAP SIDING  
EMBOSSED WALNUT  
EXAMPLE

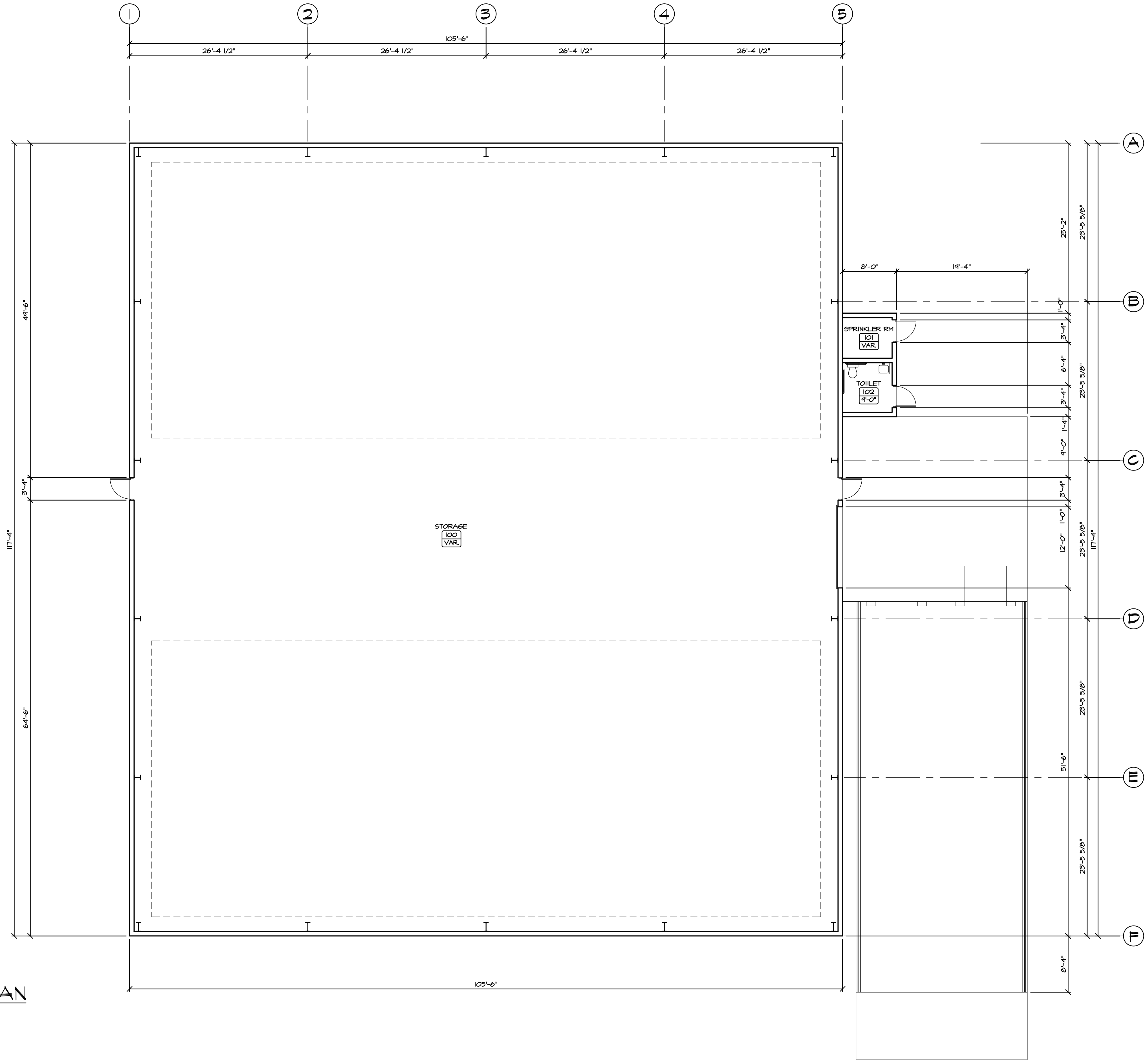


**Isoleren**  
STUCCO EMBOSSED  
EXAMPLE

## 9"D Lyrical Articulated Design Element



**FLOOR PLAN**  
SCALE: 1/8" = 1'-0"



REVISIONS	BY

FLOOR PLAN

NEW BUILDING FOR:  
136050  
U-HALL OF CRYSTAL LAKE  
4504 NORTHWEST HIGHWAY  
CRYSTAL LAKE, ILLINOIS 60014

**R.B. CUSTOM DESIGNS INC.**  
2108 N. Johnsonburg Road  
Johnsonburg, Illinois 60051  
Phone: 815-756-4454 Fax: 815-307-8200

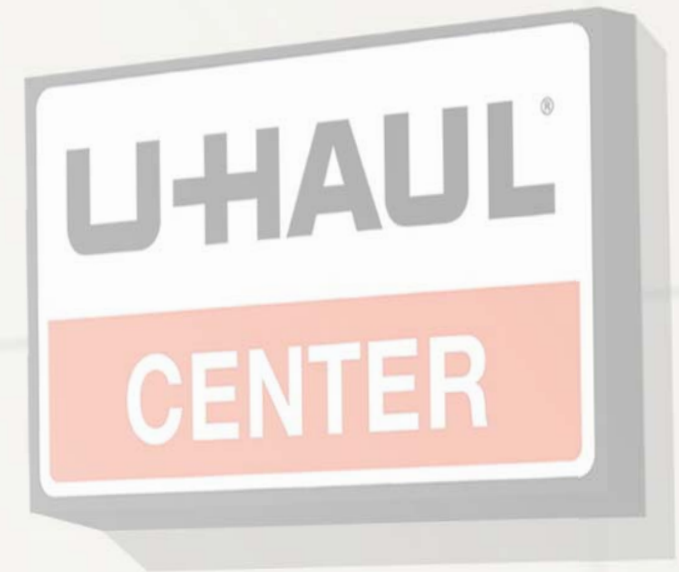
Date	10/25/22
Scale	AS NOTED
Drawn	RJB
Job	202280
Sheet	A-2
OF	2
Sheets	

© 2022 R.B. CUSTOM DESIGNS INC.



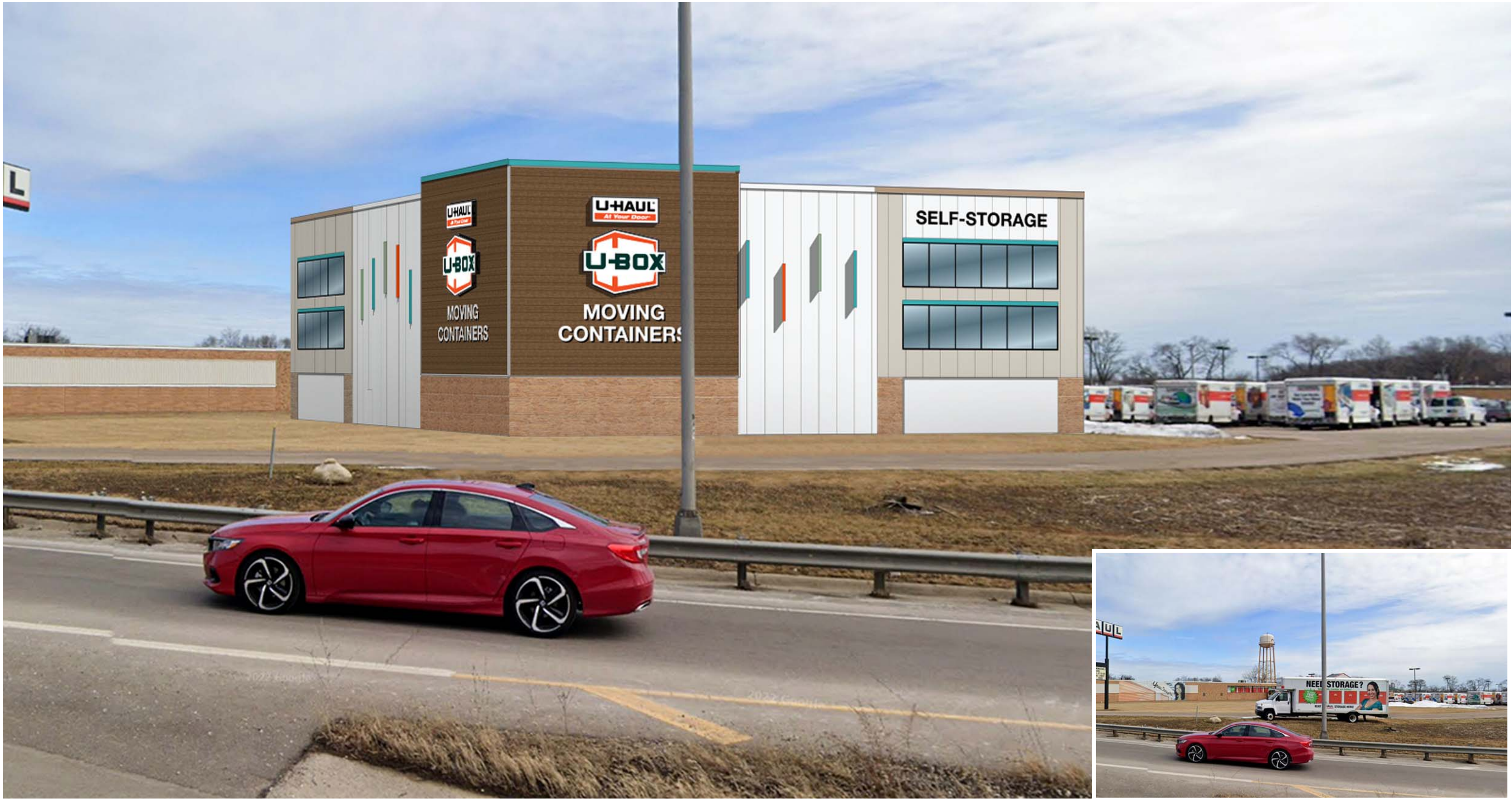
# SIGNAGE PROPOSAL

***CRYSTAL LAKE, IL***



# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014





# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014



**SOUTH ELEVATION**

Scale: 1" = 20'



**EAST ELEVATION**

Scale: 1" = 20'



**WEST ELEVATION**

Scale: 1" = 20'



**NORTH ELEVATION**

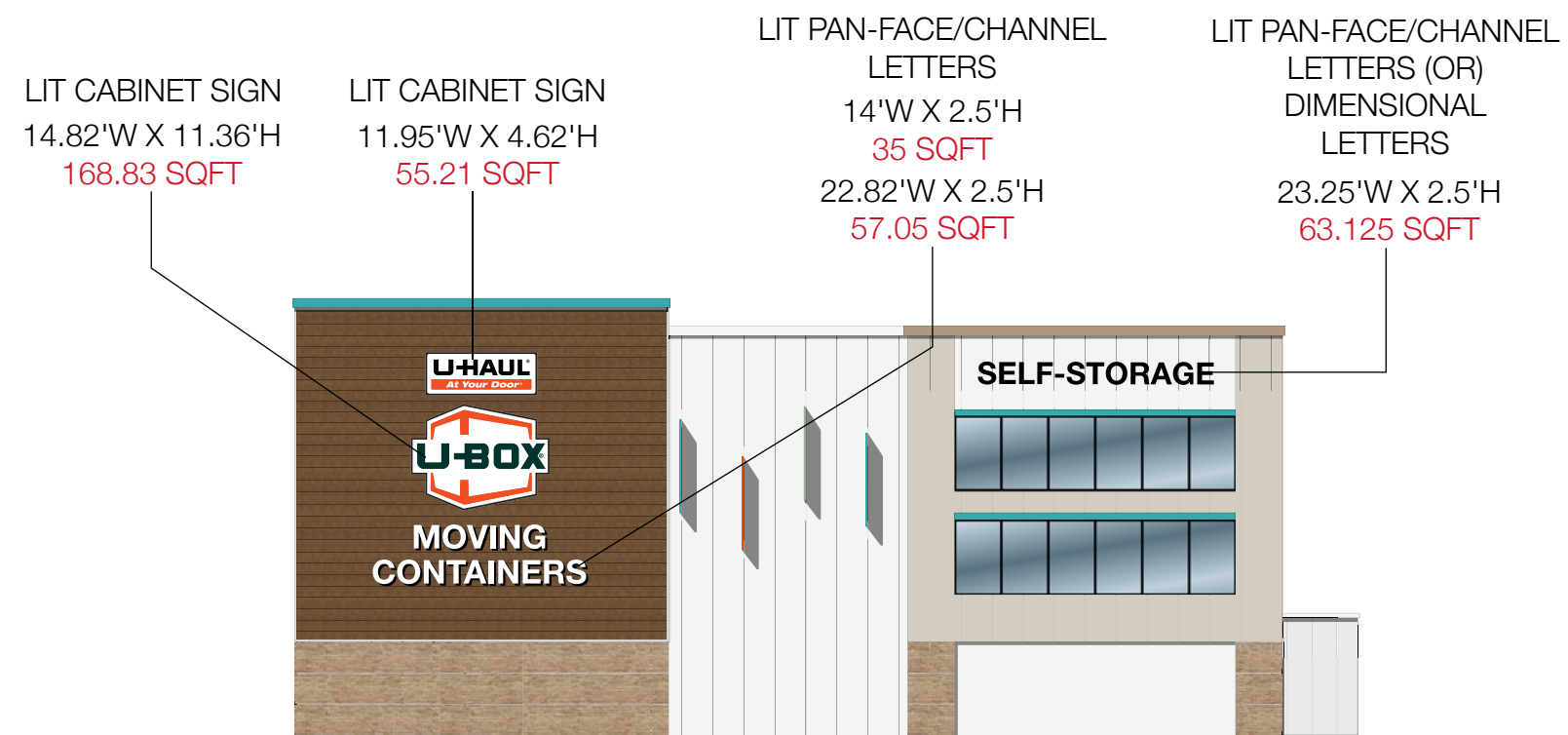
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# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014



## SOUTH ELEVATION

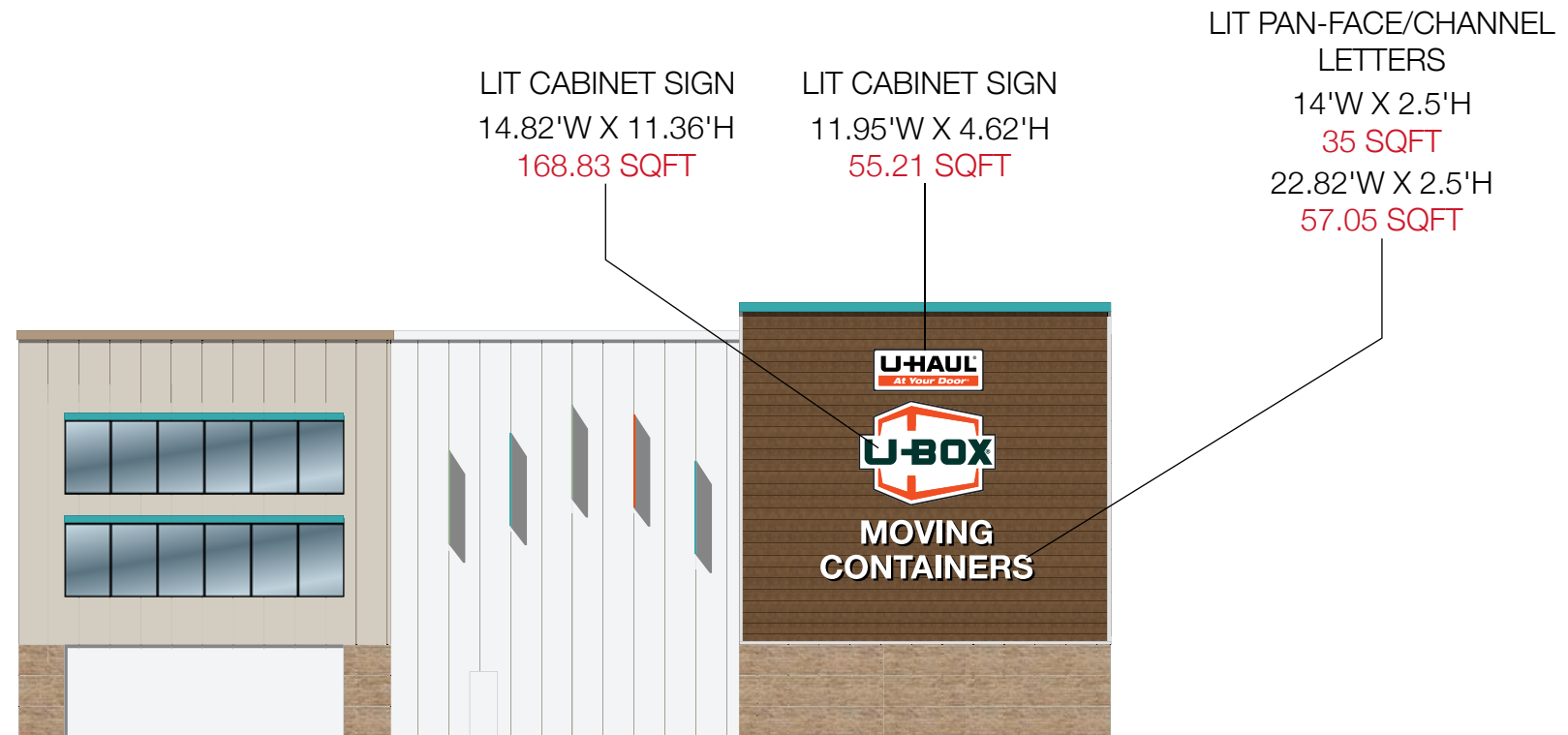
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# MOVING & STORAGE OF CRYSTAL LAKE

