# URBAN DESIGN COMMISSION APPLICATION

UDC

City of Madison
Planning Division
Madison Municipal Building, Suite 017
215 Martin Luther King, Jr. Blvd.
P.O. Box 2985
Madison, WI 53701-2985
(608) 266-4635

FOR OFFICE USE ONLY:

Date Received _____ ☐ Initial Submittal

Paid _____ ☐ Revised Submittal

**Complete all sections of this application, including the desired meeting date and the action requested.** If your project requires both UDC and Land Use application submittals, a completed Land Use Application and accompanying submittal materials are also required to be submitted.

*If you need an interpreter, translator, materials in alternate formats or other accommodations to access these forms, please call the Planning Division at (608) 266-4635.*

*Si necesita interprete, traductor, materiales en diferentes formatos, u otro tipo de ayuda para acceder a estos formularios, por favor llame al (608) 266-4635.*

*Yog tias koj xav tau ib tug neeg txhais lus, tus neeg txhais ntawv, los sis xav tau cov ntaub ntawv ua lwm hom ntawv los sis lwm cov kev pab kom paub txog cov lus qhia no, thov hu rau Koog Npaj (Planning Division) (608) 266-4635.*

## 1. Project Information

Address (list all addresses on the project site): 1601 N. Sherman Ave, Madison WI 53704

Title: MMSD Sherman MS - Malcolm Shabazz HS

## 2. Application Type (check all that apply) and Requested Date

UDC meeting date requested October 22, 2025

☐ New development ☐ Alteration to an existing or previously-approved development

☐ Informational ☐ Initial Approval ☒ Final Approval

## 3. Project Type

☐ Project in an Urban Design District

☐ Project in the Downtown Core District (DC), Urban Mixed-Use District (UMX), or Mixed-Use Center District (MXC)

☐ Project in the Suburban Employment Center District (SEC), Campus Institutional District (CI), or Employment Campus District (EC)

☐ Planned Development (PD)

- ☐ General Development Plan (GDP)
- ☐ Specific Implementation Plan (SIP)

☐ Planned Multi-Use Site or Residential Building Complex

**Signage**

☐ Comprehensive Design Review (CDR)

☐ Modifications of Height, Area, and Setback

☐ Sign Exceptions as noted in Sec. 31.043(3), MGO

**Other**

☒ Please specify

Public Building

## 4. Applicant, Agent, and Property Owner Information

**Applicant name** Scott Chehak Company Madison Metropolitan School District

Street address 545 West Dayton Street City/State/Zip Madison, WI 53703

Telephone 608-235-4989 Email sachehak@madison.k12.wi.us

**Project contact person** Susan Bowersox Company OPN Architects

Street address 301 North Broom Street, Suite 100 City/State/Zip Madison, WI 53703

Telephone 319-551-9723 Email sbowersox@opnarchitects.com

**Property owner (if not applicant)** _____

Street address _____ City/State/Zip _____

Telephone _____ Email _____

# URBAN DESIGN COMMISSION APPROVAL PROCESS

UDC

## Introduction

The City of Madison's Urban Design Commission (UDC) has been created to:

- Encourage and promote high quality in the design of new buildings, developments, remodeling, and additions so as to maintain and improve the established standards of property values within the City.
- Foster civic pride in the beauty and nobler assets of the City, and in all other ways possible assure a functionally efficient and visually attractive City in the future.

## Types of Approvals

There are three types of requests considered by the UDC:

- Informational Presentation. A request for an Informational Presentation to the UDC may be requested prior to seeking any approvals to obtain early feedback and direction before undertaking detailed design efforts. Applicants should provide details on the context of the site, design concept, site and building plans, and other relevant information to help the UDC understand the proposal and provide feedback. (Does not apply to CDR's or Signage Modification requests)
- Initial Approval. Applicants may, at their discretion, request Initial Approval of a proposal by presenting preliminary design information. As part of their review, the Commission will provide feedback on the design information that should be addressed at Final Approval stage.
- Final Approval. Applicants may request Final Approval of a proposal by presenting all final project details. Recommendations or concerns expressed by the UDC in the Initial Approval must be addressed at this time.

## Presentations to the Commission

The Urban Design Commission meets virtually via Zoom, typically on the second and fourth Wednesdays of each month at 4:30 p.m. Applicant presentations are strongly encouraged, although not required. Prior to the meeting, each individual speaker is required to complete an online registration form to speak at the meeting. A link to complete the online registration will be provided by staff prior to the meeting. Please note that individual presentations will be limited to a **maximum of three (3) minutes**. The pooling of time may be utilized to provide one speaker more time to present, however the additional time will be based on the number of registrants from the applicant team, i.e. two (2) applicant registrants = six (6) minutes for one (1) speaker.

Primarily, the UDC is interested in the appearance and design quality of projects. Emphasis should be given to the site plan, landscape plan, lighting plan, building elevations, exterior building materials, color scheme, and graphics. Please note that presentation slides, in a PDF file format, are required to be submitted **the Friday before** the UDC meeting.

# URBAN DESIGN DEVELOPMENT PLANS CHECKLIST UDC

The items listed below are minimum application requirements for the type of approval indicated. Please note that the UDC and/or staff may require additional information in order to have a complete understanding of the project.

## 1. Informational Presentation

- ☐ Locator Map
- ☐ Letter of Intent (If the project is within an Urban Design District, a summary of how the development proposal addresses the district criteria is required)
- ☐ Contextual site information, including photographs and layout of adjacent buildings/structures
- ☐ Site Plan
- ☐ Two-dimensional (2D) images of proposed buildings or structures.

Providing additional information beyond these minimums may generate a greater level of feedback from the Commission.

**Requirements for All Plan Sheets**

1. Title block
2. Sheet number
3. North arrow
4. Scale, both written and graphic
5. Date
6. Fully dimensioned plans, scaled at 1"= 40' or larger

*** All plans must be legible, including the full-sized landscape and lighting plans (if required)*

## 2. Initial Approval

- ☒ Locator Map
- ☒ Letter of Intent (If the project is within a Urban Design District, a summary of how the development proposal addresses the district criteria is required)
- ☒ Contextual site information, including photographs and layout of adjacent buildings/structures
- ☒ Site Plan showing location of existing and proposed buildings, walks, drives, bike lanes, bike parking, and existing trees over 18" diameter
- ☒ Landscape Plan and Plant List (*must be legible*)
- ☒ Building Elevations in **both** black & white and color for all building sides, including material and color callouts
- ☒ PD text and Letter of Intent (if applicable)

Providing additional information beyond these minimums may generate a greater level of feedback from the Commission.

## 3. Final Approval

All the requirements of the Initial Approval (see above), **plus**:

- ☒ Grading Plan
- ☒ Lighting Plan, including fixture cut sheets and photometrics plan (must be legible)
- ☒ Utility/HVAC equipment location and screening details (with a rooftop plan if roof-mounted)
- ☒ Site Plan showing site amenities, fencing, trash, bike parking, etc. (if applicable)
- ☒ PD text and Letter of Intent (if applicable)
- ☒ Samples of the exterior building materials
- NA ☐ Proposed sign areas and types (if applicable)

## 4. Signage Approval *(Comprehensive Design Review (CDR), Sign Modifications, and Sign Exceptions (per Sec. 31.043(3))*

- ☐ Locator Map
- ☐ Letter of Intent (a summary of how the proposed signage is consistent with the CDR or Signage Modifications criteria is required)
- ☐ Contextual site information, including photographs of existing signage both on site and within proximity to the project site
- ☐ Site Plan showing the location of existing signage and proposed signage, dimensioned signage setbacks, sidewalks, driveways, and right-of-ways
- ☐ Proposed signage graphics (fully dimensioned, scaled drawings, including materials and colors, and night view)
- ☐ Perspective renderings (emphasis on pedestrian/automobile scale viewsheds)
- ☐ Illustration of the proposed signage that meets Ch. 31, MGO compared to what is being requested
- ☐ Graphic of the proposed signage as it relates to what the Ch. 31, MGO would permit

## 5. Required Submittal Materials

☒ **Application Form**

- A completed application form is required for each UDC appearance. For projects also requiring Plan Commission approval, applicants must also have submitted an accepted application for Plan Commission consideration prior to obtaining any formal action (Initial or Final Approval) from the UDC.

☒ **Letter of Intent**

- If the project is within an Urban Design District, a summary of how the development proposal addresses the district criteria is required.
- For signage applications, a summary of how the proposed signage is consistent with the applicable Comprehensive Design Review (CDR) or Signage Modification review criteria is required.

☒ **Development Plans** (Refer to checklist on Page 4 for plan details)

combined application

☐ **Filing Fee** (Refer to Section 7 (below) for a list of application fees by request type)

☒ **Electronic Submittal**

- Complete electronic submittals must be received prior to the application deadline before an application will be scheduled for a UDC meeting. Late materials will not be accepted. All plans must be legible and scalable when reduced. Individual PDF files of each item submitted should be submitted via email to UDCapplications@cityofmadison.com. The email must include the project address, project name, and applicant name.
- Email Size Limits. Note that an individual email cannot exceed 20MB and it is the responsibility of the applicant to present files in a manner that can be accepted. Applicants who are unable to provide the materials electronically should contact the Planning Division at (608) 266-4635 for assistance.

☒ **Notification to the District Alder**

- Please provide an email to the District Alder notifying them that you are filing this UDC application. Please send this as early in the process as possible and provide a copy of that email with the submitted application.

## 6. Applicant Declarations

1. Prior to submitting this application, the applicant is required to discuss the proposed project with Urban Design Commission staff. This application was discussed with UDC Informational on 6/11/25.
2. The applicant attests that all required materials are included in this submittal and understands that if any required information is not provided by the application deadline, the application will not be placed on an Urban Design Commission agenda for consideration.

Name of applicant Scott Chehak Relationship to property Senior Exec Dir of Building Services

Authorizing signature of property owner Scott Chehak Date 7/10/2025

## 7. Application Filing Fees

Fee payments are due by the submittal date. Payments received after the submittal deadline may result in the submittal being scheduled for the next application review cycle. Fees may be paid in-person, via US Mail, or City drop box. If mailed, please mail to: *City of Madison Building Inspection, P.O. Box 2984, Madison, WI 53701-2984*. The City's drop box is located outside the Municipal Building at 215 Martin Luther King, Jr. Blvd. on the E Doty Street side of the building. Please make checks payable to *City Treasurer*, and include a completed application form or cover letter indicating the project location and applicant information with all checks mailed or submitted via the City's drop box.

Please consult the schedule below for the appropriate fee for your request:

☐ Urban Design Districts: $350 *(per §33.24(6) MGO)*.

☐ Minor Alteration in the Downtown Core District (DC) or Urban Mixed-Use District (UMX) : $150 *(per §33.24(6)(b) MGO)*

☐ Comprehensive Design Review: $500 *(per §31.041(3)(d)(1)(a) MGO)*

☐ Minor Alteration to a Comprehensive Sign Plan: $100 *(per §31.041(3)(d)(1)(c) MGO)*

☐ All other sign requests to the Urban Design Commission, including, but not limited to: appeals from the decisions of the Zoning Administrator, requests for Sign Modifications (of height, area, and setback), and additional sign code approvals: $300 *(per §31.041(3)(d)(2) MGO)*

A filing fee is not required for the following project applications if part of the combined application process involving both Urban Design Commission and Plan Commission:

— Project in the Downtown Core District (DC), Urban Mixed-Use District (UMX), or Mixed-Use Center District (MXC)

— Project in the Suburban Employment Center District (SEC), Campus Institutional District (CI), or Employment Campus District (EC)

— Planned Development (PD): General Development Plan (GDP) and/or Specific Implementation Plan (SIP)

— Planned Multi-Use Site or Residential Building Complex

OPN ARCHITECTS

Cedar Rapids
200 Fifth Avenue SE Ste. 201
Cedar Rapids, Iowa 52401
(319) 363-6018

Des Moines
100 Court Avenue Ste. 100
Des Moines, Iowa 50309
(515) 309-0722

Iowa City
24 ½ S. Clinton Street Ste. 1
Iowa City, Iowa 52240
(319) 363-6018

Madison
301 N. Broom Street Ste. 100
Madison, Wisconsin 53703
(608) 819-0260

Minneapolis
212 N 3rd Avenue, Ste. 312
Minneapolis, Minnesota 55401
(612) 355-7111

opnarchitects.com

October 2025

Letter of Intent – City Resubmittal

Proposed Sherman Middle School – Malcolm Shabazz High School
1601 N Sherman Ave, Madison WI 53704

Madison Metropolitan School District is proposing to construct a new combination Middle School – Small High School to replace the current school on the existing site located at 1601 N. Sherman Ave, Madison, WI 53704. The new school will be constructed on the unused portion of the site while the existing school is in use. Upon completion of the new construction the existing building will then be demolished with new parking and green space constructed on the site.

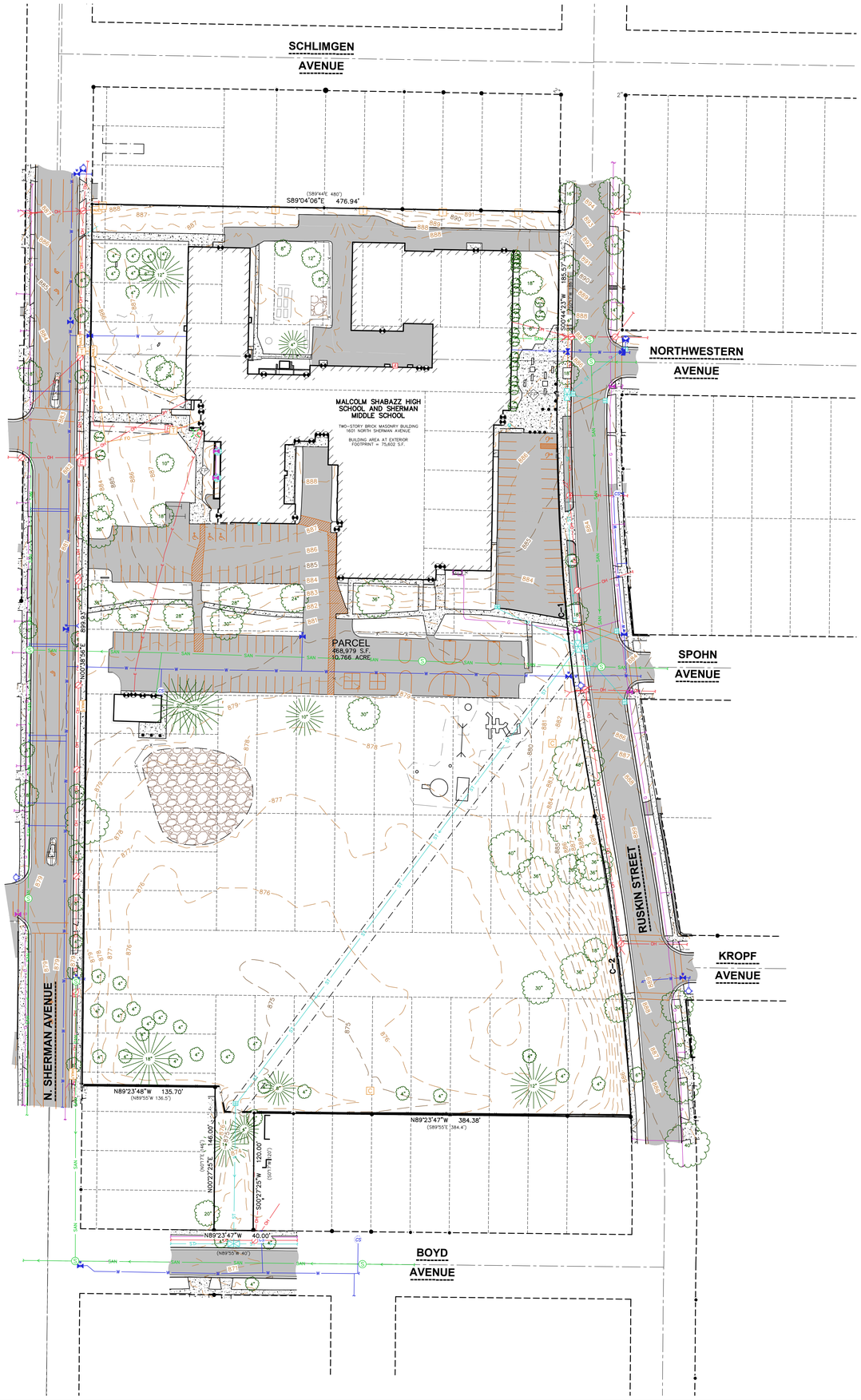
The proposed Sherman Middle School – Shabazz High School was reviewed by the Urban Design Council on September 17, 2025 and was granted initial approval with one condition to revise the building design of the Sherman Middle School to incorporate more color.

In the resubmitted design, cues were taken from the natural colors of the site and incorporated into both the vertical blades along the North side and the articulated sun shade devices running along the East side. The natural colors integrate seamlessly with the wood grain finish at the underside of the entrance canopy and along the opposite face of the sun shade devices. Adjacent both the main entrance and the East side entrance are large panels of wall flanking the glazed entrance systems. These panels are poised to host either an oversized graphic that is connected to its history, a commissioned mural, or an artistic expression by someone local either within or outside of the district.

Please contact Susan Bowersox with OPN Architects or Scott Chehak with Madison Metropolitan School District if additional information is needed prior to the review meeting.

# EXISTING CONDITIONS SURVEY

LANDS LOCTAED IN THE THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 AND SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 31, TOWNSHIP 08 NORTH, RANGE 10 EAST, CITY OF MADISON, DANE COUNTY, WISCONSIN, MORE PARTICULARLY AS DESCRIBED IN THE LEGAL DESCRIPTION.



VICINITY MAP /SHEET INDEX
NOT TO SCALE

## LEGEND

- GOVERNMENT CORNER
- 1" IRON PIPE FOUND
- ¾" REBAR FOUND
- 3/4" x 24" REBAR SET (1.50 LBS/LF)
- CHISELED "X" FOUND
- BENCHMARK
- FINISHED FLOOR SHOT LOCATION
- FLAG POLE
- POST
- SIGN
- SANITARY MANHOLE
- VENT PIPE
- HYDRANT
- WATER VALVE
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- ROUND CASTED INLET
- CURB INLET
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- GRAVEL
- PAVEMENT STRIPING
- END OF FLAGGED UTILITIES
- DENOTES RECORDED AS MEASUREMENTS DEPICTING THE SAME LINE ON THE GROUND AS RETRACED BY THIS SURVEY

## NOTES

1. FIELD WORK PERFORMED ON DECEMBER 02, 04, 09, 23, 30, AND 31, 2024.
2. BEARINGS FOR THIS SURVEY AND MAP ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY ZONE.
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BENCHMARK IS A BRASS CAP MONUMENT MARKING THE CENTER CORNER OF SECTION 31, T08N, R10E, ELEVATION = 863.31'
4. CONTOUR INTERVAL IS ONE FOOT.
5. SUBSURFACE UTILITIES AND FEATURES SHOWN ON THIS MAP HAVE BEEN APPROXIMATED BY LOCATING SURFICIAL FEATURES AND APPURTENANCES, LOCATING DIGGERS HOTLINE FIELD MARKINGS AND BY REFERENCE TO UTILITY RECORDS AND MAPS. DIGGER'S HOTLINE TICKET NOS: 20244714578, 20244714586, 20244714640, 20244714646, 20244714653, 20244714724, 20244714728, 20244714729, AND 20244714728 WITH A CLEAR DATE OF NOVEMBER 27, 2024.
6. UTILITY COMPANIES CONTACTED THRU DIGGERS HOTLINE:
   - CITY OF MADISON
   - MCI
   - AT&T COMMUNICATIONS
   - MGE (ELECTRIC AND GAS)
   - METROPOLITAN UNIFIED NETWORK CONSORTIUM
   - LEVEL 3 NOW LUMEN
7. BEFORE EXCAVATION, APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED. FOR EXACT LOCATION OF UNDERGROUND UTILITIES, CONTACT DIGGERS HOTLINE, AT 1.800.242.8511.
8. SITE PLAN RECORDS WERE ACQUIRED FROM THE CITY OF MADISON ZONING DEPARTMENT. THE RECORDS ACQUIRED ARE FROM SEPTEMBER 18, 2024.
9. THIS SURVEY REFLECTS TITLE 3191929 ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, WITH A COMMITMENT DATE OF DECEMBER 10, 2024

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE | LENGTH | RADIUS | DELTA | CHORD | CHORD BEARING |
| C-1 | 441.48' | 2132.00' | 11°51'52" | 440.69' | S5°15'51"E |
| (C-1) | | 2132.00' | 12'06' | | S5°47'E |
| C-2 | 301.91' | 2066.00' | 8°22'22" | 301.64' | S6°36'44"E |
| (C-2) | | 2066.00' | 11°44' | | S5°47'E |

## LEGAL DESCRIPTION

LOTS 1, 2, 3, 15, 16, 17, 18, 19, 20, 21 AND 22, BLOCK 1, CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION.
THE NORTH 14 FEET OF LOT 4 AND LOTS 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, BLOCK 9, FIRST ADDITION TO CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION.
LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, AND 25, BLOCK 10, FIRST ADDITION TO CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION.
LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, BLOCK 16, FIRST ADDITION TO CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION.
ALL THAT PART OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 08 NORTH, RANGE 10 EAST, LYING NORTH AND WEST OF THE FIRST ADDITION TO CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION, LESS THE SHERMAN AVENUE PUBLIC STREET RIGHT OF WAY.
VACATED NORTHWESTERN AVENUE, SPOHN AVENUE AND KROPF AVENUE LYING WEST OF RUSKIN STREET AND EAST OF SHERMAN AVENUE IN CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION AND IN THE FIRST ADDITION TO CLYDE A. GALLAGHER'S SHERMAN AVENUE SUBDIVISION.

TAX KEY NO: 251/0810-312-2001-5

## SURVEYOR'S CERTIFICATE

I, TODD J. BUHR, WISCONSIN PROFESSIONAL LAND SURVEYOR NO. S-2614, HEREBY CERTIFY THAT UNDER THE DIRECTION OF MADISON METROPOLITAN SCHOOL DISTRICT THIS SURVEY AND MAP HAS BEEN PREPARED AND COMPLIES WITH WISCONSIN ADMINISTRATIVE CODE A-E7 AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF IN ACCORDANCE WITH THE INFORMATION PROVIDED.

Todd J. Buhr — 04-02-25

TODD J. BUHR, S-2614
PROFESSIONAL LAND SURVEYOR

DATE

WISCONSIN
TODD J. BUHR
S-2614
DEFOREST, WI
LAND SURVEYOR

north
SCALE IN FEET
50' 0 50'


JSD
CREATE THE VISION TELL THE STORY
jsdinc.com
MADISON REGIONAL OFFICE
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
P. 608.848.5060


CLIENT:
**MADISON METROPOLITAN SCHOOL DISTRICT**

CLIENT ADDRESS:
**301 NORTH BROOM STREET**
**MADISON, WISCONSIN 53703**

PROJECT:
**MALCOLM SHABAZZ HIGH SCHOOL / SHERMAN MIDDLE SCHOOL**

PROJECT LOCATION:
**1601 NORTH SHERMAN AVENUE**
**MADISON, DANE COUNTY**
**WISCONSIN, 53704**

MODIFICATIONS:

| # | Date: | Description: |
|---|---|---|
| 1 | 01/17/25 | PRELIMINARY MAP |
| 2 | 03/07/25 | FINAL MAP |
| 3 | | |
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Prepared By: ZHG 01/08/25

SHEET TITLE:
**EXISTING CONDITIONS SURVEY**

SHEET NUMBER:
**1 OF 3**

PROJECT NO: 24-14661


THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF JSD PROFESSIONAL SERVICES, INC.


File: \JSD\MCprojects\2024\24-14661\DWG\Survey Sheets\24-14661 Exist.dwg Layout: Sheet 1 User: john.krebs Plotted: Apr 01, 2025 - 3:25pm Xref's:

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### STORM SEWER STRUCTURES

| STRUCT. ID | RIM ELEVATION | INVERT | ELEVATION | PIPE SIZE | PIPE TYPE |
|---|---|---|---|---|---|
| STM–1 | 884.75 | SW | 882.30 | 12" | VCP |
| STM–2 | 884.31 | W | 881.86 | 12" | VCP |
| STM–3 | 884.78 | W | 880.80 | 12" | VCP |
| STM–4 | 885.88 | S | 880.42 | 15" | VCP |
| | | N | 880.78 | 8" | VCP |
| | | NE | 880.67 | 12" | VCP |
| | | E | 880.85 | 12" | VCP |
| | | E | 880.73 | 12" | VCP |
| STM–5 | 882.27 | SE | 880.11 | 12" | VCP |
| STM–6 | 882.38 | SW | 879.36 | 12" | VCP |
| STM–7 | 883.37 | NW | 880.89 | 12" | VCP |
| STM–8 | 882.16 | NW | 879.34 | 12" | VCP |
| STM–9 | 882.23 | W | 877.25 | 12" | VCP |
| STM–10 | 883.45 | SW | 876.20 | 18" | VCP |
| | | NW | 876.90 | 12" | VCP |
| | | N | 877.30 | 15" | VCP |
| | | NE | 877.25 | 12" | VCP |
| | | E | 877.29 | 12" | VCP |
| | | E | 877.29 | 12" | VCP |
| | | SE | 877.15 | 12" | VCP |
| STM–11 | 872.87 | S | 868.07 | 21" | VCP |
| | | NE | 868.25 | 15" | VCP |
| STM–12 | 871.21 | E | 867.11 | 24" | VCP |
| | | N | 868.71 | 8" | DI |
| | | E | 867.26 | 21" | VCP |
| | | W | 867.16 | 18" | VCP |

### SANITARY SEWER MANHOLES

| STRUCT. ID | RIM ELEVATION | INVERT | ELEVATION | PIPE SIZE | PIPE TYPE |
|---|---|---|---|---|---|
| SAN–1 | 887.19 | S | 877.40 | 8" | VCP |
| | | N | 877.43 | 8" | VCP |
| | | NE | 877.47 | 6" | PVC |
| | | SW | 977.95 | 8" | VCP |
| SAN–2 | 886.42 | S | 877.08 | 8" | VCP |
| | | N | 877.16 | 8" | VCP |
| | | E | 877.37 | 8" | PVC |
| SAN–3 | 883.59 | W | 874.80 | 8" | VCP |
| | | E | 875.00 | 8" | PVC |
| | | N | 874.93 | 8" | VCP |
| | | S | 875.02 | 8" | ABANDON |
| SAN–4 | 879.62 | W | 870.36 | 8" | VCP |
| | | E | 870.41 | 8" | VCP |
| | | NE | 870.59 | 8" | ABANDON |
| | | SE | 870.72 | 8" | ABANDON |
| SAN–5 | 880.07 | S | 869.03 | 12" | VCP |
| | | W | 869.67 | 6" | VCP |
| | | NW | 869.29 | 6" | VCP |
| | | N | 869.05 | 12" | VCP |
| | | E | 869.22 | 8" | VCP |
| SAN–6 | 878.99 | S | 870.19 | 8" | VCP |
| | | N | 870.47 | 8" | ABANDON |
| | | NW | 870.54 | 6" | ABANDON |
| SAN–7 | 874.19 | W | 861.54 | 8" | PVC |
| | | N | 861.75 | 12" | VCP |
| | | N | 866.05 | 8" | ABANDON |
| | | E | 861.67 | 6" | VCP |
| SAN–8 | 879.00 | S | 868.26 | 12" | VCP |
| | | N | 868.28 | 12" | VCP |
| | | NE | 868.98 | 6" | VCP |
| SAN–9 | 874.19 | W | 862.77 | 6" | VCP |
| | | E | 862.79 | 6" | VCP |
| | | N | 862.84 | 8" | VCP |
| | | S | 862.86 | 8" | VCP |

### BENCHMARKS

| BENCH MARK | ELEVATION | DESCRIPTION |
|---|---|---|
| BM–1 | 882.85 | REBAR WITH BLUE JSD CAP LOCATED AT THE NORTHEAST CORNER OF VACATED SPOHN AVENUE |
| BM–2 | 886.82 | REBAR WITH BLUE JSD CAP LOCATED IN THE NW CORNER OF SITE |

*JSD DOES NOT GUARANTEE THE BENCHMARK ELEVATIONS LISTED ON THIS MAP ARE ACCURATE AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.

### SURVEYOR'S CERTIFICATE

I, TODD J. BUHR, WISCONSIN PROFESSIONAL LAND SURVEYOR NO. S–2614, HEREBY CERTIFY THAT UNDER THE DIRECTION OF MADISON METROPOLITAN SCHOOL DISTRICT THIS SURVEY AND MAP HAS BEEN PREPARED AND COMPLIES WITH WISCONSIN ADMINISTRATIVE CODE A–E7 AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF IN ACCORDANCE WITH THE INFORMATION PROVIDED.

TODD J. BUHR, S–2614
PROFESSIONAL LAND SURVEYOR

04-02-25
DATE

WISCONSIN — TODD J. BUHR S–2614 DEFOREST, WI — PROFESSIONAL LAND SURVEYOR

north
SCALE IN FEET
30' 0 30'

JSD
CREATE THE VISION TELL THE STORY
jsdinc.com


MADISON REGIONAL OFFICE
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
P. 608.848.5060


CLIENT:
**MADISON METROPOLITAN SCHOOL DISTRICT**

CLIENT ADDRESS:
**301 NORTH BROOM STREET MADISON, WISCONSIN 53703**

PROJECT:
**MALCOLM SHABAZZ HIGH SCHOOL / SHERMAN MIDDLE SCHOOL**

PROJECT LOCATION:
**1601 NORTH SHERMAN AVENUE MADISON, DANE COUNTY WISCONSIN, 53704**

MODIFICATIONS:

| # | Date: | Description: |
|---|---|---|
| 1 | 01/17/25 | PRELIMINARY MAP |
| 2 | 03/07/25 | FINAL MAP |
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Prepared By: ZHG 01/08/25

SHEET TITLE:
**EXISTING CONDITIONS SURVEY**

SHEET NUMBER:
**2 OF 3**

PROJECT NO: 24-1466


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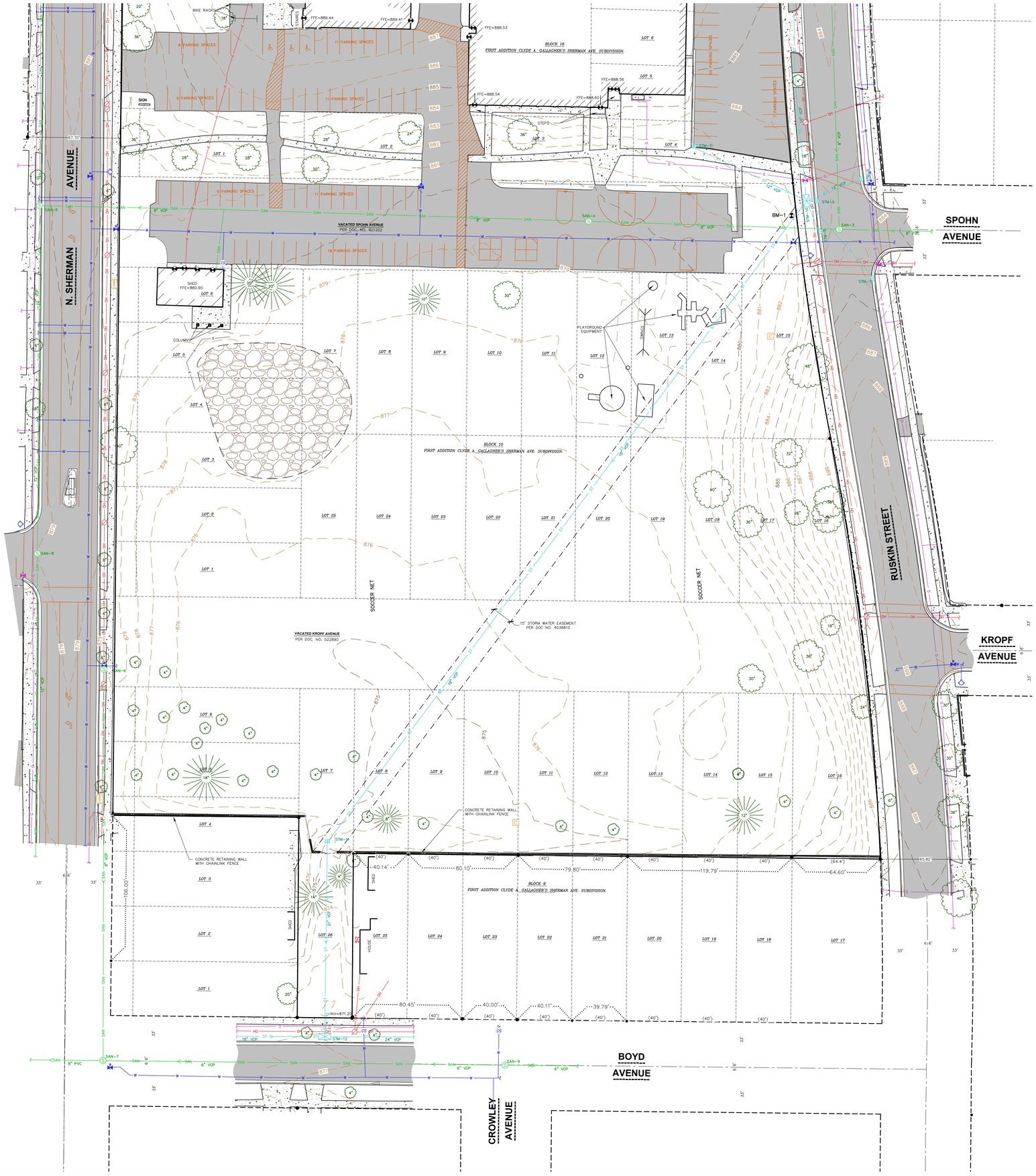
File: \JSD\INC\projects\2024\24-1466\1 ISD\WD\Survey Sheets\24-1466 1 Excon.dwg, Layout: Sheet2, User: john.krebs, Plotted: Apr 01, 2025 - 3:26pm, Xrefs:

# EXISTING CONDITIONS SURVEY

LANDS LOCTAED IN THE THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 AND SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 31, TOWNSHIP 08 NORTH, RANGE 10 EAST, CITY OF MADISON, DANE COUNTY, WISCONSIN, MORE PARTICULARLY AS DESCRIBED IN THE LEGAL DESCRIPTION.



VICINITY MAP/SHEET INDEX
NOT TO SCALE

## LEGEND

- GOVERNMENT CORNER
- 1" IRON PIPE FOUND
- ¾" REBAR FOUND
- 3/4" x 24" REBAR SET (1.50 LBS/LF)
- CHISELED "X" FOUND
- BENCHMARK
- FINISHED FLOOR SHOT LOCATION
- FLAG POLE
- POST
- SIGN
- SANITARY MANHOLE
- VENT PIPE
- HYDRANT
- WATER VALVE
- CURB STOP/SERVICE VALVE
- STORM MANHOLE
- ROUND CASTED INLET
- CURB INLET
- STORM SEWER ACCESS
- ENDWALL/END OF PIPE
- GAS VALVE
- ELECTRIC TRANSFORMER
- LIGHT POLE
- YARD LIGHT
- ELECTRIC MANHOLE
- POWER POLE
- POWER POLE W/GUY
- VAULT
- TELEPHONE PEDESTAL
- CABLE PEDESTAL
- DECIDUOUS TREE
- CONIFEROUS TREE
- HANDICAP PARKING
- PARCEL BOUNDARY
- SECTION LINE
- RIGHT-OF-WAY LINE
- PLATTED LOT LINE
- CHORD LINE
- SETBACK LINE
- EASEMENT LINE
- LANDSCAPE LIMITS
- FENCE LINE
- WALL LINE
- CONCRETE CURB & GUTTER
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- SANITARY SEWER
- WATER LINE
- STORM SEWER
- UNDERGROUND TELEPHONE
- NATURAL GAS
- OVERHEAD LINE
- UNDERGROUND ELECTRIC
- BUILDING
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- GRAVEL
- PAVEMENT STRIPING
- END OF FLAGGED UTILITIES
- ( ) DENOTES RECORDED AS MEASUREMENTS DEPICTING THE SAME LINE ON THE GROUND AS RETRACED BY THIS SURVEY

### STORM SEWER STRUCTURES

| STRUCT. ID | RIM ELEVATION | INVERT | ELEVATION | PIPE SIZE | PIPE TYPE |
|---|---|---|---|---|---|
| STM-1 | 884.75 | SW | 882.30 | 12" | VCP |
| STM-2 | 884.31 | W | 881.86 | 12" | VCP |
| STM-3 | 884.78 | W | 880.80 | 12" | VCP |
| STM-4 | 885.88 | S | 880.42 | 15" | VCP |
| | | N | 880.78 | 8" | VCP |
| | | NE | 880.67 | 12" | VCP |
| | | E | 880.85 | 12" | VCP |
| | | E | 880.73 | 12" | VCP |
| STM-5 | 882.27 | SE | 880.11 | 12" | VCP |
| STM-6 | 882.38 | SW | 879.36 | 12" | VCP |
| STM-7 | 883.37 | NW | 880.89 | 12" | VCP |
| STM-8 | 882.16 | NW | 879.34 | 12" | VCP |
| STM-9 | 882.23 | W | 877.25 | 12" | VCP |
| STM-10 | 883.45 | SW | 876.20 | 18" | VCP |
| | | NW | 876.90 | 12" | VCP |
| | | N | 877.30 | 15" | VCP |
| | | NE | 877.25 | 12" | VCP |
| | | E | 877.29 | 12" | VCP |
| | | E | 877.29 | 12" | VCP |
| | | SE | 877.15 | 12" | VCP |
| STM-11 | 872.87 | S | 868.07 | 21" | VCP |
| | | NE | 868.25 | 15" | VCP |
| STM-12 | 871.21 | E | 867.11 | 24" | VCP |
| | | N | 868.71 | 8" | DI |
| | | N | 867.26 | 21" | VCP |
| | | W | 867.16 | 18" | VCP |

### SANITARY SEWER MANHOLES

| STRUCT. ID | RIM ELEVATION | INVERT | ELEVATION | PIPE SIZE | PIPE TYPE |
|---|---|---|---|---|---|
| SAN-1 | 887.19 | S | 877.40 | 8" | VCP |
| | | N | 877.43 | 8" | VCP |
| | | NE | 877.47 | 6" | PVC |
| | | SW | 977.95 | 8" | VCP |
| SAN-2 | 886.42 | S | 877.08 | 8" | VCP |
| | | N | 877.16 | 8" | VCP |
| | | E | 877.37 | 8" | PVC |
| SAN-3 | 883.59 | W | 874.89 | 8" | VCP |
| | | E | 875.00 | 8" | PVC |
| | | N | 874.93 | 8" | VCP |
| | | S | 875.02 | 8" | ABANDON |
| SAN-4 | 879.62 | W | 870.36 | 8" | VCP |
| | | E | 870.41 | 8" | VCP |
| | | NE | 870.59 | 8" | ABANDON |
| | | SE | 870.72 | 8" | ABANDON |
| SAN-5 | 880.07 | S | 869.03 | 12" | VCP |
| | | W | 869.67 | 6" | VCP |
| | | NW | 869.29 | 6" | VCP |
| | | N | 869.05 | 12" | VCP |
| | | E | 869.22 | 8" | VCP |
| SAN-6 | 878.99 | S | 870.19 | 8" | VCP |
| | | N | 870.47 | 8" | ABANDON |
| | | NW | 870.54 | 6" | ABANDON |
| SAN-7 | 874.19 | W | 861.54 | 8" | PVC |
| | | N | 861.75 | 12" | VCP |
| | | N | 866.05 | 8" | ABANDON |
| | | E | 861.67 | 6" | VCP |
| SAN-8 | 879.00 | S | 868.26 | 12" | VCP |
| | | N | 868.28 | 12" | VCP |
| | | NE | 868.98 | 6" | VCP |
| SAN-9 | 874.19 | W | 862.77 | 6" | VCP |
| | | E | 862.79 | 6" | VCP |
| | | N | 862.84 | 8" | VCP |
| | | S | 862.86 | 8" | VCP |

### BENCHMARKS

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|---|---|---|
| BM-1 | 882.85 | REBAR WITH BLUE JSD CAP LOCATED AT THE NORTHEAST CORNER OF VACATED SPOHN AVENUE |
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## SURVEYOR'S CERTIFICATE

I, TODD J. BUHR, WISCONSIN PROFESSIONAL LAND SURVEYOR NO. S-2614, HEREBY CERTIFY THAT UNDER THE DIRECTION OF MADISON METROPOLITAN SCHOOL DISTRICT THIS SURVEY AND MAP HAS BEEN PREPARED AND COMPLIES WITH WISCONSIN ADMINISTRATIVE CODE A-E7 AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF IN ACCORDANCE WITH THE INFORMATION PROVIDED.