4504 Northwest Hwy., Crystal Lake, IL 60014



## WEST ELEVATION

Scale: 1" = 20'



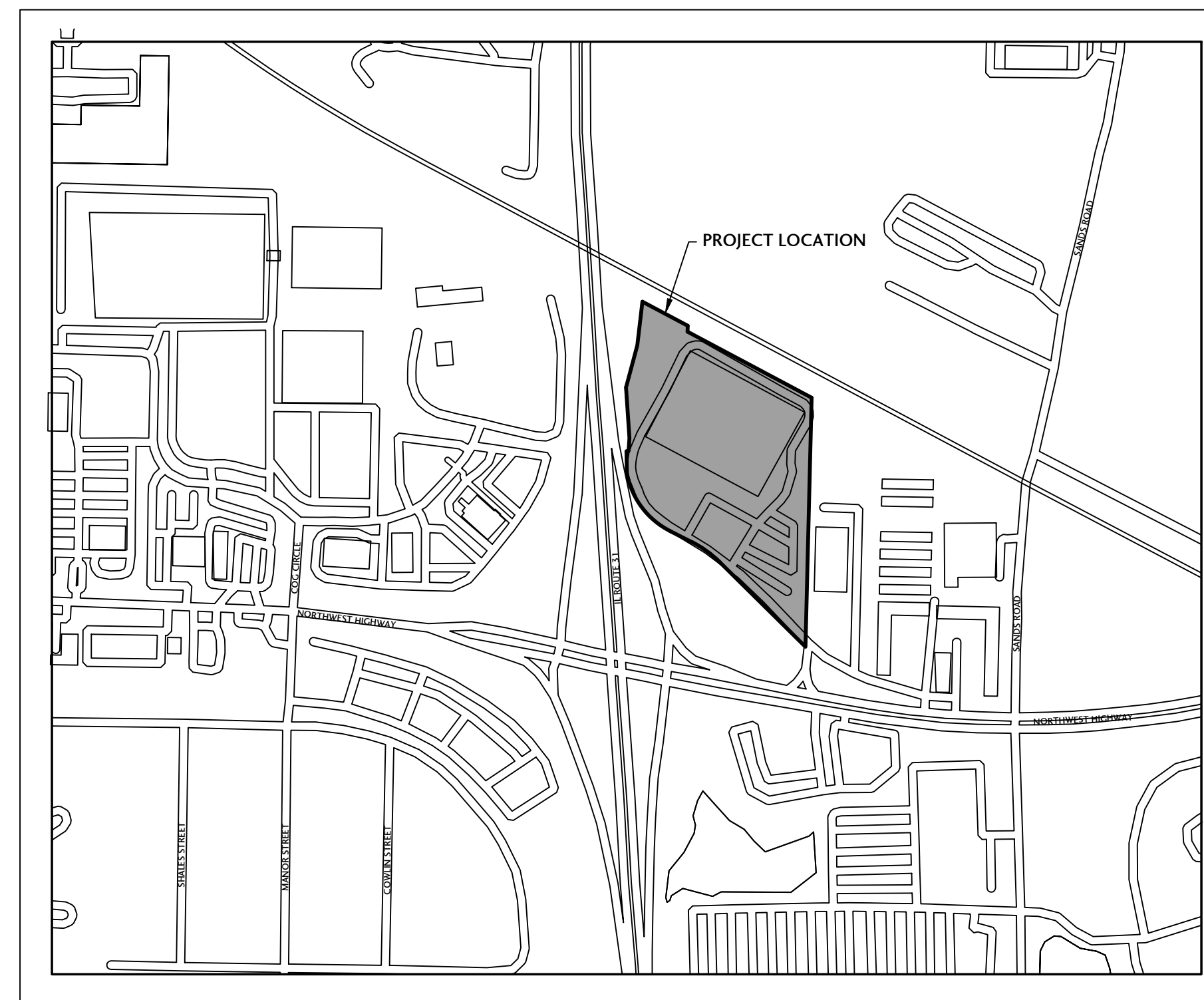
PRELIMINARY  
NOT FOR CONSTRUCTION

# ENGINEERING PLANS FOR U-HAUL CRYSTAL LAKE U-BOX BUILDING

4504 NORTHWEST HWY  
CRYSTAL LAKE, IL 60014

PLANS PREPARED FOR:

MR. BRIAN HEIMSOOTH  
B&C ENTREPRISES  
2482 TECHNOLOGY DRIVE  
ELGIN, IL 60124



LOCATION MAP  
N.T.S.

EXISTING	DESCRIPTION	PROPOSED
⊖	DOWN GUY	⊖
⊖	DRAIN	⊖
⊖	ELECTRIC TELEPHONE TV RISERS	⊖
⊖	UTILITY HANDHOLE MANHOLE	⊖
⊖	ELECTRIC GAS WATER METER	⊖
⊖	UTILITY MARKER	⊖
⊖	LIFT STATION	⊖
⊖	SPIGOT	⊖
⊖	TRAFFIC CONTROL BOX	⊖
⊖	TRAFFIC CONTROL SIGNAL	⊖
⊖	TRANSFORMER	⊖
⊖	WELL	⊖
⊖	SOIL BORING	⊖
⊖	A/C UNIT	⊖
⊖	FLAG POLE	⊖
⊖	CURB INLET	⊖
⊖	SANITARY MANHOLE	⊖
⊖	STORM MANHOLE	⊖
⊖	STORM CATCH BASIN	⊖
⊖	STORM INLET	⊖
⊖	FLARED END SECTION	⊖
⊖	VALVE VAULT	⊖
⊖	WATER VALVE	⊖
⊖	FIRE HYDRANT	⊖
⊖	SIGN POST	⊖
⊖	LIGHT POLE	⊖
⊖	DOWNSPOUT	⊖
⊖	BOLLARD	⊖
⊖	UTILITY POLE	⊖
⊖	CLEANOUT	⊖
⊖	MAILBOX	⊖
⊖	WATERMAIN	⊖
⊖	SANITARY SEWER	⊖
⊖	STORM SEWER	⊖
⊖	FENCE	⊖
⊖	OVERHEAD ELECTRIC	⊖
⊖	ELECTRIC SERVICE	⊖
⊖	TELEPHONE SERVICE	⊖
⊖	GAS SERVICE	⊖
⊖	COMBINED SEWER	⊖
⊖	MAJOR CONTOUR	⊖
⊖	MINOR CONTOUR	⊖

**BENCHMARK**

SITE BENCHMARK:  
CROSS IN HEADWALL  
ELEV=901.85 NAVD88



Know what's below.  
Call before you dig.

OPERATES  
24 Hours  
365 Days

CALL JULIE 1-800-892-0123  
WITH THE FOLLOWING:  
COUNTY MCHENRY  
CITY-TOWNSHIP CITY OF CRYSTAL LAKE  
SEC. & 1/4 SEC. NO.# SE 1/4 SEC 3, T43N, R8E  
48 Hours Before You Dig.  
EXCLUDING SAT., SUN., & HOLIDAYS

**SHEET INDEX:**

C0.0 COVER SHEET  
C0.1 SPECIFICATIONS AND TYPICAL SECTIONS  
C1.0 EXISTING CONDITIONS AND DEMOLITION PLAN  
C2.0 OVERALL SITE PLAN  
C3.0 GRADING & EROSION CONTROL PLAN  
C4.0 STANDARD DETAILS  
C4.1 STANDARD DETAILS



I HEREBY CERTIFY THAT THE PLANS WITH THE FIRM'S NAME LISTED BELOW WERE PREPARED UNDER MY DIRECT SUPERVISION. FURTHERMORE, THE PROPOSED PROJECT WILL NOT RESULT IN DRAINAGE, EROSION OR RUNOFF WHICH ADVERSELY IMPACTS ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY. THE PLANS PREPARED MEET THE MINIMUM REQUIREMENTS OF THE MCHENRY COUNTY STORMWATER MANAGEMENT ORDINANCE. DATED AT RINGWOOD, ILLINOIS THIS 14th DAY OF OCTOBER, 2022

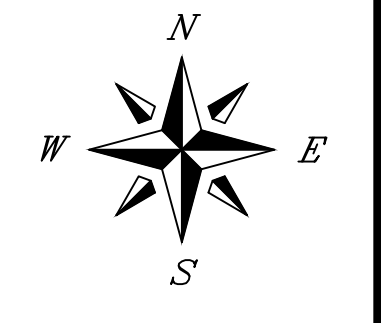
Meghan A. Michel

MEGHAN A. MICHEL, P. E., J. CONDON & ASSOCIATES, INC.  
ILLINOIS REG. PROF. ENGINEER No. 062-057170 EXPIRATION DATE 11-30-2023  
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION FIRM NUMBER: 184-006759

**J. CONDON & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
5415 BUSINESS PARKWAY  
RINGWOOD, ILLINOIS 60072  
815.728.0068  
IL DESIGN FIRM # 184-006759

**B&C ENTREPRISES**

ELGIN,  
ILLINOIS



SCALE  
N/A

ISSUE DATE  
06/03/2022

PROJECT MANAGER  
MAM

DESIGNER  
MAM

QUALITY CONTROL  
JEC

**U-HAUL CRYSTAL LAKE U-BOX BUILDING**  
CRYSTAL LAKE, ILLINOIS

NO.	DATE	DESCRIPTION
1	10/14/22	PER CITY REVIEW AND NEW BUILDING SIZE

LIMITATION OF WARRANTY OF ENGINEER'S INSTRUMENTS OF SERVICE

THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE THE NECESSARY STEPS TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES FOR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

PROJECT NUMBER  
BCEI-21046-3

SHEET TITLE  
COVER SHEET

SHEET NUMBER  
C0.0

PRELIMINARY  
NOT FOR CONSTRUCTION

Design Special Provisions

The Standard Specifications for Road and Bridge Construction prepared by the Department of Transportation of the State of Illinois (latest edition), Supplemental Specifications, the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition) and the Illinois Urban Manual (blue book) as published by the IEPA shall govern the construction of this project.

In addition, the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

1. Scope of Work

The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated "U-HAUL CRYSTAL LAKE U-BOX BUILDING."

2. Construction Of Underground Utilities

A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.

The slopes shall not extend below the top of the pipe, and the trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe.

Open-cut trenches shall be sheeted and braced as required by the governing state, federal laws and municipal ordinances, and as may be necessary to protect life, property or the work.

Where firm foundation is not encountered at the grade established, due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

B. Width of Trenches: The maximum width of the trench at the top of the pipe shall be as follows:

Table with 2 columns: Nominal Pipe Sizes (inches) and Trench Widths (inches). Rows include sizes 12 or smaller, 14-18, 20-24, 27-30, and 33 and larger with corresponding trench widths.

C. Removal of Water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations.

D. Bedding of Pipe: All pipe shall be installed on a bedding of approved, compacted granular material unless otherwise approved by the City Engineer.

E. Trench Backfill: Whenever the excavation is in or within 2 feet of existing or proposed streets, parking areas, driveways, sidewalks or other paved areas, the trench shall be backfilled with approved selected granular material compacted in place.

F. Restoration of Drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed.

G. Utilities: The contractor shall notify all utilities prior to the installation of any pipelines. Where conflicts exist between underground utilities and the proposed underground pipeline requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.

3. Inspection

All improvements shall be subject to inspection by a duly authorized and qualified Owner's Representative both during the course of construction and after construction is complete.

4. Sanitary Service Lines

The services shall be of adequate depth at the property line to gravity drain the lowest point in the building. Where necessary, riser pipes shall be installed to prevent the service line from being installed deeper than necessary.

5. Water Main

Water mains shall be cement lined Class 52 Ductile Cast Iron pipe meeting the requirements of ANSI A21.51 or Class 150 (SDR 18) PVC pipe meeting the requirements of AWWA Standard C900.

6. Fire Hydrants

Hydrants shall be per City of Crystal Detail "UW-06" with break away flange and a depth of "bury" compatible to the finished grade and elevation of the water main.

7. Valves And Vaults

Valve vaults shall be provided for all valves except fire hydrant auxiliary valves and will be of the type specified in the valve vault detail.

8. Protection Of Water Main And Water Service Lines

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

A. Water Main

- 1. Horizontal Separation
a. Water mains shall be located at least 10 feet (3.1 m) horizontally from an existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.
b. Water mains may be located closer than 10 feet (3.1 m) to a sewer line when:
i. local conditions prevent a lateral separation of 10 feet (3.1 m); and
ii. the water main invert is at least 18 inches (460 mm) above the crown of the sewer; and
iii. the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

C. When it is impossible to meet (a) or (b) above, both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction.

2. Vertical Separation

A. A water main shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections.

B. Both the water main and sewer shall be constructed of slip-on, mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction when:

- i. it is impossible to obtain the proper vertical separation as described in (a) above; or
ii. the water main passes under a sewer or drain.

C. A vertical separation of 18 inches (460 mm) between the invert of the sewer drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support for the sewer or drain lines shall be provided to prevent settling and breaking the water main, as shown on the plans or as approved by the ENGINEER.

9. Water Service Line

- a. The horizontal and vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as the water main separation described in (A) above.
b. The water pipe described in (2) above shall be used for sewer service lines when minimum horizontal and vertical separation cannot be maintained.

- 1. Special Conditions. Conditions in (1.), (2.) and (3.) shall be met unless special considerations are covered in the Plans and Special Provisions.
2. Sewer Manholes. No water pipe shall pass through or come in contact with any part of a sewer or sewer manhole.
10. Pressure And Leakage Testing

After the pipe has been laid and partly backfilled as Specified herein, all newly laid pipe or any valved sections of it shall, unless otherwise expressly specified, be subjected to a hydrostatic pressure equal to fifty (50) percent more than the operating pressure at the lowest elevation of the pipe section, but not to exceed the pressure rating of the type of pipe specified.

Each section of pipe to be tested, as determined by the ENGINEER, shall be slowly filled with water and the Specified test pressure shall be applied by means of a pump connected to the pipe in a satisfactory manner.

After completion of the pressure test, a leakage test shall be made to determine the quantity of water lost by leakage under the specified test pressure. Test pressure is defined as the maximum operating pressure of the section under test and is based on the elevation of the lowest point in the line or section under test corrected to the elevation of the test gauge.

11. Disinfection & Chlorination

All installed water mains shall be disinfected and chlorinated per Article 41, Section 2.14 of the Standard Specifications.

12. Storm Sewers

Storm sewers shall be of reinforced concrete pipe meeting the requirements of ASTM C-76. Pipe shall be Class III for depths less than or equal to 14 feet and Class IV for depths exceeding 14 feet or less than 3 feet under paved surfaces.

Corrugated Polyethylene (HDPE) Pipe with Smooth Interior. Pipes and fittings shall meet the requirements of AASHTO M-294 (12" and larger), Type S (corrugated outside smooth inside, 4" -48").

Corrugated Polypropylene (CPP) Pipe with Smooth Interior. Pipes and fittings shall meet the requirements of AASHTO M-330 (12" and larger).

PVC storm sewer shall be SDR 26 ASTM D3034 with ASTM D3212 joints.

Storm Sewer Frames And Grates. All frames and grates shall be per City of Crystal Lake details "UD-01-a-d".

Earth Excavation. This item shall include stripping and stockpiling of all topsoil in areas designated by the Owner's Representative.

Topsoil Placement. The contractor shall place topsoil to a minimum depth of 6 inches over all unpaved disturbed areas ready for landscaping.

Seeding. All disturbed unpaved areas shall be seeded or sodded with Kentucky Bluegrass mixture or with another mixture approved by the owner's representative.

Bituminous Materials (Prime Coat). Prime shall be MC-30 applied at a rate of 0.35 GAL/SY of pavement for all aggregate areas.

Traffic Control. The contractor shall obtain, erect, maintain and remove all signs, barricades, flagmen, and other traffic control devices as may be necessary for the purpose of regulating, warning or guiding traffic.

Engineer's Responsibility. The engineer shall be responsible for the following:

To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the engineer;

The engineer shall not, during such visits or as a result of such observations of the contractor's work in progress, supervise, direct, have control over the contractor's work, nor shall the engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the contractor for safety precautions and programs incidental to the work of the contractor.

20. Construction Drawings/Contractor's Responsibility

No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site.

21. Indemnification

The contractor shall indemnify and hold harmless the Owner and J. Condon & Associates, Inc. from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the contractor's work.

22. Preconstruction Conference

A preconstruction conference for representatives of the developer, municipality and contractor will be held before the contractor proceeds with construction, at a time and place convenient for all parties.

23. Project Quantities

The quantities given by the engineer are intended as a guide for the contractor in determining the scope of the completed project. It is the contractor's responsibility to determine all material quantities and appraise himself of all site conditions.

24. Insurance Requirements

The contractor shall purchase and maintain Comprehensive General Liability and other insurance set forth below which will provide protection from claims which may arise out of or resulting from the performance of work by anyone directly or indirectly employed by the contractor.

A. Worker's Compensation and Employer's Liability insurance in any amount not less than statutory limits required by law.

B. Comprehensive General Liability insurance including coverage in the amount of \$500,000 per accident for property damage and \$1,000,000 per person and \$2,000,000 aggregate per accident for bodily injury, sickness or disease, or death of any person.

C. Comprehensive Automobile Liability insurance covering all automobiles, trucks, trailers and any other motorized equipment owned or leased by the contractor.

25. Certificate of Insurance

The contractor shall not commence work until he has filed with the Owner's Representative a certificate of insurance showing complete coverage of all insurance required, signed by the insurance companies or their authorized agents.

26. Erosion Control

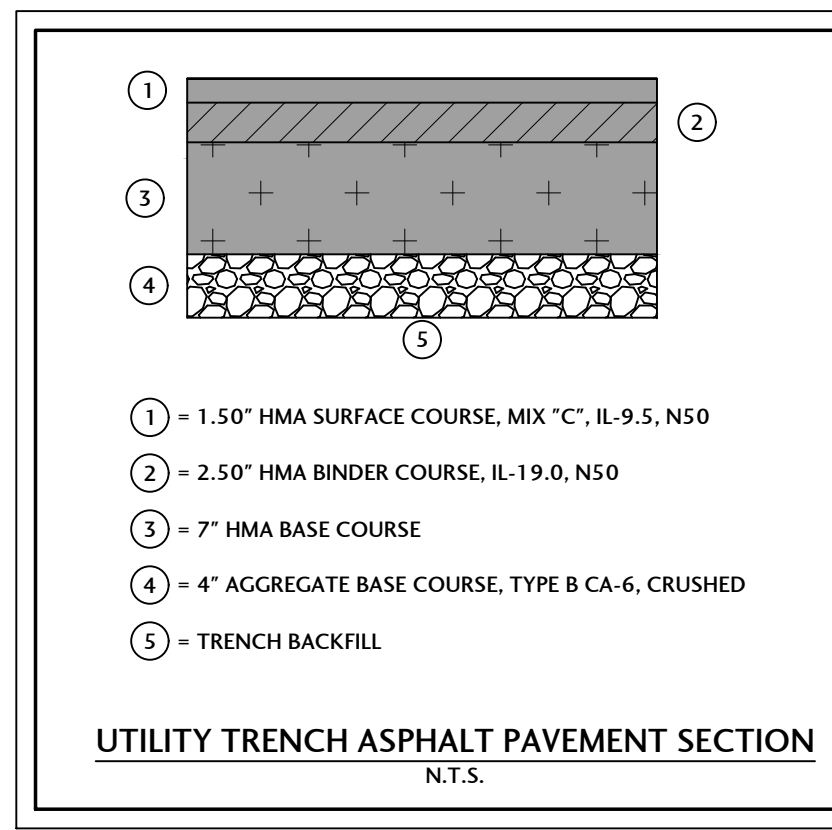
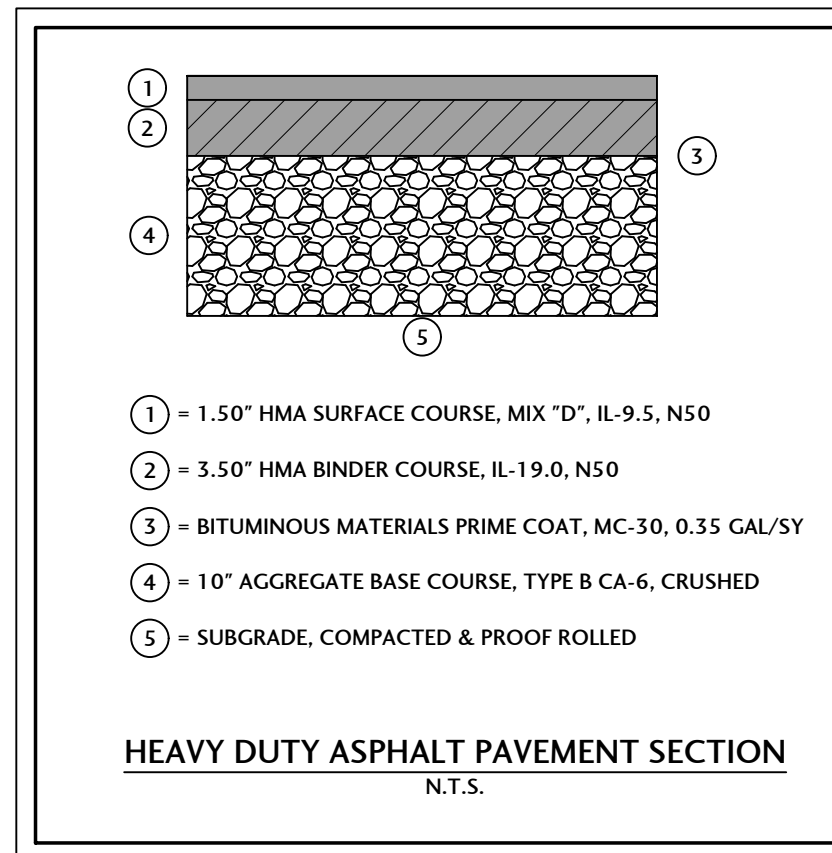
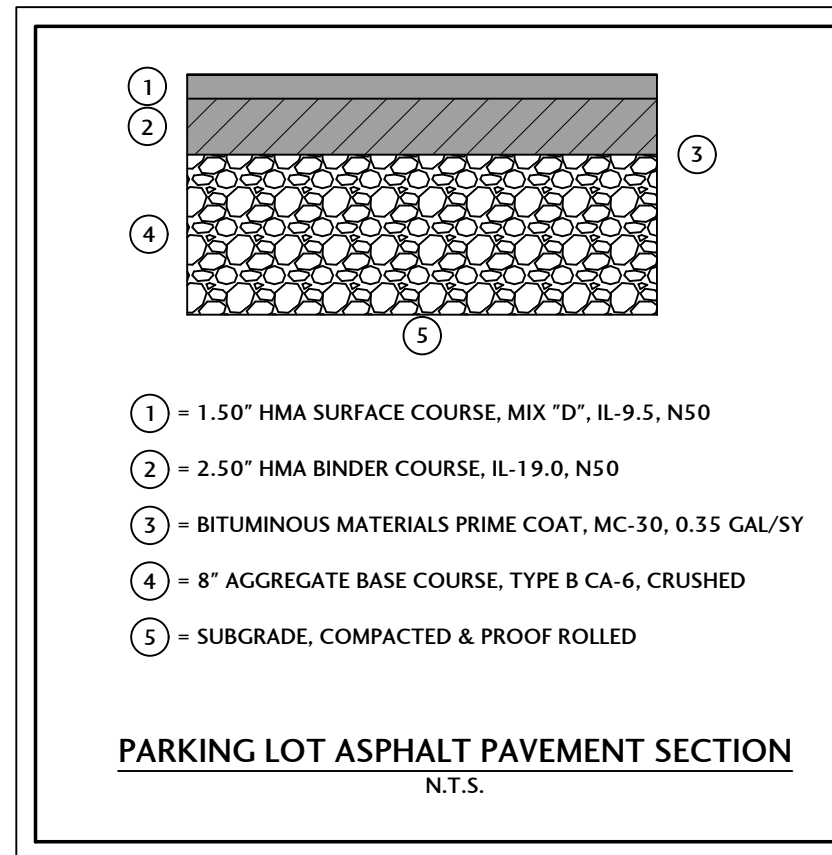
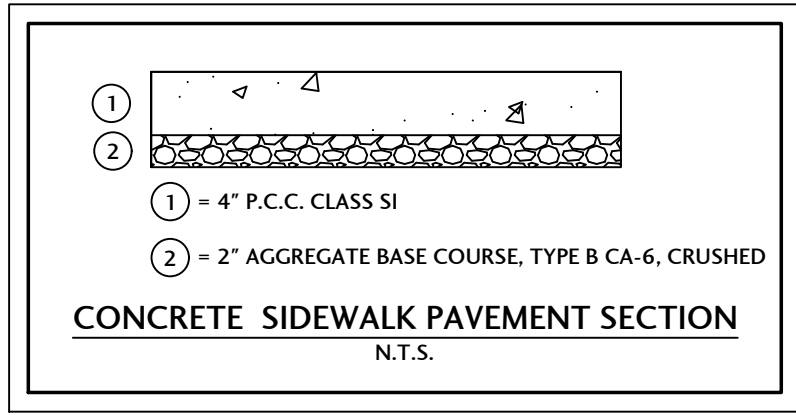
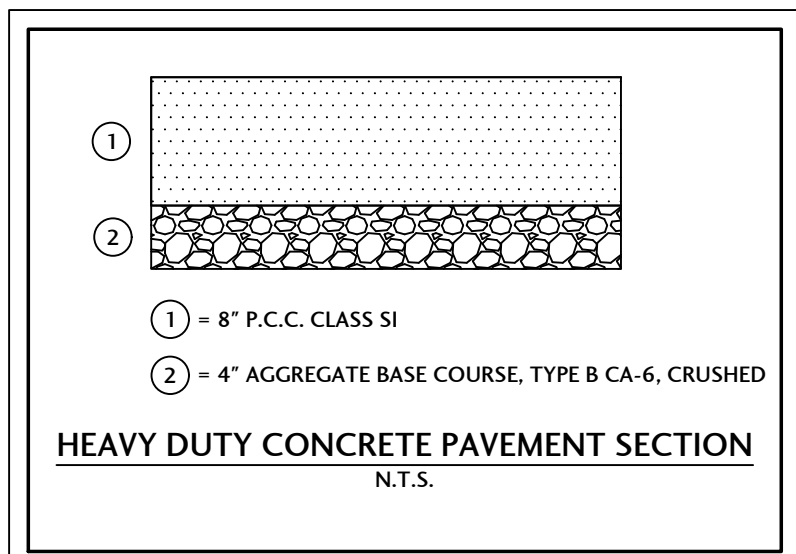
It shall be the contractor's responsibility to properly control erosion on the job site through the use of siltation ponds, filter fabrics, etc. Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the contractor until the seeding has taken hold.

The contractor's responsibility for erosion control shall extend throughout the construction process. The contractor shall be responsible for clean-up of paved surfaces within and outside of the project.

All erosion control practices shall comply with the latest revision of the Illinois Urban Manual (Blue Book) as published by the IEPA.

STANDARD SOIL EROSION AND SEDIMENT CONTROL

- 1. Control measures shall meet the minimum standards and specifications of the Illinois Urban Manual (www.aiswcd.org/IUM) unless stated otherwise.
2. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
3. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
4. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
5. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
6. Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
7. Sediment control measures shall be installed prior to the disturbance of tributary areas.
8. Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the development site.



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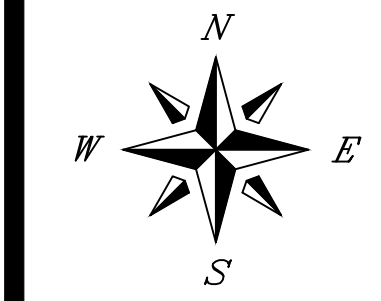


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U-HAUL CRYSTAL LAKE U-BOX BUILDING, CRYSTAL LAKE, ILLINOIS

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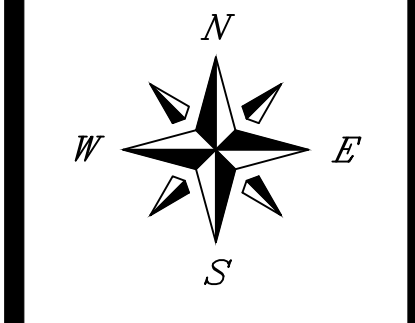
PROJECT NUMBER: BCEI-21046-3, SHEET TITLE: SPECIFICATIONS AND TYPICAL SECTIONS, SHEET NUMBER: C0.1



J. CONDON & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
5415 BUSINESS PARKWAY  
RINGWOOD, ILLINOIS 60072  
815-728-0068  
IL DESIGN FIRM # 184-006759

**B&C ENTERPRISES**

ELGIN,  
ILLINOIS



SCALE  
1" = 60'  
ISSUE DATE  
06/03/2022  
PROJECT MANAGER  
MAM  
DESIGNER  
MAM  
QUALITY CONTROL  
JEC

**U-HAUL CRYSTAL  
LAKE U-BOX  
BUILDING**  
CRYSTAL LAKE,  
ILLINOIS

NO.	DATE	DESCRIPTION
1	10/14/22	PER CITY REVIEW AND NEW BUILDING SIZE

PROJECT NUMBER
BCEI-21046-3

**SHEET TITLE**  
EXISTING  
CONDITIONS AND  
DEMOLITION PLAN

**SHEET NUMBER**  
C1.0

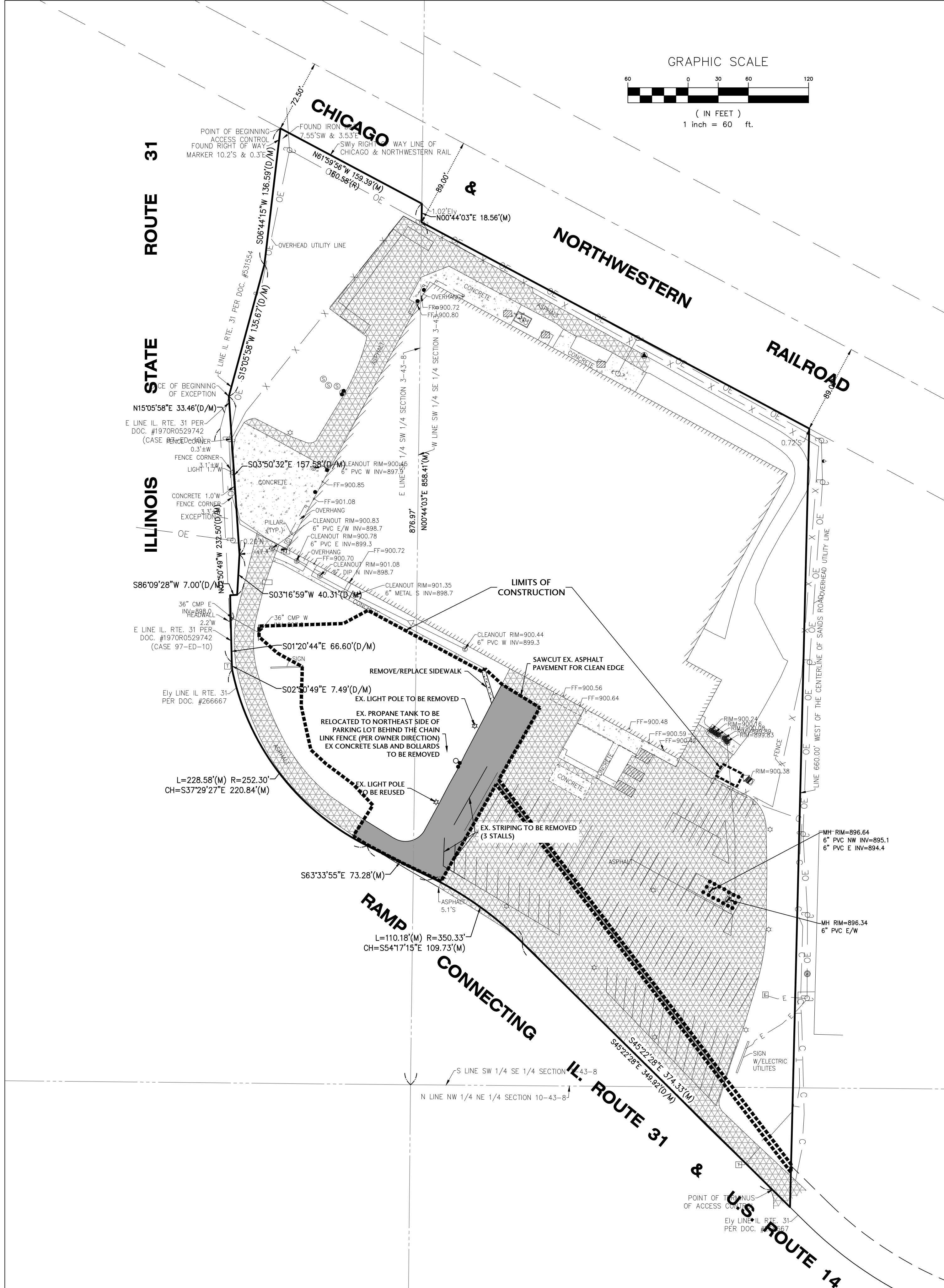
- DEMOLITION NOTES**
- CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO DEMOLITION. SOME UTILITIES MAY NOT BE SHOWN.
  - COORDINATE WITH LOCAL AUTHORITIES AND UTILITY PURVEYORS FOR THE REMOVAL/RELOCATION OF EXISTING UTILITIES.
  - SAWCUTTING OF EXISTING PAVEMENT SHALL BE FULL DEPTH TO PROVIDE A CLEAN VERTICAL FACE TO MATCH PROPOSED PAVEMENT.
  - KEEP ALL PUBLIC AND PRIVATE STREETS CLEAR OF CONSTRUCTION DEBRIS, TRASH, AND MATERIALS. ALL ADJOINING PUBLIC AND PRIVATE PROPERTIES SHALL BE PROTECTED FROM DAMAGED CAUSED BY CONSTRUCTION.
  - ALL WASTE MATERIALS SHALL BE DISPOSED OF OFFSITE IN AN APPROVED FACILITY.
  - ALL WASTE MATERIALS SHALL BE REMOVED IN A MANNER THAT PREVENTS INJURY OR DAMAGE TO PERSONS, ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY.
  - ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION OPERATIONS.
  - THE SITE SHALL BE GRADED TO MINIMIZE ACCUMULATION OF WATER OR DAMAGE TO ANY FOUNDATIONS ON THE PREMISES OF ADJOINING PROPERTY.