TODD J. BUHR, S-2614
PROFESSIONAL LAND SURVEYOR

04-02-25
DATE

WISCONSIN TODD J. BUHR S-2614 DEFOREST, WI LAND SURVEYOR

north
SCALE IN FEET
30' 0 30'


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CLIENT:
**MADISON METROPOLITAN SCHOOL DISTRICT**

CLIENT ADDRESS:
**301 NORTH BROOM STREET**
**MADISON, WISCONSIN 53703**

PROJECT:
**MALCOLM SHABAZZ HIGH SCHOOL / SHERMAN MIDDLE SCHOOL**

PROJECT LOCATION:
**1601 NORTH SHERMAN AVENUE**
**MADISON, DANE COUNTY**
**WISCONSIN, 53704**

MODIFICATIONS:

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| 1 | 01/17/25 | PRELIMINARY MAP |
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Prepared By: ZHG 01/08/25

SHEET TITLE:
**EXISTING CONDITIONS SURVEY**

SHEET NUMBER:
**3 OF 3**

PROJECT NO: 24-1466


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## GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE RIGHT-OF-WAY AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, JURISDICTIONAL SPECIFICATIONS, AND APPROVED BY THE JURISDICTION HAVING AUTHORITY.
3. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
4. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
6. CONTRACTOR SHALL RESTORE ALL BUILDINGS, PAVEMENT, PIPES, SLOPES, AND STRUCTURES DAMAGED BY THE CONTRACTOR TO PRE-EXISTING OR BETTER CONDITIONS.
7. THE RIGHT-OF-WAY IS THE SOLE JURISDICTION OF THE JURISDICTIONAL AUTHORITY AND IS SUBJECT TO CHANGE AT ANY TIME.
8. THE PUBLIC IMPROVEMENT PLANS REFERENCED IN THESE PLANS SHALL BE CONSTRUED TO MEAN THE PLANS ISSUES BY THE CITY OF MADISON; PUBLIC IMPROVEMENTS PROJECT #XXXXX, CONTRACT #XXXX AND ALL ITS REFERENCED AND ASSOCIATED DOCUMENTS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
10. ANY REFERENCES TO THE TERMS OR ENTITY ABBREVIATIONS IN THE FOLLOWING NOTES AND SPECIFICATIONS SHALL BE UNDERSTOOD AS FOLLOWS:
    - 10.1. "JURISDICTION " - THE LOCAL GOVERNMENTAL AGENCY (I.E., CITY, VILLAGE, TOWN, COUNTY, STATE, OR UTILITY SERVICE PROVIDER) HAVING AUTHORITY.
    - 10.2. "STATE HIGHWAY SPECIFICATIONS" - STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION AND SUPPLEMENTS
    - 10.3. "STANDARD SPECIFICATIONS" - STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, CURRENT EDITION AND SUPPLEMENTS
    - 10.4. WISCONSIN DEPARTMENT OF TRANSPORTATION - "WISDOT"
    - 10.5. WISCONSIN DEPARTMENT OF NATURAL RESOURCES - "WDNR"
    - 10.6. DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES - "DSPS" OR "SPS"

## DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE PROPERTY INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE, "DIGGERS HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVEGROUND OBSERVATION, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S/BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE, AND PROVIDE THEIR OWN DUE DILIGENCE TO INCLUDE IN THEIR BID WHAT ADDITIONAL ITEMS, IN THEIR OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR/BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE ENGINEER OF RECORD. JSD TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. CONTRACTOR SHALL KEEP ALL STREETS AND PRIVATE DRIVES FREE AND CLEAR OF ALL CONSTRUCTION-RELATED DIRT, DUST, AND DEBRIS.
3. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS SPECIFICALLY CALLED OUT FOR PROTECTION. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. STUMPS MAY BE GROUND TO PROPOSED SUBGRADE IN GRASSED AREAS ONLY UNLESS DIRECTED BY ENGINEER.
4. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND/OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
5. ABANDONED/REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF OFFSITE UNLESS OTHERWISE NOTED.
6. CONTRACTOR TO REPLACE ALL SIDEWALK AND CURB AND GUTTER ABUTTING THE PROPERTIES THAT WERE DAMAGED BY THE CONSTRUCTION.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO:
    - 7.1. EXAMINE ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
    - 7.2. VERIFY UTILITY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
    - 7.3. NOTIFY ALL UTILITIES OWNER'S PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
    - 7.4. NOTIFY THE DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.
8. ANY UTILITIES THAT ARE DAMAGED BY THE CONTRACTORS SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR SHALL COORDINATE PRIVATE UTILITY REMOVAL/ABANDONMENT AND NECESSARY RELOCATION WITH RESPECTIVE UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
10. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH THE APPROVED JURISDICTION'S RECYCLING PLAN.
11. ANY CONTAMINATED SOILS ENCOUNTERED SHALL BE REMOVED IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS TO AN APPROPRIATE AND APPROVED LANDFILL.
12. ALL EXISTING UTILITIES SHALL BE FIELD LOCATED AND CLEARLY MARKED BY CONTRACTOR PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OCCUR IN THE LOCATION SHOWN OR PROPOSED IMPROVEMENTS IMPACTING EXISTING UTILITY LINE LOCATION(S). CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING UTILITY LINE OPENINGS (ULO) TO CONFIRM LOCATIONS OR ELEVATIONS, AS REQUESTED BY THE ENGINEER.
13. SEWER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 3.2.24 OF THE STANDARD SPECIFICATIONS AND JURISDICTIONAL SPECIFICATIONS.
14. WATER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 4.14.0 OF THE STANDARD SPECIFICATIONS AND JURISDICTIONAL SPECIFICATIONS.
15. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES. CONTRACTOR SHALL KEEP ALL STREETS AND PAVEMENTS FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST, AND DEBRIS.
16. BUILDING REMOVALS SHALL BE PREFORMED BY A QUALIFIED CONTRACTOR. CONTRACTOR SHALL FOLLOW ALL DEMOLITION REGULATIONS, DISCONNECT ALL UTILITIES, OBTAIN ALL APPLICABLE PERMITS, AND DISPOSE OF ALL BUILDING MATERIALS IN APPROPRIATE AND APPROVED LANDFILLS. DEMOLISHED MATERIALS SHALL NOT BE BURNED OR BURIED ONSITE.
17. CONTRACTOR SHALL REMOVE EXISTING UTILITY PIPE OR PROVIDE PIPE BACKFILLING AFTER REMOVAL OF EXISTING UTILITIES WITHIN BUILDING FOOTPRINT USING "LOW DENSITY CONCRETE/FLOWABLE FILL".
18. RESTORATION OF THE EXISTING ROADWAY RIGHT-OF-WAYS ARE CONSIDERED INCIDENTAL AND SHALL BE PART OF THE COST OF THE UNDERGROUND IMPROVEMENTS, DEMOLITION, AND REMOVAL. THIS INCLUDES CURB AND GUTTER, SIDEWALK, TOPSOIL, SEEDING, AND MULCHING.

## PAVING NOTES

1. GENERAL:
    - 1.1. PAVING SHALL CONFORM TO STATE HIGHWAY SPECIFICATIONS, APPLICABLE JURISDICTIONAL SPECIFICATIONS, AND THE GEOTECHNICAL REPORT PREPARED BY PSI, INC., TITLED "GEOTECHNICAL EXPLORATION AND EVALUATION: PROPOSED MALCOLM SHABAZZ CITY HIGH SCHOOL AND SHERMAN MIDDLE SCHOOL", ISSUE DATE SEPTEMBER 4, 2025. ALL REFERENCES TO THE "GEOTECHNICAL REPORT" SHALL BE UNDERSTOOD AS THE AFOREMENTIONED REPORT.
    - 1.2. ALL PAVING DIMENSIONS ARE TO FACE OF CURB UNLESS SPECIFIED OTHERWISE.
    - 1.3. ALL SPOT GRADES ARE TO EDGE OF PAVEMENT UNLESS SPECIFIED OTHERWISE.
    - 1.4. SURFACE PREPARATION - NOTIFY ENGINEER/OWNER OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.
    - 1.5. ANY REQUIRED REPLACEMENT OF PUBLIC CURB AND GUTTER, PAVEMENT, OR SIDEWALK SHALL MATCH EXISTING AND MEET JURISDICTIONAL REQUIREMENTS.

## SEEDING AND RESTORATION NOTES

1. CONTRACTOR SHALL PROVIDE NOTICE TO THE JURISDICTIONAL AUTHORITIES IN ADVANCE OF ANY SOIL DISTURBING ACTIVITIES, IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
2. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES. SOD/SEED MIX TO BE IN ACCORDANCE WITH LANDSCAPE PLAN.
3. CONTRACTOR SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7-DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
4. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARILY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE. REFER TO STABILIZATION PRACTICES IN THE EROSION CONTROL NOTES FOR FURTHER SPECIFICATIONS.
5. CONTRACTOR SHALL CHISEL-PLOW OR DEEP TILL WITH DOUBLE TINES ALL STORMWATER MANAGEMENT FACILITIES JUST PRIOR TO SODDING AND/OR SEEDING AND MULCHING TO PROMOTE INFILTRATION.

## GRADING AND EARTHWORK NOTES

1. ALL SITE PREP AND EARTHWORK SHALL CONFORM TO THE GEOTECHNICAL REPORT PREPARED BY PSI, INC., TITLED "GEOTECHNICAL EXPLORATION AND EVALUATION: PROPOSED MALCOLM SHABAZZ CITY HIGH SCHOOL AND SHERMAN MIDDLE SCHOOL", ISSUE DATE SEPTEMBER 4, 2025. ALL REFERENCES TO THE "GEOTECHNICAL REPORT" SHALL BE UNDERSTOOD AS THE AFOREMENTIONED REPORT.
2. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY, AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR COMPUTATIONS OF ALL GRADING QUANTITIES. WHILE JSD PROFESSIONAL SERVICES, INC. ATTEMPTS TO PROVIDE A COST-EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE. THEREFORE, NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.
4. ALL EXCAVATIONS AND FILLS SHALL BE TO THE ELEVATIONS SHOWN ON THE DRAWINGS AND SHALL INCLUDE SUFFICIENT DEPTHS FOR PLACEMENT OF FILL MATERIALS, BASE COURSES, PAVEMENTS, TOPSOIL, AND OTHER MATERIALS TO THE SPECIFIED DEPTHS.
5. CONTRACTOR SHALL NOT EXCAVATE BELOW ELEVATIONS OR DESIGN GRADES SHOWN ON THE DRAWINGS WITHOUT PRIOR AUTHORIZATION FROM ENGINEER AND OWNER.
6. PRIOR TO ALL EXCAVATION OR FILLING OPERATIONS, CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TOPSOIL FROM PROPOSED LOCATIONS OF BUILDINGS, STRUCTURES, ROADS, WALKS, OTHER PAVED AREAS, STORM WATER FACILITIES OR WITHIN THE GRADING EXTENTS WHERE EXISTING GRADES ARE ALTERED BY MORE THAN 3". REMOVED OR STRIPPED TOPSOIL SHALL BE SEGREGATED AND STOCKPILED ON-SITE IN AN APPROPRIATE LOCATION TO BE RESPREAD AS SPECIFIED ON THE DRAWINGS.
7. CONTRACTOR SHALL NOT PLACE ANY FILL OR OTHER MATERIALS ON AREAS THAT HAVE NOT HAD TOPSOIL REMOVED, ARE FROZEN, SATURATED, OR YIELDING. CONTRACTOR SHALL NOTIFY OWNER OR ENGINEER IF SUBGRADE CONDITIONS ARE NOT SUITABLE FOR SUPPORTING FILL AND A FURTHER DETERMINATION SHALL BE PROVIDED BY OWNER OR ENGINEER.
8. CONTRACTOR SHALL PLACE THE FILLS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT INCLUDING LIFT DEPTHS AND COMPACTION EFFORTS.
9. PRIOR TO PLACEMENT OF BASE COURSE MATERIALS IN PAVEMENT OR HARD SURFACE AREAS OR CONDUCTING EXCAVATION BELOW SUBGRADE (EBS) ELEVATIONS, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER TO CONDUCT AN INSPECTION OF THE PREPARED SUBGRADE AND PROOF-ROLLING. PROOF-ROLLING SHALL BE CONDUCTED BY THE CONTRACTOR IN WITNESS OF THE OWNER AND ENGINEER. OWNER AND ENGINEER SHALL DETERMINE IF AREAS OF EBS ARE REQUIRED. EBS SHALL BE COMPLETED BY THE CONTRACTOR PER THE DIRECTION OF THE OWNER AND ENGINEER.

## STORMWATER FACILITIES CONSTRUCTION NOTES

1. ENGINEER SHALL BE NOTIFIED PRIOR TO INSTALLATION OF STORMWATER MANAGEMENT FACILITIES. CONTRACTOR SHALL PROVIDE ENGINEER DOCUMENTATION OF CONSTRUCTION OF STORMWATER FACILITIES INCLUDING GEOTECHNICAL NOTES ON EXISTING SOILS, PHOTOGRAPHS OF EACH STAGE OF BASIN CONSTRUCTION, LOAD TICKETS AND SPECIFICATION OF MATERIALS USED IN THE BASIN, AND ELEVATION OF CRITICAL ITEMS SUCH AS PIPES, EXCAVATIONS, DRAINAGE STONE BOTTOM, ETC.
2. ERECT CONSTRUCTION FENCING OR SNOW FENCING AROUND PROPOSED STORMWATER FACILITIES INTENDED TO INFILTRATE STORMWATER TO PROTECT THESE SOILS FROM DISTURBANCE AND COMPACTION. CONSTRUCTION TRAFFIC, HEAVY EQUIPMENT, AND SOIL STOCKPILES SHALL NOT BE PLACED IN AREAS WHERE PROPOSED INFILTRATE AREAS ARE LOCATED.
3. STORMWATER MANAGEMENT FACILITIES FOR INFILTRATION SHALL BE INSTALLED AFTER SUBSTANTIAL COMPLETION OF FINAL SITE GRADING AND SOILS HAVE BEEN STABILIZED.
4. TEMPORARY SEDIMENT BASINS SHALL BE REMOVED IN THEIR ENTIRETY AFTER CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES. PERMANENT STORMWATER BASINS USED AS TEMPORARY SEDIMENT BASINS SHALL BE DREDGED TO DESIGN DEPTH AFTER SITE IS STABILIZED.
5. REFER TO PROJECT DETAILS FOR FURTHER INFORMATION AND SPECIFICATIONS FOR THE CONSTRUCTION OF THE STORMWATER FACILITIES.

## CONSTRUCTION SEQUENCING

1. INSTALL PERIMETER SILT FENCE, WATTLES, INLET PROTECTION, AND CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL AND INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. ROUGH GRADE BIORETENTION PONDS AND INSTALL POND OUTLETS.
4. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES.
5. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
6. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
7. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROL MEASURES AS INDICATED ON PLANS.
8. RESTORE BIORETENTION PONDS (FINAL GRADE PER PLAN REQUIREMENTS).
9. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED OR 70% CONTIGUOUS VEGETATIVE COVER IS ESTABLISHED.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM NO. 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

## CITY FORESTRY NOTES

1. ALL PROPOSED STREET TREE REMOVALS WITHIN THE RIGHT OF WAY SHALL BE REVIEWED BY CITY FORESTRY BEFORE THE PLAN COMMISSION MEETING. STREET TREE REMOVALS REQUIRE APPROVAL AND A TREE REMOVAL PERMIT ISSUED BY CITY FORESTRY. ANY STREET TREE REMOVALS REQUESTED AFTER THE DEVELOPMENT PLAN IS APPROVED BY THE PLAN COMMISSION OR THE BOARD OF PUBLIC WORKS AND CITY FORESTRY WILL REQUIRE A MINIMUM OF A 72-HOUR REVIEW PERIOD WHICH SHALL INCLUDE THE NOTIFICATION OF THE ALDERPERSON WITHIN WHO'S DISTRICT IS AFFECTED BY THE STREET TREE REMOVAL(S) PRIOR TO A TREE REMOVAL PERMIT BEING ISSUED.
2. AS DEFINED BY THE SECTION 107.13 OF CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION: NO EXCAVATION IS PERMITTED WITHIN 5 FEET OF THE TRUNK OF THE STREET TREE OR WHEN CUTTING ROOTS OVER 3 INCHES IN DIAMETER. IF EXCAVATION IS NECESSARY, THE CONTRACTOR SHALL CONTACT MADISON CITY FORESTRY (266-4816) PRIOR TO EXCAVATION. CITY OF MADISON FORESTRY PERSONNEL SHALL ASSESS THE IMPACT TO THE TREE AND TO ITS ROOT SYSTEM PRIOR TO WORK COMMENCING. TREE PROTECTION SPECIFICATIONS CAN BE FOUND ON THE FOLLOWING WEBSITE: HTTPS://WWW.CITYOFMADISON.COM/BUSINESS/PW/SPECS.CFM
3. CONTRACTOR SHALL TAKE PRECAUTIONS DURING CONSTRUCTION TO NOT DISFIGURE, SCAR, OR IMPAIR THE HEALTH OF ANY STREET TREE. CONTRACTOR SHALL OPERATE EQUIPMENT IN A MANNER AS TO NOT DAMAGE THE BRANCHES OF THE STREET TREE(S). THIS MAY REQUIRE USING SMALLER EQUIPMENT AND LOADING AND UNLOADING MATERIALS IN A DESIGNATED SPACE AWAY FROM TREES ON THE CONSTRUCTION SITE. ANY DAMAGE OR INJURY TO EXISTING STREET TREES (EITHER ABOVE OR BELOW GROUND) SHALL BE REPORTED IMMEDIATELY TO CITY FORESTRY AT 266-4816. PENALTIES AND REMEDIATION SHALL BE REQUIRED.
4. SECTION 107.13(G) OF CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ADDRESSES SOIL COMPACTION NEAR STREET TREES AND SHALL BE FOLLOWED BY CONTRACTOR. THE STORAGE OF PARKED VEHICLES, CONSTRUCTION EQUIPMENT, BUILDING MATERIALS, REFUSE, EXCAVATED SPOILS OR DUMPING OF POISONOUS MATERIALS ON OR AROUND TREES AND ROOTS WITHIN FIVE (5) FEET OF THE TREE OR WITHIN THE PROTECTION ZONE IS PROHIBITED.
5. ON THIS PROJECT, STREET TREE PROTECTION ZONE FENCING IS REQUIRED. THE FENCING SHALL BE ERECTED BEFORE THE DEMOLITION, GRADING OR CONSTRUCTION BEGINS. THE FENCE SHALL INCLUDE THE ENTIRE WIDTH OF TERRACE AND, EXTEND AT LEAST 5 FEET ON BOTH SIDES OF THE OUTSIDE EDGE OF THE TREE TRUNK. DO NOT REMOVE THE FENCING TO ALLOW FOR DELIVERIES OR EQUIPMENT ACCESS THROUGH THE TREE PROTECTION ZONE.
6. STREET TREE PRUNING SHALL BE COORDINATED WITH MADISON FORESTRY AT A MINIMUM OF TWO WEEKS PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT. ALL PRUNING SHALL FOLLOW THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A300 - PART 1 STANDARDS FOR PRUNING.
7. ADDITIONAL STREET TREES ARE NEEDED FOR THIS PROJECT. TREE PLANTING SPECIFICATIONS CAN BE FOUND IN SECTION 209 OF CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WEBSITE: HTTPS://WWW.CITYOFMADISON.COM/BUSINESS/PW/SPECS.CFM) - ALL STREET TREE PLANTING LOCATIONS AND TREE SPECIES WITHIN THE RIGHT OF WAY SHALL BE DETERMINED BY CITY FORESTRY. A LANDSCAPE PLAN AND STREET TREE PLANTING PLAN SHALL BE SUBMITTED IN PDF FORMAT TO CITY FORESTRY FOR APPROVAL OF PLANTING LOCATIONS WITHIN THE RIGHT OF WAY AND TREE SPECIES. ALL AVAILABLE STREET TREE PLANTING LOCATIONS SHALL BE PLANTED WITHIN THE PROJECT BOUNDARIES.
8. AT LEAST ONE WEEK PRIOR TO STREET TREE PLANTING, CONTRACTOR SHALL CONTACT CITY FORESTRY AT (608) 266-4816 TO SCHEDULE INSPECTION AND APPROVAL OF NURSERY TREE STOCK AND REVIEW PLANTING SPECIFICATIONS WITH THE LANDSCAPER.

## CITY TRAFFIC ENGINEERING NOTES

1. THE RIGHT-OF-WAY IS THE SOLE JURISDICTION OF THE CITY OF MADISON AND IS SUBJECT TO CHANGE AT ANY TIME PER THE RECOMMENDED PLAN BY TRAFFIC ENGINEERING AND CITY ENGINEERING DEPARTMENT

## PUBLIC IMPROVEMENTS NOTES

1. ALL PROPOSED IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY OR CONNECTIONS TO CITY OWNED UTILITIES SHALL BE COMPLETED PER THE CITY ISSUED IMPROVEMENTS PLAN (CONTRACT NO. XXXX, PROJECT NO. XXXX)

## UTILITY NOTES

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGERS HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
    - 2.1. EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
    - 2.2. OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
    - 2.3. VERIFYING ALL ELEVATIONS, LOCATIONS, AND SIZES OF SANITARY, WATER, AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
    - 2.4. NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
    - 2.5. NOTIFYING THE DESIGN ENGINEER AND JURISDICTIONAL AUTHORITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
    - 2.6. COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC UTILITIES AND STATE DSPS/SPS AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE JURISDICTIONAL AUTHORITIES.
4. SPECIFICATIONS SHALL COMPLY WITH THE JURISDICTIONAL AUTHORITY'S SPECIAL PROVISIONS.
5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED IN CONSTRUCTION SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.
8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
9. ALL NON-METALLIC UTILITY PIPES (SANITARY SEWER, STORM SEWER, AND WATER PIPING) SHALL BE INSTALLED IN CONJUNCTION WITH TRACER WIRE AS REQUIRED BY SPS 382.30(11)(H), SPS 382.36(7)(C)10., AND SPS 382.40(8)(K). COLOR OF TRACER WIRE SHALL BE: SANITARY SEWER - GREEN, STORM SEWER - BROWN, WATER - BLUE, NON-POTABLE WATER - PURPLE.
10. DRY UTILITIES (COMMUNICATION, TELEPHONE, GAS, ELECTRIC, ETC.) ARE SHOWN FOR GENERAL ROUTING ONLY. CONTRACTOR SHALL COORDINATE DESIGN AND FINAL LOCATION WITH APPROPRIATE UTILITY COMPANY.
11. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
12. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE JURISDICTIONAL AUTHORITY'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
13. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE INSTALLED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
14. IN ANY LOCATIONS WHERE BUILDING SEWERS (STORM AND SANITARY) ARE INSTALLED WITH LESS THAN THE MINIMUM COVER AS SPECIFIED IN SPS 382.30(11)(c) OR WATER PIPING 382.40(8)(a), CONTRACTOR SHALL INSTALL INSULATION IN ACCORDANCE WITH SPS 382.30(11)(c)2. FOR PROTECTION FROM FROST.
18. SEPARATION DISTANCES
    - 18.1. WHERE PRIVATE WATER MAIN OR WATER SERVICES CROSSES A SANITARY SEWER OR SANITARY LATERAL, THE WATER PIPE WITHIN 5 FEET OF THE CROSSING SHALL BE INSTALLED WITH THE FOLLOWING:
        - 18.1.1. WATER PIPING SHALL BE INSTALLED AT LEAST 12 INCHES ABOVE THE TOP OF SANITARY PIPING.
        - 18.1.2. WATER PIPING SHALL BE INSTALLED AT LEAST 18 INCHES BELOW THE BOTTOM OF SANITARY PIPING.

## EXCAVATION, FILL PLACEMENT, & COMPACTION SPECIFICATIONS

1. ALL EXCAVATIONS SHALL BE TO THE ELEVATIONS SHOWN ON THE DRAWINGS OR AS REQUIRED FOR DEMOLITION PURPOSES, AND SHALL INCLUDE SUFFICIENT DEPTHS FOR PLACEMENT OF FILL MATERIALS, BASE COURSES, PAVEMENTS, TOPSOIL AND OTHER MATERIALS TO THE SPECIFIED DEPTHS.
2. CONTRACTOR SHALL NOT EXCAVATE BELOW ELEVATIONS OR DESIGN GRADES SHOWN ON THE DRAWINGS WITHOUT PRIOR AUTHORIZATION FROM ENGINEER AND OWNER.
3. PRIOR TO ALL EXCAVATION OR FILLING OPERATIONS, CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TOPSOIL FROM PROPOSED LOCATIONS OF BUILDINGS, STRUCTURES, ROADS, WALKS, OTHER PAVED AREAS, OR WITHIN THE GRADING EXTENTS WHERE EXISTING GRADES ARE ALTERED BY MORE THAN 3 INCHES. REMOVED OR STRIPPED TOPSOIL SHALL BE SEGREGATED AND STOCKPILED ON-SITE IN AN APPROPRIATE LOCATION TO BE RESPREAD AS INDICATED ON THE DRAWINGS.
4. WHERE CONTRACTOR ENCOUNTERS ROCK IN EXCAVATIONS OR TRENCHES, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER FOR FURTHER DETERMINATION OF EXCAVATION LIMITS AND SPECIFICATIONS.
5. CONTRACTOR SHALL NOT PLACE ANY FILL OR OTHER MATERIALS ON AREAS THAT HAVE NOT HAD TOPSOIL REMOVED, ARE FROZEN, SATURATED OR YIELDING. CONTRACTOR SHALL NOTIFY OWNER OR ENGINEER IF SUB-SOIL CONDITIONS NOT SUITABLE FOR SUPPORTING FILL AND A FURTHER DETERMINATION SHALL BE PROVIDED BY OWNER OR ENGINEER.
6. ALL FILL SHALL BE PLACED TO THE ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS AND SHALL INCLUDE SUFFICIENT DEPTHS FOR PLACEMENT OF BASE COURSES, PAVEMENTS, TOPSOIL AND OTHER FILL MATERIALS TO THE SPECIFIED DEPTHS.
7. ALL FILLS UNDER PROPOSED BUILDINGS, STRUCTURES, PAVEMENTS AND TURF AREAS SHALL BE PLACED IN HORIZONTAL LIFTS, NOT EXCEEDING A THICKNESS OF 1-FOOT, UNLESS OTHERWISE DIRECTED BY OWNER OR ENGINEER. FILLS UNDER INFILTRATION AREAS SHALL BE PLACED TO MITIGATE COMPACTION WHICH COMPROMISES INFILTRATION CAPACITIES OF THE SOILS. REFER TO STORM WATER SPECIFICATIONS FOR FURTHER DETAILS.
8. PLACEMENT AND COMPACTION OF FILL MATERIALS SHALL BE COMPLETED TO MINIMIZE SETTLEMENT AND AVOID DAMAGE TO EXISTING BUILDINGS, STRUCTURES, PAVEMENTS UTILITIES AND OTHER WORK IN PLACE OR IN PROGRESS.
9. CONTRACTOR SHALL PLACE THE FILLS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND THE BELOW COMPACTION SPECIFICATIONS. THE GEOTECHNICAL REPORT RECOMMENDATIONS SHALL GOVERN IF DISCREPANCIES BETWEEN THE BELOW COMPACTION SPECIFICATIONS AND THE REPORT OCCUR.
    - 9.1. AREAS BENEATH FOOTINGS, FLOOR SLABS AND BUILDINGS: 95% MODIFIED PROCTOR
    - 9.2. AREAS BENEATH PAVEMENTS, SIDEWALKS OR OTHER EXTERIOR HARD SURFACES: 95% MODIFIED PROCTOR
    - 9.3. AREAS OUTSIDE 10' OF STRUCTURE OR PAVEMENTS AND IN TURF: 90% MODIFIED PROCTOR
        - 9.3.1. EXCLUDING STORM WATER INFILTRATION AREAS.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY COMPACTION AND GRADING EQUIPMENT AND MEANS AND METHODS TO ACHIEVE THE SPECIFIED COMPACTION REQUIREMENTS, INCLUDING USE OF HAND GUIDED VIBRATORY OR TAMPING COMPACTORS WHEN SPACE CONSTRAINTS OF COMPACTING BACKFILL ALONG WALLS, FOOTINGS, OR BUILDINGS MAY REQUIRE SUCH MEANS.
11. PRIOR TO PLACEMENT OF BASE COURSE MATERIALS IN PAVEMENT OR HARD SURFACE AREAS OR UNDERCUTTING OR EXCAVATION BELOW SUBGRADE (EBS) ELEVATIONS, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER TO CONDUCT AN INSPECTION OF THE PREPARED SUB-GRADE AND PROOF-ROLLING. PROOF-ROLLING SHALL BE CONDUCTED BY THE CONTRACTOR IN WITNESS OF THE OWNER AND ENGINEER. OWNER AND ENGINEER SHALL DETERMINE IF AREAS OF UNDERCUTTING OR EBS IS REQUIRED. UNDERCUTTING OR EBS SHALL BE COMPLETED BY THE CONTRACTOR PER THE DIRECTION OF THE OWNER AND ENGINEER.

## EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE TO NOTIFY ENGINEER OF RECORD AND OFFICIALS OF ANY CHANGES TO THE EROSION CONTROL AND STORMWATER MANAGEMENT PLANS.
2. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS AND JURISDICTIONAL REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THESE STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL EROSION CONTROL MEASURES WHICH MAY BE NECESSARY TO MEET UNFORESEEN FIELD CONDITIONS.
3. INSTALL PERIMETER EROSION CONTROL MEASURES (SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE, AND EXISTING INLET PROTECTION) PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE COVER. MODIFICATIONS TO THE APPROVED EROSION CONTROL DESIGN IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS IS ALLOWED IF MODIFICATIONS CONFORM TO WDNR TECHNICAL STANDARDS AND JURISDICTIONAL REQUIREMENTS. ALL DESIGN MODIFICATIONS MUST BE APPROVED BY THE JURISDICTIONAL AUTHORITIES PRIOR TO DEVIATION OF THE APPROVED PLAN.
4. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY JURISDICTIONS HAVING AUTORITY AND/OR ENGINEER OF RECORD SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.
5. INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY.
6. ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE INSPECTED WITHIN 24 HOURS OF ALL RAIN EVENTS EXCEEDING 0.5". ANY DAMAGED EROSION CONTROL MEASURES SHALL BE REPAIRED OR REPLACED IMMEDIATELY UPON INSPECTION.
7. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESS/EGRESS POINTS. ADDITIONAL LOCATIONS OTHER THAN AS SHOWN ON THE PLANS MUST BE PRE-APPROVED BY THE JURISDICTION. CONSTRUCTION ENTRANCES SHALL BE 50' LONG AND NO LESS THAN 12" THICK BY USE OF 3" SELECTED CRUSHED. CONSTRUCTION ENTRANCES SHALL BE MAINTAINED BY THE CONTRACTOR IN A CONDITION WHICH WILL PREVENT THE TRACKING OF MUD OR DRY SEDIMENTOFF-SITE AFTER EACH WORKING DAY OR MORE FREQUENTLY AS REQUIRED.
8. PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEPT AND/OR SCRAPED TO REMOVE ACCUMULATED SOIL, DIRT, AND/OR DUST AFTER THE END OF EACH WORK DAY AND AS REQUESTED BY THE JURISDICTIONAL AUTHORITIES.
9. INLET PROTECTION SHALL BE IMMEDIATELY FITTED AT THE INLETS OF ALL INSTALLED STORM SEWER. STONE DITCH CHECKS FENCE SHALL BE IMMEDIATELY FITTED AT ALL INSTALLED CULVERT INLETS TO PREVENT SEDIMENT DEPOSITION WITHIN STORM SEWER SYSTEMS.
10. INSTALL EROSION CONTROLS ON THE DOWNSTREAM SIDE OF STOCKPILES. IF STOCKPILE REMAINS UNDISTURBED FOR MORE THAN SEVEN (7) DAYS, TEMPORARY SEEDING AND STABILIZATION IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES IS REQUIRED. IF DISTURBANCE OCCURS BETWEEN NOVEMBER 15TH AND MAY 15TH, THE MULCHING SHALL BE PERFORMED BY HYDRO-MULCHING WITH A "TACKIFIER."
11. DITCH CHECKS AND APPLICABLE EROSION NETTING/MATTING SHALL BE INSTALLED IMMEDIATELY AFTER COMPLETION OF GRADING EFFORTS WITHIN DITCHES/SWALES TO PREVENT SOIL TRANSPORTATION.
12. EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.):
    - 12.1. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
    - 12.2. BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
    - 12.3. DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH THE WDNR DEWATERING TECHNICAL STANDARD NO. 1061 PRIOR TO RELEASE INTO THE STORM SEWER, RECEIVING STREAM, OR DRAINAGE DITCH.
13. ALL SLOPES 4:1 OR GREATER SHALL BE STABILIZED WITH CLASS I, TYPE B EROSION MATTING PER STATE HIGHWAY SPECIFICATIONS OR APPLICATION OF A WISDOT APPROVED POLYMER SOIL STABILIZATION TREATMENT OR A COMBINATION THEREOF, AS REQUIRED WITHIN SEVEN (7) DAYS OF REACHING FINAL GRADE. DRAINAGE SWALES SHALL BE STABILIZED WITH CLASS II, TYPE B EROSION MATTING PER STATE HIGHWAY SPECIFICATIONS. EROSION MATTING AND/OR NETTING USED ONSITE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND WDNR TECHNICAL STANDARDS 1052 AND 1053.
14. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO CONTROL DUST ARISING FROM CONSTRUCTION OPERATIONS. REFER TO WDNR TECHNICAL STANDARD 1068.
15. A CONCRETE WASHOUT AREA SHALL BE DESIGNATED ONSITE. CONTRACTOR SHALL USE PRE-MANUFACTURED ABOVE GROUND WASHOUT TOTE OR EQUIVALENT CONTAINMENT AREA FOR ALL CONCRETE WASTE. CONCRETE WASTE SHALL ONLY BE CONTAINED IN ABOVE GROUND PRE-FABRICATED CONTAINERS OR CONSTRUCTED CONTAINMENT AREA AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FREQUENTLY DISPOSE OF OFF-SITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS TO MAINTAIN THE SYSTEMS EFFECTIVENESS.
16. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. NO MORE THAN SEVEN (7) DAYS SHALL PASS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS CEASED UNLESS:
    - 16.1. THE INITIATION STABILIZATION MEASURES BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS CEASED OR IS PRECLUDED BY SNOW COVER. IN THAT EVENT, STABILIZATION SHALL BE INITIATED AS SOON AS PRACTICABLE.
    - 16.2. CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN FOURTEEN (14) DAYS FROM WHEN ACTIVITY CEASED (*I.E., THE TOTAL TIME PERIOD THAT THE CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN FOURTEEN (14) DAY*). IN THAT EVENT, STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED.
    - 16.3. STABILIZATION MEASURES SHALL BE DETERMINED BASED ONSITE CONDITIONS WHEN CONSTRUCTION ACTIVITY HAS CEASED INCLUDING, BUT NOT LIMITED TO, WEATHER CONDITIONS AND LENGTH OF TIME THE MEASURE MUST BE EFFECTIVE. THE FOLLOWING ARE ACCEPTABLE STABILIZATION MEASURES:
        - 16.3.1. PERMANENT SEEDING; IN ACCORDANCE WITH APPROVED CONSTRUCTION SPECIFICATION
        - 16.3.2. TEMPORARY SEEDING; MAY CONSIST OF SPRING OATS(100LBS.ACRE) IN SPRING/SUMMER OR WHEAT OR CEREAL RYE (150LBS./ACRE) IN FALL
        - 16.3.3. HYDRO-MULCHING WITH A TACKIFIER
        - 16.3.4. WOVEN AND NON-WOVEN GEOTEXTILES
        - 16.3.5. EROSION MATTING
        - 16.3.6. SODDING
        - 16.3.7. OTHER MEASURES AS APPROVED BY THE ENGINEER
17. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL LAND DISTURBING CONSTRUCTION ACTIVITY AT THE SITE HAS BEEN COMPLETED AND THAT A UNIFORM PERENNIAL VEGETATIVE COVER HAS BEEN ESTABLISHED WITH A CONTIGUOUS DENSITY OF AT LEAST 70% FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES OR THAT EMPLOY EQUIVALENT PERMANENT STABILIZATION MEASURES.
18. CONTRACTOR/OWNER SHALL FILE A NOTICE OF TERMINATION UPON COMPLETION OF THE PROJECT IN ACCORDANCE WITH WDNR REQUIREMENTS AND/OR REQUEST FOR PERMIT CLOSURE IN ACCORDANCE WITH JURISDICTION PERMIT AND SPECIFICATION REQUIREMENTS.

## LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- EXISTING / PROPOSED EASEMENT
- DEMOLITION – REMOVAL OF ONSITE CURB SURFACES AND BASE COURSE
- DEMOLITION – REMOVAL OF FENCE
- DEMOLITION – PAVEMENT MILL AND OVERLAY
- DEMOLITION – REMOVAL OF PLAYGROUND/SPORTS EQUIPMENT
- DEMOLITION – REMOVAL OF ASPHALT SURFACES
- DEMOLITION – REMOVAL OF CONCRETE SURFACES
- DEMOLITION – REMOVAL OF BUILDINGS/STRUCTURES
- DEMOLITION – REMOVAL OF UTILITIES
- DEMOLITION – REMOVAL OF LANDSCAPE FEATURES
- SAWCUT EXISTING PAVEMENT
- TREE AND SHRUB REMOVAL
- MISCELLANEOUS SITE REMOVALS
- SIGN REMOVAL
- PROTECT EXISTING TREE
- BUILDING OUTLINE
- BUILDING OVERHANG
- BUILDING SETBACK LINE
- EDGE OF PAVEMENT
- 18" STANDARD CURB AND GUTTER
- 18" REJECT CURB AND GUTTER
- 18" MOUNTABLE CURB AND GUTTER
- CONCRETE VALLEY CURB/RIBBON CURB
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE PAVEMENT WITH COLOR/TEXTURE
- SEAT WALL / RETAINING WALL
- LIGHT POLE (REFER TO PHOTOMETRIC PLAN)
- SIGN
- BOLLARD
- BOLLARD WITH ADA PARKING SIGN
- BIKE RACK
- RAILING
- FENCE
- FLAG POLE
- SF — SILT FENCE
- RIP-RAP
- CONSTRUCTION ENTRANCE
- EROSION MATTING
- TURF REINFORCEMENT MATTING
- DITCH CHECK
- INLET PROTECTION
- 959 — PROPOSED 1 FOOT CONTOUR
- 960 — PROPOSED 5 FOOT CONTOUR
- 959 — EXISTING 1 FOOT CONTOUR
- 960 — EXISTING 5 FOOT CONTOUR
- DRAINAGE DIRECTION
- GRADE BREAK
- STORMWATER MANAGEMENT AREA
- FG: XXX.XX — SPOT ELEVATION
    - EP – EDGE OF PAVEMENT
    - FG – FINISH GRADE
    - EC – EDGE OF CONCRETE
    - BOC – BACK OF CURB
    - MATCH – MATCH EXISTING GRADE
    - HP – HIGH POINT
    - SW – SIDEWALK
- S — SANITARY SEWER
- W — WATERMAIN
- D — STORM SEWER
- UNDERDRAIN
- 8'x4'x4" INSULATION (PLAN VIEW)
- 8'x4'x4" INSULATION (PROFILE VIEW)


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Key Plan

| Revision | Description | Date |
|---|---|---|


OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**GENERAL NOTES & LEGEND**

Sheet Number
**C100**


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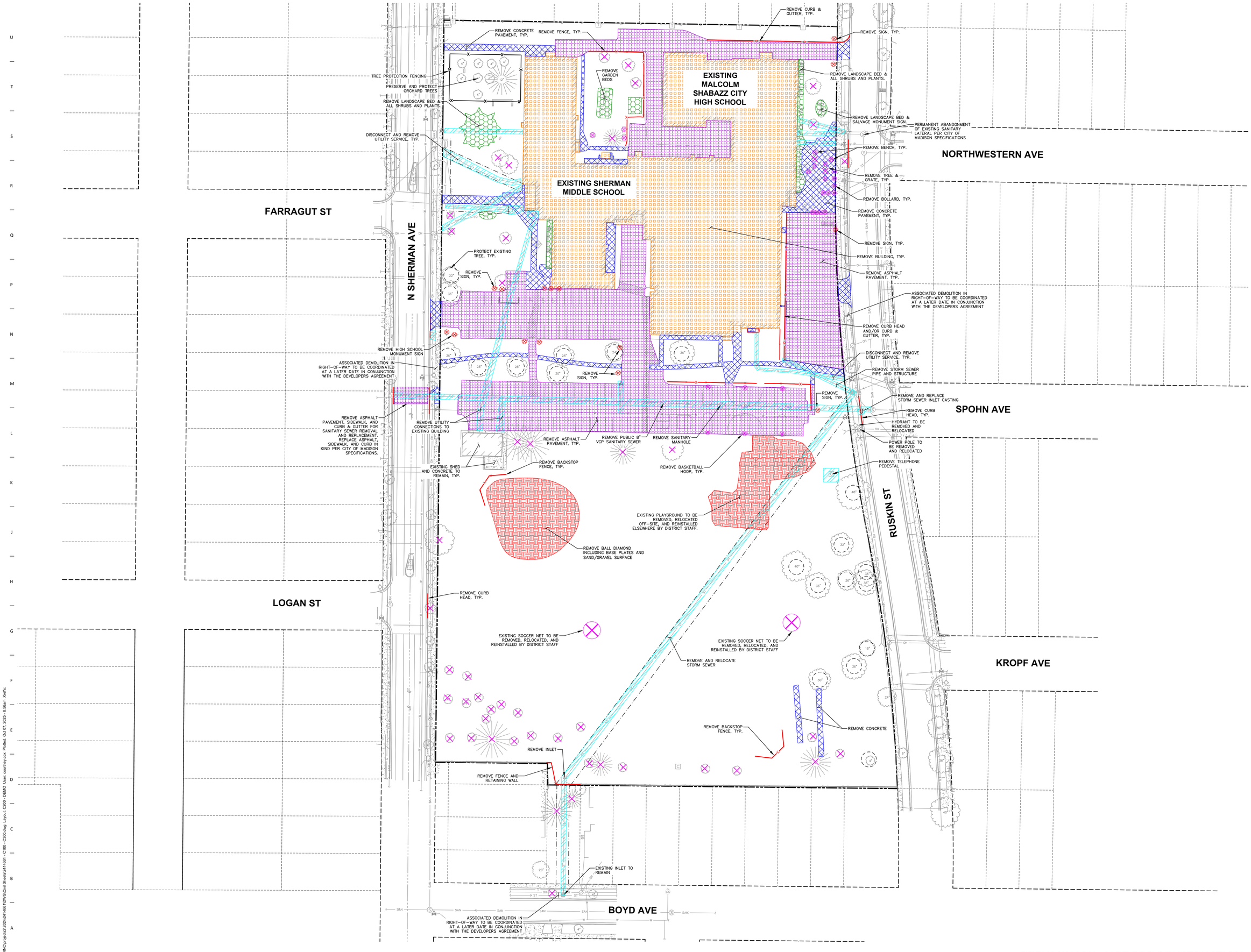


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Key Plan

north
SCALE IN FEET
40' 0 40'

| Revision | Description | Date |
|---|---|---|

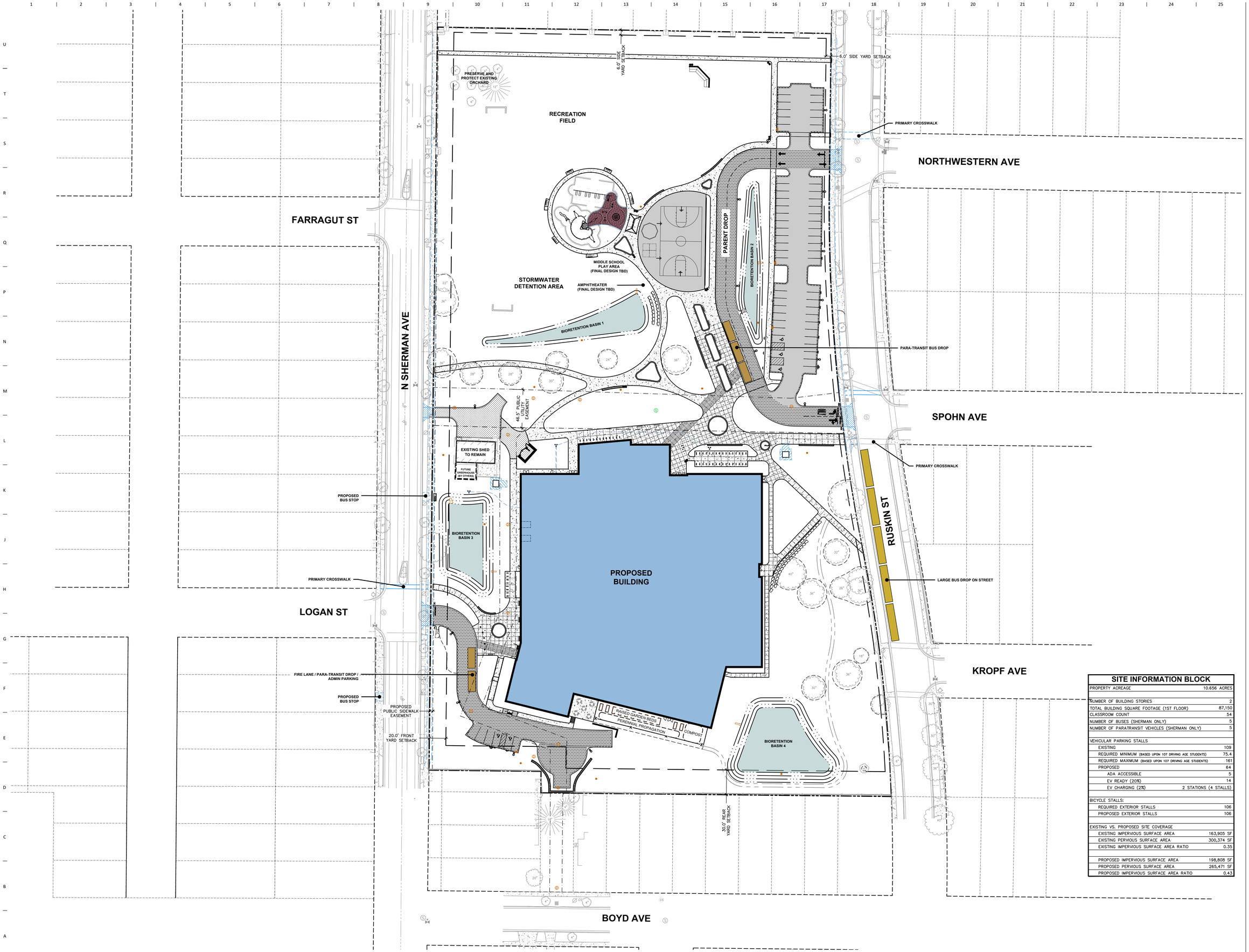
OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**DEMOLITION PLAN**

Sheet Number
**C200**

File: \\JSD\INC\projects\2024\24146610\DWG\Civil Sheets\24146601 - C100 - C200.dwg Layout: C200 - DEMO User: courtney.cox Plotted: Oct 07, 2025 - 8:56am, XrefIs:




## SITE INFORMATION BLOCK

| | |
|---|---|
| PROPERTY ACREAGE | 10.656 ACRES |
| | |
| NUMBER OF BUILDING STORIES | 2 |
| TOTAL BUILDING SQUARE FOOTAGE (1ST FLOOR) | 87,150 |
| CLASSROOM COUNT | 54 |
| NUMBER OF BUSES (SHERMAN ONLY) | 5 |
| NUMBER OF PARATRANSIT VEHICLES (SHERMAN ONLY) | 5 |
| | |
| VEHICULAR PARKING STALLS | |
| EXISTING | 109 |
| REQUIRED MINIMUM (BASED UPON 107 DRIVING AGE STUDENTS) | 75.4 |
| REQUIRED MAXIMUM (BASED UPON 107 DRIVING AGE STUDENTS) | 161 |
| PROPOSED | 64 |
| ADA ACCESSIBLE | 5 |
| EV READY (20%) | 14 |
| EV CHARGING (2%) | 2 STATIONS (4 STALLS) |
| | |
| BICYCLE STALLS: | |
| REQUIRED EXTERIOR STALLS | 106 |
| PROPOSED EXTERIOR STALLS | 106 |
| | |
| EXISTING VS. PROPOSED SITE COVERAGE | |
| EXISTING IMPERVIOUS SURFACE AREA | 163,905 SF |
| EXISTING PERVIOUS SURFACE AREA | 300,374 SF |
| EXISTING IMPERVIOUS SURFACE AREA RATIO | 0.35 |
| | |
| PROPOSED IMPERVIOUS SURFACE AREA | 198,808 SF |
| PROPOSED PERVIOUS SURFACE AREA | 265,471 SF |
| PROPOSED IMPERVIOUS SURFACE AREA RATIO | 0.43 |

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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision Description Date

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**SITE PLAN**

Sheet Number
**C300**

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PRESERVE AND PROTECT EXISTING ORCHARD

FARRAGUT ST

N SHERMAN AVE

NORTHWESTERN AVE

RUSKIN ST

SPOHN AVE

STORMWATER DETENTION AREA

BIORETENTION BASIN 1

BIORETENTION BASIN 2

PARENT DROP

EXISTING SHED TO REMAIN

FUTURE GREENHOUSE

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Key Plan

north
SCALE IN FEET
20' 0 20'

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**DIMENSIONED SITE PLAN - NORTH**

Sheet Number
**C301**


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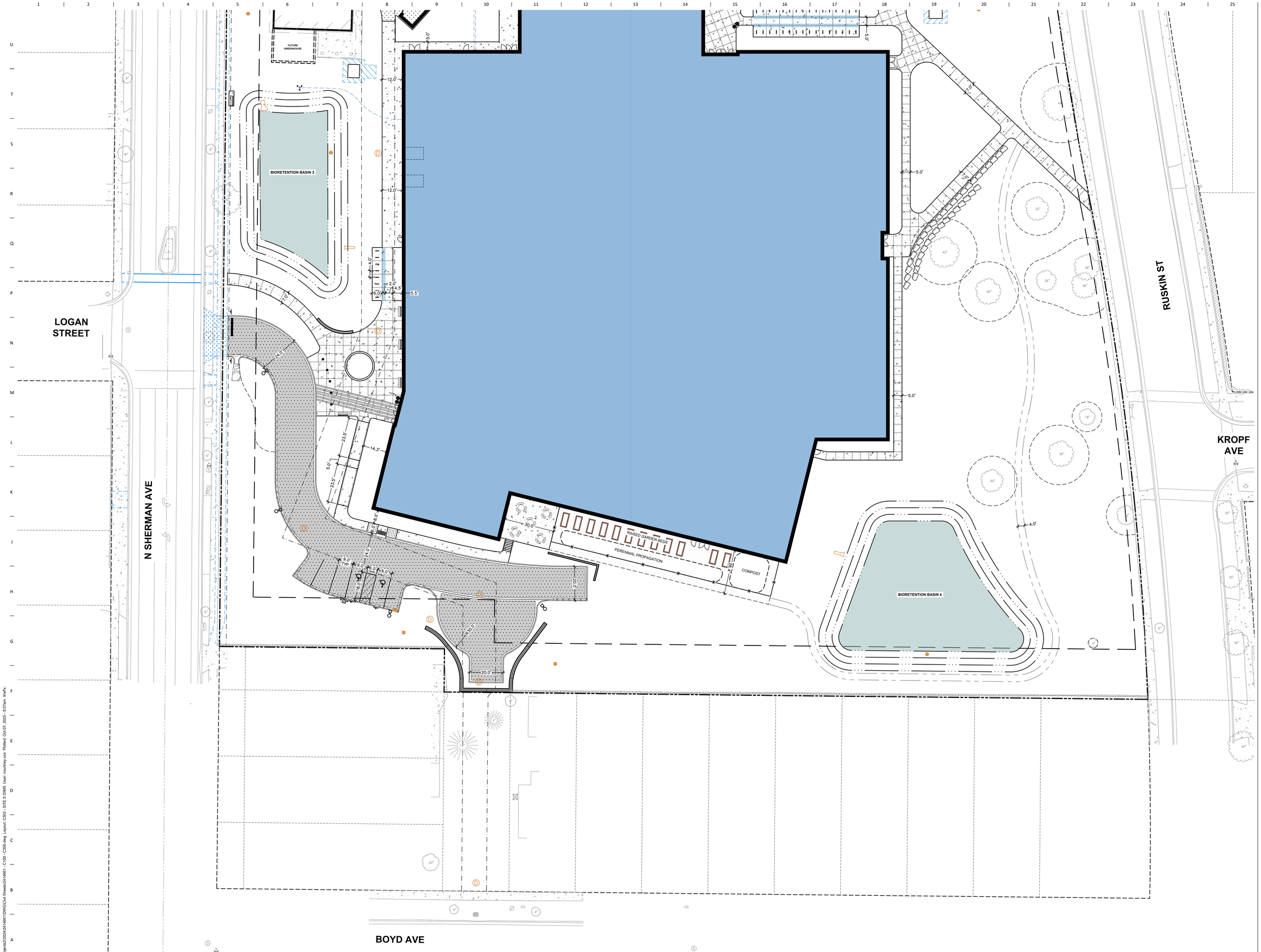



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Key Plan

north
SCALE IN FEET
20' 0 20'

| Revison | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**DIMENSIONED SITE PLAN - SOUTH**

Sheet Number
**C302**

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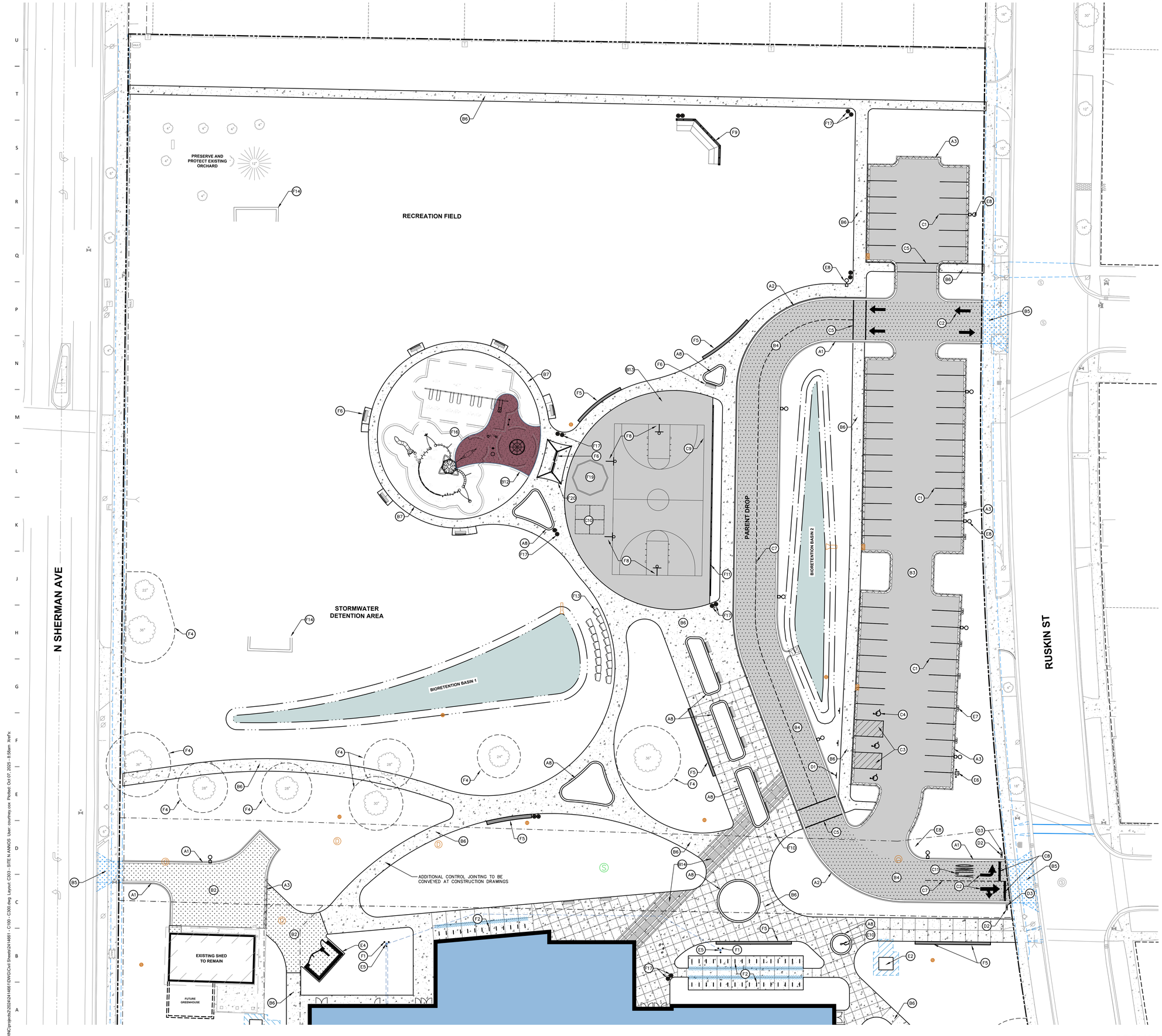


## KEY NOTES

- A1 18" STANDARD CURB AND GUTTER
- A2 18" REJECT CURB AND GUTTER
- A3 18" MOUNTABLE CURB AND GUTTER
- A4 12" RIBBON CURB
- A5 CURB FLUME
- A6 3' CURB HEAD TAPER
- A7 CONCRETE INLET COLLAR
- A8 12"x12" PLANTER CURB
- A9 24" VALLEY GUTTER

- B1 CONCRETE PAVEMENT
- B2 HEAVY DUTY CONCRETE PAVEMENT
- B3 ASPHALT PAVEMENT
- B4 HEAVY DUTY ASPHALT PAVEMENT
- B5 COMMERCIAL ENTRANCE (REFER TO PUBLIC IMPROVEMENT PLANS)
- B6 CONCRETE SIDEWALK
- B7 THICKENED EDGE SIDEWALK
- B8 THICKENED EDGE SIDEWALK – FLUSH WITH PAVEMENT (SEE GRADING PLAN)
- B9 ACCESSIBLE RAMP
- B10 ACCESSIBLE WARNING DETECTOR FIELD
- B11 MOWED PATH (BY DISTRICT)
- B12 POURED IN PLACE RUBBERIZED PLAY SURFACE
- B13 ASPHALT PAVED RECREATION SPORT COURT
- B14 CONCRETE SIDEWALK W/ EXPOSED AGGREGATE FINISH
- B15 ACCESSIBLE RAMP WITH HANDRAILS

- C1 PAVEMENT MARKING: PARKING STALL – 4" WIDE, WHITE
- C2 PAVEMENT MARKING; DIRECTIONAL ARROW, WHITE
- C3 PAVEMENT MARKING; DIAGONAL HATCH – SWSL/4" AT 45° @ 2'-0" O.C. WHITE
- C4 ACCESSIBLE PARKING SPACE & SYMBOL, WHITE
- C5 CROSSWALK MARKING – TYPE II, WHITE
- C6 PAVEMENT MARKING; 4" WIDE WHITE
- C7 PAVEMENT MARKING; 4" WIDE WHITE DASHED, 10' LONG 20' BETWEEN DASHES
- C8 18" WHITE STOP BAR
- C9 BASKETBALL PAINT LINES (SEE DETAIL)
- C10 16'X16' FOUR-SQUARE PAINT LINES
- C11 PAVEMENT MARKING; WORDS, WHITE

- D1 ACCESSIBLE PARKING SIGN
- D2 TYPE R1-1 STOP SIGN
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- F1 8" CONCRETE BOLLARD WITH SLEEVE (REFER TO DETAIL)
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north
SCALE IN FEET
20' 0 20'

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Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**ANNOTATED SITE PLAN - NORTH**

Sheet Number
**C303**

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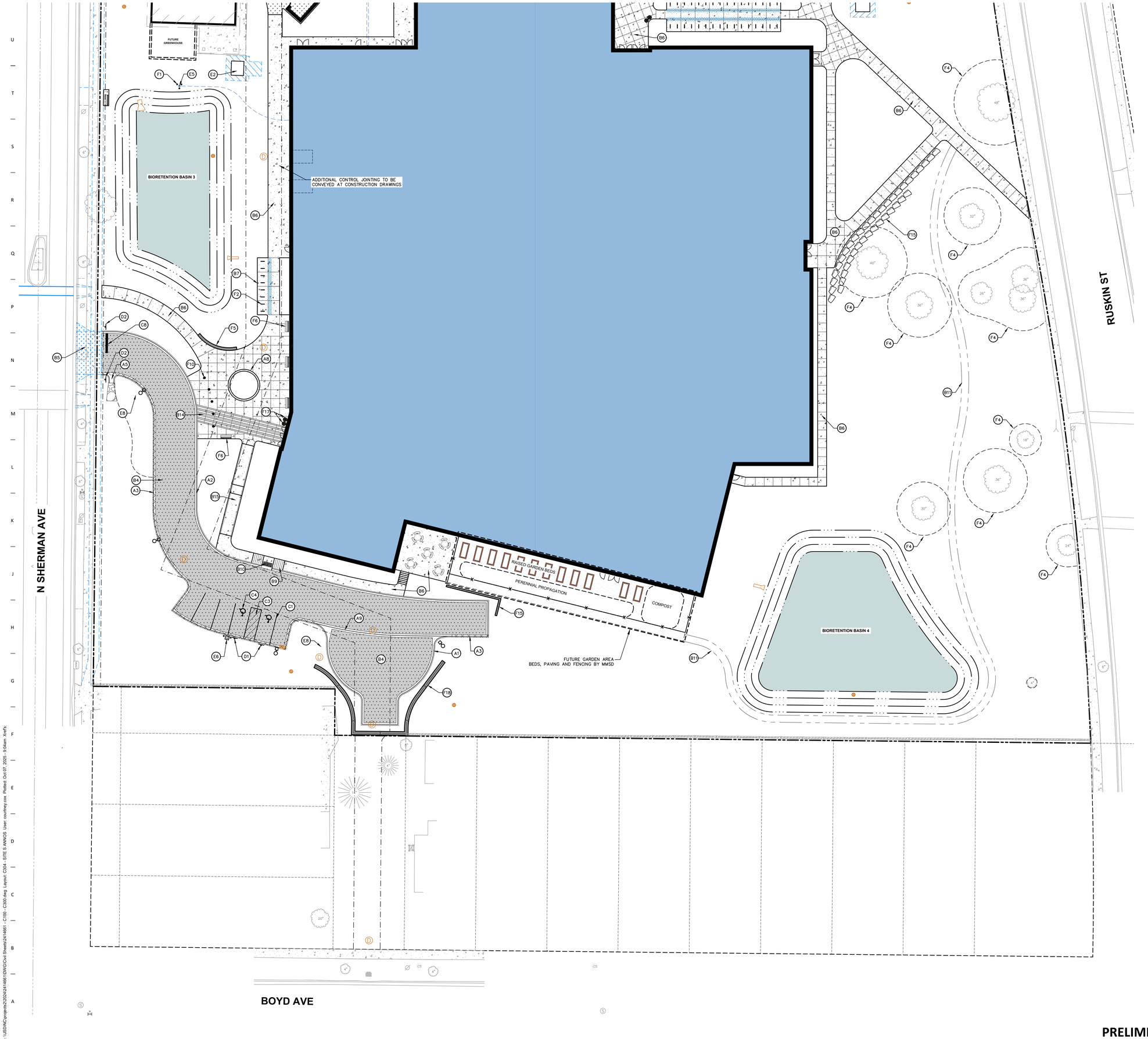


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Key Plan

Revision Description Date

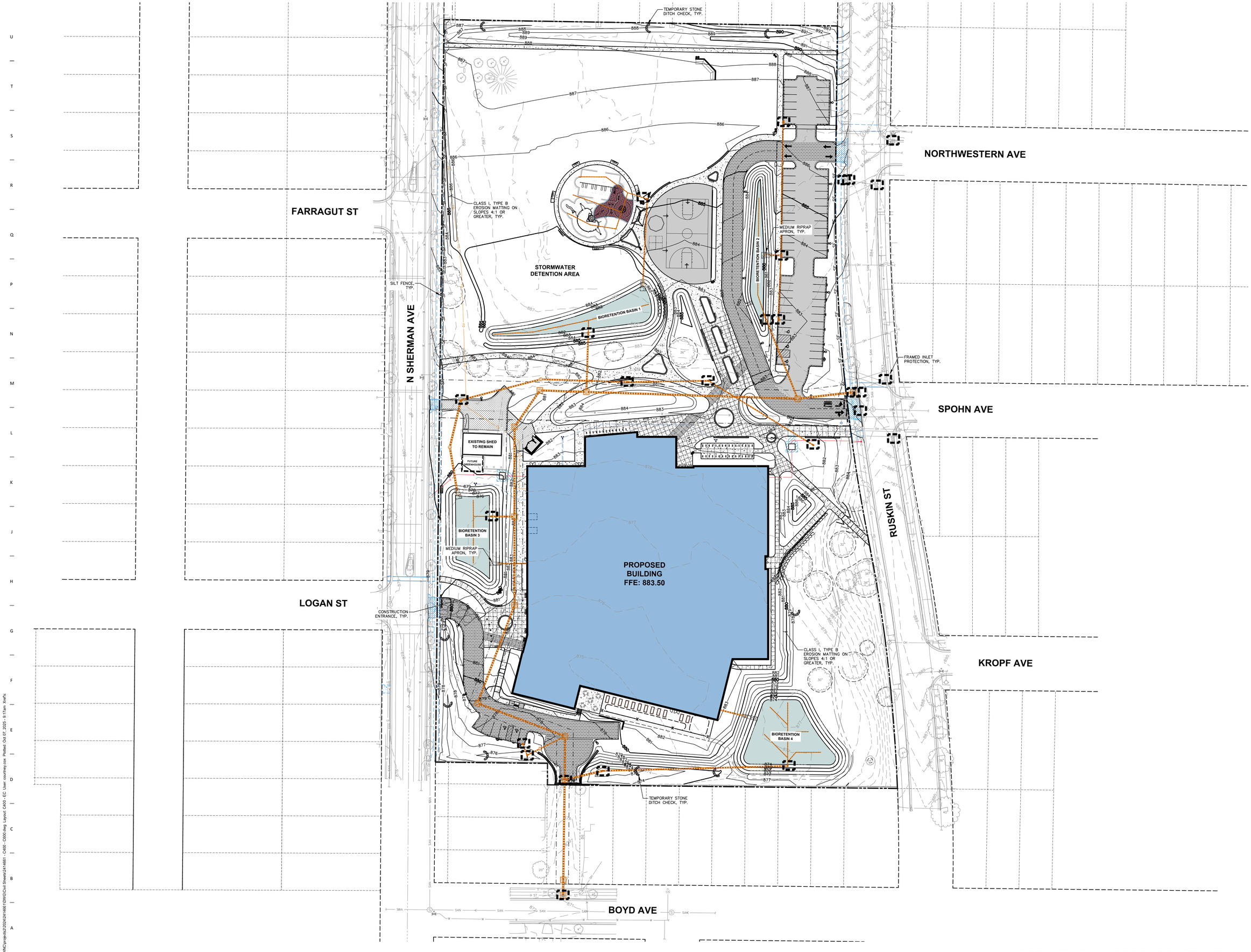
OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**ANNOTATED SITE PLAN - SOUTH**

Sheet Number
**C304**

File: \\JSD\NC\projects2\2024\24146610\DWG\Civil Sheets\24146610 - C100 - C300.dwg Layout: C304 - SITE S ANNOS User: courtney.cox Plotted: Oct 07, 2025 - 9:04am Xref's:

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Key Plan

north
SCALE IN FEET
40' 0 40'

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**EROSION CONTROL PLAN**

Sheet Number
**C400**

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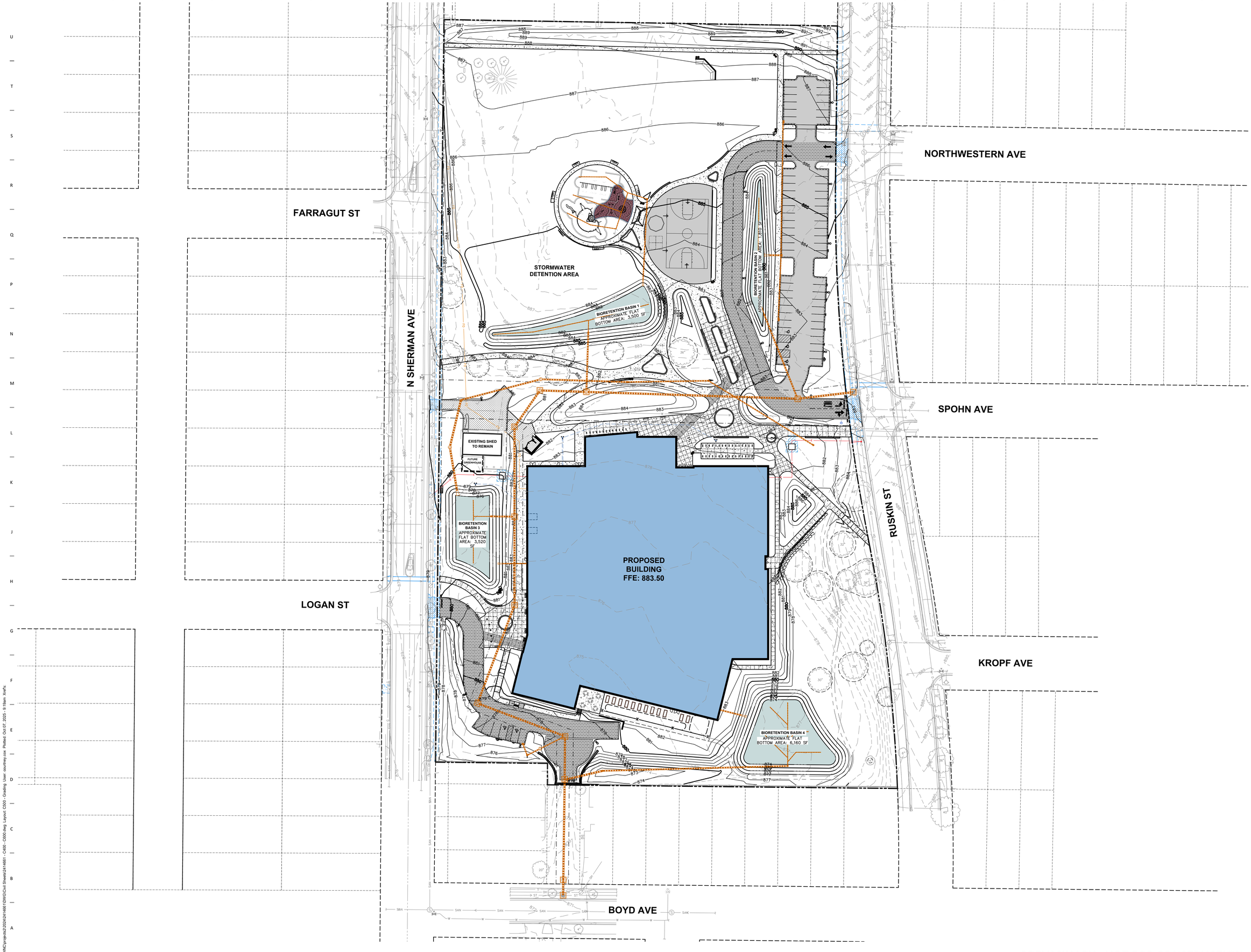


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Key Plan

north
SCALE IN FEET
40' 0 40'

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**GRADING PLAN**

Sheet Number
**C500**

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## PROPOSED STORM SEWER STRUCTURE TABLE

| LABEL | RIM EL. (FT) | INVERT EL. (FT) | DEPTH (FT) | STRUCTURE DESC. | FRAME & GRATE |
|---|---|---|---|---|---|
| STO DB A-1.1 | 872.00 | W INV: 868.65 (24")<br>E INV: 868.75 (18") | 3.3 | 24 IN DB | DUCTILE IRON DOME |
| STO DB A-2.2 | 875.00 | NE INV: 871.58 (12")<br>N INV: 871.68 (12") | 3.4 | 12 IN DB | DUCTILE IRON DOME |
| STO DB E-1 | 880.41 | S INV: 876.13 (24")<br>N INV: 876.13 (24") | 4.3 | 24 IN DB | DUCTILE IRON SOLID COVER |
| STO DB E-3 | 881.44 | W INV: 876.78 (18")<br>E INV: 876.88 (18") | 4.7 | 18 IN DB | DUCTILE IRON SOLID COVER |
| STO DB E-4 | 880.54 | W INV: 877.30 (18")<br>E INV: 877.40 (15") | 3.2 | 18 IN DB | DUCTILE IRON DOME |
| STO DB E-5 | 879.96 | W INV: 877.79 (15")<br>SE INV: 877.89 (12") | 2.2 | 18 IN DB | DUCTILE IRON DOME |
| STO DB E-6 | 881.08 | NW INV: 878.49 (12") | 2.6 | 12 IN DB | DUCTILE IRON DOME |
| STO DB G-1 | 884.94 | S INV: 882.40 (12")<br>W INV: 882.90 (6") | 2.5 | 12 IN DB | DUCTILE IRON DOME |
| STO EW C | N/A | W INV: 877.00 (14") | N/A | 14 IN HDPE FES | N/A |
| STO EW D | N/A | E INV: 878.50 (10") | N/A | 12 IN HDPE FES | N/A |
| STO EW E | N/A | N INV: 876.00 (24") | N/A | 24 IN HDPE FES | N/A |
| STO EW F | N/A | E INV: 880.00 (18") | N/A | 18 IN HDPE FES | N/A |
| STO EW G | N/A | N INV: 882.00 (12") | N/A | 12 IN HDPE FES | N/A |
| STO INL A-2.3 | 877.15 | S INV: 871.82 (12") | 5.3 | 2 X 3 INLET | R-3067 TYPE R |
| STO INL F-1 | 883.34 | W INV: 880.04 (18")<br>S INV: 880.09 (12")<br>N INV: 880.09 (12") | 3.3 | 2 X 3 INLET | R-3067 TYPE R |
| STO INL F-1.1 | 886.06 | S INV: 880.90 (12") | 5.2 | 2 X 3 INLET | R-3067 TYPE R |
| STO INL F-1.2 | 882.89 | N INV: 880.29 (12") | 2.6 | 2 X 3 INLET | R-3067 TYPE R |
| STO MH A-0 | 871.62 | S INV: 867.40 (24")<br>N INV: 867.40 (24") | 4.2 | 6X6 CIP* | R-2560-E BEEHIVE |
| STO MH A-1 | 878.49 | S INV: 868.31 (24")<br>E INV: 868.41 (24")<br>N INV: 868.41 (24") | 10.2 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-1.2 | 876.35 | W INV: 869.87 (18")<br>N INV: 871.50 (6")<br>N INV: 875.00 (9") | 6.5 | 48 IN MH (FLAT) | 48 IN HAALA TRASH RACK |
| STO MH A-2 | 878.21 | S INV: 868.80 (24")<br>W INV: 868.90 (24")<br>SW INV: 870.07 (12") | 9.4 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-2.1 | 877.73 | NE INV: 870.40 (12")<br>SW INV: 871.40 (12") | 10.3 | 48 IN MH (FLAT) | R-1550 SOLID LID |
| STO MH A-3 | 878.86 | E INV: 869.75 (24")<br>N INV: 869.85 (24") | 9.1 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-4 | 882.99 | S INV: 870.80 (24")<br>N INV: 870.90 (24") | 12.2 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-5 | 883.16 | S INV: 871.71 (24")<br>N INV: 871.81 (24")<br>W INV: 871.81 (18") | 11.5 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-5.1 | 878.00 | E INV: 872.00 (18")<br>W INV: 873.50 (6")<br>W INV: 877.00 (9") | 6.0 | 48 IN MH (FLAT) | 48 IN HAALA TRASH RACK |
| STO MH A-6 | 880.91 | S INV: 872.63 (24")<br>NE INV: 872.73 (24") | 8.3 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-7 | 880.89 | SW INV: 873.13 (24")<br>E INV: 873.23 (24") | 7.8 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-8 | 882.43 | W INV: 873.65 (24")<br>E INV: 873.75 (24")<br>N INV: 873.75 (18") | 8.8 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-8.1 | 884.50 | S INV: 874.47 (18")<br>N INV: 879.50 (6")<br>N INV: 883.50 (6") | 10.0 | 48 IN MH (FLAT) | 48 IN HAALA TRASH RACK |
| STO MH A-9 | 883.49 | W INV: 875.67 (24")<br>E INV: 875.77 (24")<br>N INV: 875.77 (18") | 7.8 | 6X6 CIP* | R-1550 SOLID LID |
| STO MH A-9.1 | 881.00 | S INV: 876.50 (18")<br>N INV: 877.50 (6") | 4.5 | 48 IN MH (FLAT) | 48 IN HAALA TRASH RACK |
| STO MH E-2 | 880.10 | S INV: 876.28 (24")<br>E INV: 876.38 (18") | 3.8 | 48 IN MH (FLAT) | R-3067 TYPE R |

**NOTES:**
1. **STO MH A-2.1 TO HAVE A 3' SUMP**
2. **INLET RIM GRADES ARE TO FLOWLINE**
3. **(*) CAST-IN-PLACE (CIP) STRUCTURES SHALL BE CONSTRUCTED PER CITY OF MADISON STANDARD DETAIL DRAWING 5.7.4**

## PROPOSED STORM SEWER PIPE TABLE

| LABEL | FROM | TO | LENGTH | INVERT EL. (FT) | DISCHARGE EL. (FT) | SLOPE | SIZE & MATERIAL |
|---|---|---|---|---|---|---|---|
| STO A-0 | STO MH A-0 | EX STO INL A | 19' | 867.40 | 867.26 | 0.75% | 24 IN RCP |
| STO A-1 | STO MH A-1 | STO MH A-0 | 121' | 868.31 | 867.40 | 0.75% | 24 IN RCP |
| STO A-1.1 | STO DB A-1.1 | STO MH A-1 | 47' | 868.65 | 868.41 | 0.52% | 24 IN HDPE |
| STO A-1.2 | STO MH A-1.2 | STO DB A-1.1 | 224' | 869.87 | 868.75 | 0.50% | 18 IN HDPE |
| STO A-2 | STO MH A-2 | STO MH A-1 | 53' | 868.80 | 868.41 | 0.75% | 24 IN RCP |
| STO A-2.1 | STO MH A-2.1 | STO MH A-2 | 33' | 870.40 | 870.07 | 1.00% | 12 IN HDPE |
| STO A-2.2 | STO DB A-2.2 | STO MH A-2.1 | 18' | 871.58 | 871.40 | 1.00% | 12 IN HDPE |
| STO A-2.3 | STO INL A-2.3 | STO DB A-2.2 | 14' | 871.82 | 871.68 | 1.00% | 12 IN HDPE |
| STO A-3 | STO MH A-3 | STO MH A-2 | 113' | 869.75 | 868.90 | 0.75% | 24 IN RCP |
| STO A-4 | STO MH A-4 | STO MH A-3 | 127' | 870.80 | 869.85 | 0.75% | 24 IN RCP |
| STO A-5 | STO MH A-5 | STO MH A-4 | 107' | 871.71 | 870.90 | 0.75% | 24 IN RCP |
| STO A-5.1 | STO MH A-5.1 | STO MH A-5 | 28' | 872.00 | 871.81 | 0.67% | 18 IN HDPE |
| STO A-6 | STO MH A-6 | STO MH A-5 | 109' | 872.63 | 871.81 | 0.75% | 24 IN RCP |
| STO A-7 | STO MH A-7 | STO MH A-6 | 54' | 873.13 | 872.73 | 0.75% | 24 IN RCP |
| STO A-8 | STO MH A-8 | STO MH A-7 | 56' | 873.65 | 873.23 | 0.75% | 24 IN RCP |
| STO A-8.1 | STO MH A-8.1 | STO MH A-8 | 72' | 874.47 | 873.75 | 1.00% | 18 IN HDPE |
| STO A-9 | STO MH A-9 | STO MH A-8 | 256' | 875.67 | 873.75 | 0.75% | 24 IN RCP |
| STO A-9.1 | STO MH A-9.1 | STO MH A-9 | 109' | 876.50 | 875.77 | 0.67% | 18 IN HDPE |
| STO A-10 | EX STO INL A-10 | STO MH A-9 | 68' | 876.20 | 875.77 | 0.63% | 24 IN RCP |
| STO E-1 | STO DB E-1 | STO EW E | 53' | 876.13 | 876.00 | 0.25% | 24 IN HDPE |
| STO E-2 | STO MH E-2 | STO DB E-1 | 59' | 876.28 | 876.13 | 0.25% | 24 IN HDPE |
| STO E-3 | STO DB E-3 | STO MH E-2 | 100' | 876.78 | 876.38 | 0.40% | 18 IN HDPE |
| STO E-4 | STO DB E-4 | STO DB E-3 | 105' | 877.30 | 876.88 | 0.40% | 18 IN HDPE |
| STO E-5 | STO DB E-5 | STO DB E-4 | 99' | 877.79 | 877.40 | 0.40% | 15 IN HDPE |
| STO E-6 | STO DB E-6 | STO DB E-5 | 149' | 878.49 | 877.89 | 0.40% | 12 IN HDPE |
| STO F-1 | STO INL F-1 | STO EW F | 14' | 880.04 | 880.00 | 0.25% | 18 IN HDPE |
| STO F-1.1 | STO INL F-1.1 | STO INL F-1 | 162' | 880.90 | 880.09 | 0.50% | 12 IN HDPE |
| STO F-1.2 | STO INL F-1.2 | STO INL F-1 | 78' | 880.29 | 880.09 | 0.25% | 12 IN HDPE |
| STO G-1 | STO DB G-1 | STO EW G | 99' | 882.40 | 882.00 | 0.40% | 12 IN HDPE |
| STO RD EAST | STO RD EAST | STO EW C | 26' | 877.27 | 877.00 | 1.04% | 14 IN PVC* |
| STO RD WEST | STO RD WEST | STO EW D | 29' | 878.80 | 878.50 | 1.04% | 10 IN PVC* |

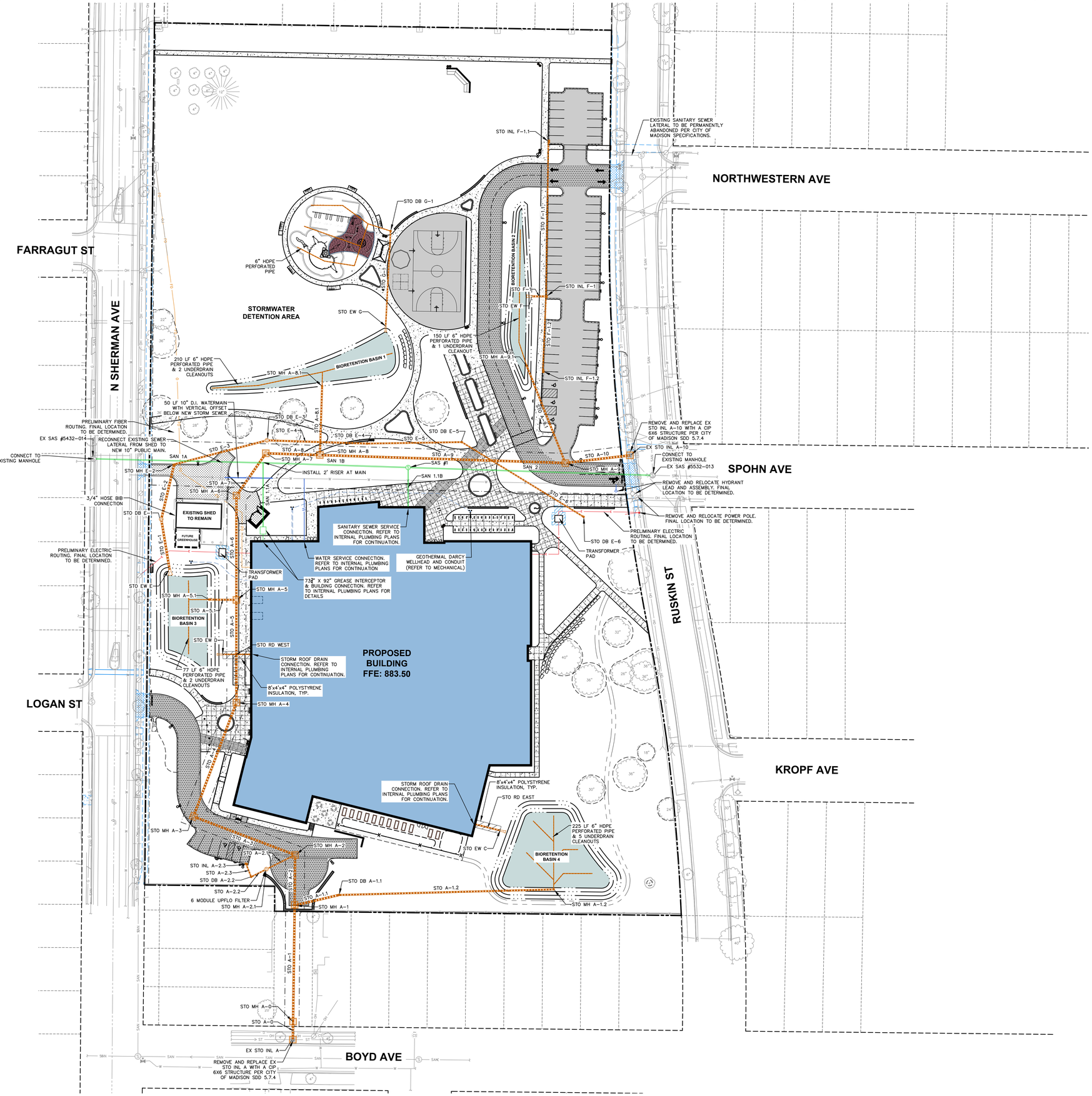
**NOTES:**
1. **(*) ROOF DRAIN PIPES TO MATCH MATERIAL OF INTERIOR PLUMBING PLANS. SCH 40 PVC**

## PROPOSED SANITARY SEWER STRUCTURE TABLE

| LABEL | RIM EL. (FT) | INVERT EL. (FT) | DEPTH (FT) | STRUCTURE DESC. | FRAME & GRATE |
|---|---|---|---|---|---|
| EX SAS #5432-014 | 880.07 | S INV: 869.03 (12")<br>E INV: 869.22 (10")<br>N INV: 869.05 (12") | 11.0 | 48 IN MH | R-1550 SOLID LID |
| EX SAS #5532-013 | 883.59 | W INV: 874.89 (10")<br>E INV: 875.00 (8")<br>N INV: 874.93 (8") | 8.7 | 48 IN MH | R-1550 SOLID LID |
| SAS #1 | 884.00 | W INV: 872.36 (10")<br>E INV: 872.46 (10")<br>S INV: 874.26 (8") | 11.6 | 48 IN MH | R-1550 SOLID LID |

## PROPOSED SANITARY SEWER PIPE TABLE

| LABEL | FROM | TO | LENGTH | INVERT EL. (FT) | DISCHARGE EL. (FT) | SLOPE | SIZE & MATERIAL |
|---|---|---|---|---|---|---|---|
| SAN 1.1A | STO-88 | STO-87 | 67' | 874.30 | 872.91 | 2.08% | 4 IN PVC |
| SAN 1.1B | BLDG | SAS #1 | 40' | 874.68 | 874.26 | 1.04% | 8 IN PVC |
| SAN 1A | STO-87 | EX SAS #5432-014 | 177' | 870.91 | 869.22 | 0.96% | 10 IN PVC |
| SAN 1B | SAS #1 | STO-87 | 151' | 872.36 | 870.91 | 0.96% | 10 IN PVC |
| SAN 2 | EX SAS #5532-013 | SAS #1 | 255' | 874.89 | 872.46 | 0.95% | 10 IN PVC |

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Key Plan

north
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40' 0 40'

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**UTILITY PLAN**

Sheet Number
**C600**


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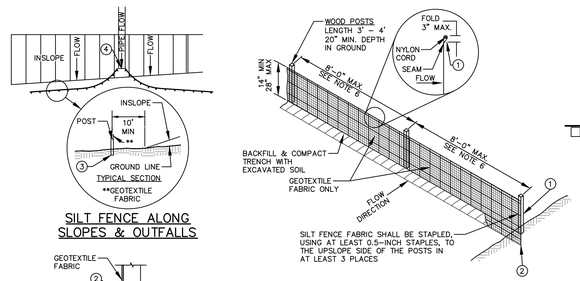
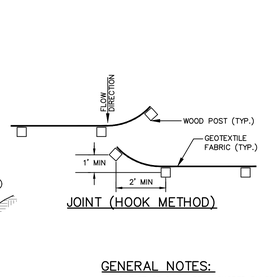
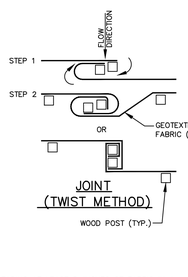



## SILT FENCE ALONG SLOPES & OUTFALLS




## JOINT (HOOK METHOD)

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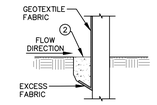
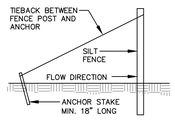



## NOTE:

ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

## TRENCH DETAIL




## SILT FENCE TIE BACK

(WHEN ADDITIONAL SUPPORT REQUIRED)

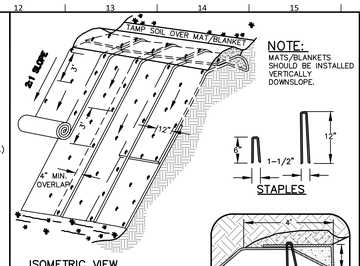
## GENERAL NOTES:

1. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8-INCHES OF FABRIC IN A 4-INCH WIDE AND 6-INCH DEEP TRENCH OR 6-INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
2. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1.125–INCHES x 1.125–INCHES OF DRIED OAK OR HICKORY.
4. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE.
5. SILT FENCE CONSTRUCTION AND GEOTEXTILE FABRIC SHALL CONFORM TO WDNR TECHNICAL STANDARD 1056.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8–FEET FOR WOVEN & 3–FEET FOR NON–WOVEN)

## SILT FENCE

N.T.S.