**LEGEND**

- = EXISTING BITUMINOUS PAVEMENT
- = EXISTING CONCRETE SIDEWALK
- = EXISTING GRAVEL
- = EXISTING BUILDING
- = PAVEMENT TO BE REMOVED
- = CONCRETE PAVEMENT TO BE REMOVED
- = FULL DEPTH SAWCUT
- = LIMITS OF WORK AREA

**SITE DATA TABLE**

<b>EXISTING</b>	
IMPERVIOUS AREA:	6.23 ACRES
PERVIOUS AREA:	2.50 ACRES
PROPERTY AREA:	8.73 ACRES
<b>PROPOSED</b>	
IMPERVIOUS AREA:	6.60 ACRES (16,139 SF NEW)
DISTURBANCE AREA:	0.95 ACRES



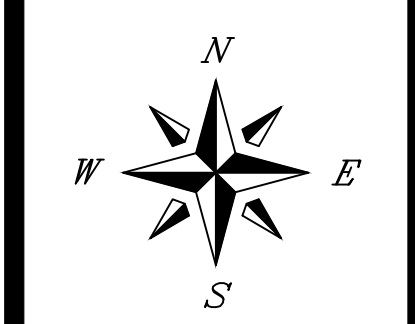




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**B&C ENTERPRISES**

ELGIN,  
 ILLINOIS



SCALE  
 1" = 30'  
 ISSUE DATE  
 06/03/2022  
 PROJECT MANAGER  
 MAM  
 DESIGNER  
 MAM  
 QUALITY CONTROL  
 JEC

**U-HAUL CRYSTAL  
 LAKE U-BOX  
 BUILDING**  
 CRYSTAL LAKE,  
 ILLINOIS

NO.	DATE	DESCRIPTION
1	10/14/22	PER CITY REVIEW AND NEW BUILDING SIZE

PROJECT NUMBER  
**BCEI-21046-3**  
 SHEET TITLE  
**OVERALL SITE PLAN**  
 SHEET NUMBER  
**C2.0**



**LEGEND**

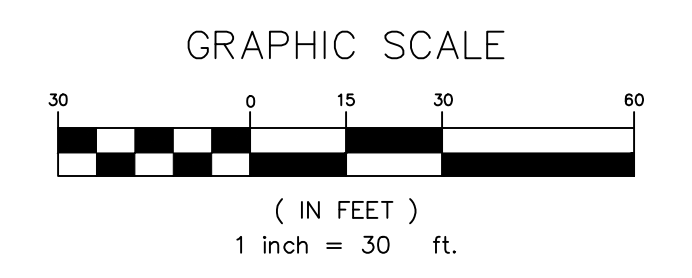
- = EXISTING BITUMINOUS PAVEMENT
- = EXISTING CONCRETE PAVEMENT
- = EXISTING CONCRETE SIDEWALK
- = EXISTING BUILDING
- = PROPOSED BUILDING
- = PROPOSED PARKING LOT PAVEMENT
- = PROPOSED HEAVY DUTY PAVEMENT
- = PROPOSED CONCRETE PAVEMENT
- = PROPOSED CONCRETE SIDEWALK

**STORM SEWER TAGS**

- P1. PROP 12" FES W/GRATE  
INV = 897.00
- P2. PROP 58 LF 12" ST SEWER @ 0.86%
- P3. PROP CB TC 3' DIA, T8GR  
RIM = 899.50  
INV = 896.50 (SW, SE)
- P4. PROP 41 LF 12" ST SEWER @ 0.98%
- P5. PROP CB TC 3' DIA, T8GR  
RIM = 899.25  
INV = 896.10 (E, W)
- P6. PROP 85 LF 12" ST SEWER @ 0.53%
- P7. PROP CB TC 3' DIA, T8GR  
RIM = 899.30  
INV = 895.65 (E, W)
- P8. PROP 38 LF 12" ST SEWER @ 0.53%
- P9. PROP CB TC 3' DIA, T8GR  
RIM = 899.35  
INV = 895.45 (NW, SE)
- P10. PROP 60 LF 12" ST SEWER @ 0.50%
- P11. PROP CB TA, 4' DIA, TIF OL  
W/ SNOUT DEBRIS HOOD  
RIM = 899.00  
INV = 895.15 (N)  
INV = 893.90 (W, SE)
- P12. PROP CB TA, 3' DIA, TIF OL  
RIM = 896.25  
INV = 894.15
- P13. PROP 33 LF 12" ST SEWER @ 0.76%
- P14. PROP 477 LF 15" ST SEWER @ 0.30%
- P15. PROP 15" FES W/GRATE  
INV = 892.45

**OVERALL NOTES**

1. ALL SIGNING AND PAVEMENT MARKINGS SHALL MEET MUTCD STANDARDS.
2. PAVEMENT MARKINGS TO BE 4" WIDE PAINT UNLESS OTHERWISE NOTED.
3. ALL ACCESSIBLE PARKING SIGNS (R7-8) SHALL BE PLACED AT THE CENTER OR THE PARKING SPACE AND WITHIN 5' OF THE SPACE.
4. ALL DIMENSIONS ARE TO BACK OF CURB, EDGE OF PAVEMENT, AND OUTSIDE OF BUILDING FOUNDATION UNLESS OTHERWISE NOTED.
5. STRIPING DIMENSIONS ARE FROM CENTER TO CENTER OF PAVEMENT MARKING.

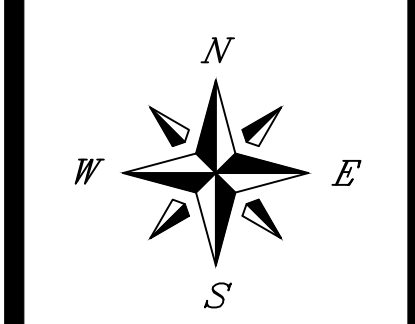




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**B&C ENTERPRISES**

ELGIN,  
ILLINOIS

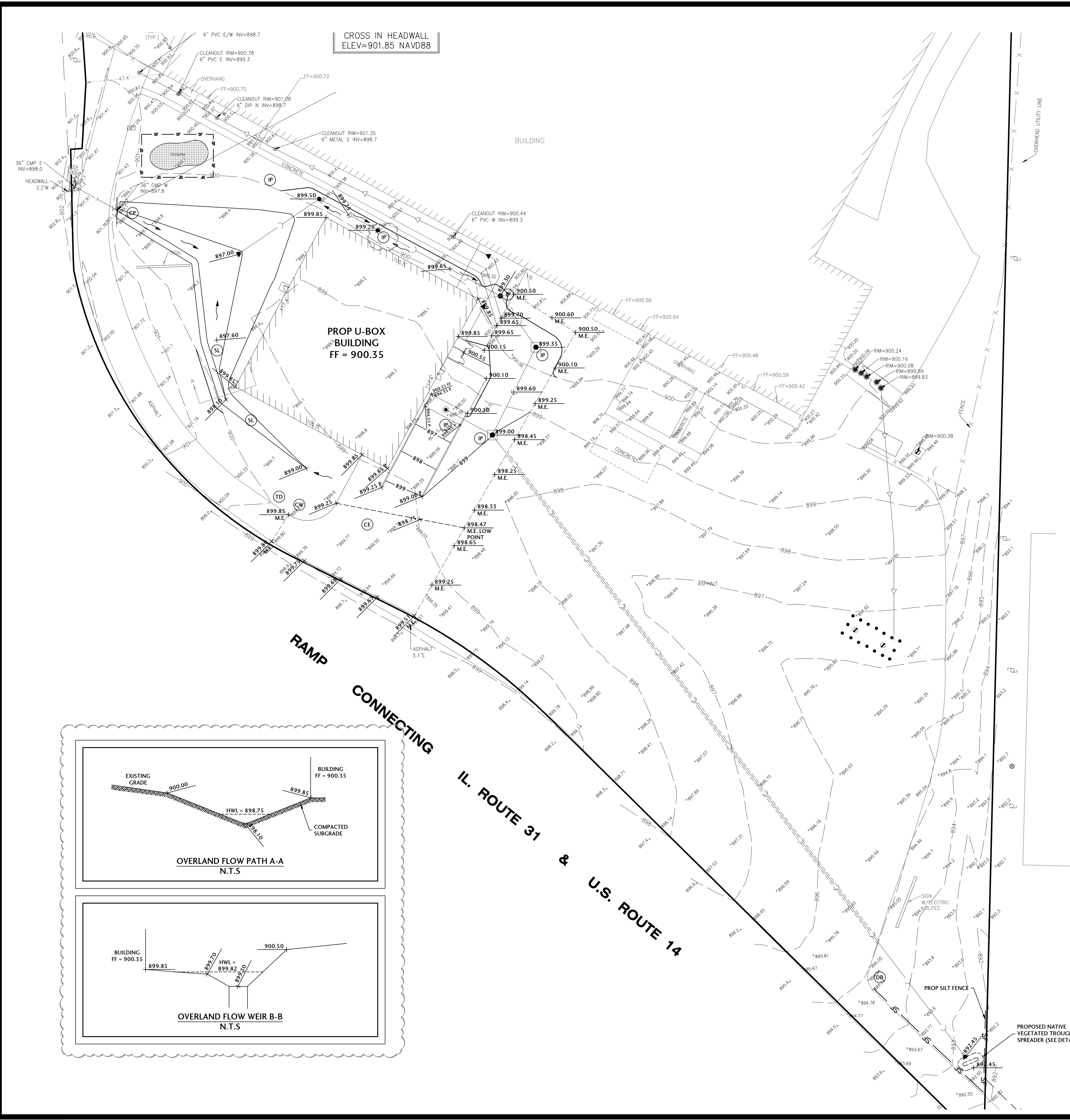


SCALE  
**1" = 30'**  
 ISSUE DATE  
 06/03/2022  
 PROJECT MANAGER  
 MAM  
 DESIGNER  
 MAM  
 QUALITY CONTROL  
 JEC

**U-HAUL CRYSTAL  
LAKE U-BOX  
BUILDING**  
 CRYSTAL LAKE,  
ILLINOIS

NO.	DATE	DESCRIPTION
1	10/14/22	PER CITY REVIEW AND NEW BUILDING SIZE

PROJECT NUMBER  
**BCEI-21046-3**  
 SHEET TITLE  
**GRADING PLAN**  
 SHEET NUMBER  
**C3.0**



**GRADING & EROSION CONTROL LEGEND**

DRAINAGE ARROW: X-XXX

OVERLAND OVERFLOW ROUTE: [Symbol]

SILT FENCE: SF

TEMPORARY TYPE II / TYPE III TRAFFIC BARRICADES: TB

OPEN-LID INLET PROTECTION: IP

RIP RAP PROTECTION: RR

SEDIMENT LOG (CURLEX SEDIMENT LOG 6") : SL

STABILIZED CONSTRUCTION ENTRANCE (USE EX. PAVEMENT): CE

PERMIT DISPLAY BOARD: DB

PORTABLE CONCRETE WASHOUT AREA: CW

ONSITE TRASH DUMPSTER: TD

SEDIMENT LOG CULVERT PROTECTION: CP

**PROPOSED ELEVATIONS:**

TOP OF CONCRETE CURB: C XXX.XX

EDGE OF CONCRETE/BITUMINOUS PAVEMENT: P XXX.XX

EDGE OF CONCRETE SIDEWALK: W XXX.XX

TOP OF WALL: T/W XXX.XX

BOTTOM OF WALL: B/W XXX.XX

TOP OF FOUNDATION: T/F XXX.XX

FIRST FLOOR ELEVATION: FF XXX.XX

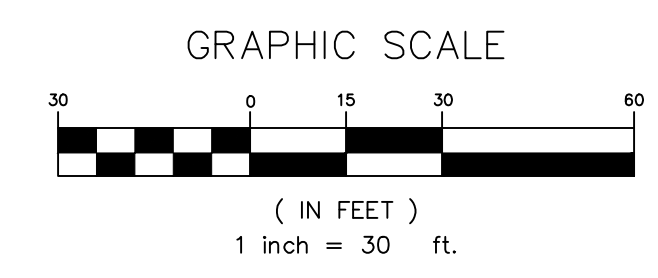
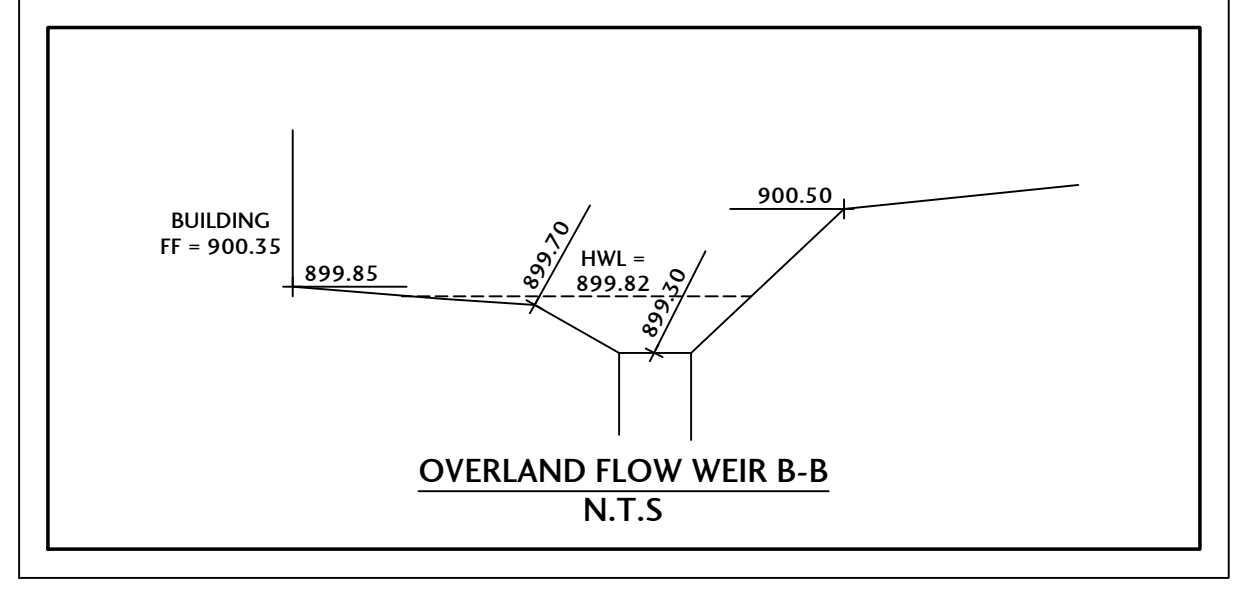
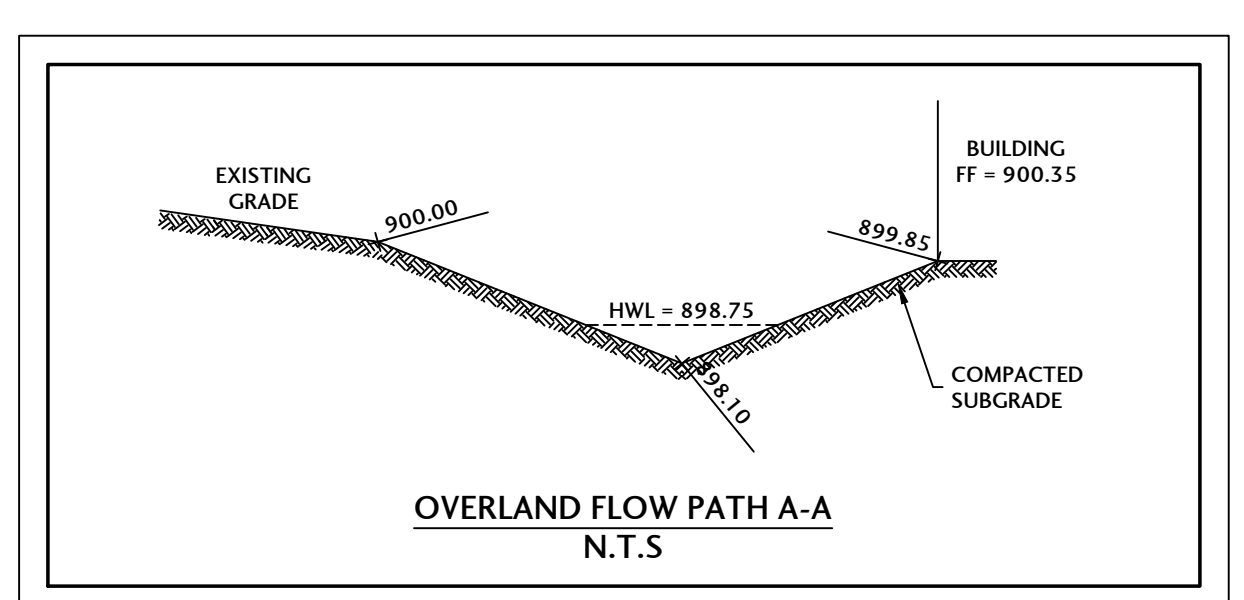
FINISHED GRADE: XXX.XX