REV. 7–01–2019



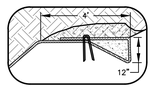

ISOMETRIC VIEW
TYPICAL SLOPE SOIL STABILIZATION

## NOTE:

MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.




STAPLES




BERM

## GENERAL NOTES:

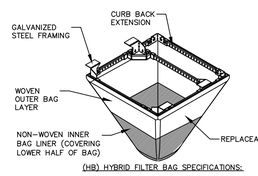
1. EROSION MAT CONSTRUCTION SHALL BE IN ACCORDANCE WITH WISCONSIN DNR TECHNICAL STANDARD 1052 "NON–CHANNEL EROSION MAT".
2. ONLY WisDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) APPROVED MATS SHALL BE ALLOWED. REFER TO EROSION CONTROL PLAN FOR EXACT MAT CLASSIFICATION.
3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

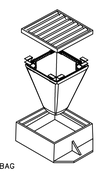
## EROSION MATTING

N.T.S.

REV. 11–19–2018

## FLEXSTORM INLET FILTERS TO MEET DANE COUNTY EROSION CONTROL STANDARDS



(HB) HYBRID FILTER BAG SPECIFICATIONS:

INSTALLATION INSTRUCTIONS:
1. REMOVE GRATE FROM THE DRAINAGE STRUCTURE
2. CLEAN STONE AND DIRT FROM LEDGE (LIP) OF DRAINAGE STRUCTURE
3. DROP THE INLET FILTER THROUGH THE CLEAR OPENING SUCH THAT THE HANGERS REST FIRMLY ON THE LIP OF THE STRUCTURE
4. REPLACE THE GRATE AND CONFIRM IT IS NOT ELEVATED MORE THAN 1/8"

MAINTENANCE GUIDELINES:
1. EMPTY THE SEDIMENT BAG IF MORE THAN HALF FILLED WITH SEDIMENT AND DEBRIS
2. REMOVE THE GRATE, ENGAGE THE LIFTING POINTS, AND LIFT FILTER FROM THE DRAINAGE STRUCTURE.
3. DISPOSE OF SEDIMENT AND DEBRIS BY THE ENGINEERING OR MAINTENANCE CONTRACT 4. ALTERNATIVELY, AN INDUSTRIAL VACUUM CAN BE USED TO COLLECT SEDIMENT FROM THE FILTER BAG

**CATCH-IT INLET FILTER (Temporary Inlet Protection)**

| Neenah Casting | Inlet Type | Grate Size | Opening Size | Bag Cap (ft³) | Flow Ratings (CFS) | | ADS P/N |
|---|---|---|---|---|---|---|---|
| | | | | | HB (Hybrid Bag) | Bypass | |
| 3087 | Curb Box | 35.25 x 17.75 | 33.0 x 15.0 | 4.4 | 2.0 | 5.8 | 62LCBEXTHB |
| 3246A | Curb Box | 35.75 x 23.875 | 33.5 x 21.0 | 4.2 | 1.1 | 3.3 | 62LCB3624HB |
| 3030 | Square/Rect (SQ) | 23 x 16 | 20.5 x 13.5 | 1.6 | 0.7 | 2.2 | 62MCB2316HB |
| 3067-C | Square/Rect (SQ) | 35.25 x 17.75 | 33 x 15 | 3.2 | 1.0 | 5.2 | 62LSQ3618HB |
| R-2501 | Round (RD) | ~26 | ~24 | 2.3 | 0.8 | 5.2 | 62MRD26HB |
| R-1772/2560 | Round (RD) | 22.25-23.5 | 20.5-21 | 1.5 | 0.6 | 4.6 | 62MRD22HB |

**Woven and Non-Woven Geotextile Filter Bag Properties (Minimum Average Roll Values)**

| PROPERTY | TEST METHOD | WOVEN (OUTER) | NON-WOVEN (LINER) |
|---|---|---|---|
| TENSILE STRENGTH | ASTM D4632 | 350 x 225 Lbs | 100 Lbs |
| ELONGATION | ASTM D4632 | 20% x 15% | 50% |
| CBR PUNCTURE | ASTM D6241 | 1000 Lbs | 65 Lbs |
| TRAPEZOIDAL TEAR | ASTM D4533 | 130 x 75 Lbs | 45 Lbs |
| UV RESISTANCE | ASTM D4355 | 90% | 70% |
| OPENING SIZE (AOS) | ASTM D4751 | 20 (0.125) SIEVE | 40 (0.075) SIEVE |
| PERMITTIVITY | ASTM D4491 | 1.5 Sec$^{-1}$ | 2.0 Sec$^{-1}$ |
| WATER FLOW RATE | ASTM D4491 | 200 gal/min/ft$^2$ | 140 gal/min/ft$^2$ |
| MINIMUM FILTER BAG VOLUME | | 2 CUBIC FT | |

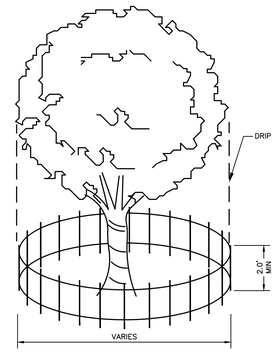
## FRAMED INLET PROTECTION

N.T.S.

REV. 7–01–2019

FLEXSTORM CATCH IT

| REV | DESCRIPTION | DATE |
|---|---|---|
| C | IPP Flexstorm HD Specification | |



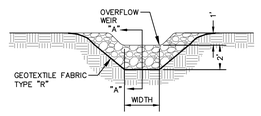

## NOTE:

FENCE TO BE INSTALLED TO PROTECT EXISTING TREE(S) DURING CONSTRUCTION. CONTRACTOR TO COORDINATE FENCE LOCATION WITH OWNER PRIOR TO INSTALLATION. SILT FENCE MATERIAL OR OTHER APPROVED BARRIER MATERIAL MAY BE USED.

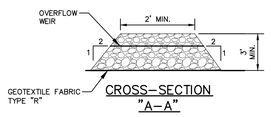
## TREE PROTECTION

N.T.S.

REV. 11–26–2018




ELEVATION




CROSS–SECTION "A–A"

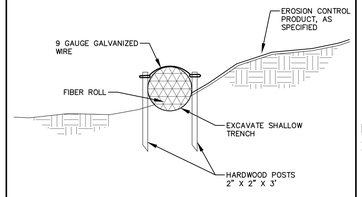
## GENERAL NOTES:

1. STONE DITCH CHECKS SHALL BE CONSTRUCTED OF A WELL–GRADED ANGULAR STONE, A D50 OF 3 INCH DIAMETER OR GREATER, SOMETIMES REFERRED TO AS BREAKER RUN OR SHOT ROCK.
2. EXTEND DITCH CHECK ACROSS CHANNEL OPENING TO MEET SWALE/DITCH SIDE SLOPES. WHERE CHANNEL IS LESS THAN 3 FEET DEEP, REDUCE WEIR HEIGHT TO 1 FOOT AND INCREASE THE TOP OF DITCH CHECK FROM 2 FEET TO 4 FEET.

## TEMPORARY DITCH CHECK (STONE)

N.T.S.

REV. 7–31–2018



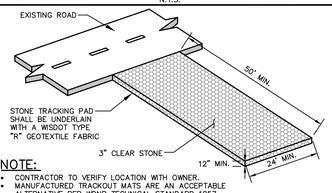

## GENERAL NOTES:

1. EXCAVATE A SHALLOW TRENCH SLIGHTLY BELOW BASEFLOW OR A 4" TRENCH ON SLOPE CONTOURS.
2. PLACE THE ROLL IN THE TRENCH AND ANCHOR WITH 2" X 2" POSTS PLACED ON BOTH SIDES OF THE ROLL AND SPACED LATERALLY ON 2' TO 4' CENTERS. TRIM THE TOP OF THE POSTS EVEN WITH THE EDGE OF THE ROLL, IF NECESSARY.
3. NOTCH THE POSTS AND TIE TOGETHER, ACROSS THE ROLL, WITH 9 GAUGE GALVANIZED WIRE OR 1/8" DIAMETER BRAIDED NYLON ROPE.
4. PLACE SOIL EXCAVATED FROM THE TRENCH BEHIND THE ROLL AND HAND TAMP. PLANT WITH SUITABLE HERBACEOUS OR WOODY VEGETATION AS SPECIFIED.

## FIBER SILT SOCK

N.T.S.

REV. 12–7–2018




## NOTE:

- CONTRACTOR TO VERIFY LOCATION WITH OWNER.
- MANUFACTURED TRACKOUT MATS ARE AN ACCEPTABLE ALTERNATIVE PER WDNR TECHNICAL STANDARD 1057.

## CONSTRUCTION ENTRANCE

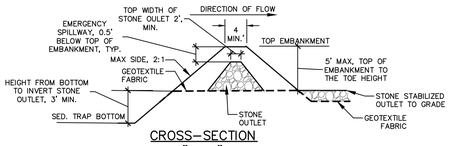
N.T.S.

REV. 04–24–2024

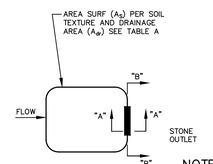
## TABLE A:

| SEE TEXTURE | |
|---|---|
| COURSE (SAND, LOAMY SAND, SANDY LOAM) | $A_S = 625*A_W$ |
| MEDIUM (LOAMS, SILT, SILTY LOAM) | $A_S = 1560*A_W$ |
| FINE (SANDY CLAY, SILTY CLAY, SILTY CLAY LOAM, CLAY) | $A_S = 5300*A_W$ |

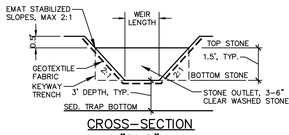
NOTES:
- ASSUME DRAINAGE AREA ($A_W$) TO NEAREST 0.1 ACRES
- SURFACE AREA ($A_S$) IN SQUARE FEET




CROSS–SECTION "A–A"




PLAN VIEW




CROSS–SECTION "B–B"

## NOTES:

1. REFER TO WDNR STORM WATER CONSTRUCTION TECHNICAL STANDARD NO. 1063, CURRENT EDITION FOR FURTHER DETAILS AND PROVISIONS FOR CONSTRUCTION, MAINTENANCE, AND OTHER CONSIDERATIONS

## TABLE B:

| DRAINAGE AREA ($A_W$) (acres) | WEIR LENGTH (FT) |
|---|---|
| 1 | 4 |
| 2 | 6 |
| 3 | 8 |
| 4 | 10 |
| 5 | 12 |

## SEDIMENT TRAP

N.T.S.

REV. 3–17–2023


OPN ARCHITECTS
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Madison, WI 53703
P: 608-819-0260
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Madison, WI 53703

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Madison, WI 53704

Construction Manager
Vogel Bros. Building Co.
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Madisosn, WI 53718
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Civil Engineer / Landscape Architect
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Key Plan

Revision Description Date

OPN Project No.
**24654002**

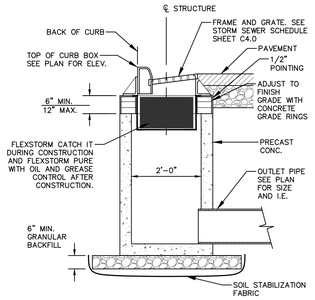
Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**CONSTRUCTION DETAILS**

Sheet Number
**C700**

**PRELIMINARY. NOT FOR CONSTRUCTION.**


File: \USR\NC\projects2\2024\24654002\DWG\Civil Sheets\24654002 - C700.dwg Layout: C700 - EC Details User: courtney.cox Plotted: Oct 07, 2025 - 9:28am Xref's:

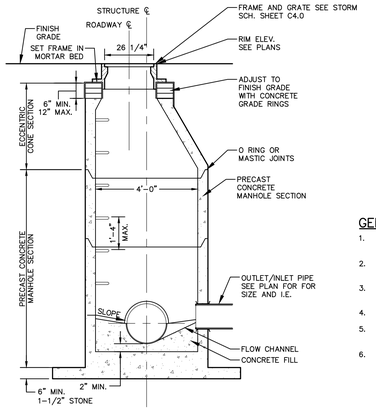


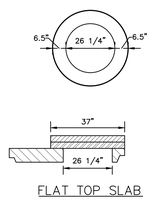

NOTE:
*INSTALL FLOGARD PLUS CATCH BASIN FILTER INSERT AS MANUFACTURED BY KRISTAR ENTERPRISES, INC. OR EQUIVALENT. FILTER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS.

## STORM INLET W/ OIL & GREASE FILTER

REV. 11-26-2018

N.T.S.




FLAT TOP SLAB

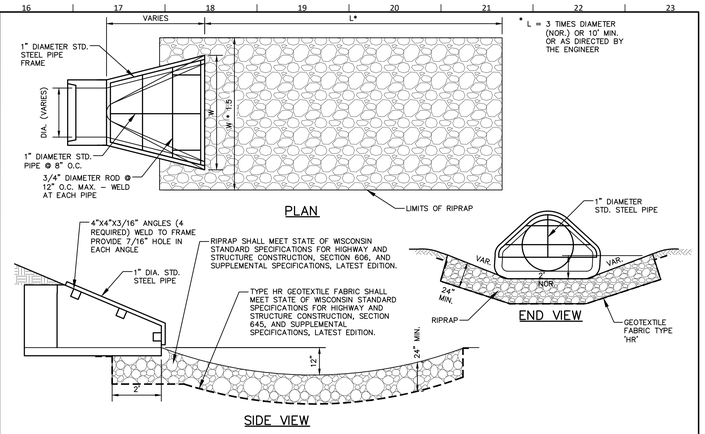
GENERAL NOTES:

1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. PROVIDE FLAT TOP SLAB FOR MANHOLES 5' OR LESS IN DEPTH. FLAT TOP SLABS TO BE IN-BELL TYPE.
3. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
4. USE MORTAR FOR PIPE CONNECTIONS.
5. ECCENTRIC CONE SECTION OF MANHOLE TO BE SET OUTSIDE OF VEHICULAR WHEEL PATH NEAR ℄ ROADWAY.
6. USE NEENAH R-2501-G BEEHIVE FRAME AND GRATE WHEN IN LANDSCAPE AREAS.

## STORM SEWER MANHOLE

REV. 12-07-2018

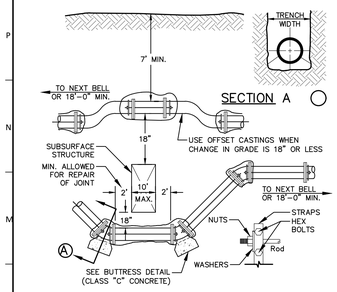
N.T.S.




## APRON ENDWALL W/ GRATE - RIPRAP

REV. 12-7-2018

N.T.S.




| Strapping Material | | | | | | |
|---|---|---|---|---|---|---|
| Pipe Size | D | Rods No. | Rods Dia. | Strap | Slot Dia. | Washer |
| 6" | 7.10 | 2 | 3/4" | 1/2"x2" | 3/4" | 1/2"x3"x5" |
| 8" | 9.30 | 2 | 3/4" | 1/2"x2" | 3/4" | " |
| 12" | 13.50 | 2 | 3/4" | 1/2"x2 1/2" | 1" | " |
| 16" | 17.80 | 4 | 3/4" | 1/2"x3" | 1" | " |

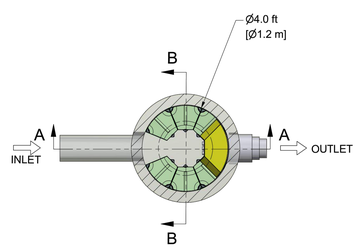
GENERAL NOTES:

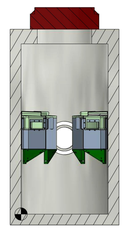
1. JOINT RESTRAINTS: RODS AND CONCRETE BUTTRESSES MAY BE USED IN LIEU OF MEG-A-LUGS IF APPROVED BY THE ENGINEER.
2. RODS & WASHERS TO BE ASTM A-575 MERCHANT QUALITY .17-.24 CARBON. NUTS TO BE AM. STD. HEAVY HOT PRESSED, TIE RODS, BOLTS, NUTS, BANDS, AND WASHERS TO BE FURNISHED & APPLIED BY CONTRACTOR. ALL STEEL MATERIAL TO BE THOROUGHLY COATED WITH BITUMASTIC CORBOLINE KOP-COAT #50 OR EQUAL.
3. BOLTED PIPE FITTINGS TO BE WRAPPED WITH 8 MIL. POLYETHYLENE BEFORE PLACEMENT OF BUTTRESSES.
4. BUTTRESS SIZE SHALL BE IN ACCORDANCE WITH CURRENT EDITION OF STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRCTION IN WISCONSIN, FILE NO. 44, 44A, 45, 46, 47 & 47A (6TH EDITION, ADDEN. NO. 2

## STRAPPING WATERMAIN OFFSETS

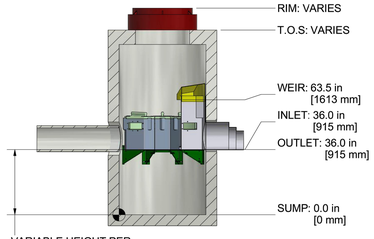
REV. 12-05-2018

N.T.S.



SECTION B-B




SECTION A-A

CAPACITIES:

- Minimum performance: 80% removal. Washington DOE/NJCAT verified at the peak treatment flow.
- Peak treatment flow:
  .033 CFS (0.9 LPS) (15 GPM) per module (Ribbons)
  .022 CFS (0.6 LPS) (10 GPM) per module (Long Ribbons)
  .056 CFS (1.6 LPS) (25 GPM) per module (CPZ)
- Maximum number of ribbon modules per outlet module: 36
- Maximum number of CPZ modules per outlet module: 18 (contract Hydro if more are required)

ADDITIONAL DESIGN INFORMATION:

- Normal operating W.S.E. is 26-30" (660-762mm) above the outlet invert
- Media Types Available: Ribbons, CPZ

PROJECTION

COMMENTS:
1. STRUCTURE WALL AND SLAB THICKNESSES ARE NOT TO SCALE
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE
3. NOT FOR CONSTURCION CONTACT HYDRO FOR SITE SPECIFIC DRAWING
4. NOT ALL SIZES AVAILABLE IN ALL AREAS
5. SUMP DEPTH AVAILABLE IN 24" (610mm) CPZ, RIBBONS AND 36" (914mm) LONG RIBBONS DEPTH

| REVISION HISTORY | | | |
|---|---|---|---|
| REV | BY | DESCRIPTION | DATE |
| | ER | FIRST RELEASE | 6/17/2019 |

| | | | |
|---|---|---|---|
| DATE: 6/17/2019 | | SCALE: NTS | |
| DRAWN BY: ER | CHECKED BY: | APPROVED BY | |

Title
UP-FLO FILTER
4ft Manhole

6 MODULES MAX

Sizing Tool

Hydro International

94 Hutchins Drive
Portland, ME 04102
Tel: +1 (207) 756-6200
Fax: +1 (207) 756-6212
hydro-int.com

ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS MANUFACTURED BY HYDRO INTERNATIONAL. HYDRO INTERNATIONAL HAS NO RESPONSIBILITY FOR ANY STRUCTURE, FUND, OR EQUIPMENT, (OR THE PERFORMANCE THEREOF) DESIGNED, BUILT, MANUFACTURED, OR SUPPLIED BY ANY THIRD PARTY. HYDRO INTERNATIONAL HAVE A POLICY OF CONTINUOUS DEVELOPMENT AND RESERVE THE RIGHT TO AMEND THE SPECIFICATION. HYDRO INTERNATIONAL CANNOT ACCEPT LIABILITY FOR PERFORMANCE OF ITS EQUIPMENT, (OR ANY PART THEREOF), IF THE EQUIPMENT IS SUBJECT TO CONDITIONS OUTSIDE ANY DESIGN SPECIFICATION. HYDRO INTERNATIONAL OWNS THE COPYRIGHT OF THIS DRAWING, AND IT MUST NOT BE COPIED OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.
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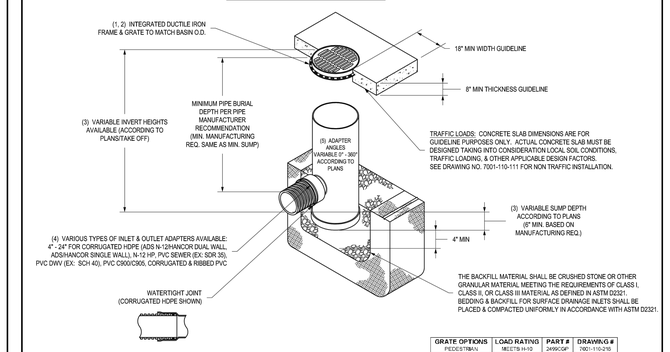
DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

TOLERENCES ARE:
FRACTIONS ± 1/16
DECIMALS:
X.X ± .06
X.XX ± .03
X.XXX ± .015
ANGLES: ± .5°

| | |
|---|---|
| WEIGHT: N/A | MATERIAL: |
| NEXT ASSEMBLY: 4 MH-1 | |
| DRAWING NO.: 4 MH-UFF-1 | |
| SHEET SIZE: B | SHEET: 1 OF 1 |
| | Rev: - |

## NYLOPLAST 24" DRAIN BASIN: 2824AG _ _X




| GRATE OPTIONS | LOAD RATING | PART # | DRAWING # |
|---|---|---|---|
| PEDESTRIAN | MEETS H-10 | 2499CGP | 7901-110-210 |
| STANDARD | MEETS H-20 | 2499CGS | 7901-110-217 |
| SOLID COVER | MEETS H-20 | 2499SOC | 7901-110-218 |
| DOME | N/A | 2499CGD | 7901-110-219 |
| DROP IN GRATE | LIGHT DUTY | 24DTG | 7901-110-075 |

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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| | | | |
|---|---|---|---|
| DRAWN BY ESC | MATERIAL | ADS Nyloplast | 3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-3443 FAX (770) 932-3496 www.nyloplast-us.com |
| DATE 04-03-06 | | | |
| REVISED BY NMH | PROJECT NO./NAME | TITLE | 24 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL |
| DATE 03-14-16 | | | |
| DWG SIZE A | SCALE 1:40 SHEET 1 OF 1 | DWG NO. 7901-110-102 | REV E |

OPN ARCHITECTS
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Verona, WI 53593
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Structural Engineer
IMEG
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Mechanical Engineer
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Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

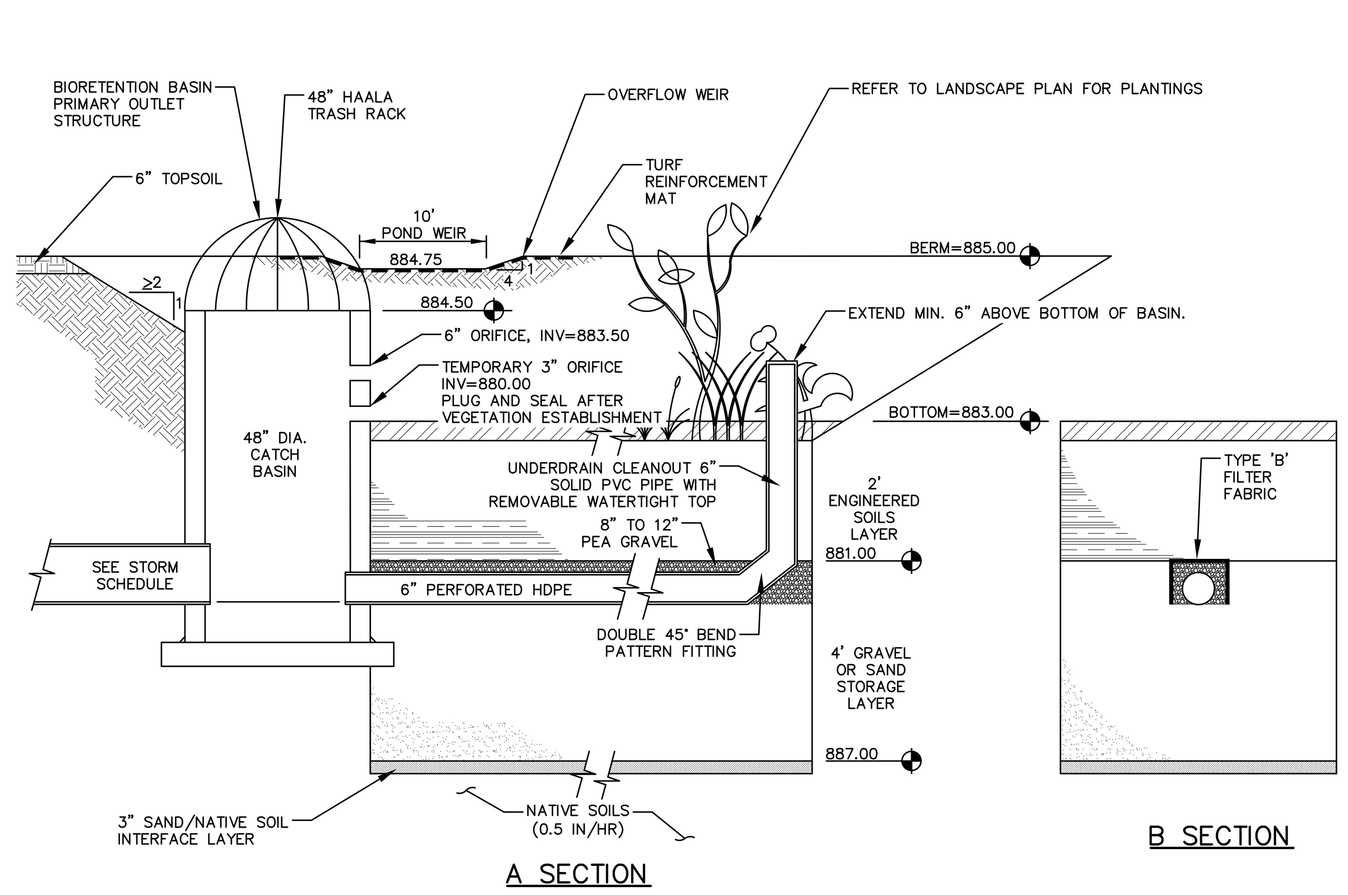
Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

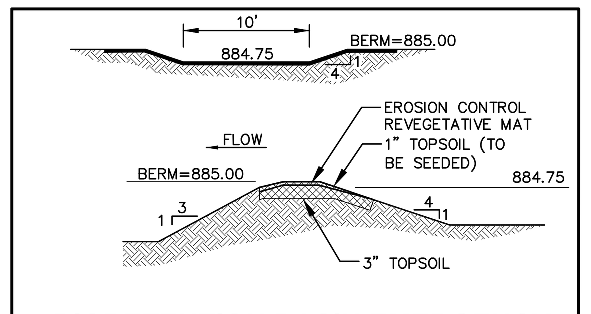
Sheet Name
**CONSTRUCTION DETAILS**

Sheet Number
**C701**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

File: \\JSDNC\projects2\2024\24654002\DWG\Civil Sheets\24654001 - C700.dwg Layout: C701 - UTIL Details User: courtney.cox Plotted: Oct 07, 2025 - 9:28am Xref's:

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# BIORETENTION BASIN 1

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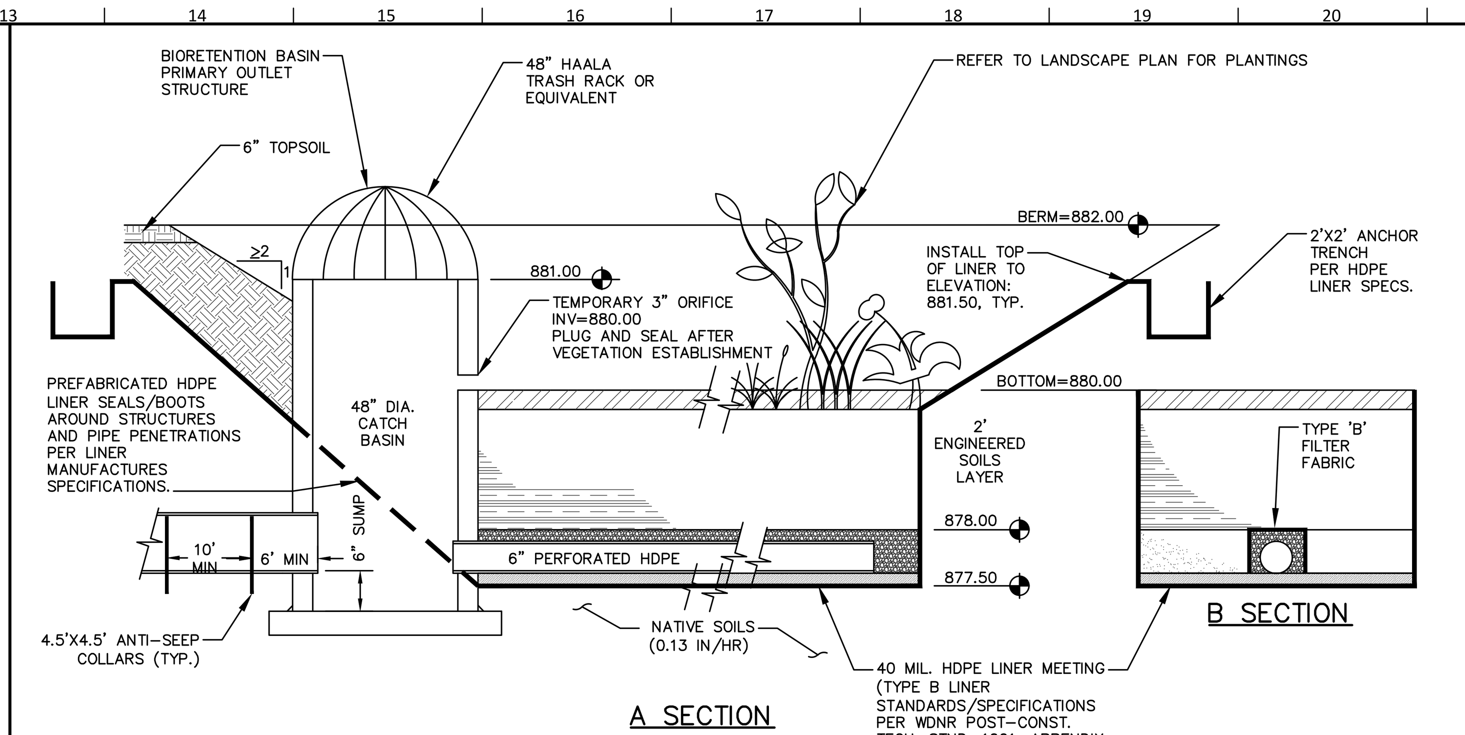
REV. 12-7-2018




## HDPE LINER NOTES:

1. A MINIMUM 6" SUBGRADE LAYER FREE OF ROCKS, DEBRIS, OR OTHER OBJECTS THAT MAY PUNCTURE OR COMPROMISE THE HDPE LINER. SUBGRADE SHALL BE PREPARED WITH A SMOOTH EVEN SURFACE AND COMPACTED WITH A SMOOTH-DRUMMED ROLLER.
2. ALL PENETRATIONS, INCLUDED STRUCTURES AND PIPES SHALL BE SEALED WITH PREFABRICATED WATER-TIGHT BOOTS/SEALS. PREFABRICATED BOOTS/SEALS SHALL BE FUSED TO LINER PER MANUFACTURERS RECOMMENDATIONS.
3. INSTALLATION OF HDPE LINER SHALL BE IN ACCORDANCE WITH PLANS HEREIN., MANUFACTURERS RECOMMENDATIONS, AND WDNR AND NRCS CONSTRUCTION SPECIFICATIONS FOR POND SEALING OR LINING – GEOMEMBRANE OR GEOSYNTHETIC CLAY LINERS (CODE 202 AND 521).
4. ALL LINERS MUST EXTEND ABOVE THE PERMANENT POOL UP TO THE ELEVATION REACHED BY THE 2-YR, 24-HR STORM EVENT. REFER TO NOTED ELEVATIONS.
5. MEDIUM RIPRAP APRONS TO BE PLACED ON A 6" MIN THICK COMPACTED SOIL COVER LAYER ON THE HDPE LINER. REFER TO PLAN FOR LOCATIONS.

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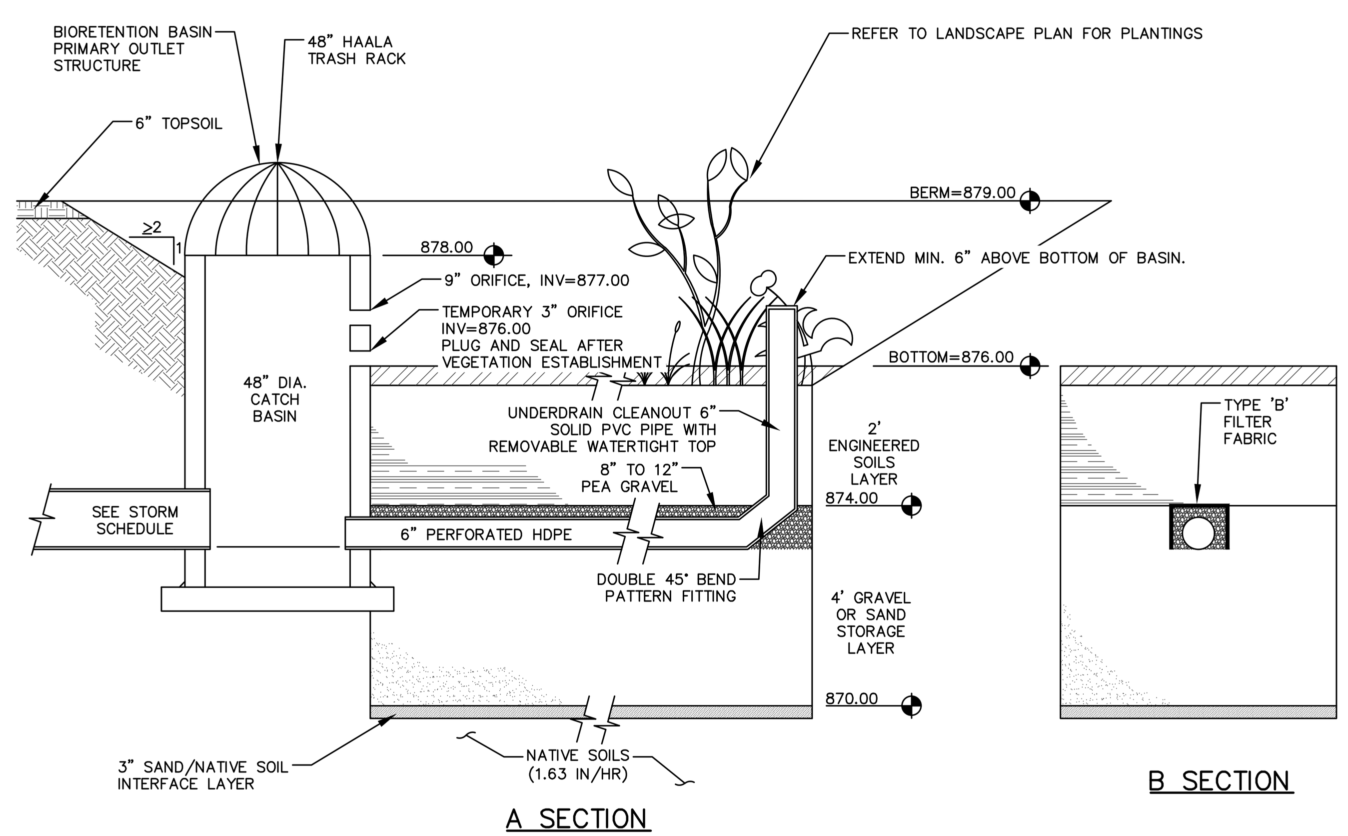
N.T.S.

REV. 12-7-2018

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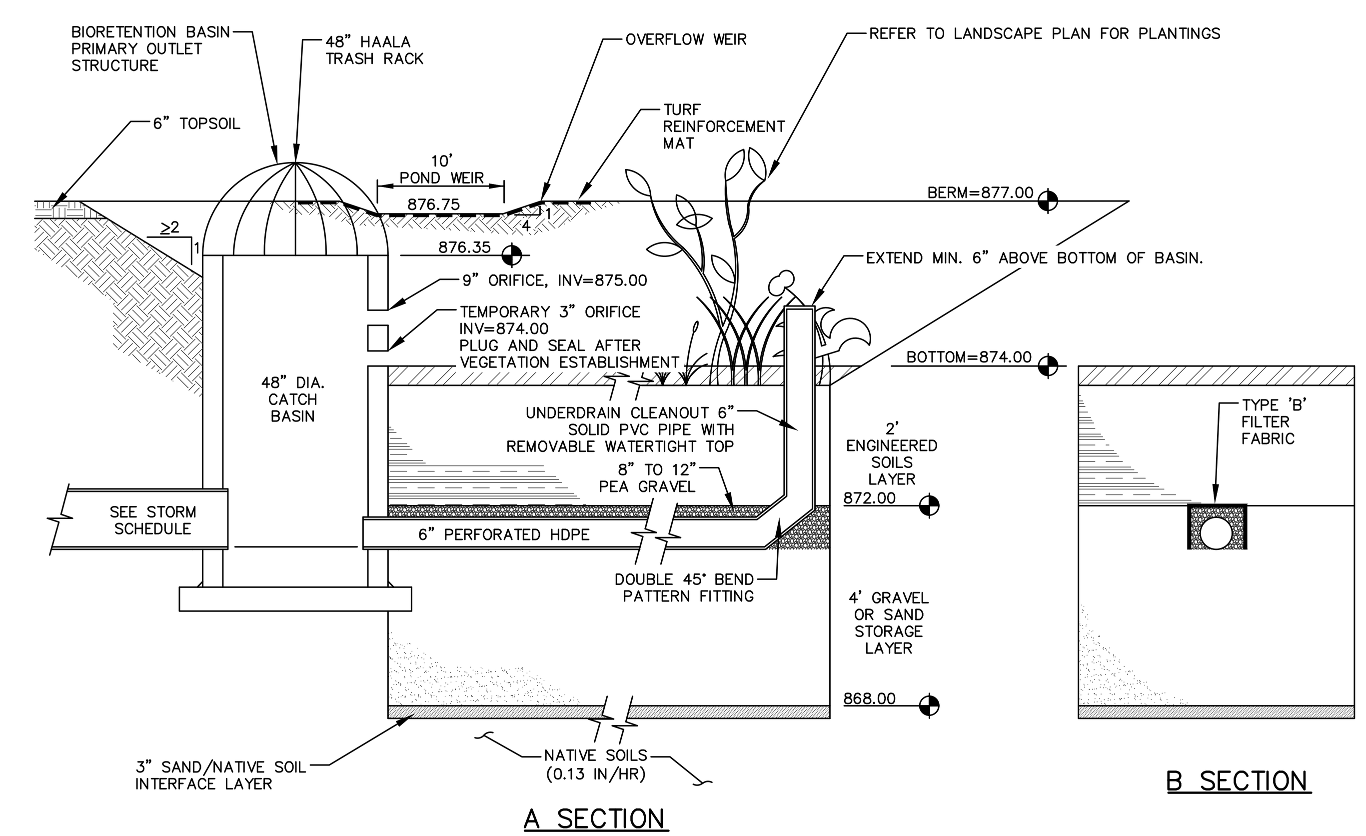


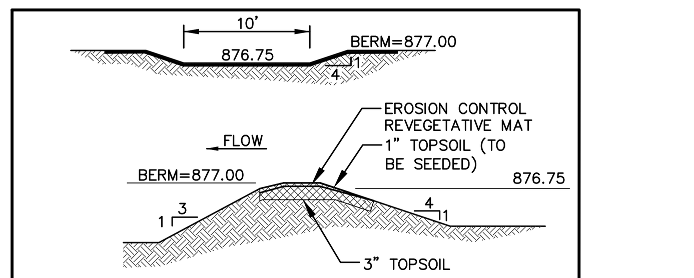


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4. SAND/GRAVEL STORAGE LAYER SHALL CONSIST OF SAND OR GRAVEL MATERIAL MEETING THE SPECIFICATIONS IN SECTION V.B.7 OF WDNR TECHINCAL STANDARD 1004.
5. SAND/NATIVE SOIL INFILTRATION LAYER SHALL BE FORMED BY A LAYER OF SAND 3 INCHES DEEP, WHICH IS VERTICALLY MIXED WITH THE NATIVE SOIL TO A DEPTH OF 2–4 INCHES.
6. CONFIRM WITH GEOTECHNICAL ENGINEER THAT THE LISTED NATIVE SOIL PROFILE HAS BEEN REACHED PRIOR TO BACKFILLING THE BIORETENTION BASIN. DEEP TILL MINIMUM 2 FEET OF NATIVE SOIL TO PROMOTE INFILTRATION.
7. IF ADDITIONAL EXCAVATION IS REQUIRED BELOW THE SAND SOIL PROFILE TO REACH THE LISTED NATIVE SOIL LAYER, THE BACKFILL USED TO RETURN THE BOTTOM OF THE BIORETENTION SYSTEM TO THE BOTTOM OF THE SAND LAYER ELEVATION MUST HAVE AN EQUAL OR HIGHER INFILTRATION RATE THAN THE LISTED NATIVE SOIL LAYER AS CONFIRMED BY A GEOTECHNICAL ENGINEER.
8. FILTER FABRIC SHALL BE PLACED ABOVE AND ON THE SIDES OF THE PERFORATED PIPE, BETWEEN THE PEA GRAVEL AND THE ENGINEERED SOIL, A WIDTH OF 4 FEET CENTERED OVER THE FLOW LINE OF THE PIPE.
10. ANNUAL RYE GRASS SHALL BE SEEDED AT 40 LB/ACRE WITH THE SEED MIX IN THE AREAS SURROUNDING THE BASIN, ON SIDE SLOPES, AND OVER ANY LAND THAT DISCHARGES INTO THE BASIN FOR EROSION CONTROL WHEN BASIN IS BROUGHT ON-LINE. ROOTSTOP AND PLUGS ARE REQUIRED TO ESTABLISH VEGETATION AT THE INVERT OF THE BASIN.
11. RUNOFF MUST INFILTRATE WITHIN 24-HOURS. BASINS UNABLE TO MAINTAIN THESE RATES MUST BE DEEP TILLED, REGRADED, AND IF NECESSARY REPLANTED TO RESTORE ORIGINAL INFILTRATION RATES.
12. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH APPLICABLE LOCAL, REGIONAL, AND STATE STORMWATER STANDARDS FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER.
13. SEE LANDSCAPING PLAN AND CONSULT WITH LANDSCAPE ARCHITECT OR ECOLOGICAL PLANTING AGENCY FOR APPROPRIATE SEED MIX, PLANTS AND PLANTING CONFIGURATIONS.

NOTE:
INFILTRATION DEVICES ARE DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR), COUNTY, MUNICIPALITY, AND ENGINEERING STANDARD OF CARE. ALL DESIGNATED INFILTRATION AREAS (e.g. RAIN GARDENS, INFILTRATION BASINS, BIORETENTION DEVICES) SHALL BE FENCED PRIOR TO CONSTRUCTION AND REMAIN UNDISTURBED AND PROTECTED DURING THE CONSTRUCTION OF PROPOSED SITE IMPROVEMENTS. PROPOSED BIORETENTION DEVICES SHALL NOT BE CONSTRUCTED UNTIL THE DEVICE'S CONTRIBUTING WATERSHED AREA MEETS ESTABLISHED VEGETATION REQUIREMENTS SET FORTH WITHIN THE RESPECTIVE WDNR TECHNICAL STANDARDS. IF THE LOCATION OF THE INFILTRATION AREA CONFLICTS WITH CONSTRUCTION STAGING AND/OR CONSTRUCTION TRAFFIC AND IS DISTURBED, COMPACTION MITIGATION WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR IS REQUIRED TO PROVIDE QUALIFIED STAFF FOR INSPECTION AND OBSERVATION OF THE CONSTRUCTION ACTIVITIES RELATING TO ALL JOB SITE REGULATORY COMPLIANCE INCLUDING THE PROTECTION AND CONSTRUCTION OF ALL STORMWATER MANAGEMENT FEATURES. ANY OBSERVATION OF PLAN OR SITE DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

# BIORETENTION BASIN 4

N.T.S.

REV. 12-7-2018

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545 West Dayton Street
Madison, WI 53703

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Madison, WI 53718
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Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**CONSTRUCTION DETAILS**

Sheet Number
**C702**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

File: \\JSDINC\projects2\2024\2414661\DWG\Civil Sheets\2414661 - C700.dwg Layout: C702 - SWM Details User: courtney.cox Plotted: Oct 07, 2025 - 9:28am Xrefs:

MADRAX DIVISION
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WAUNAKEE, WI 53597
P(800) 448-7928, P(608) 849-1080, F(608) 849-1081
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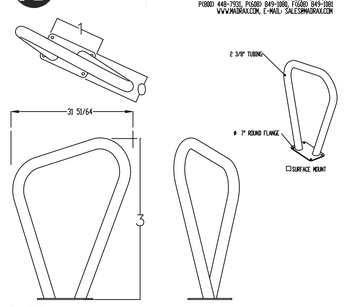


PART: LBR-2
DESCRIPTION: LOFTY BIKE RACK, 2 BIKE CAPACITY, SURFACE MOUNTED, POWDER COATED BRONZE
DATE: 5-27-2020
ENG: BLV

NOTES:
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. CONSULTANT TO APPROVE COLOR OF FINISH, SEE MANUFACTURER'S SPECIFICATIONS.
3. SEE SITE PLAN FOR LOCATION

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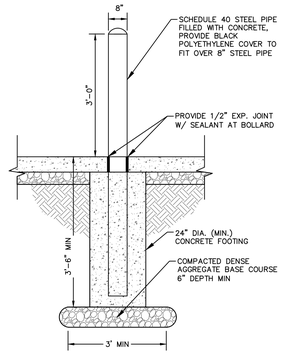
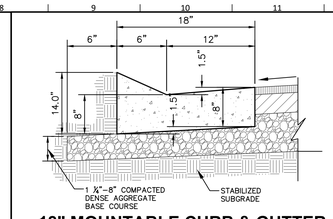
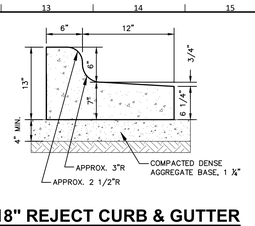
## BIKE RACK DETAIL
N.T.S.



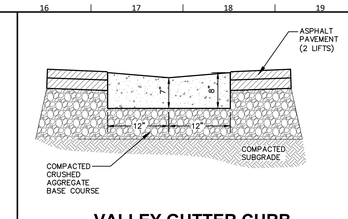

## CONCRETE BOLLARD W/ SLEEVE
REV. 12-17-2018
N.T.S.



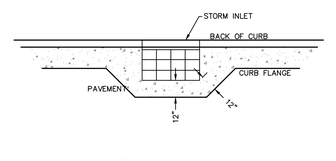

## 18" MOUNTABLE CURB & GUTTER
N.T.S.



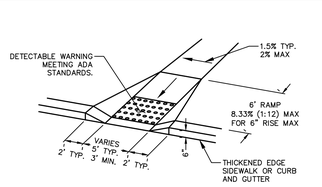

## 18" REJECT CURB & GUTTER
REV. 12-17-2018
N.T.S.



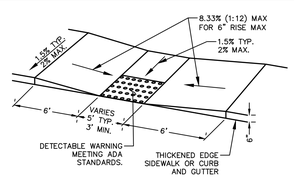

## VALLEY GUTTER CURB
REV. 11-20-2018
N.T.S.




## CONCRETE INLET COLLAR
REV. 11-20-2018
N.T.S.




## ADA ACCESSIBLE RAMP - INLINE
N.T.S.




## ADA ACCESSIBLE RAMP
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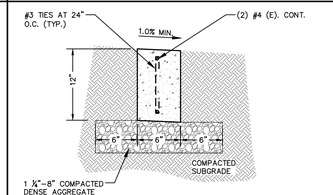
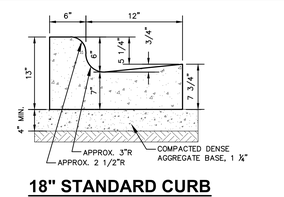
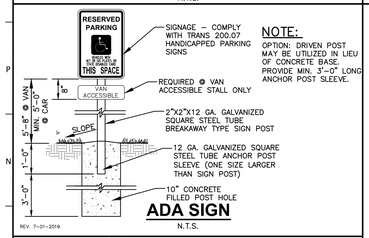



## 6" RIBBON CURB
N.T.S.

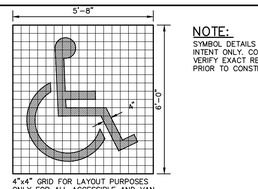



## 18" STANDARD CURB & GUTTER
REV. 12-17-2018
N.T.S.




NOTE:
OPTION: DRIVEN POST MAY BE UTILIZED IN LIEU OF CONCRETE BASE. PROVIDE MIN. 3'-0" LONG ANCHOR POST SLEEVE.

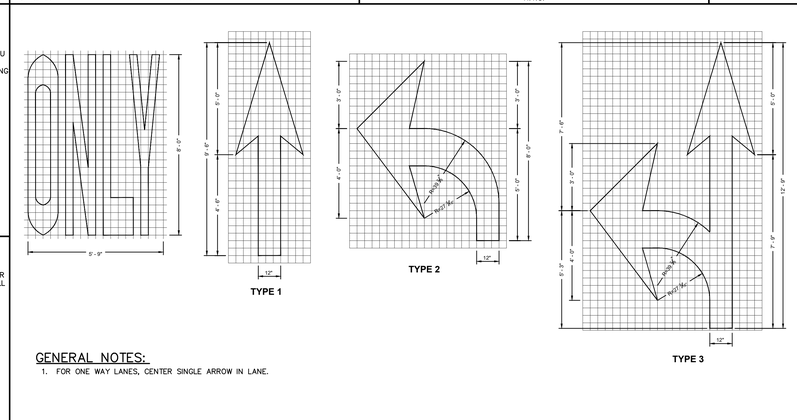
## ADA SIGN
REV. 7-01-2019
N.T.S.




NOTE:
SYMBOL DETAILS ARE SHOWN FOR INTENT ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS PRIOR TO CONSTRUCTION.

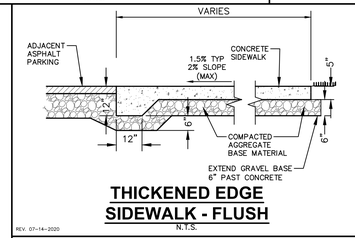
4"x4" GRID FOR LAYOUT PURPOSES ONLY FOR ALL ACCESSIBLE AND VAN ACCESSIBLE SPACES

## ADA PARKING STALL MARKING
REV. 11-20-2018
N.T.S.

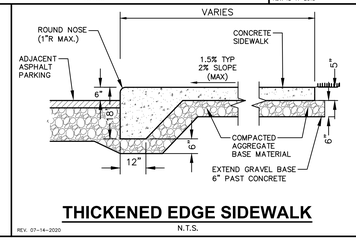



GENERAL NOTES:
1. FOR ONE WAY LANES, CENTER SINGLE ARROW IN LANE.

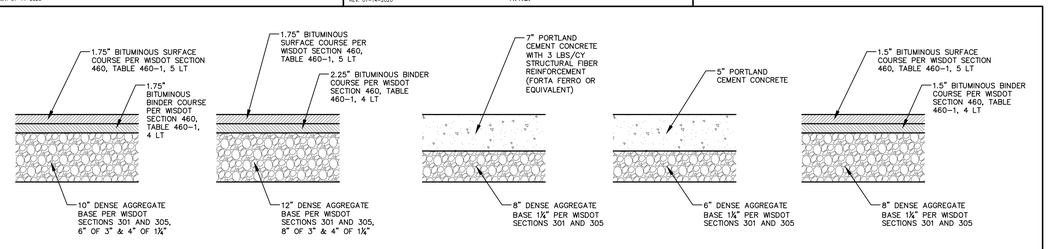
## TYPICAL PAVEMENT MARKINGS
N.T.S.




## THICKENED EDGE SIDEWALK - FLUSH
REV. 07-14-2020
N.T.S.




## THICKENED EDGE SIDEWALK
REV. 07-14-2020
N.T.S.




STANDARD ASPHALT PAVEMENT SECTION

HEAVY DUTY ASPHALT PAVEMENT SECTION

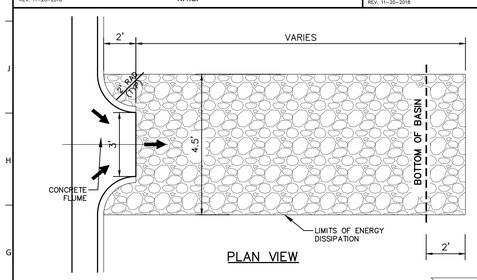
HEAVY DUTY CONCRETE PAVEMENT SECTION

CONCRETE SIDEWALK SECTION

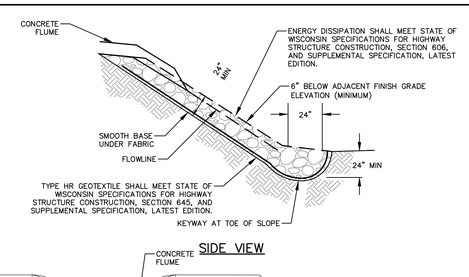
RECREATION SPORT COURTS ASPHALT PAVEMENT SECTION

GENERAL NOTES:
1. REFER TO PAVEMENT RECOMMENDATIONS IN THE GEOTECHNICAL INVESTIGATION REPORT, PREPARED BY PSI, INC., TITLED "GEOTECHNICAL EXPLORATION AND EVALUATION: PROPOSED MALCOLM SHABAZZ CITY HIGH SCHOOL AND SHERMAN MIDDLE SCHOOL", ISSUE DATE SEPTEMBER 4, 2025. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND THE PAVEMENT RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL INVESTIGATION REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN.
2. WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, INCLUDING SUPPLEMENTAL SPECIFICATIONS, COMPACTION REQUIREMENTS:
   – BITUMINOUS CONCRETE: REFER TO SECTION 460–3.
   – BASE COURSE: REFER TO SECTION 301.3.4.2, STANDARD COMPACTION.
3. CONCRETE EQUIPMENT PADS SHALL HAVE A MINIMUM 8" THICK PORTLAND CEMENT CONCRETE WITH W2.9xW2.9 WELDED WIRE REINFORCEMENT OVER COMPACTED 8" THICK 1¼" DENSE GRADED BASE COURSE. CONTRACTOR SHALL REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS WHEN CONFIRMING CONCRETE EQUIPMENT PAD THICKNESS AND REINFORCEMENT REQUIREMENTS.

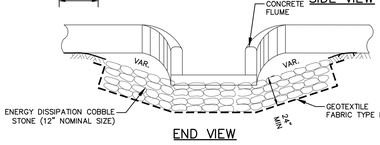
## PAVEMENT SECTIONS
REV. 7-01-2019
N.T.S.




PLAN VIEW



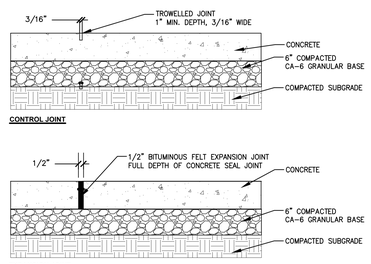

SIDE VIEW



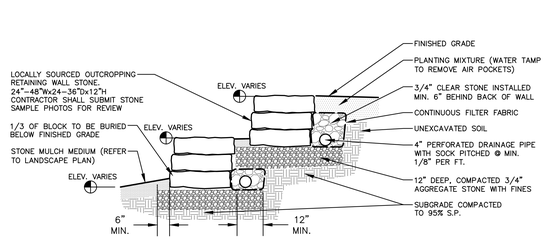

END VIEW

GENERAL NOTES:
1. PITCH CONCRETE/ASPHALT AT 2% FROM FLOW LINE OF GUTTER SECTION TO END OF FLUME.

## CURB WEIR WITH CONCRETE FLUME
REV. 07-16-2019
N.T.S.



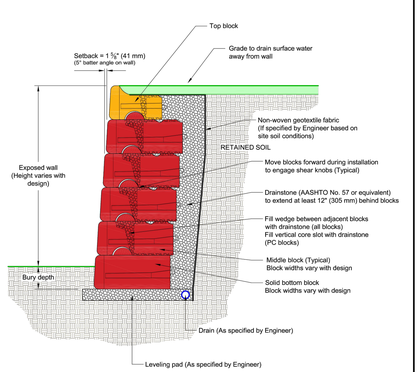

## EXPANSION JOINT / CONTROL JOINT
N.T.S.




NOTES:
– PRIOR TO CONSTRUCTION, SIZE AND TYPE OF LIMESTONE BLOCKS SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
– WALLS OVER 4'–FEET IN HEIGHT SHALL BE DESIGNED BY REGISTERED GEOTECHNICAL OR STRUCTURAL ENGINEER AS PROVIDED ON SHOP DRAWINGS AND SUBMITTED PRIOR TO CONSTRUCTION.

## LIMESTONE RETAINING WALL
REV. 06-16-2025
N.T.S.

**Typical Gravity Wall Section**

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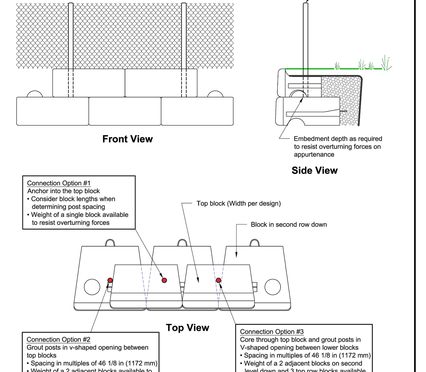
| | | | |
|---|---|---|---|
| DRAWN BY: | JRJ | TITLE: | Typical Gravity Wall Detail |
| APPROVED BY: | JRJ | | |
| DATE: | 17MAR2016 | FILE: | 1 Typical Gravity Wall Detail 031716.dwg |
| SHEET: | 1 of 1 | | |

REDI-ROCK
55481 US 31 SOUTH, CHARLEVOIX, MI 49720
(866) 222-8400 ext 3010 • engineering@redi-rock.com
www.redi-rock.com

**Fence or Pedestrian Guard Connection Locations**

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| | | | |
|---|---|---|---|
| DRAWN BY: | LBH | TITLE: | Fence or Pedestrian Guard Connection Locations |
| APPROVED BY: | LBH | | |
| DATE: | 08-18-2023 | FILE: | Fence or Pedestrian Guard Connection Locations 08182023.dwg |
| SHEET: | 1 of 1 | | |

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2310 Crossroads Dr., Suite 3000
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P. 608-223-9600

Key Plan

Revision Description Date

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**CONSTRUCTION DETAILS**

Sheet Number
**C703**

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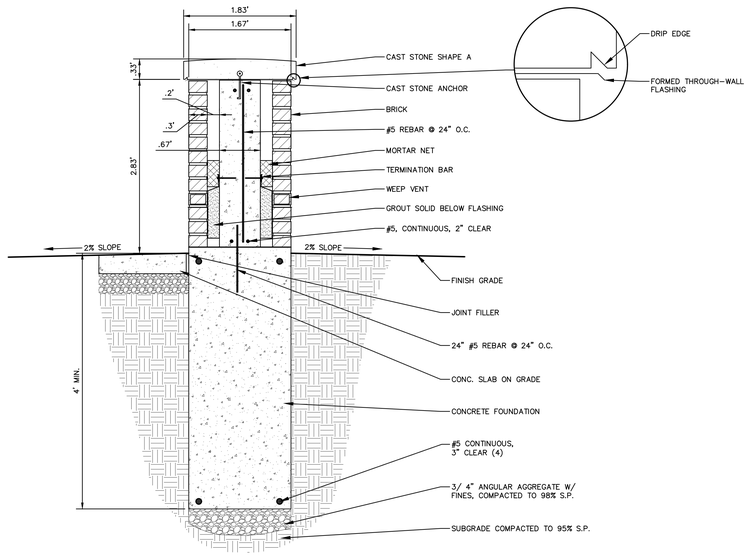
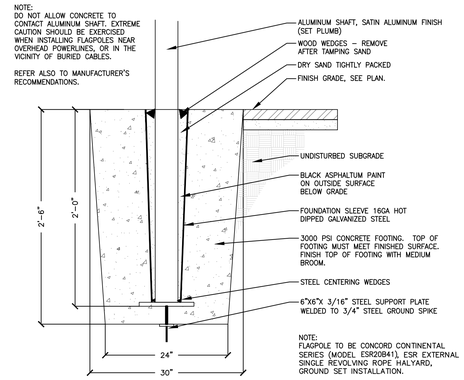


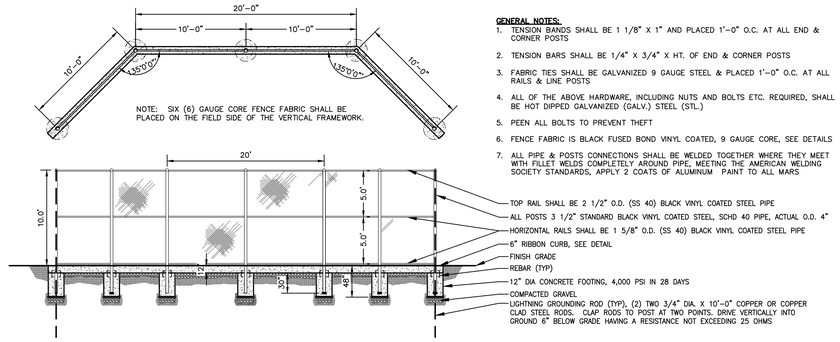

## FREESTANDING SEAT WALL

N.T.S.




## 20' FLAGPOLE

N.T.S.

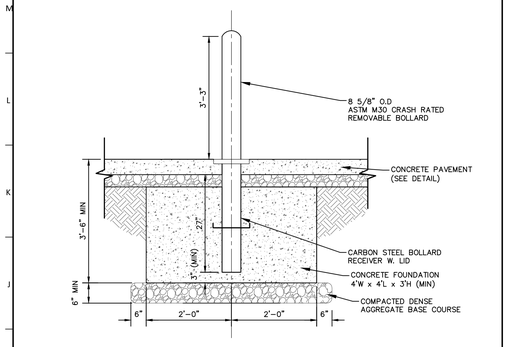



**GENERAL NOTES:**

1. TENSION BANDS SHALL BE 1 1/8" X 1" AND PLACED 1'-0" O.C. AT ALL END & CORNER POSTS
2. TENSION BARS SHALL BE 1/4" X 3/4" X HT. OF END & CORNER POSTS
3. FABRIC TIES SHALL BE GALVANIZED 9 GAUGE STEEL & PLACED 1'-0" O.C. AT ALL RAILS & LINE POSTS
4. ALL OF THE ABOVE HARDWARE, INCLUDING NUTS AND BOLTS ETC. REQUIRED, SHALL BE HOT DIPPED GALVANIZED (GALV.) STEEL (STL.)
5. PEEN ALL BOLTS TO PREVENT THEFT
6. FENCE FABRIC IS BLACK FUSED BOND VINYL COATED, 9 GAUGE CORE, SEE DETAILS
7. ALL PIPE & POSTS CONNECTIONS SHALL BE WELDED TOGETHER WHERE THEY MEET WITH FILLET WELDS COMPLETELY AROUND PIPE, MEETING THE AMERICAN WELDING SOCIETY STANDARDS, APPLY 2 COATS OF ALUMINUM PAINT TO ALL MARS

## BACKSTOP FENCE

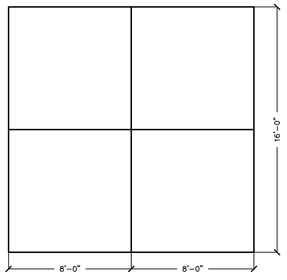
N.T.S.




## STAINLESS STEEL SECURITY BOLLARD

N.T.S.

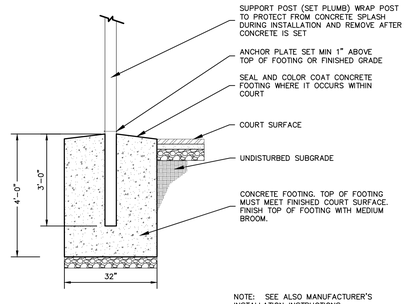
NOTE:
1. ALL LINES SHALL BE PAINTED 2" WIDE WITH WHITE ACRYLIC SURFACING BY CALIFORNIA SPORTS SURFACES (OR APPROVED EQUAL)




## FOUR SQUARE COURT LAYOUT

N.T.S.

NOTE:
1. BASKETBALL POST, BACKBOARD AND RIM TO BE COORDINATED BY CONTRACTOR WITH MMSD

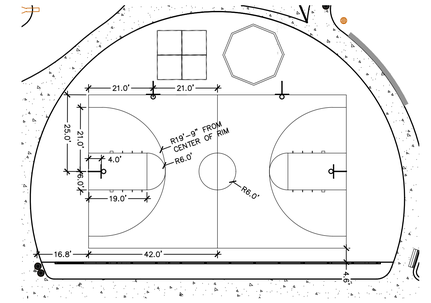



NOTE: SEE ALSO MANUFACTURER'S INSTALLATION INSTRUCTIONS

## BASKETBALL POST FOOTING

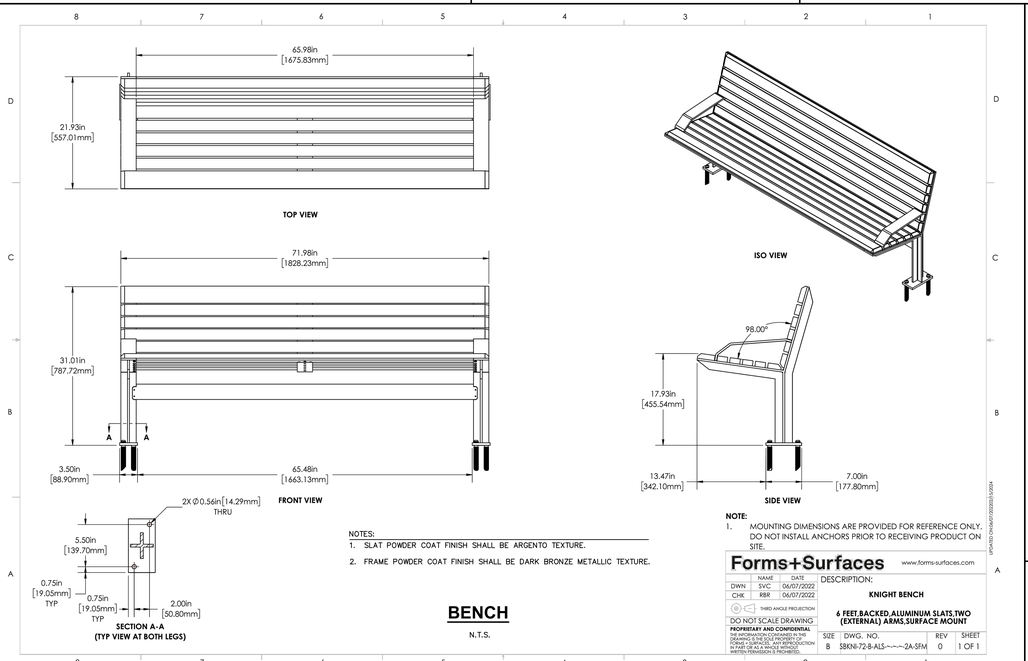
N.T.S.

NOTE:
1. ALL LINES SHALL BE PAINTED 2" WIDE WITH WHITE ACRYLIC SURFACING BY CALIFORNIA SPORTS SURFACES (OR APPROVED EQUAL)




## BASKETBALL COURT LAYOUT

N.T.S.




NOTES:
1. SLAT POWDER COAT FINISH SHALL BE ARGENTO TEXTURE.
2. FRAME POWDER COAT FINISH SHALL BE DARK BRONZE METALLIC TEXTURE.

NOTE:
1. MOUNTING DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. DO NOT INSTALL ANCHORS PRIOR TO RECEIVING PRODUCT ON SITE.

## BENCH

N.T.S.

UPDATED ON 04/07/2022 03:53:54

Forms+Surfaces — www.forms-surfaces.com

| | NAME | DATE |
|---|---|---|
| DWN | SVC | 06/07/2022 |
| CHK | KBK | 06/07/2022 |

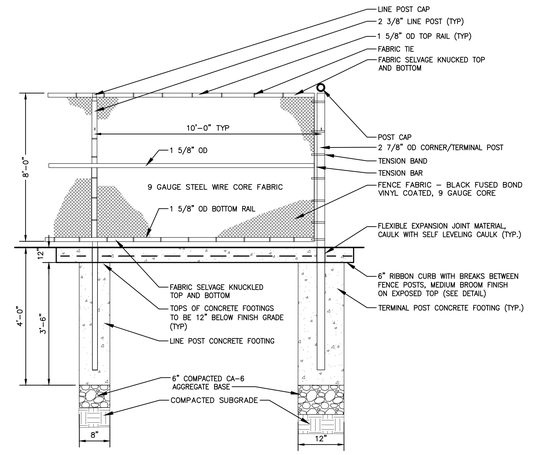
THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THE DRAWING IS THE SOLE PROPERTY OF FORMS+SURFACES. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT WRITTEN PERMISSION IS PROHIBITED.

DESCRIPTION:
KNIGHT BENCH
6 FEET,BACKED,ALUMINIUM SLATS,TWO (EXTERNAL) ARMS,SURFACE MOUNT

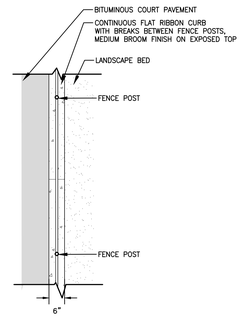
| SIZE | DWG. NO. | REV | SHEET |
|---|---|---|---|
| B | SBKNI-72-B-ALS-~~-~~-2A-SFM | 0 | 1 OF 1 |



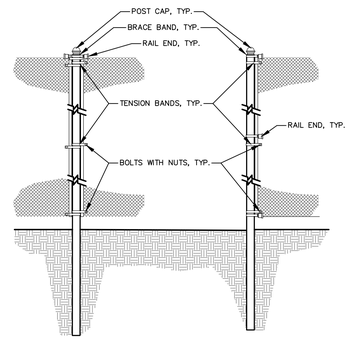

REV. 11/12/2021

## CHAIN LINK FENCE WITH CONCRETE RIBBON

N.T.S.




PLAN VIEW




CORNER POST — TERMINAL OR GATE POST

## CHAIN LINK FENCE TERMINAL POST / END POST

N.T.S.

REV. 11/12/2021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P. 608-223-9600

N.T.S.

Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

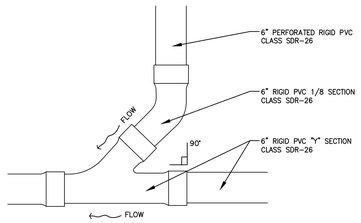
Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**CONSTRUCTION DETAILS**

Sheet Number
**C704**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

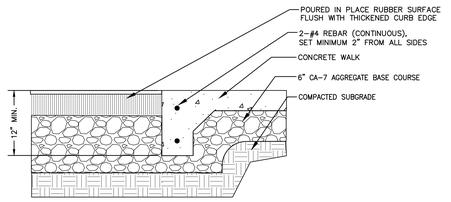
File: \\JSDINC\projects\24\20240214661\DWG\Civil Sheets\2414661 - C700.dwg Layout: C704 - SITE Details User: courtney.cox Plotted: Oct 07, 2025 - 9:29am Xref's:




## UNDERDRAINAGE PIPE TRANSITION

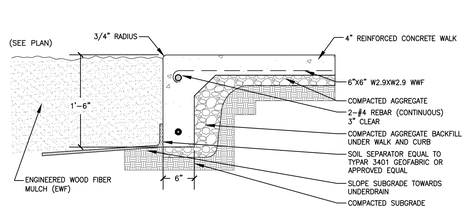
N.T.S.

REV: 7-07-2021




## THICKENED CURB EDGE AT PIP SURFACE

N.T.S.

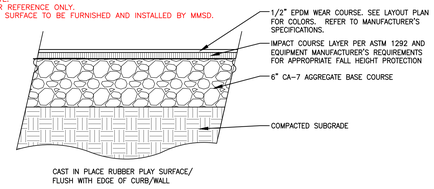



## THICKENED CURB EDGE AT PLAY AREA

N.T.S.

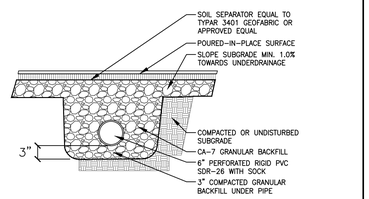
REV: 03-02-2021

NOTE:
FOR REFERENCE ONLY.
PIP SURFACE TO BE FURNISHED AND INSTALLED BY MMSD.



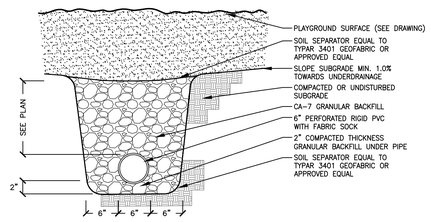

## POURED IN PLACE (PIP) RUBBER SURFACE

N.T.S.



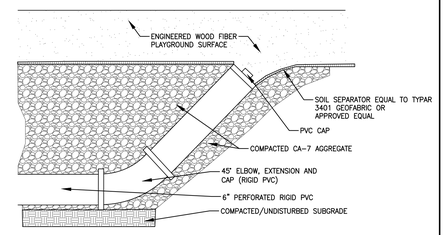

## UNDERDRAIN

N.T.S.



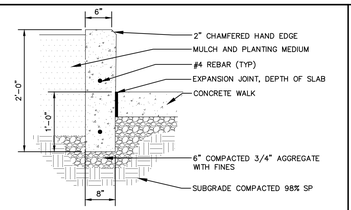

## ENGINEERED WOOD FIBER UNDERDRAIN

N.T.S.




## CLEANOUT IN PLAY AREA

N.T.S.




**NOTES:**

– CONCRETE SURFACES TO HAVE MEDIUM HORIZONTAL BROOM FINISH

## PLANTER CURB (8"x24")

N.T.S.

REV: 09-24-2021

NOTE:
FOR REFERENCE ONLY.
PIP SURFACE TO BE FURNISHED AND INSTALLED BY MMSD.




## ENGINEERED WOOD FIBER

N.T.S.

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OPN ARCHITECTS

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Key Plan

Revision Description Date

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**CONSTRUCTION DETAILS**

Sheet Number
**C705**


File: \\JSD\NCprojects2\2024\24654002\1DWG\Civil Sheets\24654001 - C7XX.dwg Layout: C705 - SITE Details User: courtney.cox Plotted: Oct 07, 2025 - 9:30am Xref's:

## COMPREHENSIVE PLANT SCHEDULE

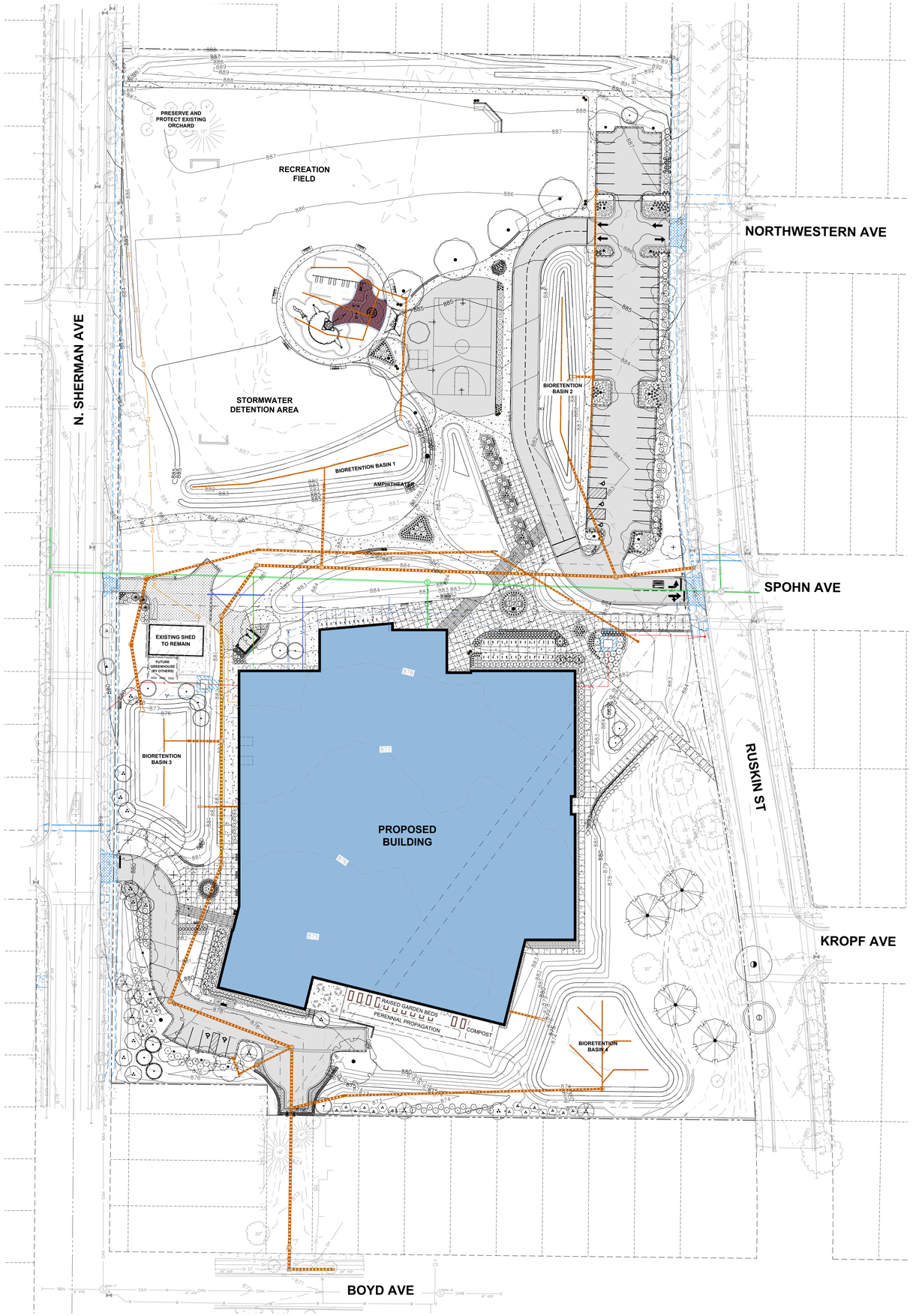
| SYMBOL | CODE | BOTANICAL / COMMON NAME | CONT | SIZE | QTY |
|---|---|---|---|---|---|
| **EVERGREEN TREE** | | | | | |
| | PIGL | *Picea glauca / White Spruce* | B & B | 6' Ht. (min) | 5 |
| | PIST | *Pinus strobus / White Pine* | B & B | 6' Ht. (min) | 3 |
| | TADI | *Taxodium distichum 'Mickelson' TM / Shawnee Brave Bald Cypress* | B & B | 3" Cal | 5 |
| **ORNAMENTAL TREES** | | | | | |
| | AMGL | *Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Serviceberry* | B & B | 6' Ht. (min) | 1 |
| | CECAN | *Cercis canadensis / Eastern Redbud* | B & B | 6' Ht. (min) | 9 |
| | HEMIT | *Heptacodium miconioides 'SMNHMRF' / Temple of Bloom® Seven Son Flower* | B & B | 8' Ht. (min) | 10 |
| **OVERSTORY DECIDUOUS TREES** | | | | | |
| | ACMI | *Acer miyabei 'Morton' / State Street™ Miyabe Maple* | B & B | 2.5"Cal | 4 |
| | BENI | *Betula nigra 'BNMTF' TM / Dura Heat River Birch* | B & B | 8' Ht. (min) | 11 |
| | GIBI | *Ginkgo biloba 'Autumn Gold' TM / Autumn Gold Maidenhair Tree* | B & B | 2.5" Cal | 5 |
| | GIBIM | *Ginkgo biloba 'Magyar' / Magyar Maidenhair Tree* | B & B | 2" Cal | 7 |
| | GLTR | *Gleditsia triacanthos inermis 'Shademaster' TM / Shademaster Locust* | B & B | 2.5"Cal | 10 |
| | PEAC | *Platanus x acerifolia 'Morton Circle' TM / Exclamation London Plane Tree* | B & B | 3.5" Cal | 3 |
| | QUBI | *Quercus bicolor / Swamp White Oak* | B & B | 2.5" Cal | 4 |
| | QUEL | *Quercus ellipsoidalis / Northern Pin Oak* | B & B | 2.5" Cal | 6 |
| | QUMA | *Quercus macrocarpa 'JFS-KW3' / Urban Pinnacle® Oak* | B & B | 2.5" Cal | 3 |
| **UPRIGHT EVERGREEN SHRUB** | | | | | |
| | THOC | *Thuja occidentalis 'Emerald' / Emerald Arborvitae* | B & B | 6' Ht. (min) | 3 |
| | THTE | *Thuja occidentalis 'Techny' / Techny Arborvitae* | B & B | 6' Ht. (min) | 3 |
| **DECIDUOUS SHRUBS** | | | | | |
| | ARME | *Aronia melanocarpa 'Morton' TM / Iroquis Beauty Black Chokeberry* | #3 | 36" Ht. (min) | 113 |
| | ARMEL | *Aronia melanocarpa 'UCONNAM165' TM / Low Scape Mound Chokeberry* | #3 | 12" Ht. (min) | 110 |
| | CEAM | *Ceanothus americanus / New Jersey Tea* | #3 | 18" Ht. (min) | 6 |
| | COBA | *Cornus baileyi / Bailey's Red-twig Dogwood* | #5 | 36" Ht. (min) | 48 |
| | CORA | *Cornus racemosa / Gray Dogwood* | #5 | 36" Ht. (min) | 22 |
| | COSE | *Cornus sericea 'Farrow' / Arctic Fire® Red Twig Dogwood* | #5 | 36" Ht. (min) | 43 |
| | HYPALL | *Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea* | #3 | 18" Ht. (min) | 43 |
| | RHAR | *Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac* * | #3 | 24" Dia. (min) | 47 |
| | VIJU | *Viburnum x juddii / Judd Viburnum* | #5 | 36" Ht. (min) | 43 |
| **EVERGREEN SHRUBS** | | | | | |
| | JUCHK | *Juniperus chinensis 'Kallays Compacta' / Kally Pfitzer Compact Juniper* | #3 | 18" Dia. (min) | 18 |
| | TAMET | *Taxus x media 'Tauntonii' / Taunton's Anglo-Japanese Yew* | #5 | 24" Ht. (min) | 77 |
| **PERENNIALS & GRASSES** | | | | | |
| | ALSU | *Allium x 'Summer Beauty' / Summer Beauty Allium* | #1 | Min. 8"-18" | 22 |
| | AQCA | *Aquilegia canadensis / Eastern Columbine* | #1 | Min. 8"-18" | 43 |
| | ASOB | *Aster oblongifolius 'October Skies / October Skies Fall Aster* | #1 | Min 8"-18" | 12 |
| | CAAC | *Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass* | #1 | Min. 8"-18" | 11 |
| | PAVI | *Panicum virgatum 'Shenandoah' / Shenandoah Switch Grass* | #1 | Min. 8"-18" | 124 |
| | RUAG | *Rudbeckia x 'American Gold Rush' / American Gold Rush Coneflower* | #1 | Min. 8"-18" | 58 |
| | SCSC | *Schizachyrium scoparium 'Prairie Blues' / Prairie Blues Little Bluestem* * | #1 | Min. 8"-18" | 111 |
| | SPHET | *Sporobolus heterolepis 'Tara' / Prairie Dropseed* | #1 | Min. 8"-18" | 284 |

## PLANT SCHEDULE STREET-TREES

| SYMBOL | CODE | BOTANICAL / COMMON NAME | CONT | SIZE | QTY |
|---|---|---|---|---|---|
| **ORNAMENTAL TREES** | | | | | |
| | ATGA | *Acer tataricum 'GarAnn' / Hot Wings® Tatarian Maple* | B & B | 2" Cal | 1 |
| | SYPM | *Syringa pekinensis 'Morton' / China Snow® Peking Lilac* | B & B | 2" Cal | 1 |
| **OVERSTORY DECIDUOUS TREES** | | | | | |
| | LITU | *Liriodendron tulipifera / Tulip Poplar* | B & B | 2" Cal | 1 |
| | ULMG | *Ulmus x 'Morton Glossy' / Triumph™ Elm* | B & B | 2" Cal | 1 |

## CONTRACTOR NOTES

1. REFER TO SHEET C100 FOR CITY FORESTRY NOTES REGARDING MUNICIPAL STREET TREE REQUIREMENTS AND INSTRUCTIONS




## LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING OUTLINE
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- MOUNTABLE CURB AND GUTTER
- CONCRETE RIBBON CURB
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 959 PROPOSED 1 FOOT CONTOUR
- 960 PROPOSED 5 FOOT CONTOUR
- 959 EXISTING 1 FOOT CONTOUR
- 960 EXISTING 5 FOOT CONTOUR
- STORMWATER MANAGEMENT AREA
- SANITARY SEWER
- WATERMAIN
- STORM SEWER
- SEAT WALL
- FENCE
- SIGN
- FLAG POLE
- BIKE RACK
- LANDSCAPE EDGING
- SHOVEL CUT EDGING
- NATIVE VEGETATIVE MAT (ALT: NATIVE PLUGS AT 1'-0" O.C.)
- SEED MIX - TALLGRASS PRAIRIE
- SEED MIX - LOW MOW FESCUE
- SEED MIX - STORMWATER RENEWAL
- SEED MIX - RECREATION/ATHLETIC FIELD
- SEED MIX - TURFGRASS
- SOD
- DECORATIVE STONE MULCH FOR MAINTENANCE STRIP ONLY

north

SCALE IN FEET

40' 0 40'

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Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
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Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**OVERALL LANDSCAPE PLANTING PLAN**