- GRADING & EROSION CONTROL NOTES:**
- ALL DISTURBED AREAS SHALL BE STABILIZED WITH NA GREEN D575 EROSION BLANKET OR APPROVED EQUAL OR HYDROSEED UNLESS OTHERWISE NOTED WITHIN THE PLAN SET.
  - CONTRACTOR RESPONSIBLE FOR MAINTENANCE/REPAIR OF EROSION CONTROL MEASURES UNTIL ADEQUATE VEGETATION GROWTH HAS OCCURRED. MAINTENANCE/REPAIR WORK SHALL BE INCIDENTAL TO THE INSTALLATION COSTS.
  - CONTRACTOR RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS RECOMMENDED BY THE ENFORCEMENT OFFICER OR THE DESIGNATED EROSION INSPECTOR AS SITE CONDITIONS WARRANT.
  - ALL TRAPPED SEDIMENT IS TO BE PROPERLY STABILIZED OR DISPOSED OF.
  - IF CONTRACTOR NEEDS TO DEWATER WHEN EXCAVATING, THEY MUST PUMP TO A "DIRT BAG" OR APPROVED EQUAL.
  - WHERE THE USE OF TREE PROTECTION FENCING DOES NOT PROVIDE AMPLE ROOM FOR CONSTRUCTION, TREE TRUNK PROTECTION SHALL BE USED.
  - TEMPORARY SEEDING SHALL BE REQUIRED TO TEMPORARILY STABILIZE DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH CONSTRUCTION WILL BE STOPPED FOR A PERIOD OF MORE THAN 14 DAYS. THE COVER CROP SEED MIX SHALL BE UTILIZED FOR TEMPORARY SEEDING.
  - CONTRACTOR IS RESPONSIBLE TO EMPLOY DUST CONTROL METHODS TO REDUCE & PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. IN ADDITION TO MINIMIZATION OF SOIL DISTURBANCE, CONTRACTOR SHALL UTILIZE MULCHING METHODS (DOT 251.03 OR 251.04), IRRIGATION AND BARRIERS.

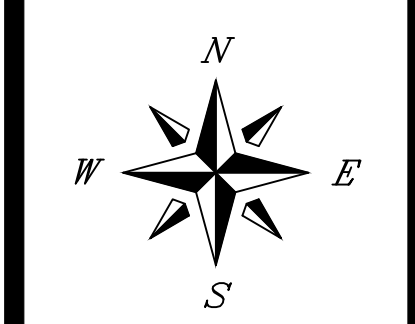
- SEQUENCE OF CONSTRUCTION/EROSION CONTROL MEASURES**
- Installation of sedimentation and erosion control measures.
  - Site clearing and topsoil stripping.
  - Excavation and grading.
  - Placement of topsoil on disturbed areas.
  - Seeding, landscaping and final stabilization. Seeding to be completed within 7 days of final grading.
  - All temporary erosion control measures shall be removed and disposed of within 30 days of final stabilization. All trapped sediment is required to be stabilized or disposed of offsite.

- EROSION CONTROL NOTES**
- Construction on this site shall comply with all Crystal Lake ordinances pertaining to erosion control.
  - All disturbed areas shall be stabilized within 7 days of active disturbance.
  - All roadways shall be cleaned at the end of each day.
  - Silt Sack/approved equal measure shall be placed between all open frame and grades.
  - All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
  - All temporary erosion control measures shall be removed and disposed of within 30 days of final stabilization. All trapped sediment is required to be stabilized or disposed of.
  - All erosion and sediment control work shall conform to the Illinois Urban Manual for erosion control.

- STORM SEWER TAGS**
- P1. PROP 12" FES W/GRATE  
INV = 897.00
  - P2. PROP 58 LF 12" ST SEWER @ 0.86%
  - P3. PROP CB TC 3' DIA, T8GR  
RIM = 899.50  
INV = 896.50 (SW, SE)
  - P4. PROP 41 LF 12" ST SEWER @ 0.98%
  - P5. PROP CB TC 3' DIA, T8GR  
RIM = 899.25  
INV = 896.10 (E, W)
  - P6. PROP 85 LF 12" ST SEWER @ 0.53%
  - P7. PROP CB TC 3' DIA, T8GR  
RIM = 899.30  
INV = 895.65 (E, W)
  - P8. PROP 38 LF 12" ST SEWER @ 0.53%
  - P9. PROP CB TC 3' DIA, T8GR  
RIM = 899.35  
INV = 895.45 (NW, SE)
  - P10. PROP 60 LF 12" ST SEWER @ 0.50%
  - P11. PROP CB TA, 4' DIA, TIF OL  
W/ SNOOT DEBRIS HOOD  
RIM = 899.00  
INV = 895.15 (N)  
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  - P15. PROP 15" FES W/GRATE  
INV = 892.45



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NO.	DATE	DESCRIPTION
1	10/14/22	PER CITY REVIEW AND NEW BUILDING SIZE

**PAVEMENT CUT AND REPLACEMENT**

**LEGEND:**

- TEMPORARY STREET PATCHES DURING WINTER CONSTRUCTION SHALL BE 4" P.C. CONCRETE (DOT CLASS SI OR A MIN. 3" OF UPM GOLD PATCH). PERMANENT PATCHES SHALL BE COMPLETED AS SOON AS POSSIBLE IN THE SPRING.
- HMA BASE COURSE MUST BE AUTHORIZED BY THE CITY ENGINEER.
- FOR CERTAIN UTILITY STREET CUTS, THE CITY ENGINEER MAY AUTHORIZE OR REQUIRE THE USE OF A CONTROLLED LOW-STRENGTH MATERIAL (CLSM) AS PER THE IDOT SPECIAL PROVISIONS.

**Revised:** 1. 06/12/2015  
2.  
3.  
4.

Drawing Name: [Blank]  
Drawing Number: **RD-06**  
Date: 05/19/2015  
Drawn: JH  
Checked: AW  
City of Crystal Lake, Illinois

**GE-02b**

**TOPSOIL STOCKPILING:**

- Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
- Topsoil stockpiled for future use shall be relatively free from large rocks, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
- Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
- If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 555 of the City Code.

**EROSION CONTROL:**

- All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
- All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
- All overland flow routes to be stabilized by sod or blanket.
- Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
- Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
- The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City of Crystal Lake Stormwater Ordinance.
- All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
- Rip-rap material RR 2 (6") - RR4 (16") shall be in accordance with Article 281 and grouted in place according to Article 601 of the IDOT Standard Specifications.
- Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

**UNDERGROUND UTILITY:**

- The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
- All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
- All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
- Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
- Existing manholes to be circular cored and booted.

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **GE-02b**  
Date: 01/30/15  
Drawn: DD  
Checked: AW  
City of Crystal Lake, Illinois

**GE-02a**

**GENERAL SITE-WORK:**

- Pre-Construction meeting shall be conducted with City Staff and all Contractors prior to commencing any grading or underground utility construction activities (schedule meeting with the Community Development Department at 815-356-3655).
- 24-hour Emergency contact numbers shall be provided to City Staff at the Pre-Construction meeting.
- Working hours shall be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays only (except in cases of emergency). Non-emergency work on weekends or holidays is not permitted per City Code except under written permission from the City Engineer. The owner is responsible for the City Inspector cost of overtime inspection beyond the normal eight (8) hour day, including weekends and holidays.
- Public/private streets shall be kept free of dirt and debris with regular cleaning, sweeping, and scraping conducted by the Contractor. Junk and debris shall not be allowed to accumulate, blow, or scatter onto streets or adjacent properties.
- U.I.U.I.E. shall be contacted for utility locations on-site and in the adjacent rights-of-way.
- Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safeguarding measures during the course of all work to protect the public from the construction operations.
- Maintain access to adjacent streets during construction. No closing of streets unless approval is first obtained from the agency with jurisdiction (City of Crystal Lake, McHenry County Department of Transportation, Illinois Department of Transportation, etc.).
- Any damage to public right-of-way, public utilities, streets, curb, etc. shall be repaired/replaced as soon as possible and as directed by the City Engineer.
- The contractor shall give the City of Crystal Lake, Illinois Department of Transportation, and any other governmental agency having jurisdiction, at least two (2) working days notice excluding Saturday and Sunday prior to the initiation of any phase of construction. Contractor shall immediately notify if construction has ceased and renew the two (2) working day notification thereafter.
- The Contractor shall be responsible for obtaining all required permits for construction prior to commencement along or across existing streets or highways. The Contractor shall make arrangements for the proper bracing, shoring and other protection of all roadways before construction begins.

**GRADING:**

- The grading and construction of the site improvements shall not cause ponding of storm sewer water. All areas adjacent to these improvements shall be graded to allow positive drainage.
- The proposed grading elevations shown on the plans are finished grade. A minimum of six (6) inches of topsoil is to be placed below finished grade elevations are achieved.
- Embankment material within roadway and open space areas shall be compacted to a minimum of ninety percent (90%) of maximum density in accordance with ASTM Specification D-1557 (modified proctor method), or to such other density as may be determined appropriate by the soils engineer.
- All subgrade material shall have a minimum CBR (California Bearing Ratio) of 3.0 as determined by the soils engineer, or base replacement and pavement design revisions shall be provided which are adequate to obtain equivalent pavement strength.
- Proposed pavement areas, building pads, driveways and sidewalks and yard/open space areas shall be excavated or filled plus or minus 0.1 foot of design subgrade elevations by the Contractor.
- Any borrow pit locations shall be identified by the Contractor on a copy of the approved site plans and forwarded to the Engineering Division at least 24-hours prior to excavation. Provide backfill compaction reports from a geotechnical engineer and soil test plans to the Engineering Division for any borrow pit area.
- Backfill shall be monitored by a geotechnical engineer on-site with compaction reports forwarded to the Engineering Division for review.
- Water lock shall be on-site at all times during mass-grading operations and be available as needed for the purpose of dust control or at the request of City Staff.
- Use of City fire hydrants is not allowed unless approved (separate from this permit) by the Public Works Department and a hydrant meter and RPZ is obtained from the City of Crystal Lake Water Division (815-356-3614). Only the City of Crystal Lake Water Division may operate valves and hydrants.

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **GE-02a**  
Date: 01/30/15  
Drawn: DD  
Checked: AW  
City of Crystal Lake, Illinois

**EC-01**

**SILT FENCE**

**NOTES:**

- TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED AS NEEDED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION.
- WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJACENT EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED.
- MATERIAL SHALL BE REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.
- DOUBLE ROWS OF SILT FENCE SPACED FIVE (5) FEET APART SHALL BE PLACED AROUND EXISTING STORMWATER MANAGEMENT FACILITIES OR WETLANDS AS ADDITIONAL PROTECTION WHEN REQUIRED BY CITY ENGINEER.

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **EC-01**  
Date: 12/4/2012  
Drawn: DD  
Checked: AW  
City of Crystal Lake, Illinois

**EC-02**

**CONSTRUCTION ENTRANCE**

**NOTES:**

- FILTER FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 282 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO THE PLACEMENT OF ROCK.
- ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATIONS, CA-1, CA-2, CA-3 OR CA-4.
- ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- IF WASH RACKS ARE USED, THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **EC-02**  
Date: 07/31/2012  
Drawn: DD  
Checked: AW  
City of Crystal Lake, Illinois

**UD-01c**

**CATCH BASIN TYPE C**

**CASTING SCHEDULE:**

LOCATION	EJWW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

**ALTERNATE MATERIALS FOR WALLS:**

	T
PRE CAST REINFORCED CONCRETE SECTIONS	3"
CAST-IN-PLACE CONCRETE	6"

**NOTES:**

- IN ADDITION TO THE REQUIREMENTS OF ART. 602.16 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **UD-01c**  
Date: 05/19/2015  
Drawn: JH  
Checked: AW  
City of Crystal Lake, Illinois

**UD-01b**

**CATCH BASIN TYPE A**

**NOTES:**

- ALL CATCH BASINS SHALL BE 4'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
- IN ADDITION TO THE REQUIREMENTS OF ART. 602.16 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.
- DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTIONS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 8 INCHES.

**CASTING SCHEDULE:**

LOCATION	EJWW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

**ALTERNATE MATERIALS FOR WALLS:**

	D	C	T
PRE CAST REINFORCED CONCRETE SECTIONS	4'-0"	2'-6"	4"
	5'-0"	3'-9"	5"
CAST-IN-PLACE CONCRETE	4'-0"	2'-6"	6"
	5'-0"	3'-9"	6"

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **UD-01b**  
Date: 05/18/2012  
Drawn: DD  
Checked: AW  
City of Crystal Lake, Illinois

**EC-04**

**INLET SEDIMENT CONTROL DEVICE**

**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **EC-04**  
Date: 11/22/2007  
Drawn: EM  
Checked: AW  
City of Crystal Lake, Illinois

**UD-01a**

**DRAINAGE STRUCTURES: INLET, TYPE A**

**CASTING SCHEDULE:**

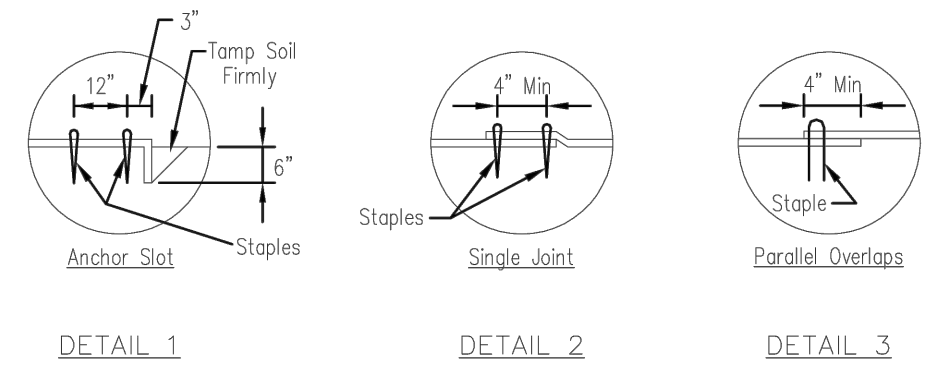
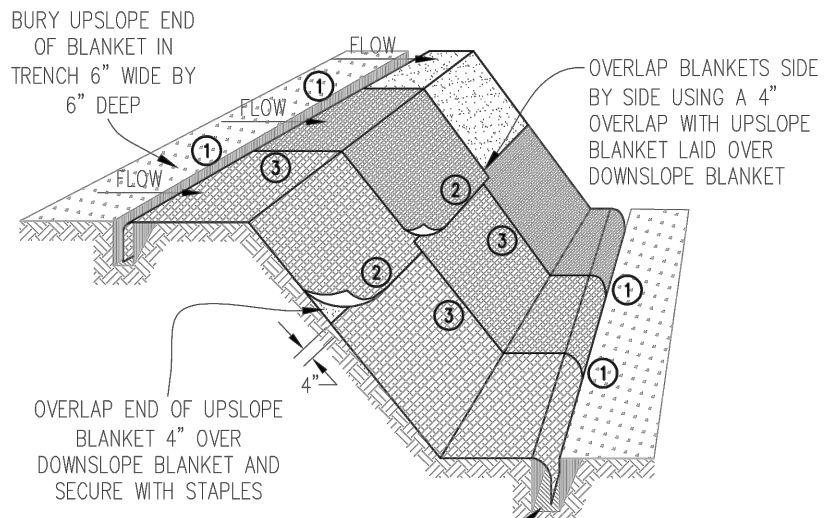
LOCATION	EJWW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-3281*
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

**ALTERNATE MATERIALS FOR WALLS:**

	T
PRE-CAST REINFORCED CONCRETE SECTIONS	3"