Sheet Number
**L100**


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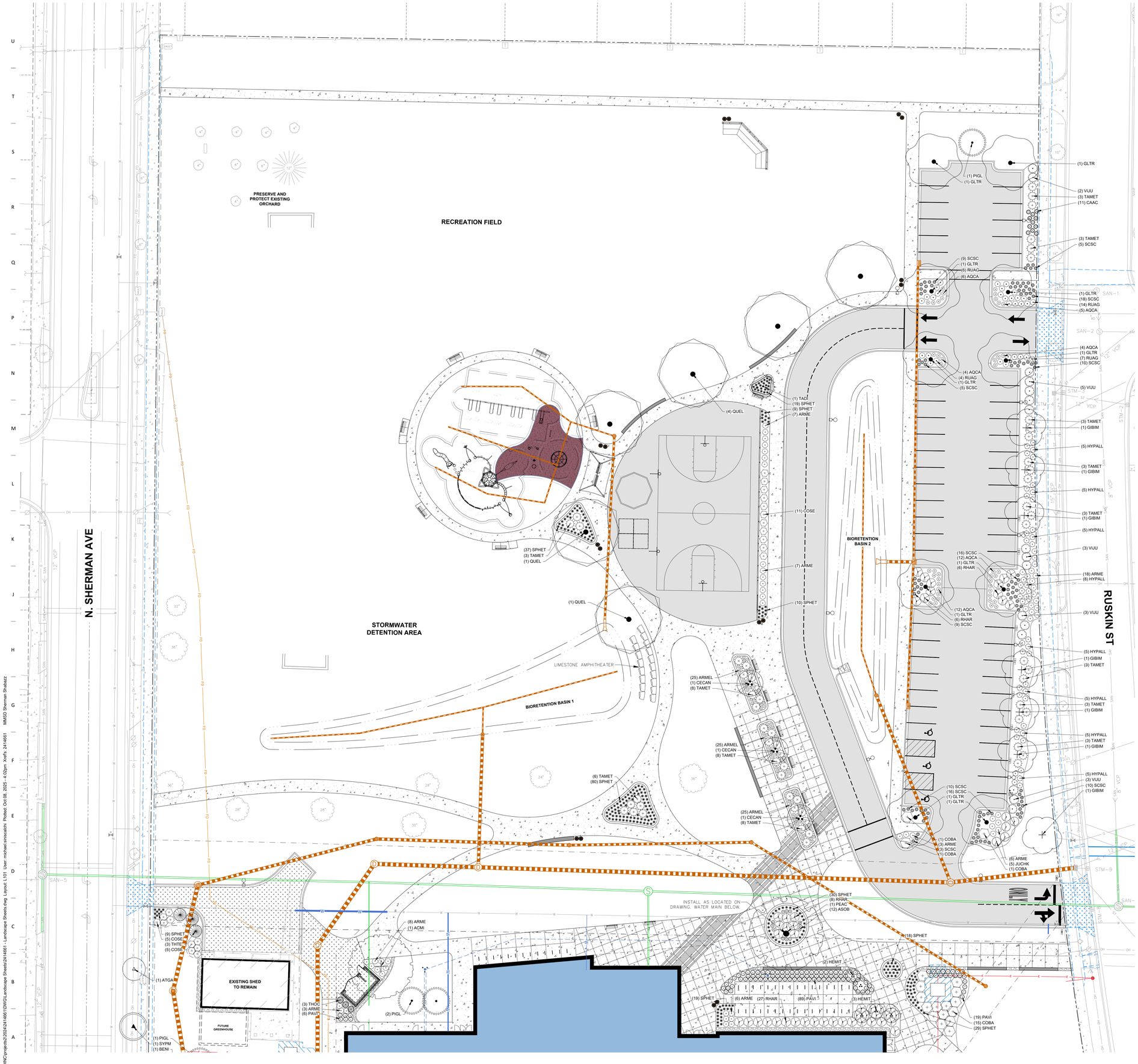


## PLANT LIST

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| **EVERGREEN TREE** | | |
| | PIGL | *Picea glauca / White Spruce* |
| | PIST | *Pinus strobus / White Pine* |
| | TADI | *Taxodium distichum 'Mickelson' TM / Shawnee Brave Bald Cypress* |
| **ORNAMENTAL TREES** | | |
| | AMGL | *Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Serviceberry* |
| | CECAN | *Cercis canadensis / Eastern Redbud* |
| | HEMIT | *Heptacodium miconioides 'SMNHMRF' / Temple of Bloom® Seven Son Flower* |
| **OVERSTORY DECIDUOUS TREES** | | |
| | ACMI | *Acer miyabei 'Morton' / State Street™ Miyabe Maple* |
| | BENI | *Betula nigra 'BNMTF' TM / Dura Heat River Birch* |
| | GIBI | *Ginkgo biloba 'Autumn Gold' TM / Autumn Gold Maidenhair Tree* |
| | GIBIM | *Ginkgo biloba 'Magyar' / Magyar Maidenhair Tree* |
| | GLTR | *Gleditsia triacanthos inermis 'Shademaster' TM / Shademaster Locust* |
| | LITU | *Liriodendron tulipifera / Tulip Poplar* |
| | QUBI | *Quercus bicolor / Swamp White Oak* |
| | QUEL | *Quercus ellipsoidalis / Northern Pin Oak* |
| | ULMG | *Ulmus x 'Morton Glossy' / Triumph™ Elm* |
| **UPRIGHT EVERGREEN SHRUB** | | |
| | THOC | *Thuja occidentalis 'Emerald' / Emerald Arborvitae* |
| | THTE | *Thuja occidentalis 'Techny' / Techny Arborvitae* |
| **DECIDUOUS SHRUBS** | | |
| | ARME | *Aronia melanocarpa 'Morton' TM / Iroquis Beauty Black Chokeberry* |
| | ARMEL | *Aronia melanocarpa 'UCONNAM165' TM / Low Scape Mound Chokeberry* |
| | CEAM | *Ceanothus americanus / New Jersey Tea* |
| | COBA | *Cornus baileyi / Bailey's Red-twig Dogwood* |
| | CORA | *Cornus racemosa / Gray Dogwood* |
| | COSE | *Cornus sericea 'Farrow' / Arctic Fire® Red Twig Dogwood* |
| | HYPALL | *Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea* |
| | RHAR | *Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac* |
| | VIJU | *Viburnum x juddii / Judd Viburnum* |
| **EVERGREEN SHRUBS** | | |
| | JUCHK | *Juniperus chinensis 'Kallays Compacta' / Kally Pfitzer Compact Juniper* |
| | JUSA | *Juniperus sabina 'Mini-Arcadia' / Mini Arcadia Juniper* |
| | TAMET | *Taxus x media 'Tauntonii' / Taunton's Anglo-Japanese Yew* |
| **PERENNIALS & GRASSES** | | |
| | ALSU | *Allium x 'Summer Beauty' / Summer Beauty Allium* |
| | AQCA | *Aquilegia canadensis / Eastern Columbine* |
| | ASOB | *Aster oblongifolius 'October Skies / October Skies Fall Aster* |
| | CAAC | *Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass* |
| | COVE | *Coreopsis verticillata 'Zagreb' / Zagreb Tickseed* |
| | HEHR | *Hemerocallis x 'Happy Returns' / Happy Returns Daylily* |
| | PAVI | *Panicum virgatum 'Shenandoah' / Shenandoah Switch Grass* |
| | RUAG | *Rudbeckia x 'American Gold Rush' / American Gold Rush Coneflower* |
| | SCSC | *Schizachyrium scoparium 'Prairie Blues' / Prairie Blues Little Bluestem* |
| | SPHET | *Sporobolus heterolepis 'Tara' / Prairie Dropseed* |

## LEGEND

- PROPERTY LINE
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- SEED MIX – RECREATION/ATHLETIC FIELD
- SEED MIX – TURFGRASS
- SOD
- DECORATIVE STONE MULCH FOR MAINTENANCE STRIP ONLY

north

SCALE IN FEET

20' 0 20'

**PRELIMINARY. NOT FOR CONSTRUCTION.**


OPN ARCHITECTS

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Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**PARTIAL LANDSCAPE PLANTING PLAN - NORTH**

Sheet Number
**L101**


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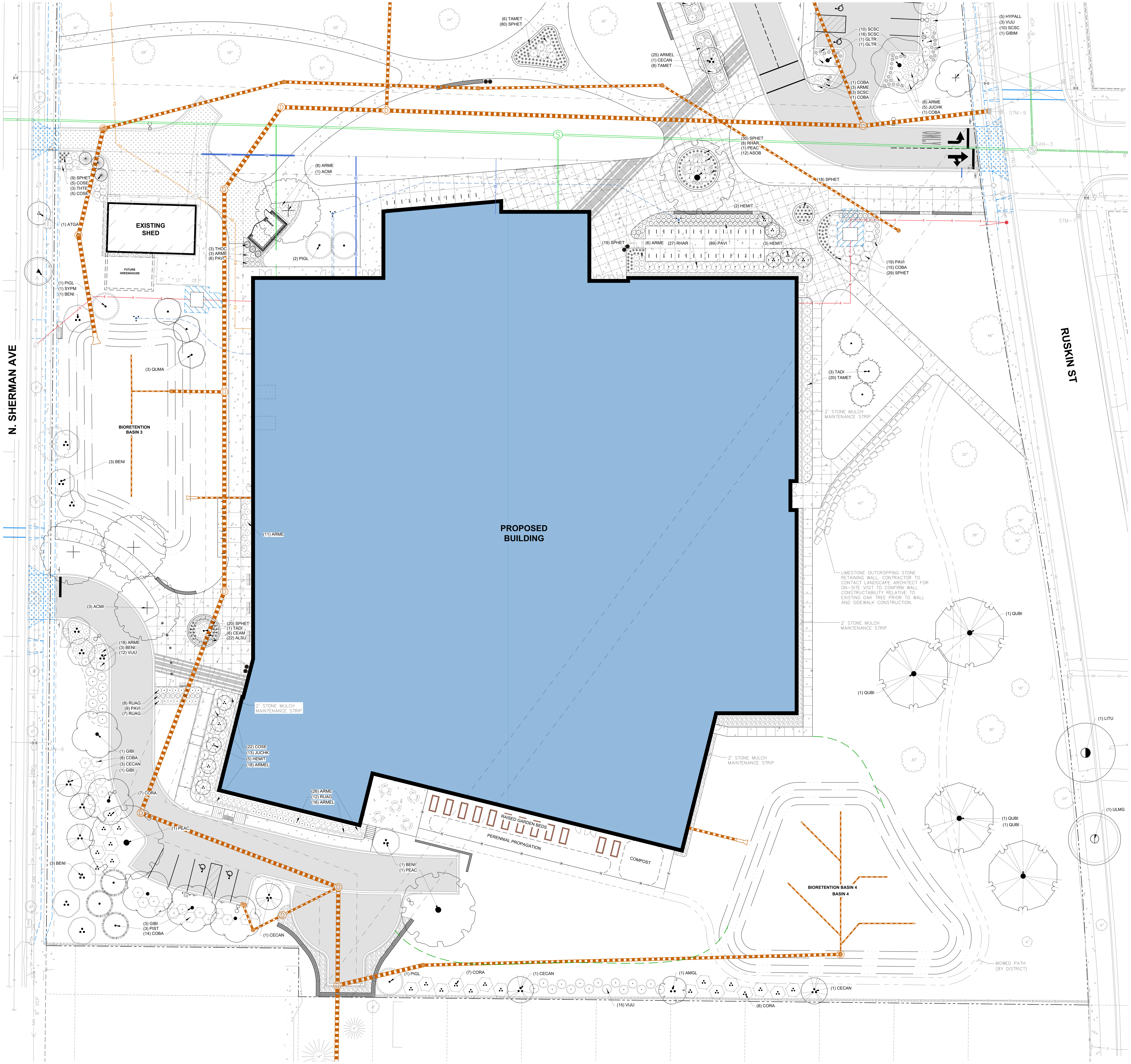


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## PLANT LIST

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| **EVERGREEN TREE** | | |
| | PIGL | *Picea glauca / White Spruce* |
| | PIST | *Pinus strobus / White Pine* |
| | TADI | *Taxodium distichum 'Mickelson' TM / Shawnee Brave Bald Cypress* |
| **ORNAMENTAL TREES** | | |
| | AMGL | *Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Serviceberry* |
| | CECAN | *Cercis canadensis / Eastern Redbud* |
| | HEMIT | *Heptacodium miconioides 'SMNHMRF' / Temple of Bloom® Seven Son Flower* |
| **OVERSTORY DECIDUOUS TREES** | | |
| | ACMI | *Acer miyabei 'Morton' / State Street™ Miyabe Maple* |
| | BENI | *Betula nigra 'BNMTF' TM / Dura Heat River Birch* |
| | GIBI | *Ginkgo biloba 'Autumn Gold' TM / Autumn Gold Maidenhair Tree* |
| | GIBIM | *Ginkgo biloba 'Magyar' / Magyar Maidenhair Tree* |
| | GLTR | *Gleditsia triacanthos inermis 'Shademaster' TM / Shademaster Locust* |
| | LITU | *Liriodendron tulipifera / Tulip Poplar* |
| | QUBI | *Quercus bicolor / Swamp White Oak* |
| | QUEL | *Quercus ellipsoidalis / Northern Pin Oak* |
| | ULMG | *Ulmus x 'Morton Glossy' / Triumph™ Elm* |
| **UPRIGHT EVERGREEN SHRUB** | | |
| | THOC | *Thuja occidentalis 'Emerald' / Emerald Arborvitae* |
| | THTE | *Thuja occidentalis 'Techny' / Techny Arborvitae* |
| **DECIDUOUS SHRUBS** | | |
| | ARME | *Aronia melanocarpa 'Morton' TM / Iroquis Beauty Black Chokeberry* |
| | ARMEL | *Aronia melanocarpa 'UCONNAM165' TM / Low Scape Mound Chokeberry* |
| | CEAM | *Ceanothus americanus / New Jersey Tea* |
| | COBA | *Cornus baileyi / Bailey's Red-twig Dogwood* |
| | CORA | *Cornus racemosa / Gray Dogwood* |
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| | SCSC | *Schizachyrium scoparium 'Prairie Blues' / Prairie Blues Little Bluestem* * |
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Key Plan

north
SCALE IN FEET
20' 0 20'

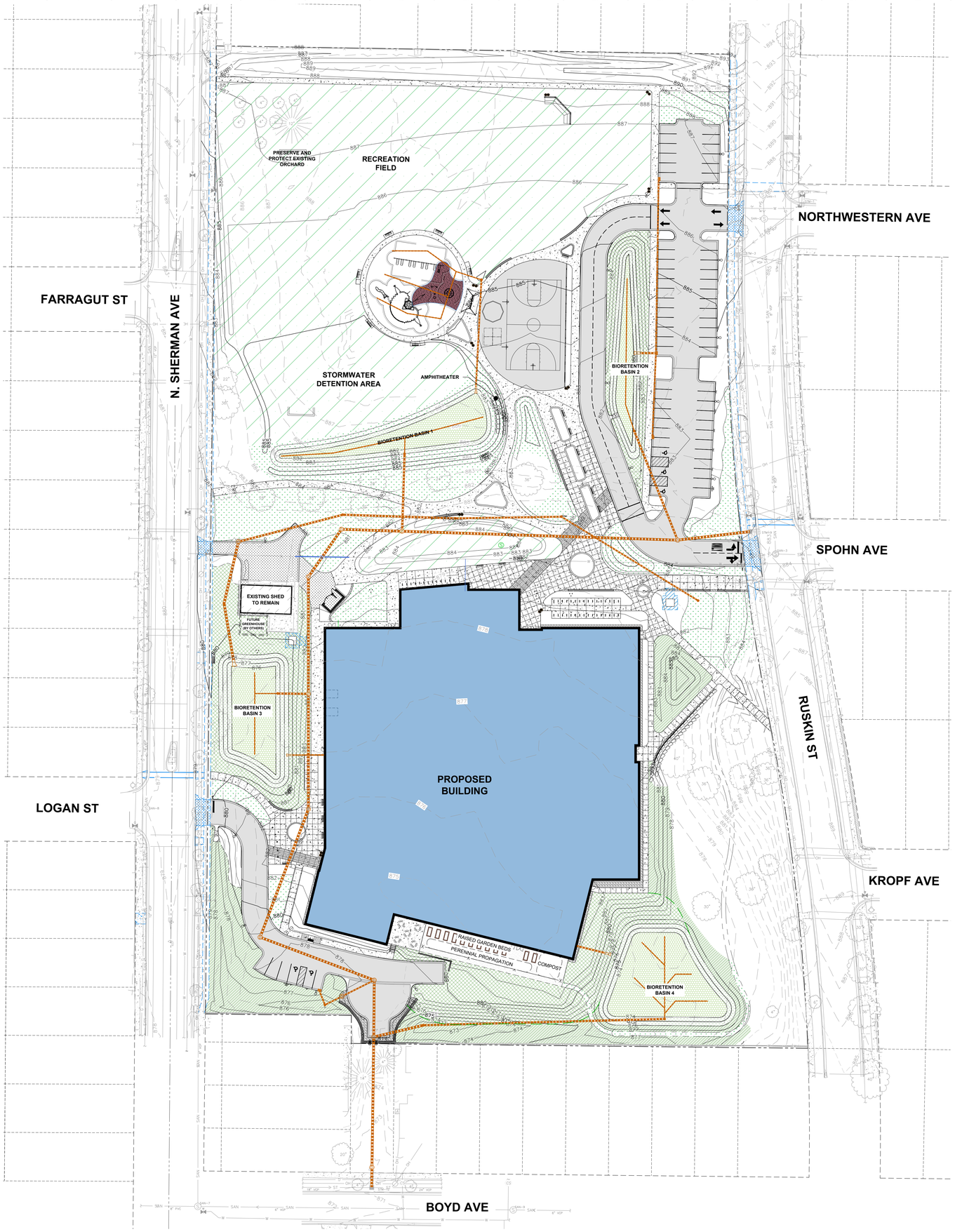
| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**PARTIAL LANDSCAPE PLANTING PLAN - SOUTH**

Sheet Number
**L102**

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Key Plan

north
SCALE IN FEET
40' 0 40'

| Revision | Description | Date |
|---|---|---|

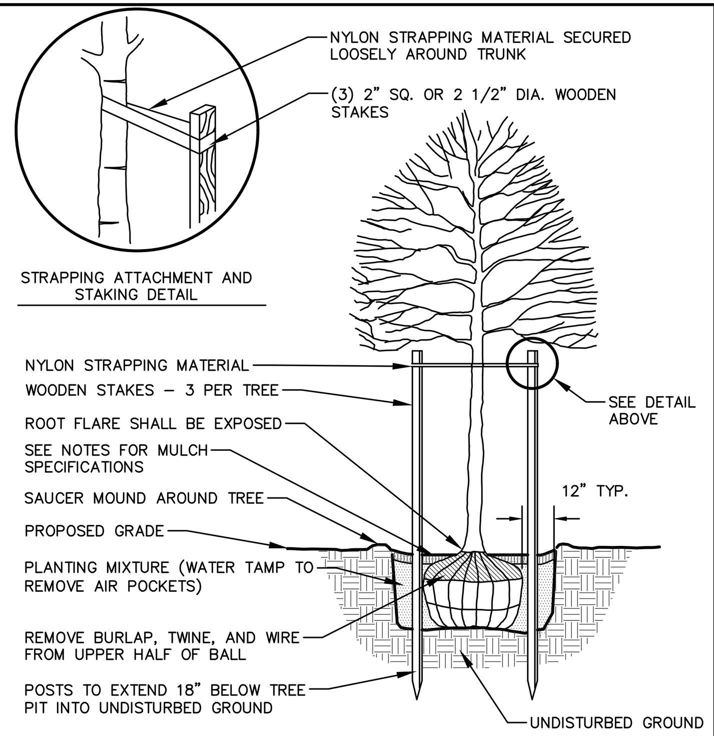
OPN Project No.
**24654002**

Sheet Issue Date
**UDC FINAL SUBMITTAL** **10/08/25**

Sheet Name
**OVERALL LANDSCAPE SEEDING PLAN**

Sheet Number
**L110**

File: \\SD\Nc\projects\2024\24654002\DWG\Landscape Sheets\24654002 - Landscape Sheets.dwg Layout: L110 User: michael.lenscakchi Plotted: Oct 08, 2025 - 4:01pm Xref's: 24654001 MMSD Sherman Shabazz

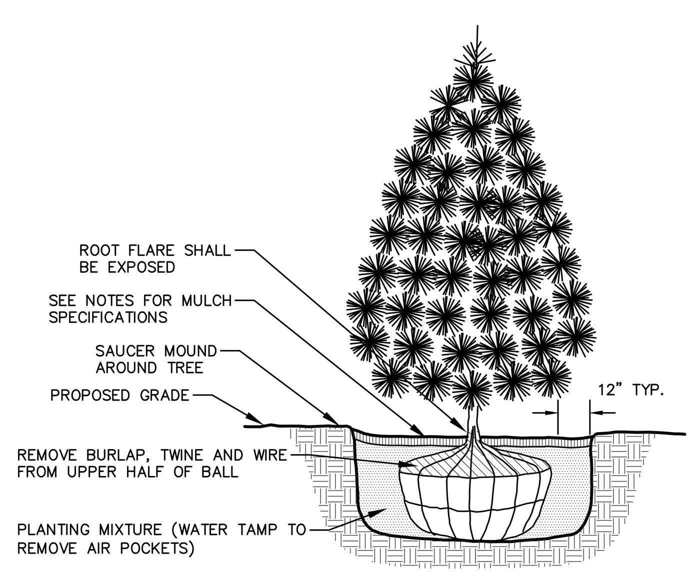



NOTE:
1. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE. ROOT BALL TO BE SET ON UNDISTURBED SOIL UNLESS COMPACTED AGGREGATE STONE REMAINS FROM SITE EXCAVATOR. REMOVE REMAINING AGGREGATE STONE UNTIL SOIL LAYER IS REACHED.
2. REMOVE NYLON STRAPPING WITHIN 9–18 MONTHS FOLLOWING INSTALLATION

## DECIDUOUS TREE PLANTING DETAIL

N.T.S.

REV. 01–04–2019

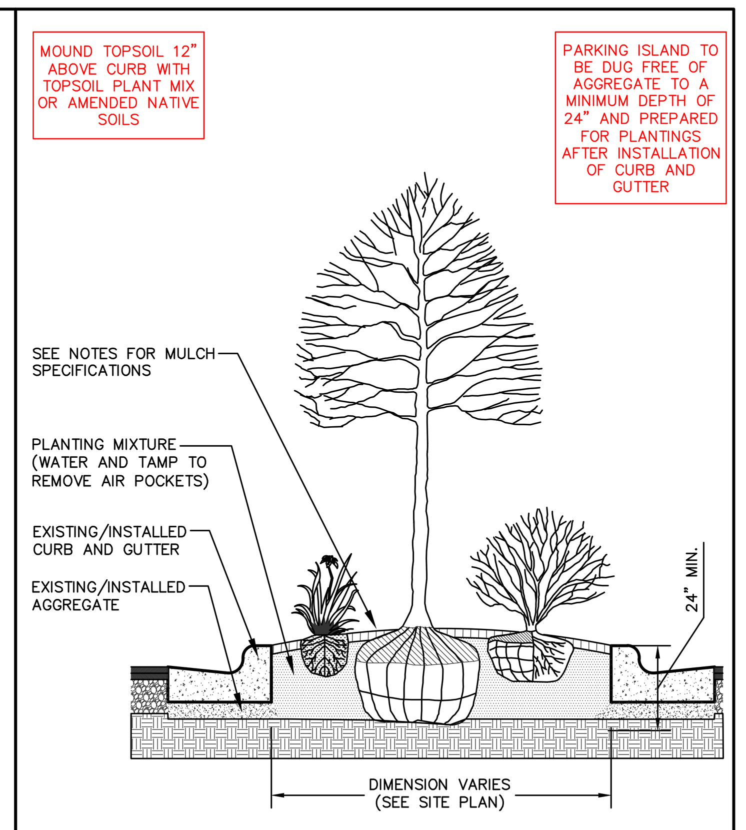



NOTE:
1. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE. ROOT BALL TO BE SET ON UNDISTURBED SOIL UNLESS COMPACTED AGGREGATE STONE REMAINS FROM SITE EXCAVATOR. REMOVE REMAINING AGGREGATE STONE UNTIL SOIL LAYER IS REACHED

## EVERGREEN TREE PLANTING DETAIL

N.T.S.

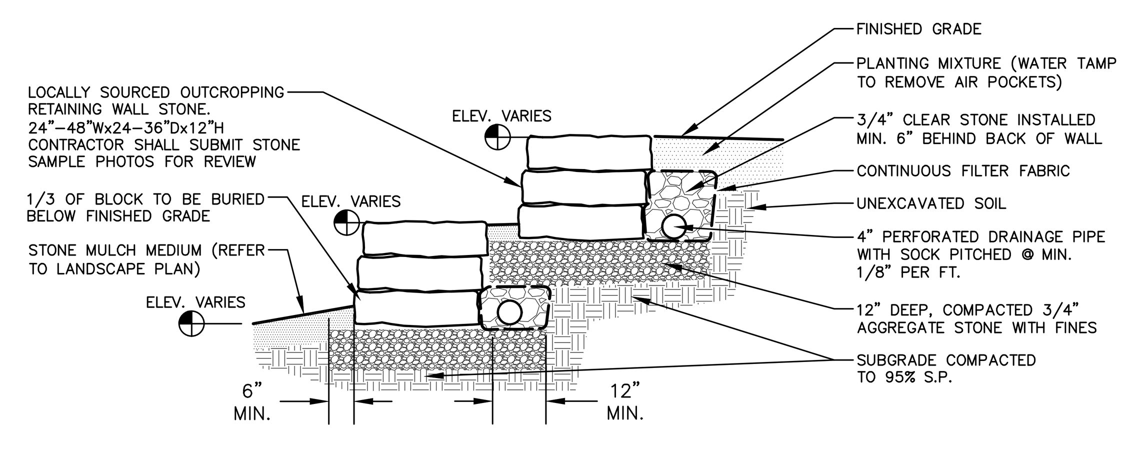
REV. 01–03–2019




## PARKING ISLAND LANDSCAPE DETAIL

N.T.S.

REV. 01–03–2019



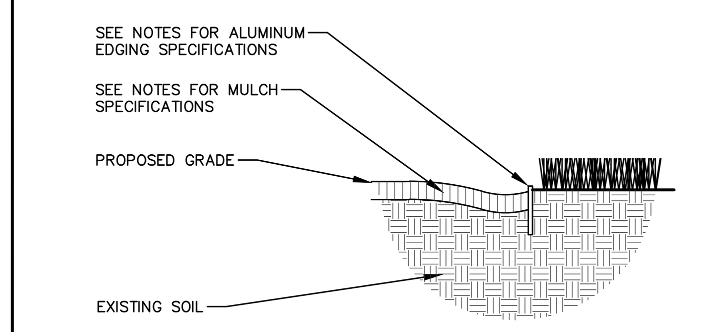

**NOTES:**
– PRIOR TO CONSTRUCTION, SIZE AND TYPE OF LIMESTONE BLOCKS SHALL BE APPROVED BY LANDSCAPE ARCHITECT.

– WALLS OVER 4–FEET IN HEIGHT SHALL BE DESIGNED BY REGISTERED GEOTECHNICAL OR STRUCTURAL ENGINEER AS PROVIDED ON SHOP DRAWINGS AND SUBMITTED PRIOR TO CONSTRUCTION.

## LIMESTONE RETAINING WALL

N.T.S.

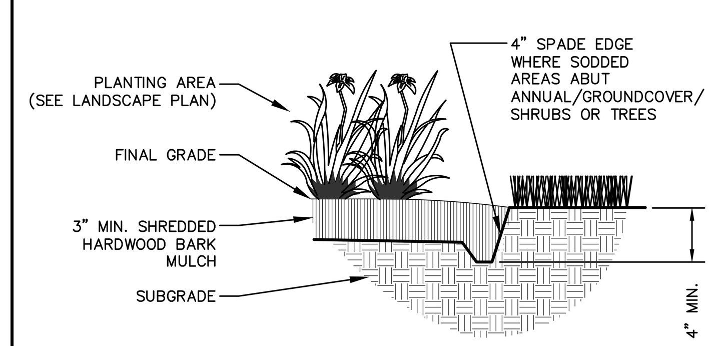
REV. 06–16–2025




## ALUMINUM LANDSCAPE EDGING DETAIL

N.T.S.

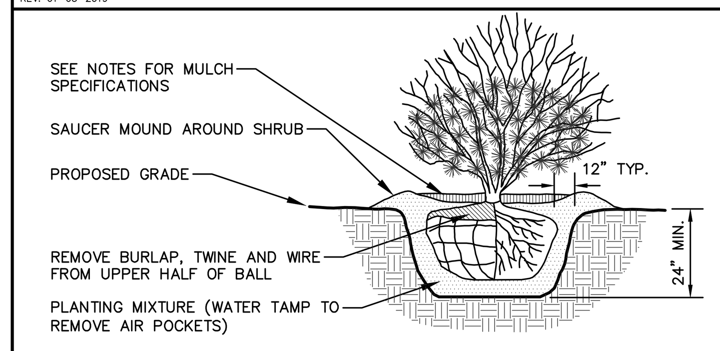
REV. 01–03–2019




## SHOVEL CUT EDGE

N.T.S.

REV. 01–03–2019

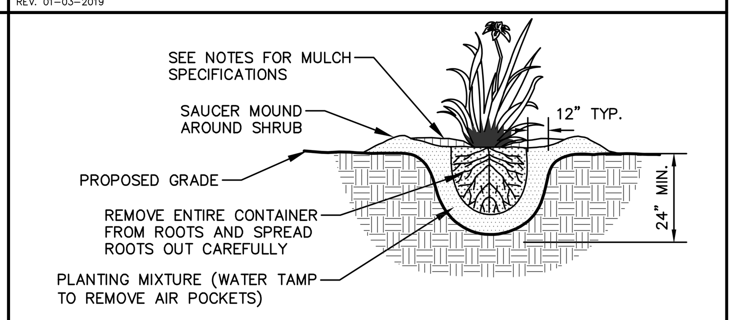



NOTE:
1. ROOT FLARE TO BE EXPOSED.

## SHRUB PLANTING DETAIL

N.T.S.

REV. 01–03–2019




NOTE:
1. ROOT FLARE TO BE EXPOSED

## PERENNIAL/ORNAMENTAL GRASS PLANTING DETAIL

N.T.S.

REV. 01–03–2019

## CONTRACTOR AND OWNER RESPONSIBILITY NOTES

1. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE ALL PLANTS THROUGH ONE (1) YEAR AFTER ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PLANTS SHALL BE ALIVE AND IN HEALTHY AND FLOURISHING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL REPLACE (AT NO COST TO OWNER) ANY PLANTS THAT ARE DEAD OR NOT IN A VIGOROUS THRIVING CONDITION. REPLACEMENT PLANTS SHALL BE OF THE SAME KIND AND SIZE AS ORIGINALLY SPECIFIED UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE. RESTORE BEDS AS NECESSARY FOLLOWING PLANT REPLACEMENT, INCLUDING BUT NOT LIMITED TO BEDDING, EDGING, MULCH, ETC. REPLACE PLANTS DAMAGED AT TIME OF PLANTING. REPAIR AREAS DISTURBED IN ANY WAY DURING PLANT REPLACEMENT AT NO COST TO OWNER. CONTRACTOR SHALL PROVIDE A ONE (1)–YEAR STRAIGHTENING GUARANTEE FOR ALL TREES.
2. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER'S REPRESENTATIVE PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.
3. MAINTENANCE: (CONTRACTOR) FOR ALL PLANTINGS, SEEDED AND/OR SODDED LAWN AREAS: THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS AND LAWN AREAS FOR A MINIMUM TIME PERIOD OF 60 DAYS, UNTIL FINAL ACCEPTANCE BY OWNER'S REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY WATERING PLANTS AND LAWN/TURFGRASS DURING THIS 60 DAY ESTABLISHMENT PERIOD. CONTRACTOR IS RESPONSIBLE FOR THE ESTABLISHMENT OF HEALTHY VIGOROUS PLANT MATERIALS AND LAWN/TURFGRASS GROWTH. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRUNING OF PLANT MATERIALS, AND SHAPING AND/OR REPLACEMENT OR SUPPLEMENT OF DEFICIENT SHREDDED HARDWOOD BARK MULCH DURING THIS PERIOD. LONG TERM PLANT MATERIALS AND LAWN/TURFGRASS MAINTENANCE AND ANY PROGRAM FOR SUCH IS THE RESPONSIBILITY OF THE OWNER. ALL PLANTINGS AND LAWN/TURFGRASS AREAS SHALL BE MAINTAINED IN A MANICURED CONDITION UNTIL THE TIME WHEN THE OWNER'S ACCEPTANCE IS GIVEN.
4. MAINTENANCE: (OWNER) THE OWNER IS RESPONSIBLE FOR THE CONTINUED MAINTENANCE, REPAIR AND REPLACEMENT OF ALL LANDSCAPING MATERIALS AND WEED BARRIER FABRIC AS NECESSARY FOLLOWING THE ONE (1) YEAR CONTRACTOR GUARANTEE PERIOD.

## LANDSCAPE MATERIAL NOTES

1. MATERIALS – PLANTING MIXTURE: ALL HOLES EXCAVATED FOR TREES, SHRUBS, PERENNIALS AND ORNAMENTAL GRASSES SHALL BE BACKFILLED WITH TWO (2) PARTS TOPSOIL, ONE (1) PART SAND AND ONE (1) PART COMPOST. SOIL MIXTURE SHALL BE WELL BLENDED PRIOR TO INSTALLATION.
2. MATERIALS – TOPSOIL: TOPSOIL TO BE CLEAN, FRIABLE LOAM FROM A LOCAL SOURCE, FREE FROM STONES OR DEBRIS OVER 3/4" IN DIAMETER, AND FREE FROM TOXINS OR OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL HAVE A pH VALUE BETWEEN 6 AND 7. TOPSOIL AND PLANTING SOIL SHALL BE TESTED TO ENSURE CONFORMANCE WITH THESE SPECIFICATIONS AND SHALL BE AMENDED TO MEET THESE SPECIFICATIONS. PROVIDE TEST RESULTS TO OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT. DO NOT PLACE FROZEN OR MUDDY TOPSOIL. APPLY SOIL AMENDMENTS TO ALL LANDSCAPE AREAS PER SOIL TEST.
3. MATERIALS – SHREDDED HARDWOOD BARK MULCH: ALL PLANTING AREAS SHALL RECEIVE CERTIFIED WEED FREE SHREDDED HARDWOOD BARK MULCH INSTALLED TO A MINIMUM AND CONSISTENT DEPTH OF 3–INCHES. SHREDDED HARDWOOD BARK MULCH SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS. SHREDDED HARDWOOD BARK MULCH AREAS SHALL NOT RECEIVE WOVEN WEED BARRIER FABRIC.
4. MATERIALS – DECORATIVE STONE MULCH: ALL AREAS HATCHED PER LANDSCAPE LEGEND AND LABELED ON PLAN SHALL RECEIVE MISSISSIPPI PEA GRAVEL BY MIDWEST DECORATIVE STONE (OR APPROVED EQUAL SUPPLIER) SPREAD TO A MINIMUM AND CONSISTENT DEPTH OF 4–INCHES. DECORATIVE STONE MULCH TYPE, SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS. STONE MULCH AREAS SHALL RECEIVE WOVEN WEED BARRIER FABRIC. NO PLASTIC/IMPERVIOUS BARRIERS WILL BE PERMITTED. EXAMPLE: BLACK VISQUEEN.
5. MATERIALS – TREE & SHRUB RINGS: ALL TREES AND/OR SHRUBS PLANTED IN SEEDED LAWN AREAS TO BE INSTALLED WITH A MINIMUM 4' DIAMETER SHREDDED HARDWOOD BARK MULCH TREE RING SPREAD TO A CONSISTENT DEPTH OF 3–INCHES. ALL TREE RINGS SHOULD BE INSTALLED WITH A 5" DEPTH SHOVEL CUT EDGE, ANGLED 45 DEGREES INTO SOIL AT A 5' DIAMETER ABOUT THE CENTER OF THE TREE PLANTING. A PRE–EMERGENT GRANULAR HERBICIDE WEED–PREVENTER SHOULD BE MIXED WITH MULCH USED TO INSTALL TREE RING AS WELL AS TOPICALLY APPLIED TO COMPLETED INSTALLATION OF TREE RING.
6. MATERIALS – ALUMINUM EDGING: EDGING SHALL BE 1/8" X 4", ALUMINUM EDGING, MILL FINISH. OWNER'S REPRESENTATIVE SHALL APPROVE PRODUCT SPECIFICATION PROVIDED BY LANDSCAPE CONTRACTOR.
7. MATERIALS – TREE PROTECTION: ALL TREES TO BE INSTALLED WITH LDPE TREE GUARDS AS MANUFACTURED BY A.M. LEONARD HORTICULTURAL TOOL & SUPPLY CO., OR APPROVED EQUAL.
8. MATERIALS – (ALTERNATE 1): TREE WATERING BAGS: ALL TREES TO BE INSTALLED WITH ONE (1) WATER BAG. PRODUCT TO BE "TREE GATOR ORIGINAL SLOW RELEASE WATERING BAG," PRODUCT NO. 98183–R OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

## SEEDING, SODDING, & POND VEGETATION NOTES

1. MATERIALS – SEED MIX – "LOW–MOW" FESCUE: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL RECEIVE 6" OF TOPSOIL AND "NO MOW" FESCUE SEED OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO FESCUE SEED, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1–1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS.
2. MATERIALS – SEED MIX – TURFGRASS: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL RECEIVE 6" OF TOPSOIL AND EARTH CARPET'S "MADISON PARKS" GRASS SEED, OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO TURFGRASS SEED, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1 1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS. MULCH SHALL BE CERTIFIED NOXIOUS WEED SEED–FREE.
3. MATERIALS –SEED MIX: – RECREATION/ATHLETIC FIELD: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL RECEIVE 6" OF TOPSOIL AND REINDERS "80/20 ATHLETIC/FAIRWAY MIX" GRASS SEED, OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO THE SEED MIX, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1 1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS. MULCH SHALL BE CERTIFIED NOXIOUS WEED SEED–FREE.
4. MATERIALS – SOD: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL RECEIVE 6" OF TOPSOIL AND A PREMIUM GRADE TURFGRASS SOD. ONLY IMPROVED TYPES OF SOD (ELITE) ARE ACCEPTABLE. TURFGRASS SHALL BE MACHINE CUT AT A UNIFORM THICKNESS OF .60 INCH, PLUS OR MINUS .25 INCH, AT TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH. LARGE ROLL TURFGRASS SOD SHALL BE CUT TO THE SUPPLIER'S STANDARD WIDTH (36–48 INCHES) AND LENGTH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE. STANDARD SIZE SECTIONS OF TURGRASS SOD SHALL BE STRONG ENOUGH SO THAT THEY CAN BE PICKED UP AND HANDLED WITHOUT DAMAGE. TURFGRASS SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT IS EXCESSIVELY DRY OR WET, AS THIS MAY ADVERSELY AFFECT ITS SURVIVAL. POST–PLANT IRRIGATION WILL BE NECESSARY TO ENSURE SOD STAYS ALIVE AND ROOTS INTO SOIL. THE CONTRACTOR IS RESPONSIBLE FOR WATERING SOD UNTIL TIME OF ACCEPTANCE BY THE OWNER. TURFGRASS SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED/TRANSPLANTED WITHIN A PERIOD OF 24 HOURS. TURFGRASS SOD SHALL BE RELATIVELY FREE OF THATCH, UP TO 0.5 INCH ALLOWABLE (UNCOMPRESSED). TURFGRASS SOD SHALL BE REASONABLY FREE (10 WEEDS/100 SQ. FT.) OF DISEASES, NEMATODES AND SOIL–BORNE INSECTS. ALL TURFGRASS SOD SHALL BE FREE OF GRASSY AND BROAD LEAF WEEDS AND WEED SEED. THE SOD SUPPLIER SHALL MAKE RECOMMENDATIONS TO THE CONTRACTOR REGARDING WATERING SCHEDULE. THE WATERING SCHEDULE SHOULD BEGIN IMMEDIATELY AFTER SOD IS INSTALLED.
5. MATERIALS – SEED MIX – STORMWATER: DISTURBED AREAS LABELED ON PLAN AS SUCH, SHALL BE BROADCAST SEEDED WITH "RAINWATER RENEWAL" SEED MIX, AS PROVIDED BY AGRECOL LLC, (WWW.AGRECOL.COM), OR APPROVED EQUIVALENT. INSTALL SEED WITH SUPPLEMENTAL MATERIALS AND AMENDMENTS AS RECOMMENDED BY SEED SUPPLIER AND AT RATES AND OPTIMUM TIMES OF THE YEAR AS RECOMMENDED BY THE SEED SUPPLIER TO ENSURE SUCCESSFUL GERMINATION AND SEED/ROOT ZONE GROWTH DEVELOPMENT. REFER TO PRODUCT SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.
6. MATERIALS – SEED MIX – TALLGRASS PRAIRIE: DISTURBED AREAS LABELED ON PLAN AS SUCH, SHALL BE BROADCAST SEEDED WITH "TALLGRASS PRAIRIE" SEED MIX, AS PROVIDED BY AGRECOL LLC, (WWW.AGRECOL.COM), OR APPROVED EQUIVALENT. INSTALL SEED WITH SUPPLEMENTAL MATERIALS AND AMENDMENTS AS RECOMMENDED BY SEED SUPPLIER AND AT RATES AND OPTIMUM TIMES OF THE YEAR AS RECOMMENDED BY THE SEED SUPPLIER TO ENSURE SUCCESSFUL GERMINATION AND SEED/ROOT ZONE GROWTH DEVELOPMENT. REFER TO PRODUCT SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.
7. MATERIALS – NATIVE VEGETATIVE MAT (NVM): AREAS SPECIFIED ON PLANS SHALL RECEIVE AGRECOL "RAINWATER RENEWAL" NATIVE VEGETATIVE MAT – DEGRADABLE CORE. CONTRACTOR SHALL CONTACT AGRECOL NATIVE NURSERY 16 WEEKS IN ADVANCE OF INSTALLATION FOR PROPER GROWING LEAD TIME. CONTRACTOR SHALL ASSUME AVAILABLE DELIVERY DATE TO BE BETWEEN MID–JUNE THROUGH THE END OF OCTOBER DUE TO THE NMV GROWING SEASON. REFER TO PRODUCT SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION PROCEDURES.

7.1. ALT BID: NATIVE PLUG PLANTINGS: PLUG PLANTINGS TO BE INSTALLED 1'–0" ON CENTER, MIXING SPECIES INTEGRALLY IN FLATS OF 20 AT A TIME. REFER TO WDNR PLUG PLANTING TECHNICAL STANDARDS FOR ROOTSTOCK AND INSTALLATION SPECIFICATIONS

## GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGEND.
2. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
3. DRAWING FOR REVIEW – NOT FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE TITLE BLOCK.
4. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL FINE GRADING AND TOPSOILING WITH GENERAL CONTRACTOR
5. CONTRACTOR SHALL REVIEW SITE CONDITIONS FOR UTILITY CONFLICTS, DRAINAGE ISSUES, SUBSURFACE ROCK, AND PLANT PLACEMENT CONFLICTS PRIOR TO PLANT INSTALLATION. REPORT ANY CONDITIONS THAT MAY HAVE ADVERSE IMPACT ON PLANTING OPERATIONS TO LANDSCAPE ARCHITECT
6. DO NOT COMMENCE PLANTING OPERATIONS UNTIL ALL ADJACENT SITE IMPROVEMENTS, IRRIGATION INSTALLATION (IF APPLICABLE), AND FINISH GRADING ARE COMPLETE
7. GENERAL: ALL WORK IN THE R–O–W AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL REQUIREMENTS. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES. LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES. CONTRACTOR MUST CALL 1–800–242–8511 FOR UTILITY LOCATIONS AT LEAST THREE DAYS PRIOR TO DIGGING. HAND DIG AND INSTALL ALL PLANTS THAT ARE NEAR EXISTING UTILITIES. PROTECT PREVIOUSLY INSTALLED WORK OF OTHER TRADES. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.
8. DELIVERY AND HANDLING: DO NOT DELIVER MORE PLANT MATERIALS THAN CAN BE PLANTED IN ONE DAY, UNLESS ADEQUATE, APPROPRIATE AND SECURE STORAGE IS PROVIDED AND APPROVED BY OWNER'S REPRESENTATIVE. AT ALL TIMES, PROTECT ALL PLANT MATERIALS FROM WIND AND DIRECT SUN. DELIVER PLANTS WITH LEGIBLE IDENTIFICATION LABELS. PROTECT PLANTS DURING DELIVERY AND DO NOT PRUNE PRIOR TO DELIVERY. ALL TREES AND SHRUBS SHALL BE PLANTED ON THE DAY OF DELIVERY; IF THIS IS NOT POSSIBLE, PROTECT THE PLANT MATERIALS NOT PLANTED BY STORING THEM IN A SHADED, SECURE AREA, PROTECTING THE ROOT MASS WITH WET SOIL, MULCH, HAY OR OTHER SUITABLE MEDIUM. CONTRACTOR TO KEEP ALL PLANT MATERIALS ADEQUATELY WATERED TO PREVENT ROOT DESICCATION. DO NOT REMOVE CONTAINER GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING. DO NOT PICK UP CONTAINER OR BALLED PLANTS BY STEM OR ROOTS. ALL PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE CONTAINER OR BALL. PERFORM ACTUAL PLANTING ONLY WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED BEST HORTICULTURAL PRACTICES.
9. MATERIALS – PLANTS: ALL PLANTS SHALL CONFORM TO THE LATEST VERSION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST 2 YEARS. PLANTS SHALL BE FRESHLY DUG (DURING THE MOST RECENT FAVORABLE HARVEST SEASON). PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECTS (ADULT EGGS, PUPAE OR LARVAE). THEY SHALL HAVE HEALTHY, WELL–DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH OR PREMATURE MORTALITY. PLANTS SHALL BE OF THE HIGHEST QUALITY, POSSESS TYPICAL GROWTH HABITS AND FORM FOR THEIR SPECIES AND BE FREE OF INJURY. PARKWAY TREES AND PARKING LOT TREES SHALL HAVE A MINIMUM BRANCHING HEIGHT OF SIX (6) FEET ABOVE THE GROUND TO ALLOW ADEQUATE VISUAL AND PHYSICAL CLEARANCE.
10. PRUNING: THE CONTRACTOR SHALL PRUNE ALL TREES AND REPAIR ANY INJURIES THAT OCCURRED DURING THE PLANTING PROCESS. DOUBLE LEADERS, DEAD BRANCHES, AND LIMBS DAMAGED OR BROKEN DURING THE PLANTING PROCESS, SHALL BE PRUNED. THIS SHALL BE THE ONLY PRUNING ALLOWED AT PLANTING. PRUNING SHALL CONFORM TO THE LATEST VERSION OF THE AMERICAN STANDARD FOR TREE CARE OPERATIONS, ANSI A300. PRUNE TREES IN ACCORDANCE WITH NAA GUIDELINES. DO NOT TOP TREES. PRUNE SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRACTICES. ON CUTS OVER 3/4" IN DIAMETER AND BRUISES OR SCARS ON BARK, TRACE THE INJURED CAMBIUM LAYER BACK TO LIVING TISSUE AND REMOVE. SMOOTH AND SHAPE WOUNDS SO AS NOT TO RETAIN WATER. TREAT THE AREA WITH AN APPROVED INCONSPICUOUS LATEX BASED ANTISEPTIC TREE PAINT, IF PRUNING OCCURS "IN SEASON". DO NOT PRUNE ANY OAK TREES DURING THE MONTHS FROM APRIL TO OCTOBER.
11. CLEANUP: THE WORK AREA SHALL BE KEPT SAFE AND NEAT AT ALL TIMES. DISPOSED OF EXCESS SOIL. REMOVE ALL CUTTINGS AND WASTE MATERIALS. SOIL AND BRANCHES. BIND AND WRAP THESE MATERIALS, ANY REJECTED PLANTS, AND ANY OTHER DEBRIS RESULTING FROM ALL PLANTING TASKS AND PROMPTLY CLEAN UP AND REMOVE FROM THE PROJECT SITE. UNDER NO CIRCUMSTANCES SHALL THE ACCUMULATION OF SOIL, BRANCHES OR OTHER DEBRIS BE ALLOWED UPON A PUBLIC PROPERTY IN SUCH A MANNER AS TO RESULT IN A PUBLIC SAFETY HAZARD OR DAMAGE. LIKEWISE, UNDER NO CIRCUMSTANCES SHALL ANY DEBRIS OR INCIDENTAL MATERIALS BE ALLOWED UPON ADJACENT PRIVATE PROPERTY.
12. ANY SUBSTITUTIONS IN PLANT TYPE, LOCATION, OR SIZE SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
13. CONTRACTOR TO VERIFY PLANT MATERIAL QUANTITIES AND SQUARE FOOTAGES. QUANTITIES SHOWN ON PLAN TAKE PRECEDENCE OVER THOSE ON SCHEDULE.
14. REFER TO C100 CITY FORESTRY NOTES

## MUNICIPAL LANDSCAPE REQUIREMENTS

### 28.142(4) DEVELOPED AREA (101,340 Square Feet)

| | |
|---|---|
| Landscape Requirement: | *5 Landscape Points per 300 SF of Developed Area* |
| Calculation: | *101,340 / 300 x 5 Points = 1,689* |
| Total Points Required: | ***1,689 Landscape Points*** |
| Total Points Provided: | ***(see Tabulation of Landscape Credits and Points table)*** |
| Provisions: | *Existing significant specimen trees must be within developed area and at least 2.5" DBH* |
| | *Existing significant specimen trees cannot comprise more than 40% of total required landscape points (675 Points)* |
| | *If the development site has more than 50 canopy trees, no single species may comprise more than 20% of trees* |

### 28.142(5) DEVELOPMENT FRONTAGE - N SHERMAN AVE (900 Linear Feet)

| | |
|---|---|
| Landscape Requirement: | *1 Overstory Deciduous Tree 30 LF of Lot Frontage* |
| Calculation: | *900 / 30 x 1 Overstory Deciduous Tree = 30* |
| Landscape Requirement: | *5 Shrubs per 30 LF of Lot Frontage* |
| Calculation: | *900 / 30 x 5 Shrubs = 150* |
| Total Landscaping Required: | *30 Overstory Deciduous Trees and 150 Shrubs* |
| Total Landscaping Provided: | ***(see Plant Type list below)*** |
| Provisions: | *Landscaping shall be provided between buildings or parking areas and the* |
| | *Existing significant specimen trees must be at least 2.5" DBH* |
| | *If the development site has more than 50 canopy trees, no single species may comprise more than 20% of trees* |

| ***Plant Type*** | ***Quantity*** |
|---|---|
| Overstory Deciduous Trees | 23 |
| Evergreen Trees | 7 |
| Ornamental Trees | 11 |
| Evergreen Shrubs | 13 |
| Deciduous Shrubs | 170 |

### 28.142(5) DEVELOPMENT FRONTAGE - RUSKIN ST (929 Linear Feet)

| | |
|---|---|
| Landscape Requirement: | *1 Overstory Deciduous Tree per 30 LF of Lot Frontage* |
| Calculation: | *929 / 30 x 1 Overstory Deciduous Tree = 31* |
| Landscape Requirement: | *5 Shrubs per 30 LF of Lot Frontage* |
| Calculation: | *929 / 30 x 5 Shrubs = 154.8* |
| Total Landscaping Required: | *31 Overstory Deciduous Trees and 155 Shrubs* |
| Total Landscaping Provided: | ***(see Plant Type list below)*** |
| Provisions: | *Landscaping shall be provided between buildings or parking areas and the* |
| | *Existing significant specimen trees must be at least 2.5" dbh* |
| | *If the development site has more than 50 canopy trees, no single species* |

| ***Plant Type*** | ***Quantity*** |
|---|---|
| Existing Significant Specimen Trees | 12 |
| Overstory Deciduous Trees | 17 |
| Evergreen Trees | 3 |
| Ornamental Trees | 5 |
| Evergreen Shrubs | 49 |
| Deciduous Shrubs | 146 |

### 28.142 INTERIOR SURFACE PARKING LOT (17,968 Square Feet)

| | |
|---|---|
| Landscape Requirement: | *8% of Surface Parking Lot Paved Area to be Interior Landscaped Area* |
| Calculation: | *17,968 x 0.08 = 1,437.4 Square Feet* |
| Landscape Requirement: | *1 Overstory Deciduous Tree per 160 SF of Required Interior Landscaped Area* |
| Calculation: | *1,438 / 160 x 1 Overstory Deciduous Tree = 9* |
| Total Landscaping Required: | *1,438 Square Feet Landscaped Area and 9 Overstory Deciduous Trees* |
| Total Landscaping Provided: | ***1,759 Square Feet Landscaped Area and 10 Overstory Deciduous Trees*** |

## TABULATION OF LANDSCAPE CREDITS AND POINTS

| | | | CREDITS / EXISTING LANDSCAPING | | NEW / PROPOSED LANDSCAPING | |
|---|---|---|---|---|---|---|
| PLANT TYPE/ELEMENT | MINIMUM INSTALLATION SIZE | POINTS | QUANTITY | POINTS ACHIEVED | QUANTITY | POINTS ACHIEVED |
| OVERSTORY DECIDUOUS TREE | 2.5" CAL MIN. | 35 | 0 | 0 | 53 | 1855 |
| TALL EVERGREEN TREE | 5-6' TALL MIN. | 35 | 0 | 0 | 13 | 455 |
| ORNAMENTAL TREE | 1.5" CAL MIN. | 15 | 0 | 0 | 20 | 300 |
| UPRIGHT EVERGREEN SHRUB | 3-4' TALL, MIN. | 10 | 0 | 0 | 6 | 60 |
| SHRUB, DECIDUOUS | #3 CONT., MIN. 12"-24" | 3 | 0 | 0 | 467 | 1401 |
| SHRUB, EVERGREEN | #3 CONT., MIN. 12"-24" | 4 | 0 | 0 | 95 | 380 |
| ORNAMENTAL GRASS & PERENNIAL | #1 CONT., MIN. 8"-18" | 2 | 0 | 0 | 665 | 1330 |
| ORNAMENTAL / DECORATIVE FENCING OR WALL | 4 POINTS / 10 LF | .4 | 0 | 0 | 0 | 0 |
| EXISTING SIGNIFICANT SPECIMAN TREE | 14 POINTS / CAL. (MAXIMUM 200 POINTS PER TREE) | 14 | 0 | 0 | 0 | 0 |
| LANDSCAPE FURNITURE | 5 POINTS PER SEAT (WITHIN PUBLICALLY ACCESSIBLE DEVELOPED AREA. CANNOT COMPRISE MORE THAN 5% OF TOTAL REQUIRED POINTS) | 5 | 0 | 0 | 0 | 0 |
| **SUBTOTAL** | | | | **0** | | **5,781** |
| **TOTAL NUMBER OF POINTS PROVIDED** | | | **5,781** | | | |

## BIORETENTION BASIN NATIVE PLUG SCHEDULES

**Bioretention Basin #1 - Plug Schedule 3,711 sq. ft.**

| Botanical Name | Common Name | Quantity | Spacing |
|---|---|---|---|
| *Rudbeckia hirta* | Black-Eyed Susan | 464 | 1'-0" On Center |
| *Zizia aurea* | Golden Alexanders | 464 | 1'-0" On Center |
| *Aster laevis* | Smooth Aster | 464 | 1'-0" On Center |
| *Ratibida pinnata* | Yellow Coneflower | 464 | 1'-0" On Center |
| *Pycnanthemum virginianum* | Common Mountain Mint | 464 | 1'-0" On Center |
| *Carex vulpinoidea* | Fox Sedge | 464 | 1'-0" On Center |
| *Asclepias syriaca* | Common Milkweek | 463 | 1'-0" On Center |
| *Carex bicknellii* | Prairie Sedge | 464 | 1'-0" On Center |
| | **TOTAL** | **3711** | |

**Bioretention Basin #2 - Plug Schedule 1,807 sq. ft.**

| Botanical Name | Common Name | Quantity | Spacing |
|---|---|---|---|
| *Rudbeckia hirta* | Black-Eyed Susan | 226 | 1'-0" On Center |
| *Zizia aurea* | Golden Alexanders | 226 | 1'-0" On Center |
| *Aster laevis* | Smooth Aster | 226 | 1'-0" On Center |
| *Ratibida pinnata* | Yellow Coneflower | 226 | 1'-0" On Center |
| *Pycnanthemum virginianum* | Common Mountain Mint | 226 | 1'-0" On Center |
| *Carex vulpinoidea* | Fox Sedge | 226 | 1'-0" On Center |
| *Asclepias syriaca* | Common Milkweek | 225 | 1'-0" On Center |
| *Carex bicknellii* | Prairie Sedge | 226 | 1'-0" On Center |
| | **TOTAL** | **1807** | |

**Bioretention Basin #3 - Plug Schedule 3,525 sq. ft.**

| Botanical Name | Common Name | Quantity | Spacing |
|---|---|---|---|
| *Rudbeckia hirta* | Black-Eyed Susan | 441 | 1'-0" On Center |
| *Zizia aurea* | Golden Alexanders | 440 | 1'-0" On Center |
| *Aster laevis* | Smooth Aster | 441 | 1'-0" On Center |
| *Ratibida pinnata* | Yellow Coneflower | 440 | 1'-0" On Center |
| *Pycnanthemum virginianum* | Common Mountain Mint | 441 | 1'-0" On Center |
| *Carex vulpinoidea* | Fox Sedge | 441 | 1'-0" On Center |
| *Asclepias syriaca* | Common Milkweek | 440 | 1'-0" On Center |
| *Carex bicknellii* | Prairie Sedge | 441 | 1'-0" On Center |
| | **TOTAL** | **3525** | |

**Bioretention Basin #4 - Plug Schedule 6,157 sq. ft.**

| Botanical Name | Common Name | Quantity | Spacing |
|---|---|---|---|
| *Rudbeckia hirta* | Black-Eyed Susan | 770 | 1'-0" On Center |
| *Zizia aurea* | Golden Alexanders | 769 | 1'-0" On Center |
| *Aster laevis* | Smooth Aster | 770 | 1'-0" On Center |
| *Ratibida pinnata* | Yellow Coneflower | 770 | 1'-0" On Center |
| *Pycnanthemum virginianum* | Common Mountain Mint | 769 | 1'-0" On Center |
| *Carex vulpinoidea* | Fox Sedge | 770 | 1'-0" On Center |
| *Asclepias syriaca* | Common Milkweek | 769 | 1'-0" On Center |
| *Carex bicknellii* | Prairie Sedge | 770 | 1'-0" On Center |
| | **TOTAL** | **6157** | |

**PRELIMINARY. NOT FOR CONSTRUCTION.**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Key Plan

| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654002**

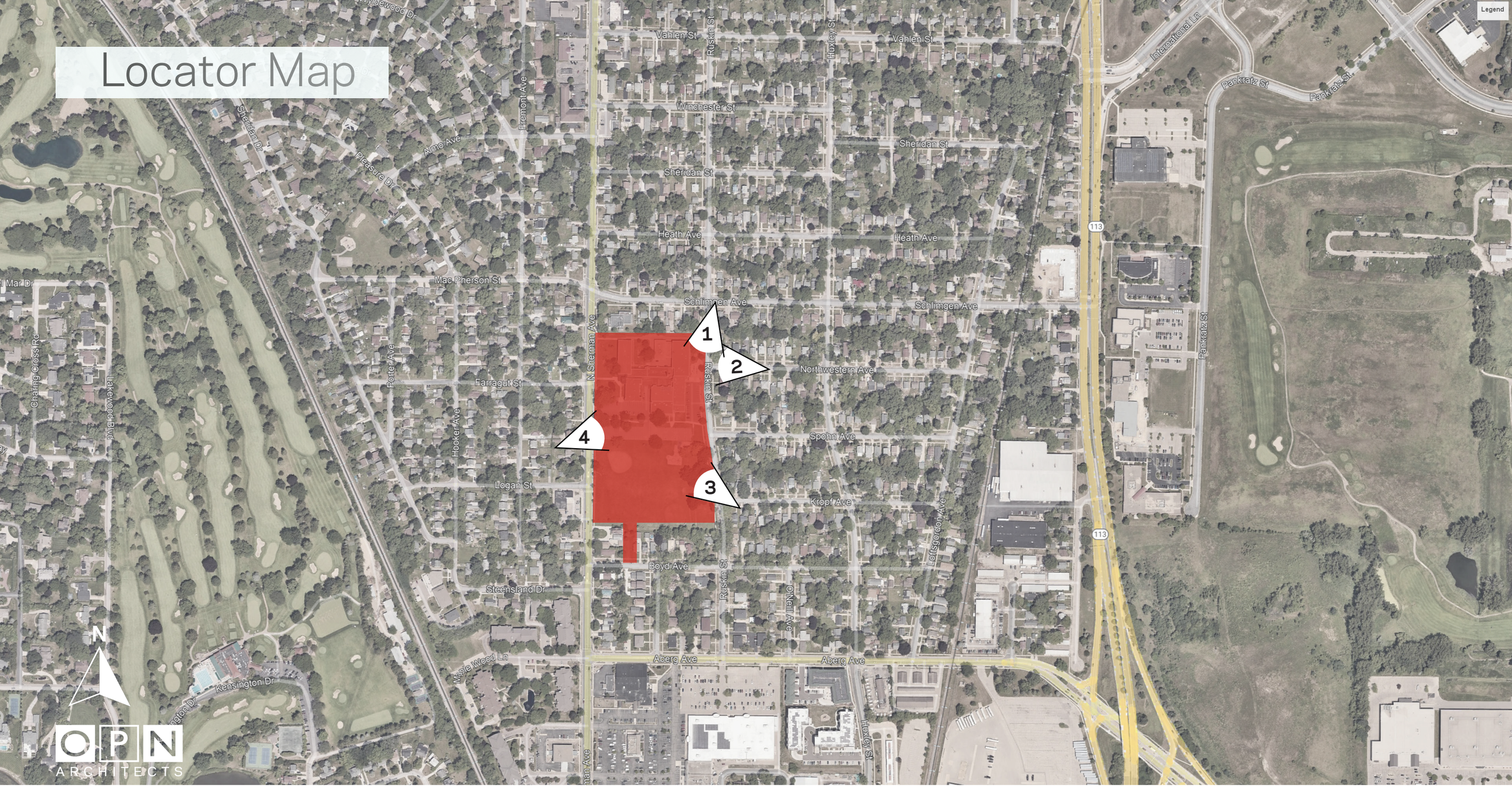
Sheet Issue Date
**UDC FINAL SUBMITTAL 10/08/25**

Sheet Name
**LANDSCAPE NOTES & DETAILS**

Sheet Number
**L200**


File: \\JSDINC\projects2\2024\2414661\DWG\Landscape Sheets\2414661 - Landscape Sheets.dwg Layout: L200 User: michael.siniscalchi Plotted: Oct 08, 2025 - 4:01pm Xref's: 2414661 MMSD Sherman Shabazz

# Locator Map




OPN ARCHITECTS

# Site Context

View South from Ruskin St

View West from Northwestern Ave

View Northwest from Ruskin St/Kropf Ave intersection

View East from Sherman Ave

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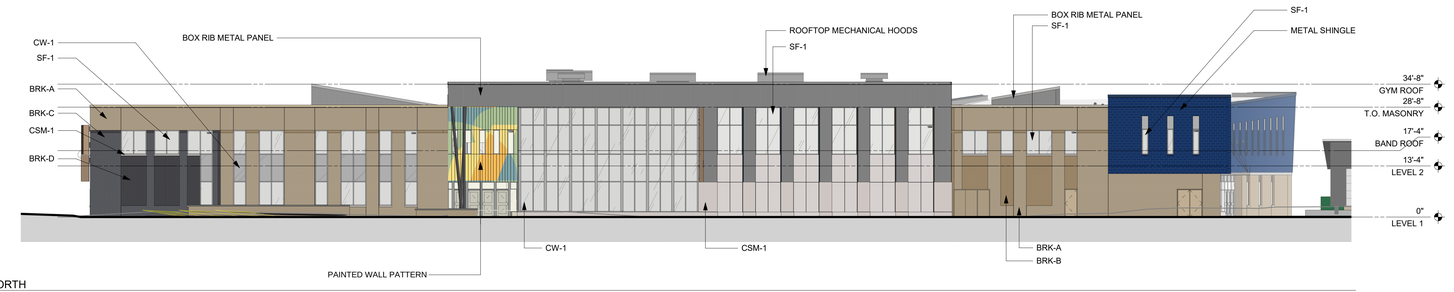
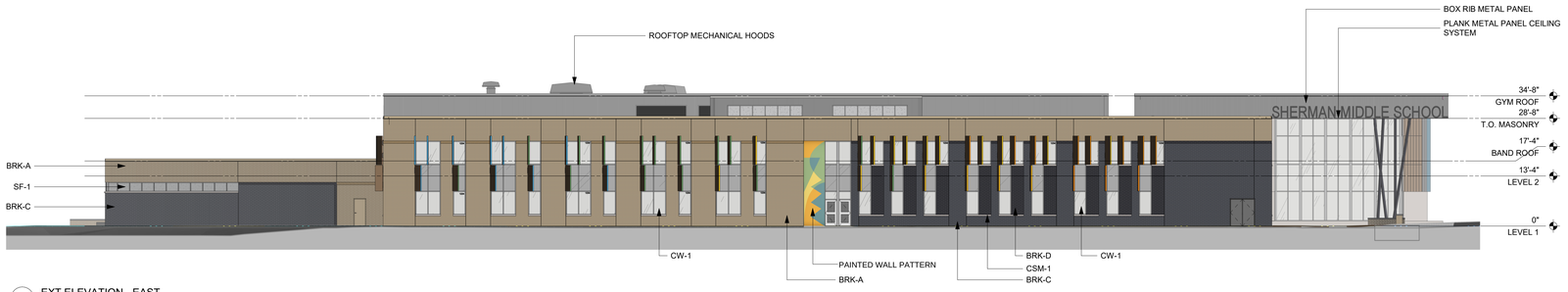
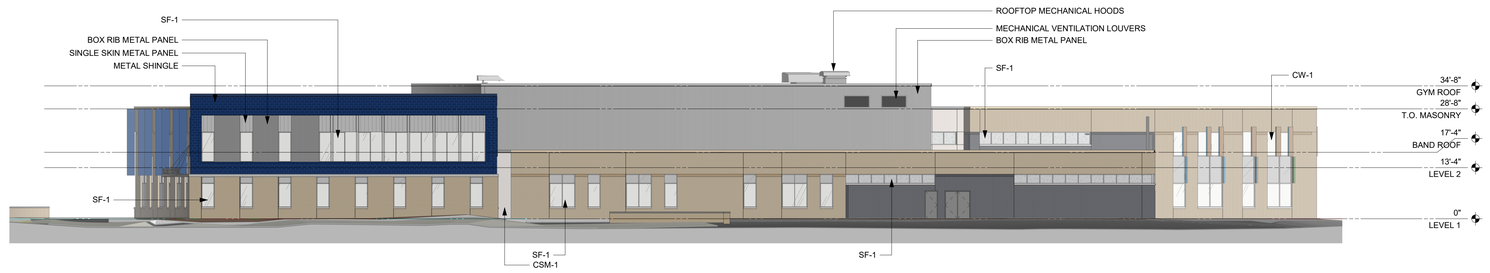


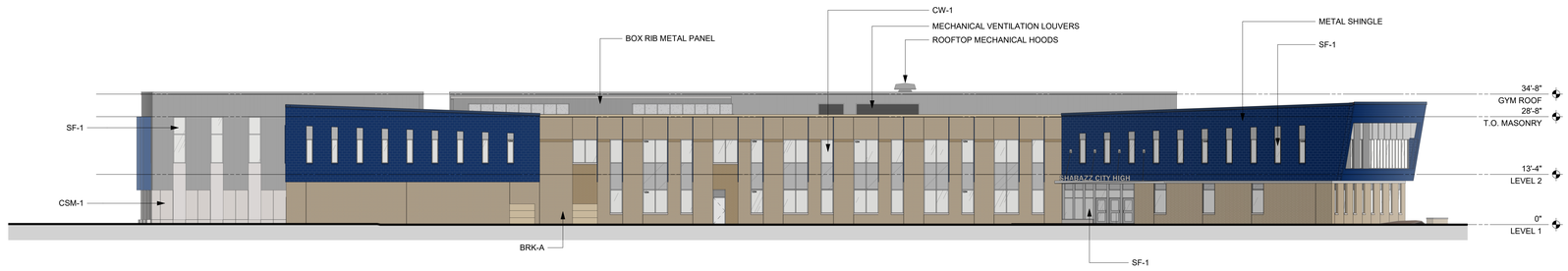

R8 EXT ELEVATION - NORTH
1/16" = 1'-0"




L8 EXT ELEVATION - EAST
1/16" = 1'-0"




F8 EXT ELEVATION - SOUTH
1/16" = 1'-0"




A8 EXT ELEVATION - WEST
1/16" = 1'-0"

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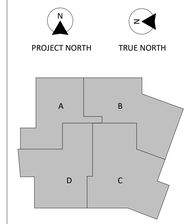
Key Plan




| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654001**

Sheet Issue Date
**UDC FINAL RESUBMIT** **10/8/25**

Sheet Name
**OVERALL EXTERIOR ELEVATIONS**

Sheet Number
**A211**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

# Current Design - Exterior Material

Brick A:
Manufacturer: Cloud Ceramics Utility
Color: Dove Grey Velour
Brick B:
Manufacturer: Yankee Hill Utility
Color: Charcoal Velour

Aluminum Metal Wall Panel

Millenium Stainless Steel
Cupped Tile, mill finish Blue

Cast Stone

MAC Architectural – Harrywood plus
Finish: cedar

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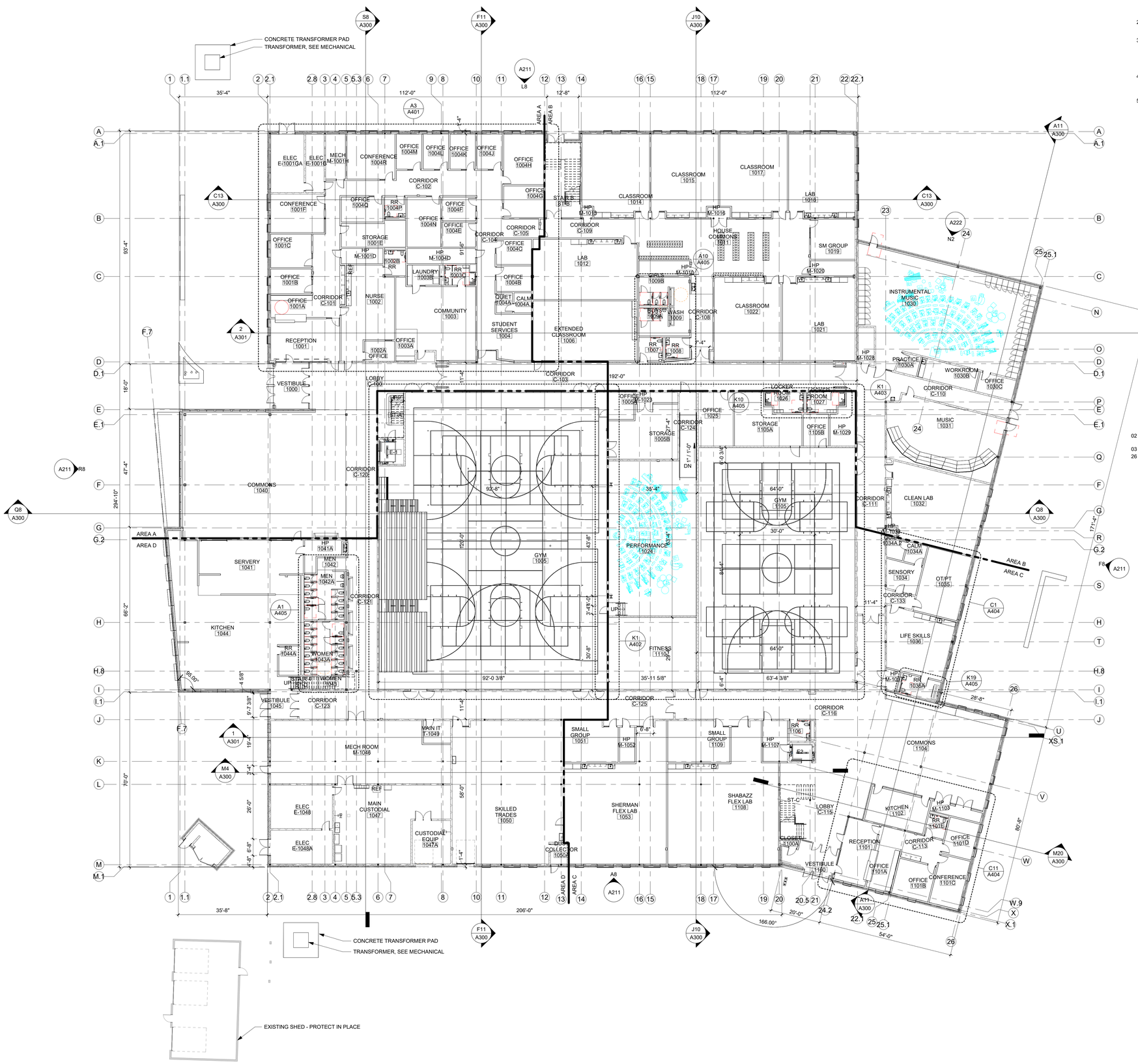


N A8 FLOOR PLAN - LEVEL 1
1/16" = 1'-0"

**GENERAL NOTES**

1. DIMENSIONS ARE MEASURED FACE-OF-FINISH TO FACE-OF-FINISH OR ROUGH MASONRY OPENING UNLESS NOTED OTHERWISE - TYPICAL FOR ALL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS - TYPICAL FOR ALL DRAWINGS.
3. IN THE EVENT OF A DISCREPANCY BETWEEN ARCHITECTURAL AND CONSULTANT DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING WORK - TYPICAL FOR ALL DRAWINGS.
4. ALL PENETRATIONS IN FIRE RATED FLOORS AND WALLS MUST BE SEALED WITH APPROPRIATE FIRESTOPPING SYSTEM.
5. ALL INTERIOR WALLS TO BE A3.c.0 UNLESS NOTED AS OTHERWISE.

**KEYNOTE LEGEND**

| | |
|---|---|
| 02 32.A1 | EXISTING SHED - PROTECT IN PLACE |
| 03 31.B1 | CONCRETE TRANSFORMER PAD |
| 26 12.A1 | TRANSFORMER, SEE MECHANICAL |


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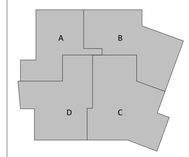


Revision Description Date

OPN Project No.
**24654001**

Sheet Issue Date
**UDC FINAL RESUBMIT** **10/8/25**

Sheet Name
**FLOOR PLAN - LEVEL 1**

Sheet Number
**A111**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

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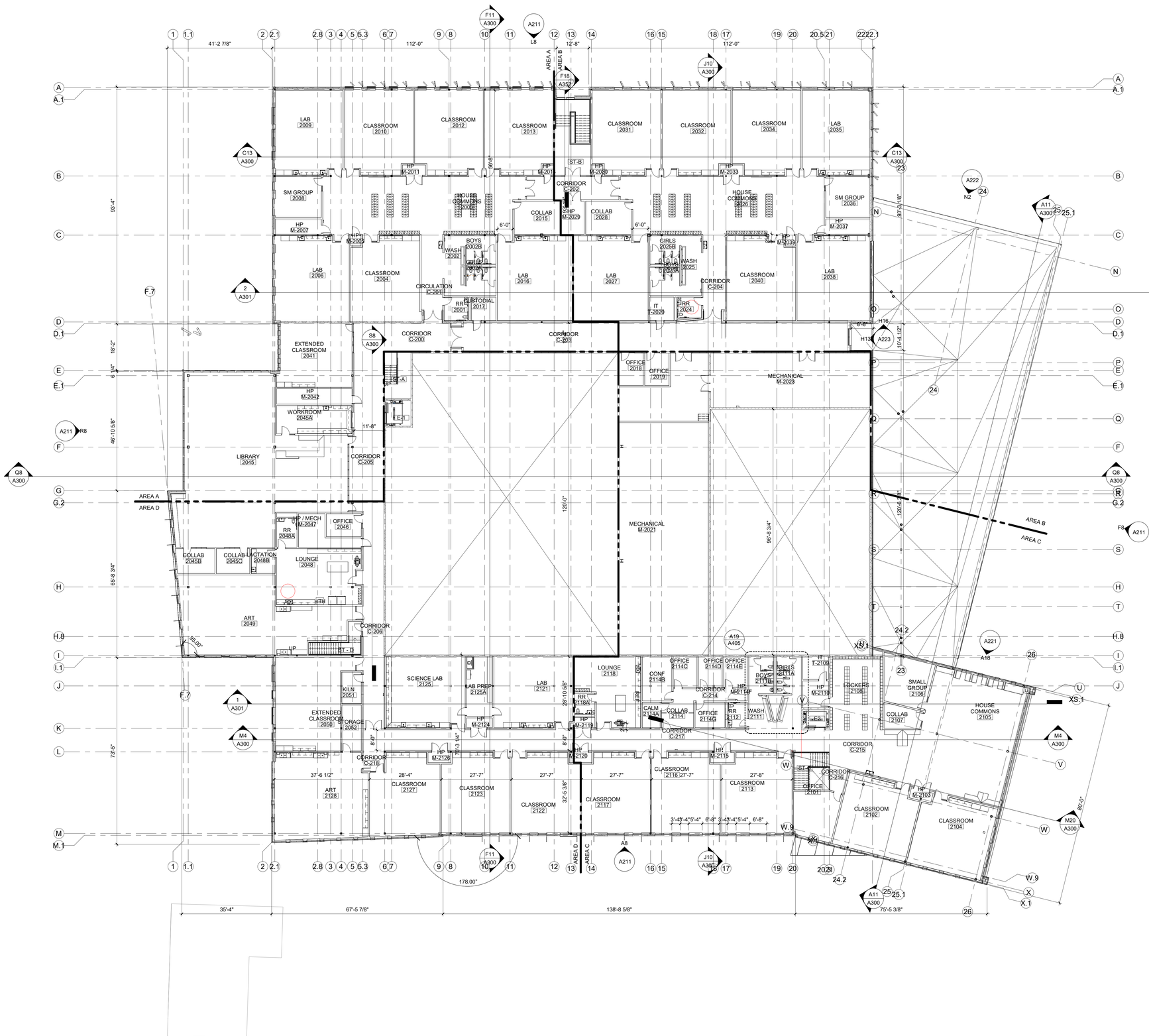


A8 FLOOR PLAN - LEVEL 2
1/16" = 1'-0"

**GENERAL NOTES**

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5. ALL INTERIOR WALLS TO BE A3.c.0 UNLESS NOTED AS OTHERWISE.

**KEYNOTE LEGEND**


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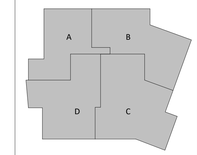


| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654001**

Sheet Issue Date
**UDC FINAL RESUBMIT** **10/8/25**

Sheet Name
**FLOOR PLAN - LEVEL 2**

Sheet Number
**A112**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

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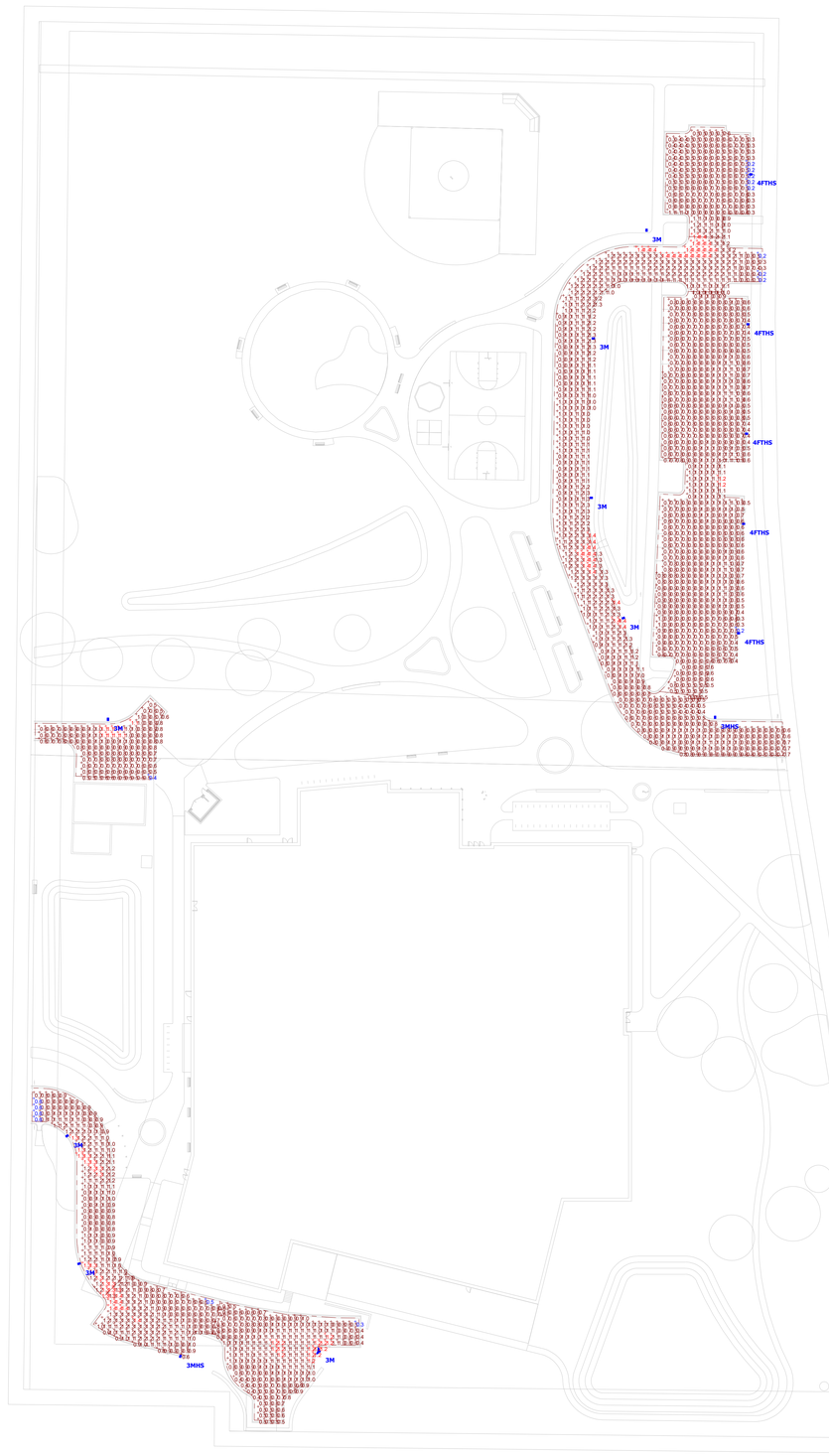


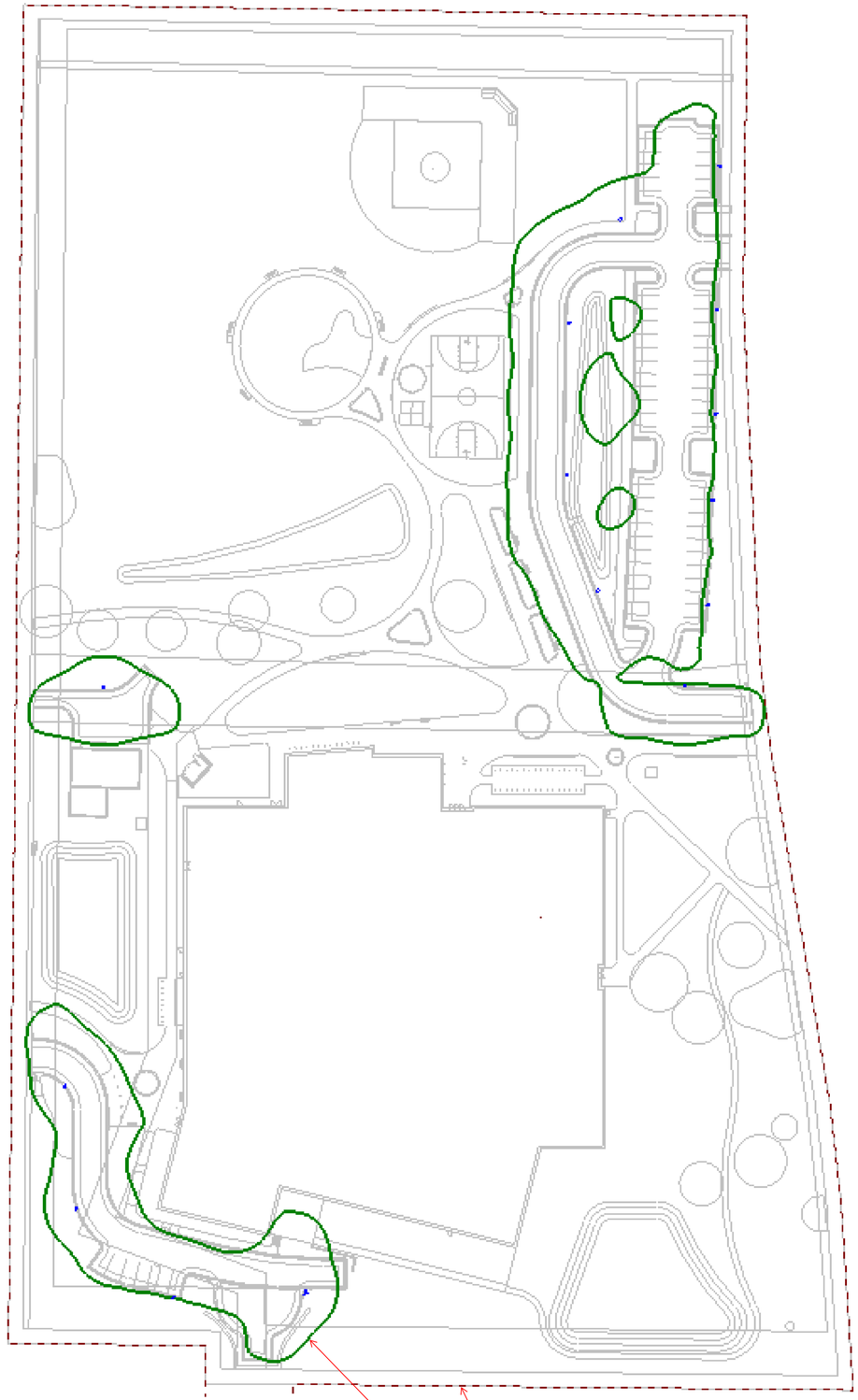


**Schedule**

| Symbol | Label | Image | QTY | Catalog Number | Description | Lamp | Number Lamps | Lumens per Lamp | LLF | Wattage | Polar Plot |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3M | | 8 | RZR-PLED-III-M-40LED-350mA-40K | CAST BLACK PAINTED FINNED METAL HOUSING. | 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP. | 40 | 180 | 0.9 | 42.9 | Max: 5613cd |
| | 3MHS | | 2 | RZR-PLED-III-M-40LED-350mA-40K-HS | CAST BLACK PAINTED FINNED METAL HOUSING. | 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP. | 40 | 130 | 0.9 | 42.9 | Max: 6860cd |
| | 4FTHS | | 5 | RZR-PLED-IV-FT-40LED-350mA-40K-HS | CAST BLACK PAINTED FINNED METAL HOUSING. | 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP. | 40 | 127 | 0.9 | 42.9 | Max: 5883cd |