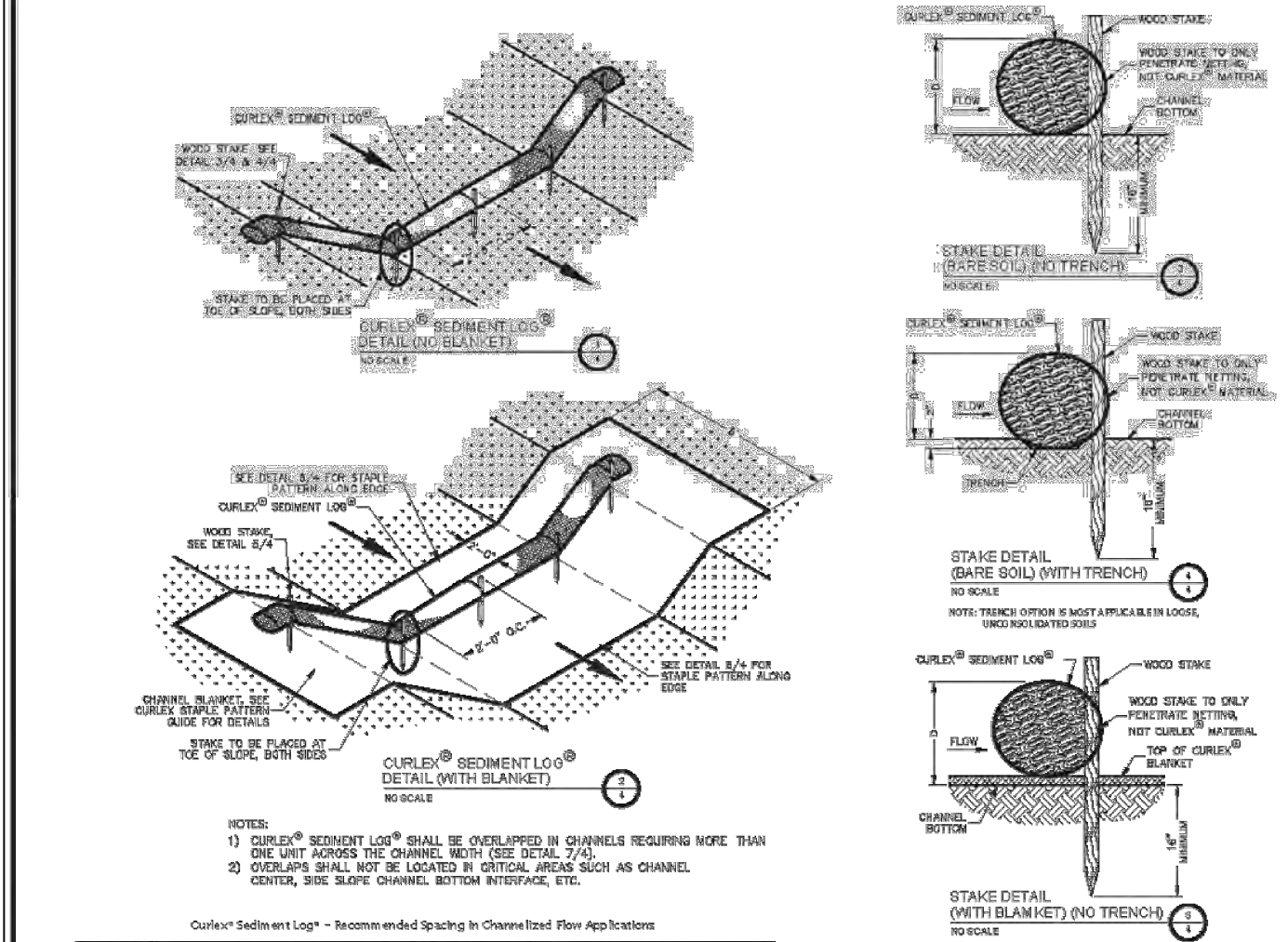
**Revised:** 1. 06/12/2015  
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Drawing Name: [Blank]  
Drawing Number: **UD-01a**  
Date: 05/28/2015  
Drawn: JH  
Checked: AW  
City of Crystal Lake, Illinois



- NOTES:
- Staples shall be placed in a diamond pattern at 2 per s.y. for stiched blankets. Non-stiched shall use 4 staples per s.y. of material. This equates to 200 staples with stiched blanket and 400 staples with non-stiched blanket per 100 s.y. of material.
  - Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
  - Erosion control material shall be placed in contact with the soil over a prepared seedbed.
  - All anchor slots shall be stapled at approximately 12" intervals.

EROSION CONTROL BLANKET INSTALLATION DETAILS



Channel Spacing between Products (ft)

Channel Spacing	3 1/2 in Curlex Sediment Log	1 1/2 in Curlex Sediment Log	20 in Curlex Sediment Log
0.5	11.7	10.4	18.3
1.0	23.4	20.8	36.6
1.5	35.1	31.2	54.9
2.0	46.8	41.6	73.2
2.5	58.5	52.0	91.5
3.0	70.2	62.4	109.8
3.5	81.9	72.8	128.1
4.0	93.6	83.2	146.4
4.5	105.3	93.6	164.7
5.0	117.0	104.0	183.0
5.5	128.7	114.4	201.3
6.0	140.4	124.8	219.6
6.5	152.1	135.2	237.9
7.0	163.8	145.6	256.2
7.5	175.5	156.0	274.5
8.0	187.2	166.4	292.8
8.5	198.9	176.8	311.1
9.0	210.6	187.2	329.4
9.5	222.3	197.6	347.7
10.0	234.0	208.0	366.0
10.5	245.7	218.4	384.3
11.0	257.4	228.8	402.6
11.5	269.1	239.2	420.9
12.0	280.8	249.6	439.2
12.5	292.5	260.0	457.5
13.0	304.2	270.4	475.8
13.5	315.9	280.8	494.1
14.0	327.6	291.2	512.4
14.5	339.3	301.6	530.7
15.0	351.0	312.0	549.0
15.5	362.7	322.4	567.3
16.0	374.4	332.8	585.6
16.5	386.1	343.2	603.9
17.0	397.8	353.6	622.2
17.5	409.5	364.0	640.5
18.0	421.2	374.4	658.8
18.5	432.9	384.8	677.1
19.0	444.6	395.2	695.4
19.5	456.3	405.6	713.7
20.0	468.0	416.0	732.0
20.5	479.7	426.4	750.3
21.0	491.4	436.8	768.6
21.5	503.1	447.2	786.9
22.0	514.8	457.6	805.2
22.5	526.5	468.0	823.5
23.0	538.2	478.4	841.8
23.5	549.9	488.8	860.1
24.0	561.6	499.2	878.4
24.5	573.3	509.6	896.7
25.0	585.0	520.0	915.0

AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS

**COVER CROP MIX (TEMP. SEEDING)**

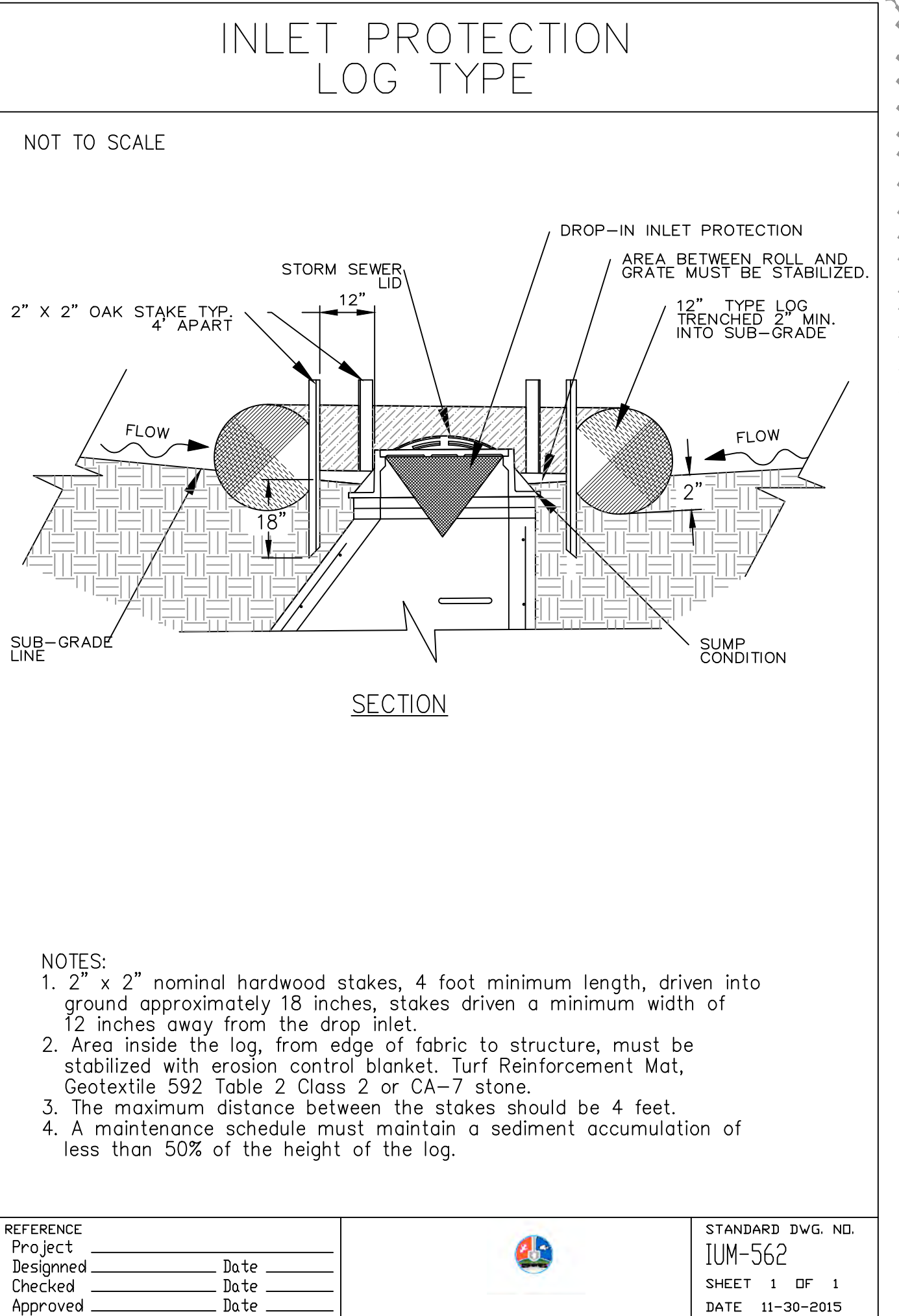
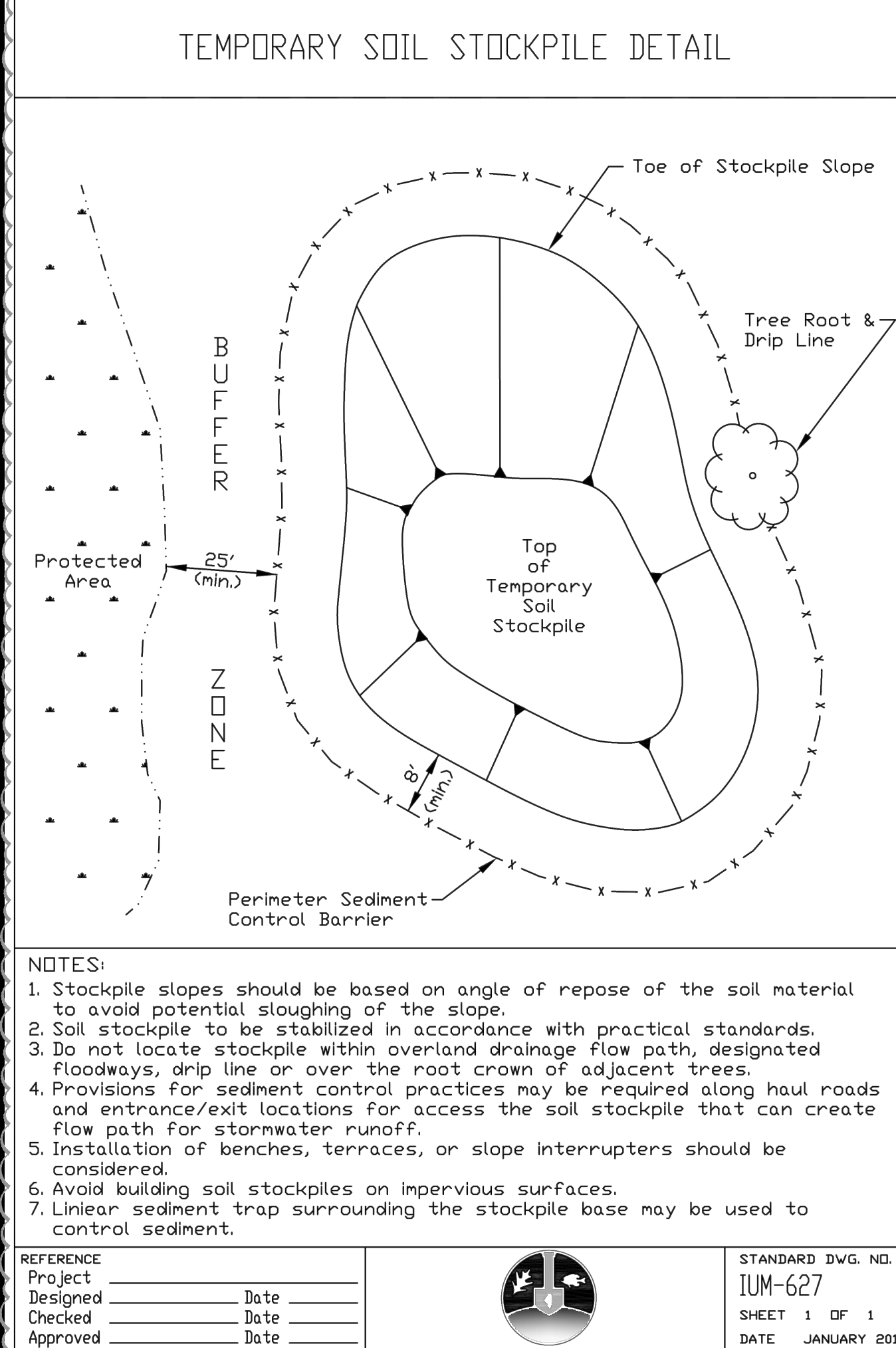
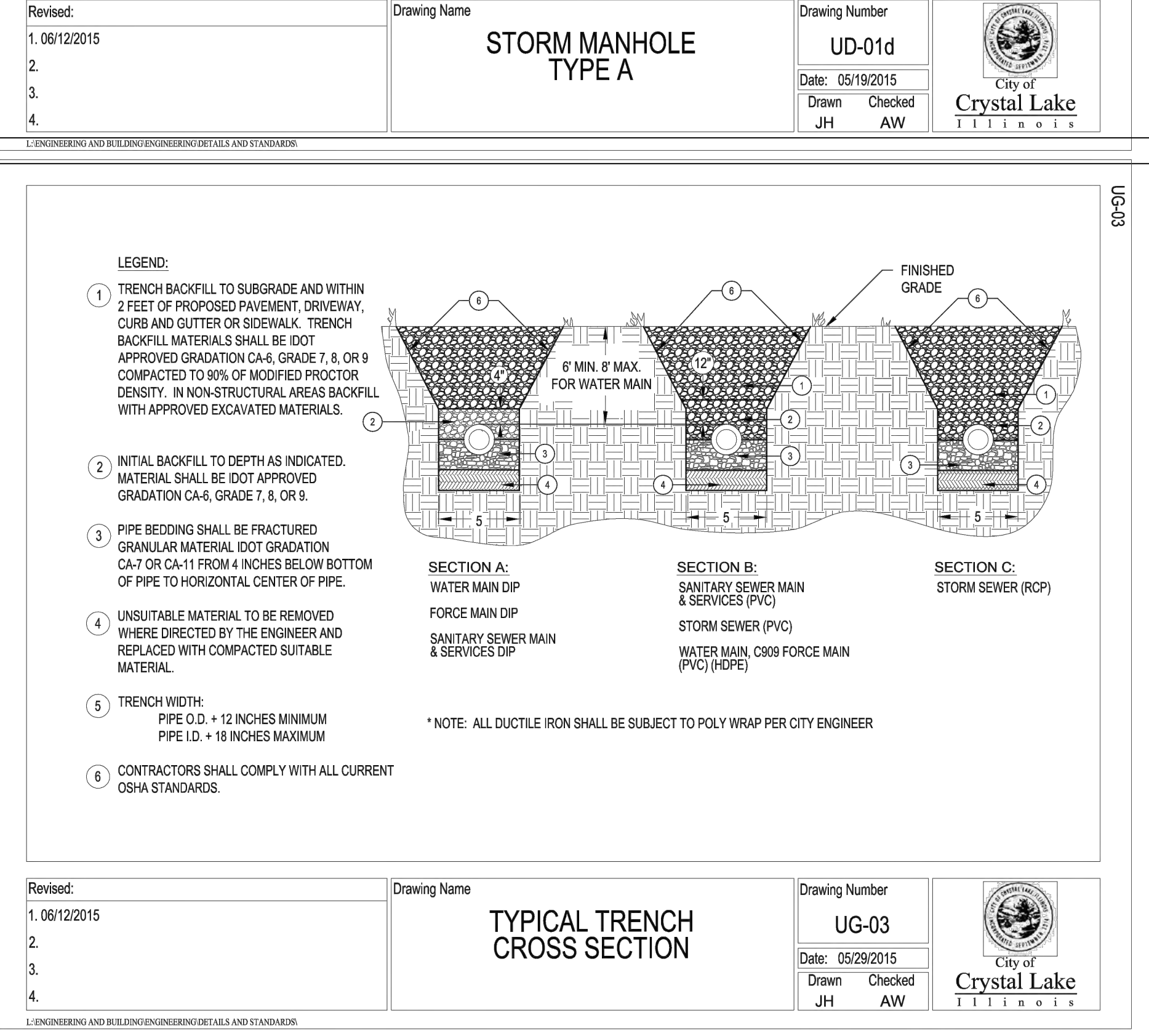
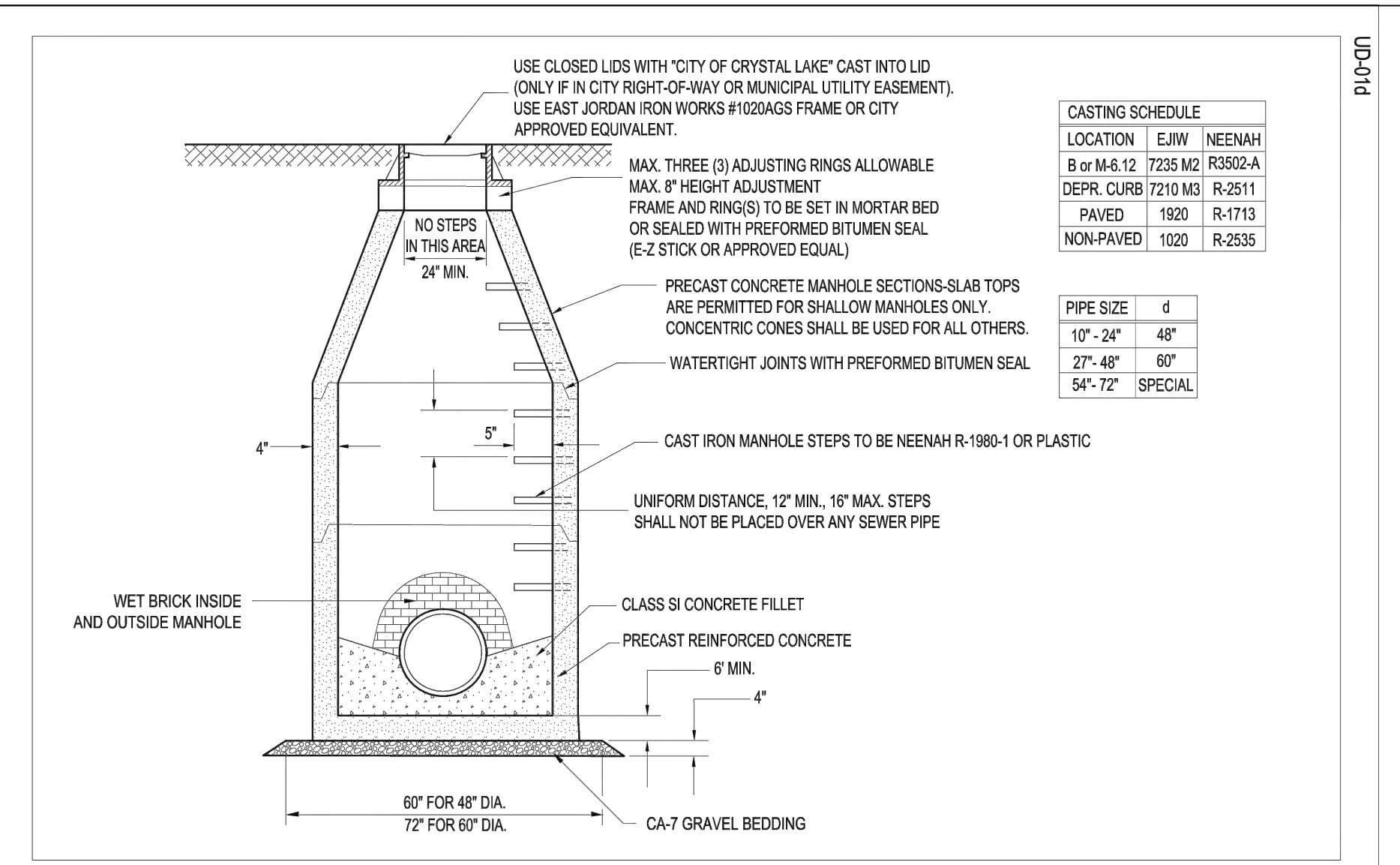
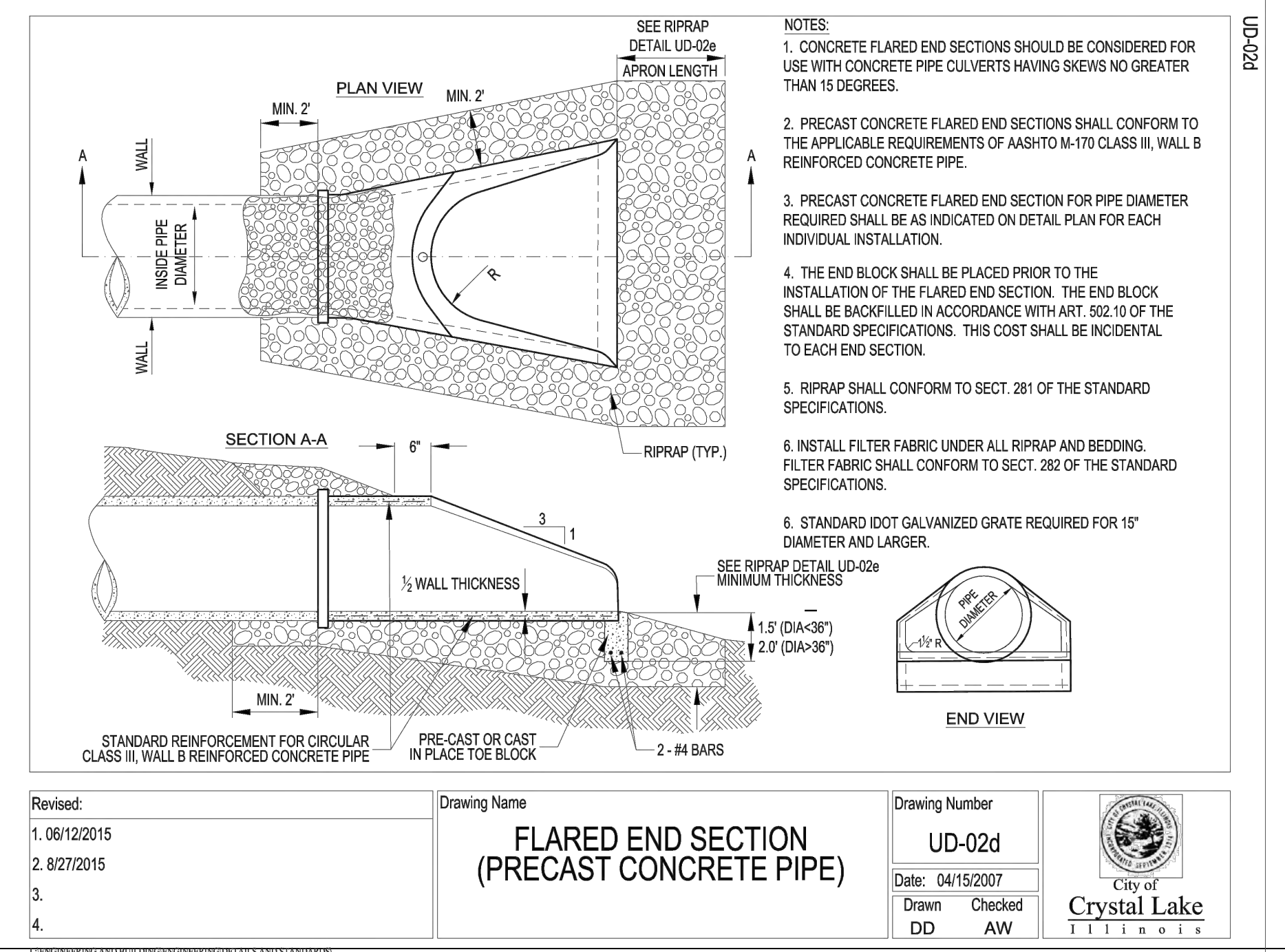
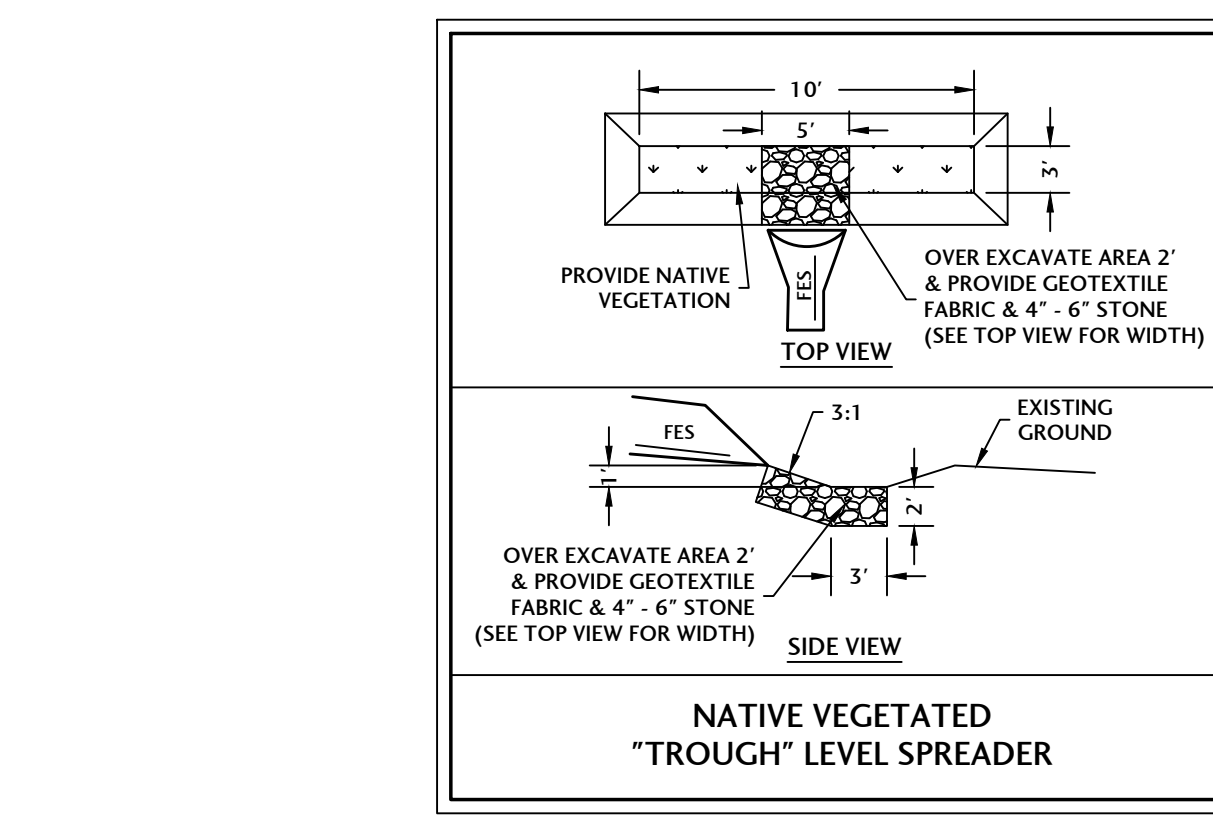
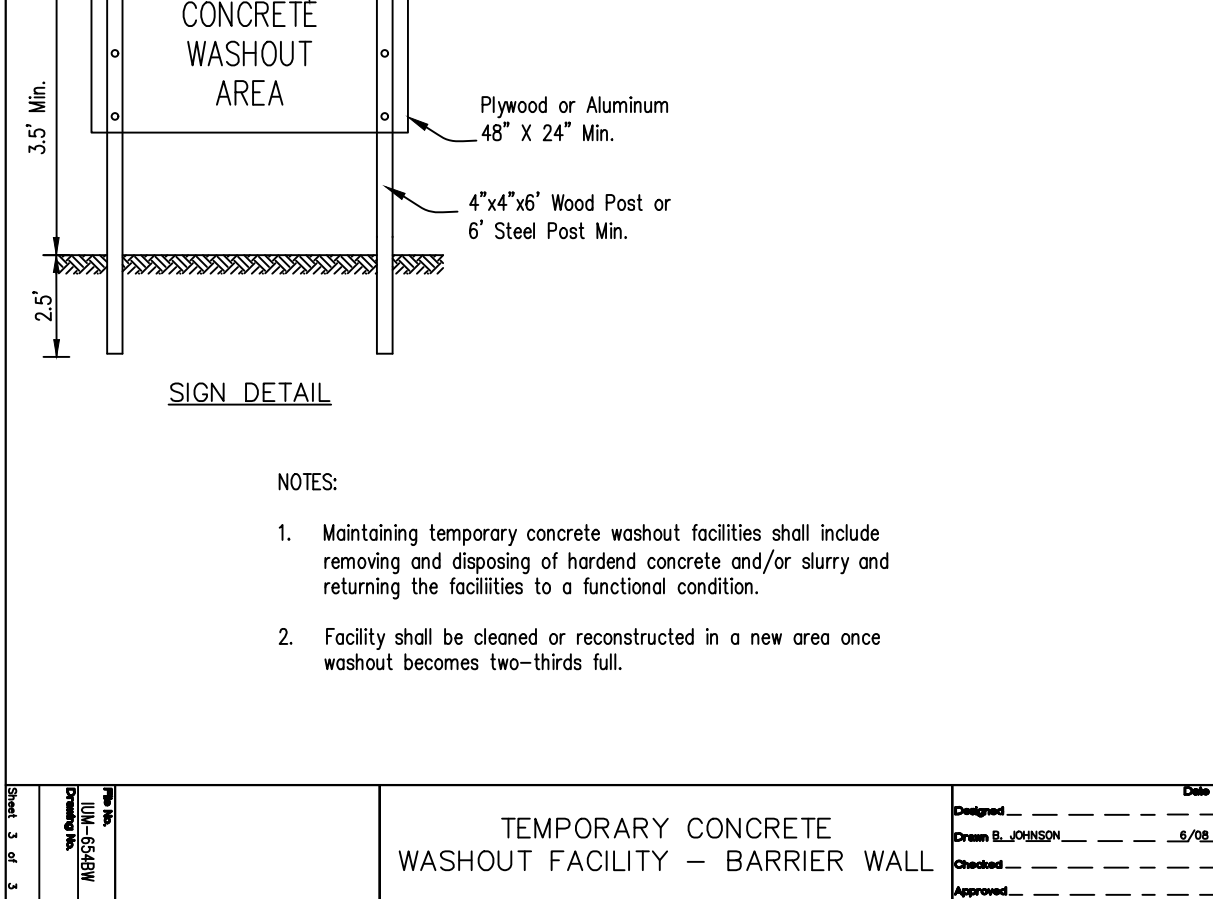
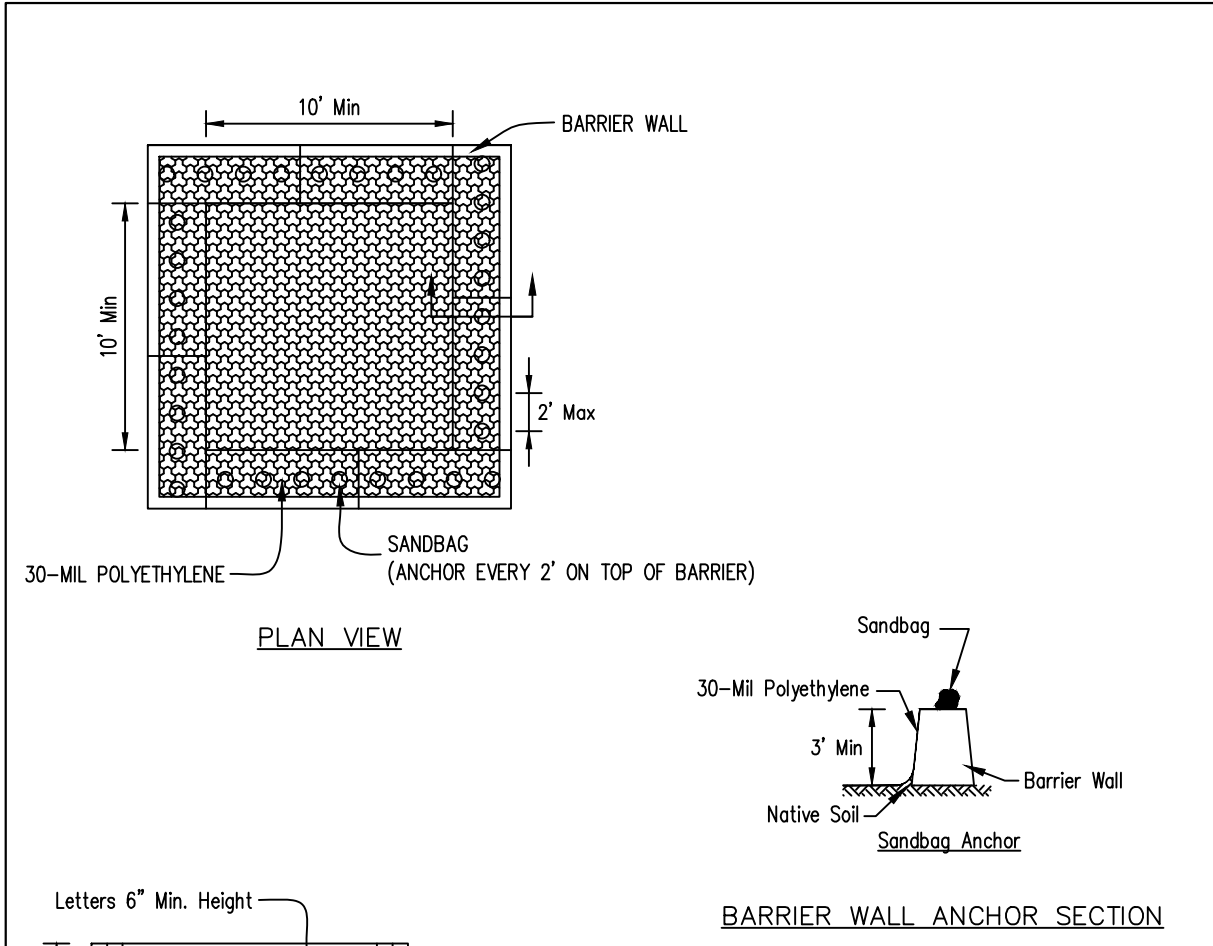
Scientific Name	Common Name	Amount/Ac
<i>Avena sativa</i>	Oats	65 lbs
<i>Lolium multiflorum</i>	Annual Ryegrass	25 lbs

Notes:  
 1. The cover crop rate listed above is for spring and summer, in the event the seed is sown for the fall the Oats shall be sown at 130 lbs/ac.  
 2. Seedbed shall be prepared of loose soil to a depth of 3-4 inches prior to temporary seeding occurring.  
 3. Temporary seed shall be evenly applied with a cyclone seeder, drill, cultipacker seeder or hydroseeder. Small grains should be planted no more than 1 inch deep, grasses no deeper than 1/2 inch. Cover broadcast seed by cultipacking, dragging a harrow or raking.  
 4. Temporary seeding shall be mulched in accordance with IDOT specifications (Article 251.03 or 251.04).

**TURF GRASS SEED MIX (IDOT Class 1) (ONSITE AREAS)**

Common Name	Amount/Ac
Kentucky Bluegrass	100 lbs
Perennial Ryegrass	60 lbs
Creeping Red Fescue	40 lbs

\* FINAL SEEDING ON ALL DISTURBED AREAS UPON CONSTRUCTION COMPLETION



**ENGINEERING SUCCESS**  
 CONSULTING ENGINEERS  
 J. CONDON & ASSOCIATES, INC.  
 5415 BUSINESS PARKWAY  
 RINGWOOD, ILLINOIS 60072  
 815.728.0068  
 IL DESIGN FIRM # 184-006759

**B&C ENTERPRISES**  
 ELGIN, ILLINOIS

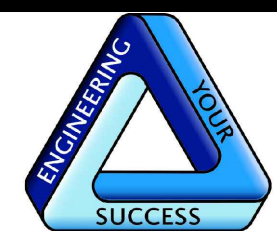
SCALE: N/A  
 ISSUE DATE: 06/03/2022  
 PROJECT MANAGER: MAM  
 DESIGNER: MAM  
 QUALITY CONTROL: JEC

**U-HAUL CRYSTAL LAKE U-BOX BUILDING**  
 CRYSTAL LAKE, ILLINOIS

DESCRIPTION: PER CITY REVIEW AND NEW BUILDING SIZE

DATE: 10/14/22  
 NO. 1

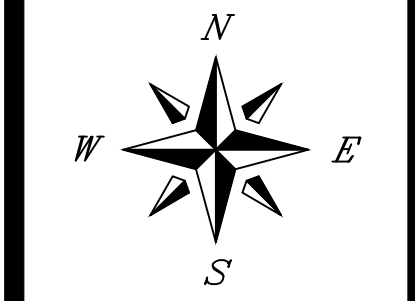
PROJECT NUMBER: BCEI-21046-3  
 SHEET TITLE: STANDARD DETAILS  
 SHEET NUMBER: C4.1



J. CONDON & ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 5415 BUSINESS PARKWAY  
 RINGWOOD, ILLINOIS 60072  
 815.728.0068  
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**B&C ENTERPRISES**

ELGIN,  
ILLINOIS

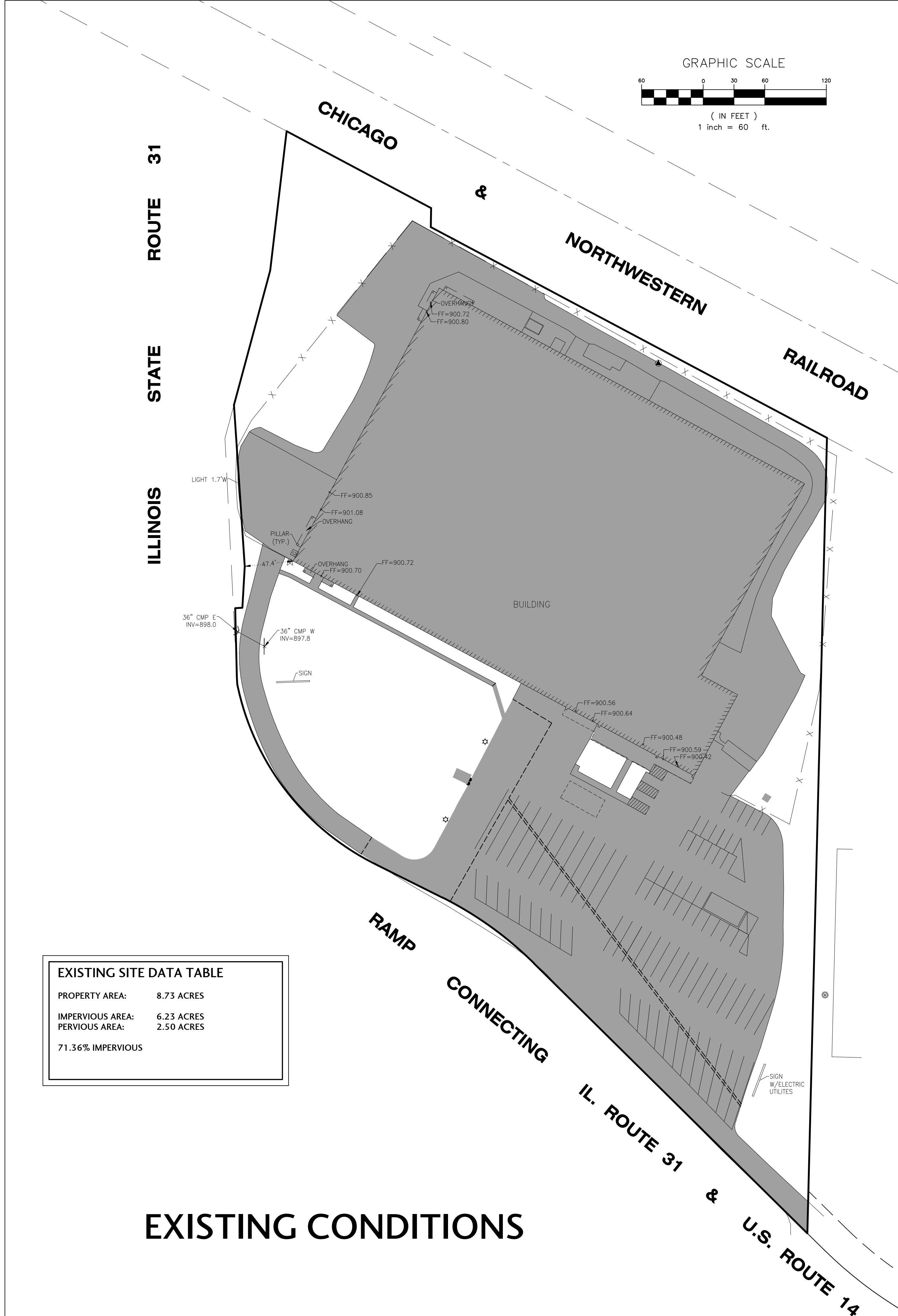


SCALE  
1" = 60'  
 ISSUE DATE  
06/03/2022  
 PROJECT MANAGER  
MAM  
 DESIGNER  
MAM  
 QUALITY CONTROL  
JEC

**U-HAUL CRYSTAL LAKE U-BOX BUILDING**  
 CRYSTAL LAKE, ILLINOIS

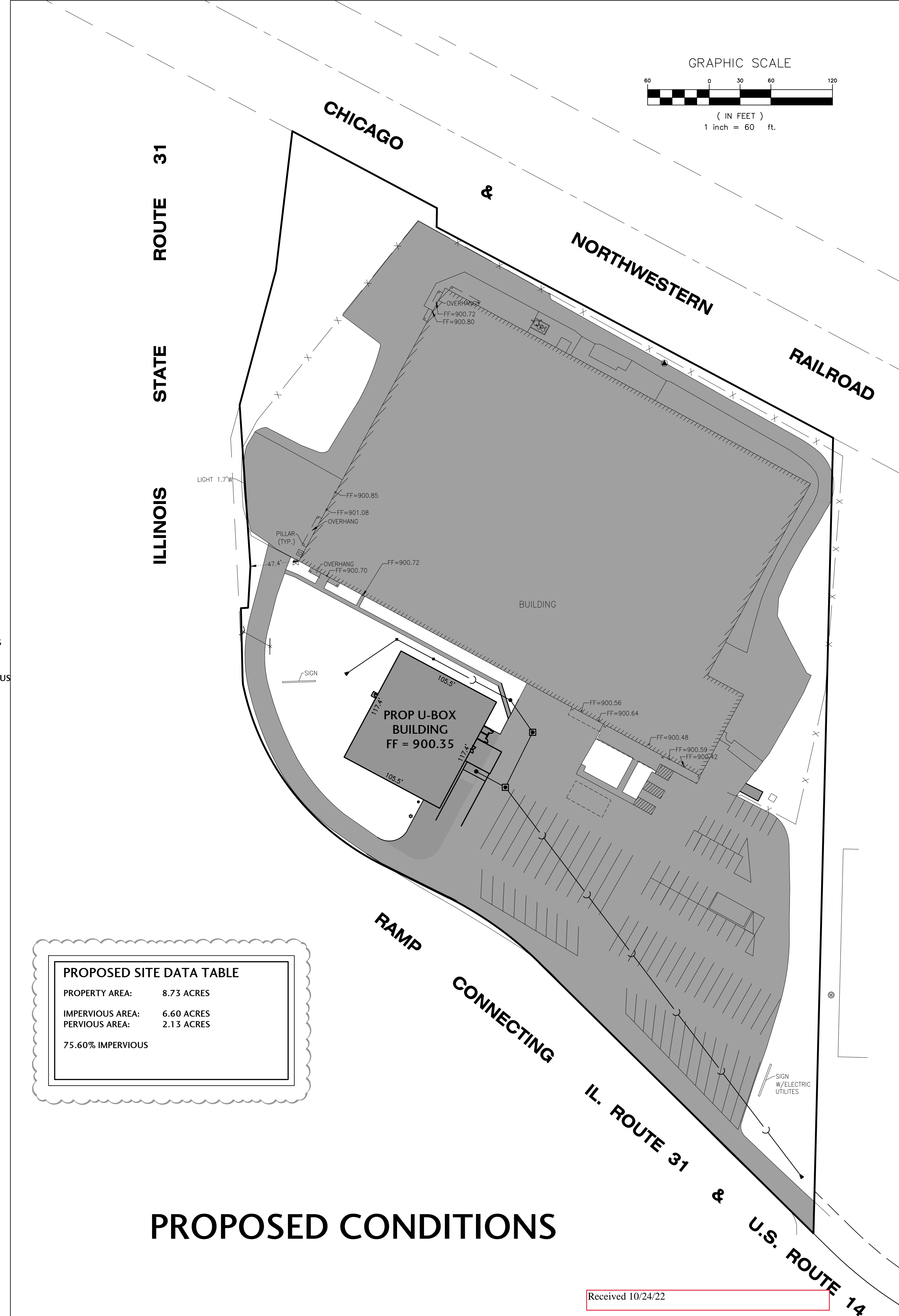
NO.	DATE	DESCRIPTION
1	10/14/22	PER CITY REVIEW AND NEW BUILDING SIZE

PROJECT NUMBER	BCEI-21046-3
SHEET TITLE	IMPERVIOUS SURFACE VARIANCE REQUEST
SHEET NUMBER	VX1.0



PROPERTY AREA:	8.73 ACRES
IMPERVIOUS AREA:	6.23 ACRES
PERVIOUS AREA:	2.50 ACRES
71.36% IMPERVIOUS	

**EXISTING CONDITIONS**



PROPERTY AREA:	8.73 ACRES
IMPERVIOUS AREA:	6.60 ACRES
PERVIOUS AREA:	2.13 ACRES
75.60% IMPERVIOUS	

**PROPOSED CONDITIONS**

Received 10/24/22

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# U-Haul Crystal Lake U-Box Building

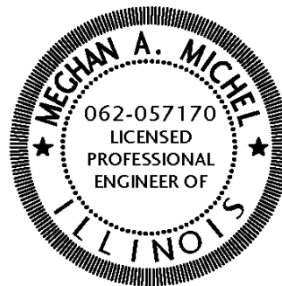
## ENGINEERING REPORT BCEI-21046-3

*For:*

Mr. Brian Heimsoth  
B&C Enterprises  
2482 Technology Drive  
Elgin, IL 60124

June 3, 2022

*Revised 10/14/22*



EXPIRES 11/30/2023



J. CONDON & ASSOCIATES, INC.  
CONSULTING ENGINEERS

5415 Business Parkway  
Ringwood, Illinois 60072  
(815) 728-0068  
Email: mmichel@jcondoninc.com  
IL Design Firm # 184-006759

Received 10/24/22

## **General Information**

The proposed development is located at the northeast corner of Route 14 and the frontage road to IL Route 31 in the City of Crystal Lake. The parcel is located in the Southeast Quarter of Section 3 Township 43 North Range 8 East. The overall site is approximately 8.73 acres containing the existing 125,000+/- sf U-Haul facility and the associated parking lot and outside storage areas. The proposed improvements are comprised of the following items:

1. Construction of a 12,385 sf U-Box storage building with loading dock.
2. Storm sewer and drainage improvements onsite.
3. Water and sewer services.

## **Site Data:**

### **Existing Conditions (Pre-2004)**

*Impervious Area:* 6.23 Acres

*Pervious Area:* 2.50 Acres

*Property Area:* 8.73 Acres

### **Proposed Conditions**

*Impervious Area:* 6.60 Acres

*Pervious Area:* 2.13 Acres

*Property Area:* 8.73 Acres

*Disturbed Area:* 0.95 Acres

## **Site Access and Parking**

The site will continue to use the existing driveway and parking facilities for the new storage building.

## **Sewer and Water Services**

A 4" combined water service and a 6" sanitary sewer service will be connected to the existing septic system and well.

## **Stormwater Management**

The proposed development will create 16,139 sf of new impervious area, thus no detention will be required.

On-site storm sewer has been designed to convey runoff to the existing discharge point at the southeast corner of the site. The storm sewer outlet will release to a native vegetated level spreader. A snout oil and debris hood will be installed on the most downstream catch basin to reduce contaminants and pollutants from leaving the site.

There is an existing 36" culvert that crosses the U-Haul driveway on the west side of the property. Exhibit CX1.1 demonstrates that the reconfiguration of the Route 31/14 intersection in the late 1990's reduced the tributary area to that culvert. The tributary area is shown in Exhibit CX1.0.

The onsite storm sewer is designed to accommodate the 10-year storm event. Supporting calculations have been included in the Appendix of the report.

**Overflow Design:**

The overland flow path capacity has been verified to confirm building freeboard requirements are met at two critical locations. The results indicate that the ordinance freeboard requirement has been met. (See supporting calculations)

**Floodplain Design**

Per FEMA Firm panel number 17111C0335J, effective November 16, 2006, there is no floodplain located within the project area.

**Wetland Design**

Per the U.S. Fish and Wildlife Service National Wetlands Inventory, there are no wetlands within the vicinity of the project. A copy of the referenced map is located in the appendix portion of this report.

**Miscellaneous Information**

Since the site was previously fully developed, a drain tile survey has not been included in the site design work as neither exist on the site due to the previous developments.





naturalized fescue