**Statistics**

| Description | Avg | Max | Min | Avg/Min |
|---|---|---|---|---|
| EAST DRIVEWAY | 1.0 fc | 1.4 fc | 0.2 fc | 5.0:1 |
| EAST PARKING | 0.8 fc | 1.2 fc | 0.2 fc | 4.0:1 |
| NORTHEAST PARKING | 0.6 fc | 1.4 fc | 0.2 fc | 3.0:1 |
| SHED DRIVEWAY | 0.8 fc | 1.1 fc | 0.4 fc | 2.0:1 |
| SOUTH PARKING | 1.0 fc | 1.4 fc | 0.5 fc | 2.0:1 |
| SOUTH TURN AROUND | 0.9 fc | 1.2 fc | 0.3 fc | 3.0:1 |
| SOUTHWEST DRIVEWAY | 1.0 fc | 1.3 fc | 0.6 fc | 1.7:1 |

NORTH

## 1 SITE PLAN - CITY PHOTOMETRICS

1" = 40'-0"


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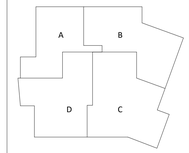
Key Plan

PROJECT NORTH | TRUE NORTH




| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654001**

Sheet Issue Date
**CITY OF MADISON SUBMITTAL** 10/06/25

Sheet Name
**SITE PLAN - CITY PHOTOMETRICS**

Sheet Number
**EC050**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0 1 2 3
REF. SCALE IN INCHES PROJECT #2500014101

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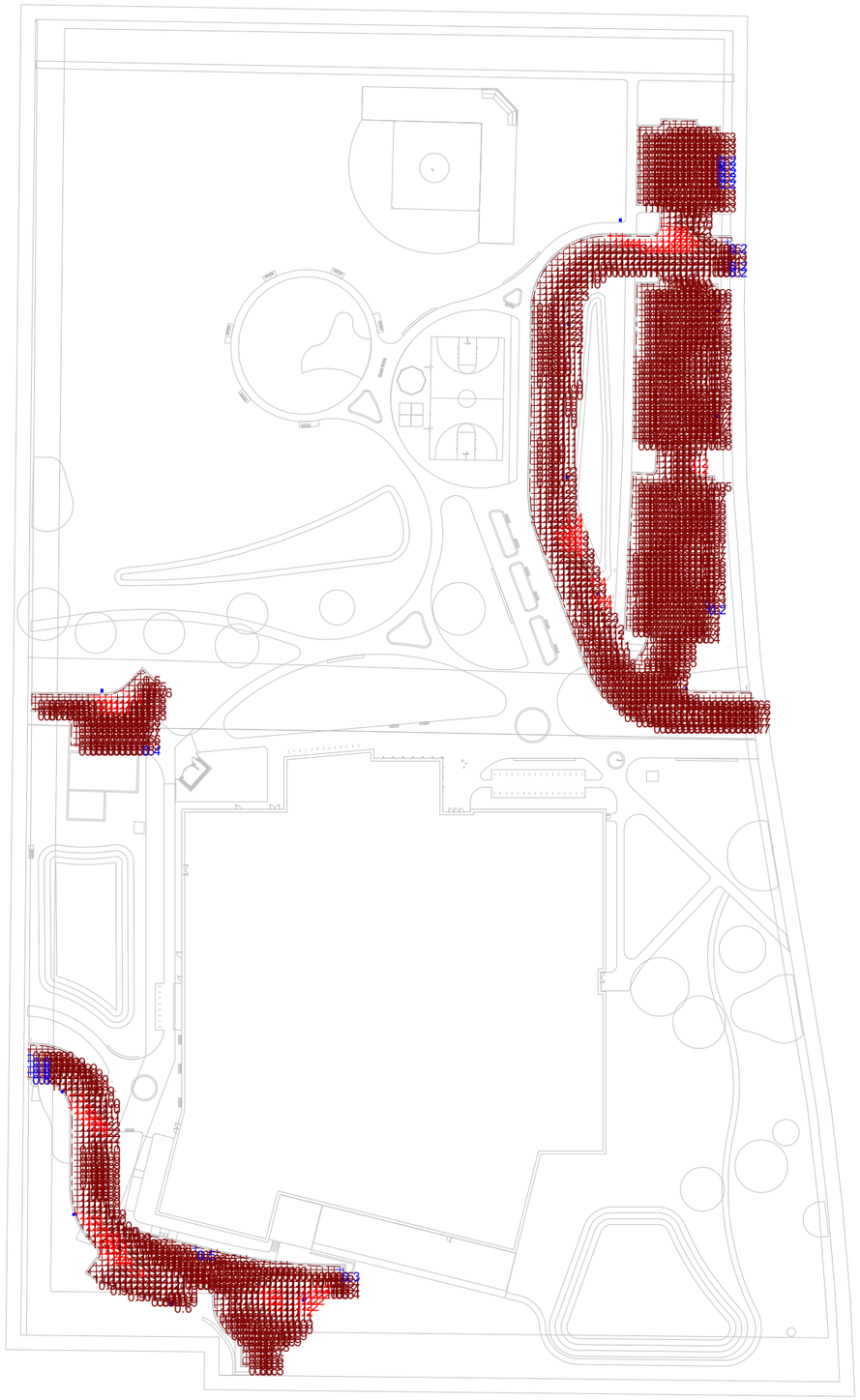

**Plan View**
Scale - 1" = 100ft

**Schedule**

| Symbol | Label | Image | QTY | Catalog Number | Description | Lamp | Number Lamps | Lumens per Lamp | LLF | Wattage | Polar Plot |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3M | | 8 | RZR-PLED-III-M-40LED-350mA-40K | CAST BLACK PAINTED FINNED METAL HOUSING. | 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP. | 40 | 180 | 0.9 | 42.9 | Max: 5613cd |
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| | 4FTHS | | 5 | RZR-PLED-IV-FT-40LED-350mA-40K-HS | CAST BLACK PAINTED FINNED METAL HOUSING. | 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP. | 40 | 127 | 0.9 | 42.9 | Max: 5883cd |

## Max/Min

| Description | Avg | Max | Min | Avg/Min |
|---|---|---|---|---|
| EAST DRIVEWAY | 1.0 fc | 1.4 fc | 0.2 fc | 5.0:1 |
| EAST PARKING | 0.8 fc | 1.2 fc | 0.2 fc | 4.0:1 |
| NORTHEAST PARKING | 0.6 fc | 1.4 fc | 0.2 fc | 3.0:1 |
| SHED DRIVEWAY | 0.8 fc | 1.1 fc | 0.4 fc | 2.0:1 |
| SOUTH PARKING | 1.0 fc | 1.4 fc | 0.5 fc | 2.0:1 |
| SOUTH TURN AROUND | 0.9 fc | 1.2 fc | 0.3 fc | 3.0:1 |
| SOUTHWEST DRIVEWAY | 1.0 fc | 1.3 fc | 0.6 fc | 1.7:1 |

**Designer**

**Date**
09/30/2025
**Scale**
Not to Scale
**Drawing No.**

**Summary**

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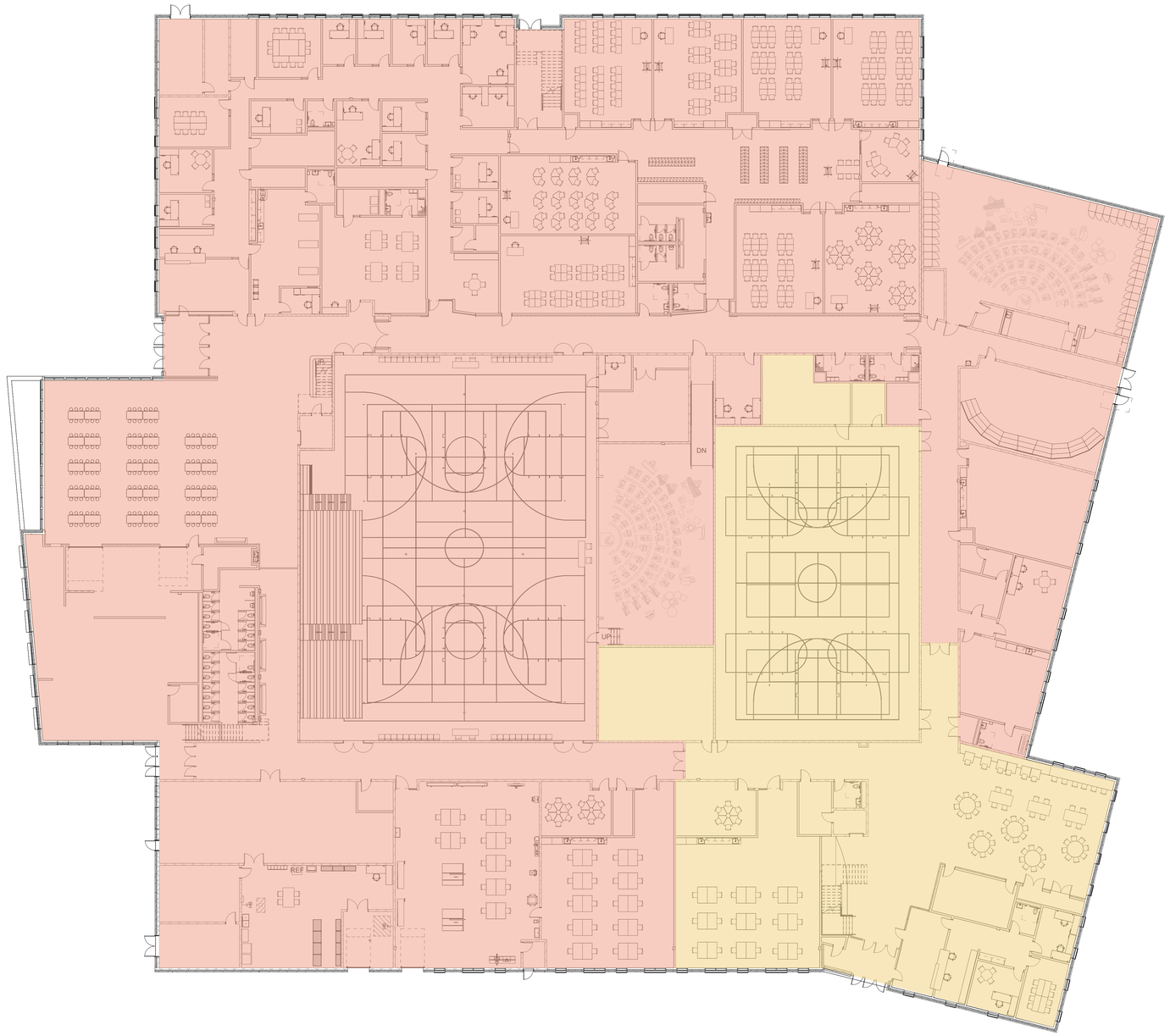


1 FURNITURE PLAN - LEVEL 1 - Clean
1/16" = 1'-0"

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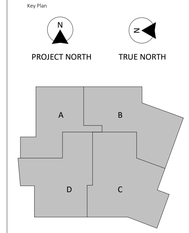


| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654001**

Sheet Issue Date
**100% DESIGN DEVELOPMENT** **09/30/25**

Sheet Name
**FURNITURE PLAN - LEVEL 1 (FOR REFERENCE ONLY)**

Sheet Number
**A801**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

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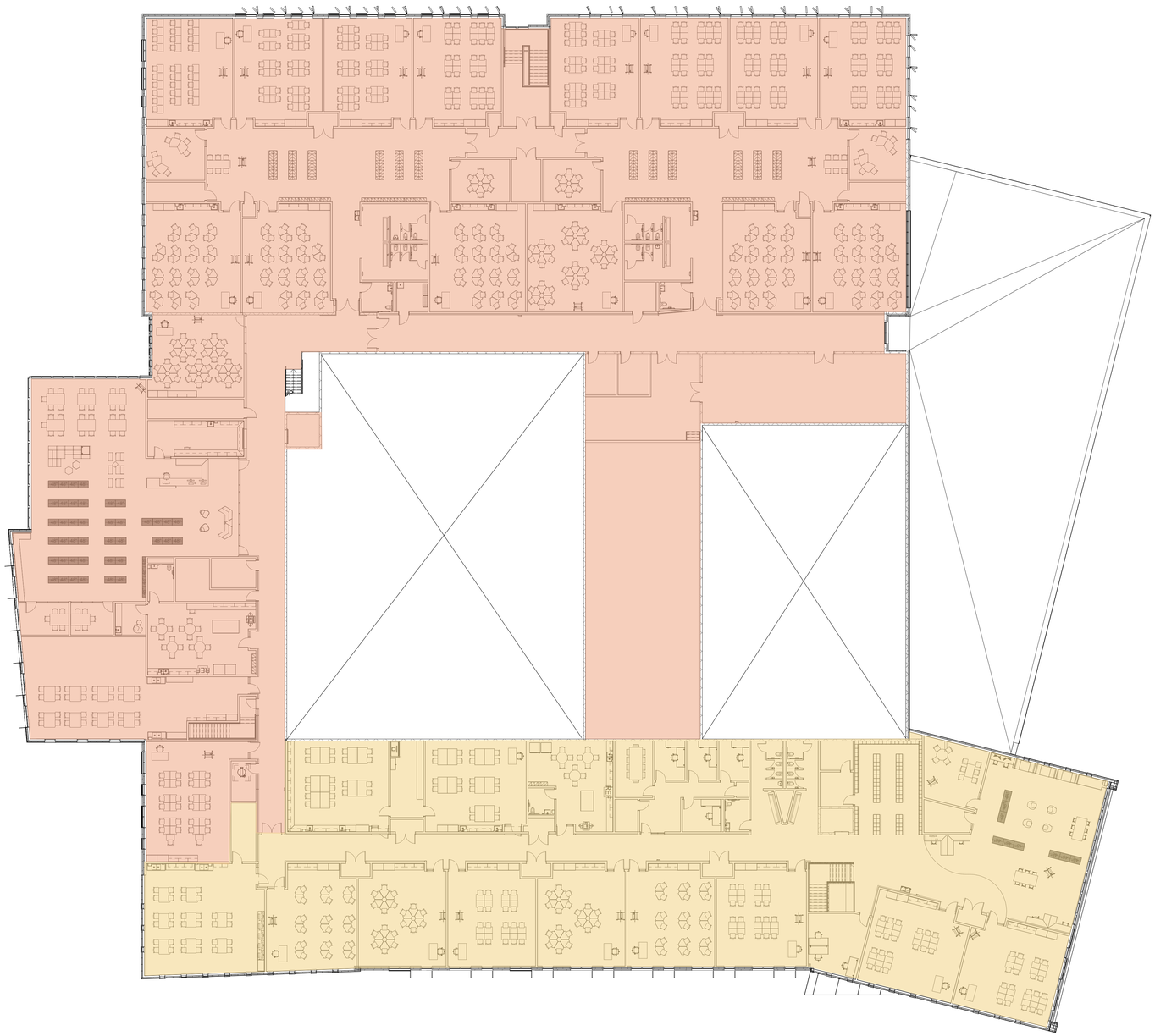

1 FURNITURE PLAN - LEVEL 2 - Clean
1/16" = 1'-0"


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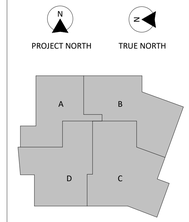



| Revision | Description | Date |
|---|---|---|

OPN Project No.
**24654001**

Sheet Issue Date
**100% DESIGN DEVELOPMENT** **09/30/25**

Sheet Name
**FURNITURE PLAN - LEVEL 2 (FOR REFERENCE ONLY)**

Sheet Number
**A802**

**PRELIMINARY. NOT FOR CONSTRUCTION.**

SHERMAN MIDDLE SCHOOL

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG 3M

# RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

### Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

### Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

### Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

### PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

### LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

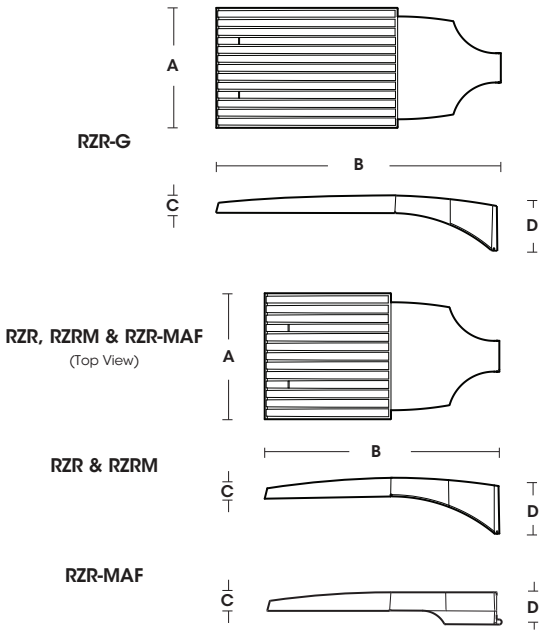
**True Amber LED's** TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

### LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

### Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.




| Fixture | A | B | C | D |
|---|---|---|---|---|
| RZR-G | 15" 381mm | 36.5" 927mm | 3" 76mm | 7" 187mm |
| RZR | 14.75" 375mm | 28.25" 718mm | 2.75" 70mm | 6.5" 165mm |
| RZRM | 11.5" 292mm | 22" 559mm | 2.5" 64mm | 5.25" 133mm |
| RZR-MAF | 15" 381mm | 28.25" 724mm | 2.5" 64mm | 4" 102mm |

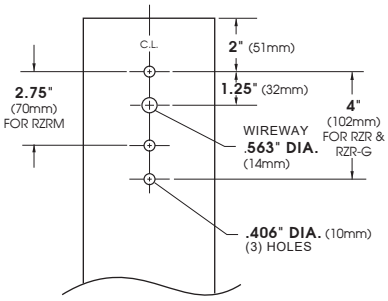
U.L. Listed for Wet Location

BABA COMPLIANT

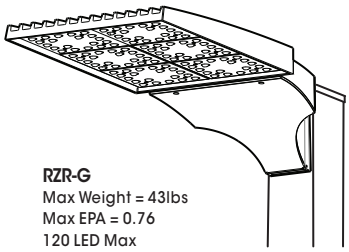
2024281

# SPECIFICATIONS

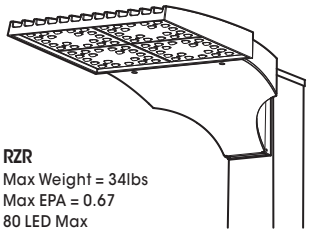
## POLE DRILLING TEMPLATE



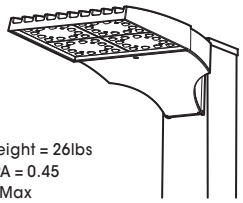

## EPA & WEIGHT



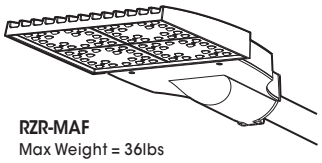
**RZR-G**
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



**RZR**
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

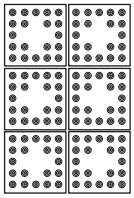


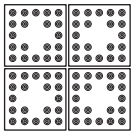
**RZRM**
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

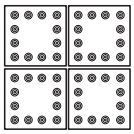


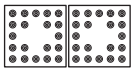
**RZR-MAF**
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

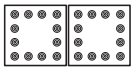
## PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

## ORDERING INFORMATION

**Spec/Order Example:** RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

| Luminaire | Optics | LED Mode | Voltage | Mounting | Finish | Options |
|---|---|---|---|---|---|---|
| **Luminaire** | **Optics** | **LED** | **Voltage** | **Mounting** | **Finish** | **Options** |
| ☐ RZR-G | PLED™ Distribution Type<br>☐ PLED-II<br>☐ PLED-II-FR<br>☐ PLED-II-MIL<br>☐ PLED-III<br>☐ PLED-III-W<br>☐ PLED-IV<br>☐ PLED-IV-FT<br>☐ PLED-VSQ-N<br>☐ PLED-V-SQ-M<br>☐ PLED-V-SQ-W | # of LEDs<br>**RZR-G**<br>☐ 120LED<br>☐ 80LED<br>**RZR / RZR-MAF**<br>☐ 80LED<br>☐ 40LED<br>**RZRM**<br>☐ 48LED<br>☐ 24LED | ☐ **UNV** (120-277)<br>☐ **347**<br>☐ **480** | Arm Mount<br>☐ **1**<br>☐ **2-180**<br>☐ **2-90**<br>☐ **3-90**<br>☐ **3-120**<br>☐ **4-90**<br>Wall Mount<br>☐ **WM**<br>WM - Wall Mount provided with mounting bracket and cover. | Standard Textured Finish<br>☐ Black **9005-T**<br>☐ White **9003-T**<br>☐ Grey **7004-T**<br>☐ Dark Bronze **8019-T**<br>☐ Green **6005-T**<br>Premium Finishes<br>☐ Rust<br>☐ Patina Copper **PC**<br>For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)<br>Consult factor for custom colors | ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**<br>☐ External Glare Shield 4 Sided **EGS4**<br>☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**<br>☐ Round Pole Adapter **RPA**<br>☐ Twist Lock Receptable Only **TPR**<br>☐ 7-Pin Twist Lock Receptable Only **TPR7**<br>☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**<br>☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**<br>☐ Photo Cell + Voltage (Example: PC120V) **PC+V**<br>☐ Single Fuse (120V, 277V) **SF**<br>☐ Double Fuse (208V, 240V) **DF**<br>☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311** |
| ☐ RZR<br>☐ RZR-MAF | | Drive Current<br>☐ 1400mA[1]<br>☐ 1225mA[1]<br>☐ 1050mA<br>☐ 875mA<br>☐ 700mA<br>☐ 525mA<br>☐ 350mA | | | | |
| ☐ RZRM | | Color Temp - CCT<br>☐ 27K (2700K)<br>☐ 30K (3000K)<br>☐ 40K (4000K)<br>☐ 50K (5000K)<br>☐ TRA True Amber<br>Consult Factory for Other LED Color, CCT, & CRI Options | | | | |

**NOTES:**
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

## ELECTRICAL DATA GUIDE - AMPERAGE CHART

| ELECTRICAL LOAD | | | CURRENT (Amps) | | | | |
|---|---|---|---|---|---|---|---|
| # of LEDs | mA | System Watts | 120V | 208V | 277V | 347V | 480V |
| 24 | 350 | 26 | 0.21 | 0.12 | 0.09 | 0.07 | 0.05 |
| 24 | 525 | 39 | 0.32 | 0.19 | 0.14 | 0.11 | 0.08 |
| 24 | 700 | 52 | 0.43 | 0.25 | 0.19 | 0.15 | 0.11 |
| 24 | 875 | 67 | 0.55 | 0.32 | 0.24 | 0.19 | 0.14 |
| 24 | 1050 | 81 | 0.67 | 0.39 | 0.29 | 0.23 | 0.17 |
| 48 | 350 | 52 | 0.43 | 0.25 | 0.19 | 0.15 | 0.11 |
| 48 | 525 | 78 | 0.65 | 0.37 | 0.28 | 0.22 | 0.16 |
| 48 | 700 | 104 | 0.87 | 0.50 | 0.38 | 0.30 | 0.22 |
| 48 | 875 | 133 | 1.11 | 0.64 | 0.48 | 0.38 | 0.28 |
| 48 | 1050 | 162 | 1.35 | 0.78 | 0.58 | 0.47 | 0.34 |
| 40 | 350 | 43 | 0.36 | 0.21 | 0.15 | 0.12 | 0.09 |
| 40 | 525 | 65 | 0.54 | 0.31 | 0.23 | 0.19 | 0.14 |
| 40 | 700 | 87 | 0.72 | 0.42 | 0.31 | 0.25 | 0.18 |
| 40 | 875 | 111 | 0.92 | 0.53 | 0.40 | 0.32 | 0.23 |
| 40 | 1050 | 135 | 1.12 | 0.65 | 0.49 | 0.39 | 0.28 |
| 40 | 1225 | 159 | 1.32 | 0.76 | 0.57 | 0.46 | 0.33 |
| 40 | 1400 | 183 | 1.53 | 0.88 | 0.66 | 0.53 | 0.38 |
| 80 | 350 | 86 | 0.72 | 0.41 | 0.31 | 0.25 | 0.18 |
| 80 | 525 | 130 | 1.08 | 0.62 | 0.47 | 0.37 | 0.27 |
| 80 | 700 | 174 | 1.45 | 0.83 | 0.63 | 0.50 | 0.36 |
| 80 | 875 | 222 | 1.85 | 1.06 | 0.80 | 0.64 | 0.46 |
| 80 | 1050 | 270 | 2.25 | 1.30 | 0.97 | 0.78 | 0.56 |
| 80 | 1225 | 318 | 2.65 | 1.53 | 1.15 | 0.92 | 0.66 |
| 80 | 1400 | 366 | 3.05 | 1.76 | 1.32 | 1.06 | 0.76 |
| 120 | 350 | 129 | 1.07 | 0.62 | 0.46 | 0.37 | 0.27 |
| 120 | 525 | 195 | 1.62 | 0.94 | 0.70 | 0.56 | 0.41 |
| 120 | 700 | 260 | 2.17 | 1.25 | 0.94 | 0.75 | 0.54 |
| 120 | 875 | 332 | 2.77 | 1.60 | 1.20 | 0.96 | 0.69 |
| 120 | 1050 | 404 | 3.37 | 1.94 | 1.46 | 1.17 | 0.84 |
| 120 | 1225 | 477 | 3.97 | 2.29 | 1.72 | 1.37 | 0.99 |
| 120 | 1400 | 549 | 4.58 | 2.64 | 1.98 | 1.58 | 1.14 |

## PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

| LED LUMEN MAINTENANCE (350mA to 1050mA) | | |
|---|---|---|
| LED Life / Operating Hours | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000 | L96 | 0.96x |
| 100,000 (6X LED Test Hrs) | L93 | 0.93x |
| 150,000 (Theoretical) | L89 | 0.90x |
| 200,000 (Theoretical) | L86 | 0.87x |

**TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.**

| LED LUMEN MAINTENANCE (1225mA & 1400mA) | | |
|---|---|---|
| LED Life / Operating Hours | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000 | L93 | 0.93x |
| 100,000 (6X LED Test Hrs) | L89 | 0.89x |
| 150,000 (Theoretical) | L84 | 0.84x |
| 200,000 (Theoretical) | L80 | 0.80x |

**TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.**
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

**IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html**

Photometric Toolbox

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] ITL88706-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-III-M-40LED-350mA-40K
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 42.9 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 7189
[_BUGRATING] LCS B2-U0-G2 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

**CHARACTERISTICS**

| | |
|---|---|
| IES Classification | Type III |
| Longitudinal Classification | Short |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 7189 |
| Downward Total Efficiency | N.A. (absolute) |
| Total Luminaire Efficiency | N.A. (absolute) |
| Luminaire Efficacy Rating (LER) | 168 |
| Total Luminaire Watts | 42.9 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 5613 |
| Maximum Candela Angle | 61H 68V |
| Maximum Candela (<90 Degrees Vertical) | 5613 |
| Maximum Candela Angle (<90 Degrees Vertical) | 61H 68V |
| Maximum Candela At 90 Degrees Vertical | 0 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 588 (8.2% Luminaire Lumens) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

| | Lumens | % Lamp | % Luminaire |
|---|---|---|---|
| FL - Front-Low (0-30) | 457.9 | N.A. | 6.4 |
| FM - Front-Medium (30-60) | 2400.2 | N.A. | 33.4 |
| FH - Front-High (60-80) | 2280.0 | N.A. | 31.7 |
| FVH - Front-Very High (80-90) | 55.0 | N.A. | 0.8 |
| BL - Back-Low (0-30) | 467.1 | N.A. | 6.5 |
| BM - Back-Medium (30-60) | 1158.6 | N.A. | 16.1 |
| BH - Back-High (60-80) | 353.5 | N.A. | 4.9 |
| BVH - Back-Very High (80-90) | 16.3 | N.A. | 0.2 |
| UL - Uplight-Low (90-100) | 0.0 | N.A. | 0.0 |
| UH - Uplight-High (100-180) | 0.0 | N.A. | 0.0 |
| Total | 7188.6 | N.A. | 100.0 |
| BUG Rating | B2-U0-G2 | | |

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**CANDELA TABULATION**

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **0** | **5** | **15** | **25** | **35** | **45** | **55** | **61** | **65** | **75** |
| **0.0** | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 |
| **2.5** | 998 | 998 | 996 | 997 | 999 | 1001 | 1004 | 1005 | 1007 | 1011 |
| **5.0** | 987 | 987 | 985 | 986 | 989 | 991 | 996 | 998 | 1002 | 1009 |
| **7.5** | 992 | 990 | 988 | 986 | 987 | 987 | 991 | 994 | 999 | 1009 |
| **10.0** | 1014 | 1012 | 1006 | 999 | 994 | 989 | 992 | 995 | 1001 | 1013 |
| **12.5** | 1035 | 1035 | 1029 | 1020 | 1012 | 998 | 996 | 998 | 1004 | 1020 |
| **15.0** | 1033 | 1030 | 1035 | 1038 | 1036 | 1021 | 1011 | 1009 | 1013 | 1031 |
| **17.5** | 1008 | 1011 | 1027 | 1052 | 1065 | 1049 | 1030 | 1026 | 1029 | 1050 |
| **20.0** | 995 | 995 | 1013 | 1056 | 1088 | 1080 | 1060 | 1052 | 1053 | 1076 |
| **22.5** | 1014 | 1014 | 1031 | 1069 | 1108 | 1118 | 1096 | 1081 | 1083 | 1109 |
| **25.0** | 1050 | 1053 | 1076 | 1111 | 1138 | 1160 | 1138 | 1118 | 1112 | 1145 |
| **27.5** | 1085 | 1083 | 1110 | 1172 | 1190 | 1205 | 1188 | 1162 | 1152 | 1188 |
| **30.0** | 1134 | 1135 | 1154 | 1216 | 1255 | 1259 | 1249 | 1229 | 1206 | 1241 |
| **32.5** | 1209 | 1210 | 1222 | 1258 | 1331 | 1325 | 1331 | 1308 | 1283 | 1310 |
| **35.0** | 1293 | 1295 | 1309 | 1327 | 1398 | 1423 | 1418 | 1404 | 1379 | 1416 |
| **37.5** | 1398 | 1385 | 1402 | 1419 | 1461 | 1523 | 1528 | 1521 | 1512 | 1532 |
| **40.0** | 1504 | 1498 | 1514 | 1532 | 1545 | 1635 | 1651 | 1683 | 1662 | 1670 |
| **42.5** | 1616 | 1619 | 1625 | 1656 | 1663 | 1757 | 1801 | 1848 | 1830 | 1829 |
| **45.0** | 1736 | 1738 | 1750 | 1772 | 1795 | 1913 | 1976 | 2036 | 2026 | 2054 |
| **47.5** | 1865 | 1868 | 1875 | 1896 | 1918 | 2059 | 2216 | 2257 | 2283 | 2302 |
| **50.0** | 2017 | 1998 | 2005 | 2036 | 2053 | 2208 | 2449 | 2559 | 2589 | 2592 |
| **52.5** | 2133 | 2135 | 2144 | 2172 | 2223 | 2369 | 2705 | 2847 | 2895 | 2902 |
| **55.0** | 2211 | 2212 | 2239 | 2301 | 2396 | 2589 | 3035 | 3210 | 3253 | 3253 |
| **57.5** | 2255 | 2256 | 2289 | 2379 | 2549 | 2818 | 3440 | 3613 | 3637 | 3588 |
| **60.0** | 2301 | 2303 | 2346 | 2460 | 2669 | 3058 | 3796 | 4000 | 4097 | 3972 |
| **62.5** | 2202 | 2196 | 2273 | 2450 | 2763 | 3323 | 4172 | 4470 | 4538 | 4390 |
| **65.0** | 1805 | 1830 | 1954 | 2231 | 2672 | 3510 | 4644 | 5118 | 5063 | 4740 |
| **67.5** | 1359 | 1389 | 1514 | 1781 | 2321 | 3453 | 4966 | 5580 | 5399 | 4749 |
| **68.0** | 1280 | 1310 | 1433 | 1664 | 2196 | 3416 | 4966 | 5613 | 5399 | 4703 |
| **70.0** | 880 | 901 | 997 | 1200 | 1745 | 3056 | 4686 | 5394 | 5044 | 4118 |
| **72.5** | 577 | 565 | 605 | 711 | 1024 | 2295 | 3893 | 4267 | 3957 | 2762 |
| **75.0** | 297 | 304 | 330 | 408 | 566 | 1223 | 2676 | 2811 | 2469 | 1607 |
| **77.5** | 173 | 177 | 191 | 233 | 319 | 586 | 1328 | 1245 | 1114 | 663 |
| **80.0** | 101 | 104 | 111 | 130 | 183 | 347 | 588 | 574 | 466 | 285 |
| **82.5** | 40 | 42 | 61 | 72 | 99 | 198 | 340 | 317 | 252 | 164 |
| **85.0** | 26 | 26 | 41 | 45 | 49 | 68 | 171 | 171 | 149 | 110 |
| **87.5** | 14 | 16 | 32 | 29 | 35 | 30 | 55 | 76 | 75 | 64 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **85** | **90** | **95** | **105** | **115** | **125** | **135** | **145** | **155** | **165** |
| **0.0** | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 |
| **2.5** | 1015 | 1017 | 1017 | 1021 | 1022 | 1026 | 1029 | 1033 | 1035 | 1036 |
| **5.0** | 1017 | 1020 | 1023 | 1033 | 1038 | 1043 | 1044 | 1047 | 1048 | 1049 |
| **7.5** | 1021 | 1027 | 1035 | 1046 | 1052 | 1054 | 1053 | 1053 | 1051 | 1049 |
| **10.0** | 1031 | 1040 | 1049 | 1062 | 1065 | 1063 | 1058 | 1055 | 1052 | 1051 |
| **12.5** | 1045 | 1059 | 1068 | 1081 | 1079 | 1073 | 1069 | 1067 | 1063 | 1060 |
| **15.0** | 1063 | 1079 | 1089 | 1102 | 1094 | 1088 | 1087 | 1082 | 1072 | 1063 |
| **17.5** | 1089 | 1109 | 1123 | 1125 | 1114 | 1114 | 1108 | 1093 | 1073 | 1056 |
| **20.0** | 1127 | 1147 | 1160 | 1154 | 1145 | 1140 | 1126 | 1101 | 1070 | 1045 |
| **22.5** | 1169 | 1194 | 1201 | 1187 | 1180 | 1167 | 1142 | 1107 | 1068 | 1038 |
| **25.0** | 1220 | 1241 | 1243 | 1224 | 1215 | 1192 | 1156 | 1111 | 1065 | 1031 |

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**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **27.5** | 1273 | 1297 | 1289 | 1270 | 1248 | 1214 | 1164 | 1111 | 1058 | 1021 |
| **30.0** | 1336 | 1356 | 1351 | 1315 | 1280 | 1228 | 1164 | 1102 | 1043 | 1005 |
| **32.5** | 1422 | 1433 | 1413 | 1366 | 1304 | 1230 | 1152 | 1082 | 1021 | 977 |
| **35.0** | 1526 | 1520 | 1486 | 1410 | 1315 | 1220 | 1127 | 1052 | 983 | 938 |
| **37.5** | 1642 | 1620 | 1576 | 1449 | 1314 | 1195 | 1092 | 1005 | 937 | 885 |
| **40.0** | 1776 | 1741 | 1666 | 1483 | 1298 | 1152 | 1040 | 952 | 878 | 829 |
| **42.5** | 1935 | 1874 | 1759 | 1503 | 1265 | 1093 | 973 | 885 | 819 | 773 |
| **45.0** | 2118 | 2007 | 1864 | 1512 | 1217 | 1025 | 904 | 816 | 751 | 716 |
| **47.5** | 2316 | 2155 | 1969 | 1518 | 1165 | 950 | 827 | 744 | 684 | 647 |
| **50.0** | 2536 | 2326 | 2103 | 1527 | 1111 | 864 | 737 | 664 | 603 | 573 |
| **52.5** | 2783 | 2551 | 2236 | 1536 | 1049 | 778 | 643 | 567 | 522 | 501 |
| **55.0** | 3056 | 2735 | 2351 | 1529 | 974 | 670 | 531 | 462 | 424 | 418 |
| **57.5** | 3319 | 2896 | 2442 | 1496 | 884 | 560 | 422 | 364 | 334 | 333 |
| **60.0** | 3552 | 3025 | 2485 | 1439 | 775 | 439 | 319 | 270 | 248 | 234 |
| **62.5** | 3761 | 3110 | 2478 | 1337 | 625 | 307 | 225 | 191 | 169 | 163 |
| **65.0** | 3842 | 3065 | 2368 | 1178 | 451 | 205 | 148 | 128 | 113 | 111 |
| **67.5** | 3608 | 2773 | 2031 | 958 | 300 | 132 | 103 | 89 | 82 | 80 |
| **68.0** | 3483 | 2655 | 1959 | 914 | 279 | 124 | 95 | 85 | 78 | 74 |
| **70.0** | 2789 | 2122 | 1539 | 680 | 195 | 93 | 75 | 68 | 63 | 62 |
| **72.5** | 1738 | 1254 | 932 | 411 | 138 | 70 | 62 | 56 | 51 | 50 |
| **75.0** | 1008 | 751 | 563 | 245 | 96 | 57 | 54 | 49 | 43 | 43 |
| **77.5** | 514 | 421 | 332 | 156 | 73 | 49 | 49 | 43 | 38 | 36 |
| **80.0** | 218 | 223 | 187 | 108 | 59 | 43 | 44 | 37 | 32 | 27 |
| **82.5** | 96 | 96 | 106 | 73 | 45 | 37 | 35 | 30 | 25 | 21 |
| **85.0** | 47 | 49 | 70 | 51 | 34 | 29 | 25 | 23 | 19 | 17 |
| **87.5** | 17 | 17 | 33 | 25 | 18 | 15 | 11 | 13 | 10 | 12 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| **Vert. Angles** | **Horizontal Angles** | |
|---|---|---|
| | **175** | **180** |
| **0.0** | 1014 | 1014 |
| **2.5** | 1034 | 1031 |
| **5.0** | 1047 | 1044 |
| **7.5** | 1047 | 1043 |
| **10.0** | 1049 | 1045 |
| **12.5** | 1056 | 1052 |
| **15.0** | 1055 | 1050 |
| **17.5** | 1044 | 1038 |
| **20.0** | 1029 | 1025 |
| **22.5** | 1020 | 1014 |
| **25.0** | 1011 | 1006 |
| **27.5** | 1001 | 995 |
| **30.0** | 983 | 977 |
| **32.5** | 951 | 947 |
| **35.0** | 905 | 899 |
| **37.5** | 855 | 849 |
| **40.0** | 805 | 798 |
| **42.5** | 752 | 747 |
| **45.0** | 689 | 681 |
| **47.5** | 622 | 620 |
| **50.0** | 560 | 558 |
| **52.5** | 493 | 492 |
| **55.0** | 417 | 417 |
| **57.5** | 329 | 335 |
| **60.0** | 237 | 235 |

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**CANDELA TABULATION - (Cont.)**

| | | |
|---|---|---|
| **62.5** | 162 | 160 |
| **65.0** | 108 | 106 |
| **67.5** | 80 | 79 |
| **68.0** | 73 | 75 |
| **70.0** | 62 | 64 |
| **72.5** | 53 | 54 |
| **75.0** | 45 | 44 |
| **77.5** | 38 | 36 |
| **80.0** | 26 | 25 |
| **82.5** | 15 | 14 |
| **85.0** | 7 | 4 |
| **87.5** | 6 | 0 |
| **90.0** | 0 | 0 |

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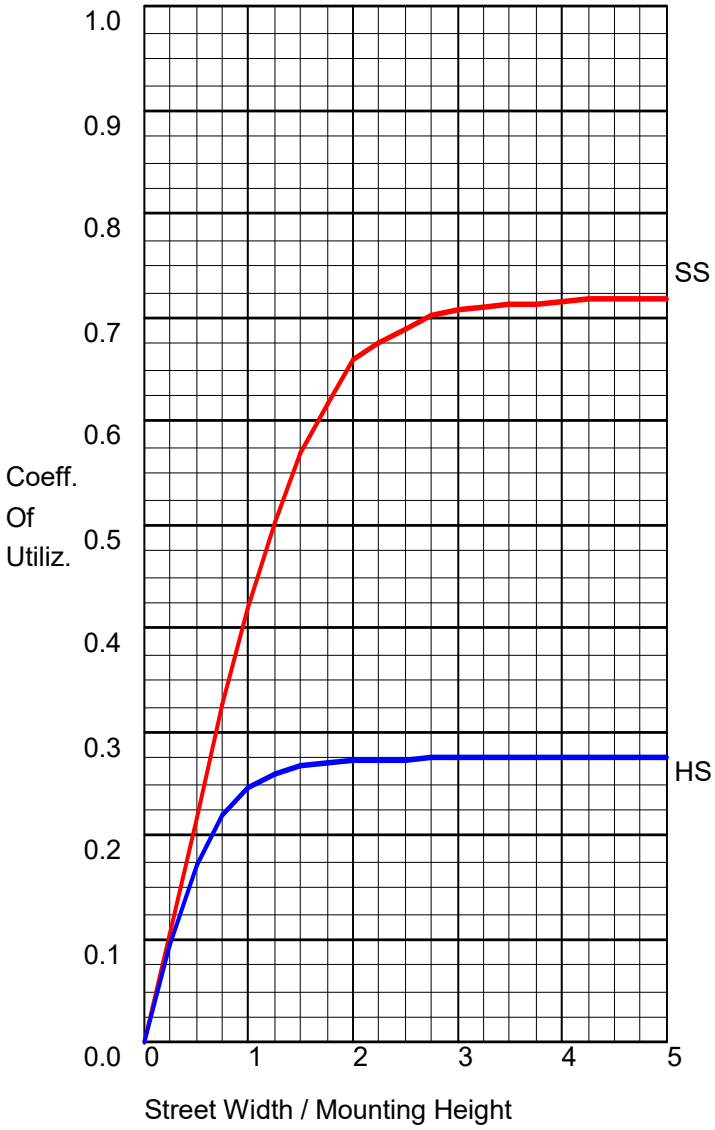
**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**COEFFICIENTS OF UTILIZATION**




**FLUX DISTRIBUTION**

| | Lumens | Percent Of Luminaire |
|---|---|---|
| Downward Street Side | 5193.1 | 72.2 |
| Downward House Side | 1995.5 | 27.8 |
| Downward Total | 7188.6 | 100.0 |
| Upward Street Side | 0.0 | 0.0 |
| Upward House Side | 0.0 | 0.0 |
| Upward Total | 0.0 | 0.0 |
| Total Flux | 7188.6 | 100.0 |

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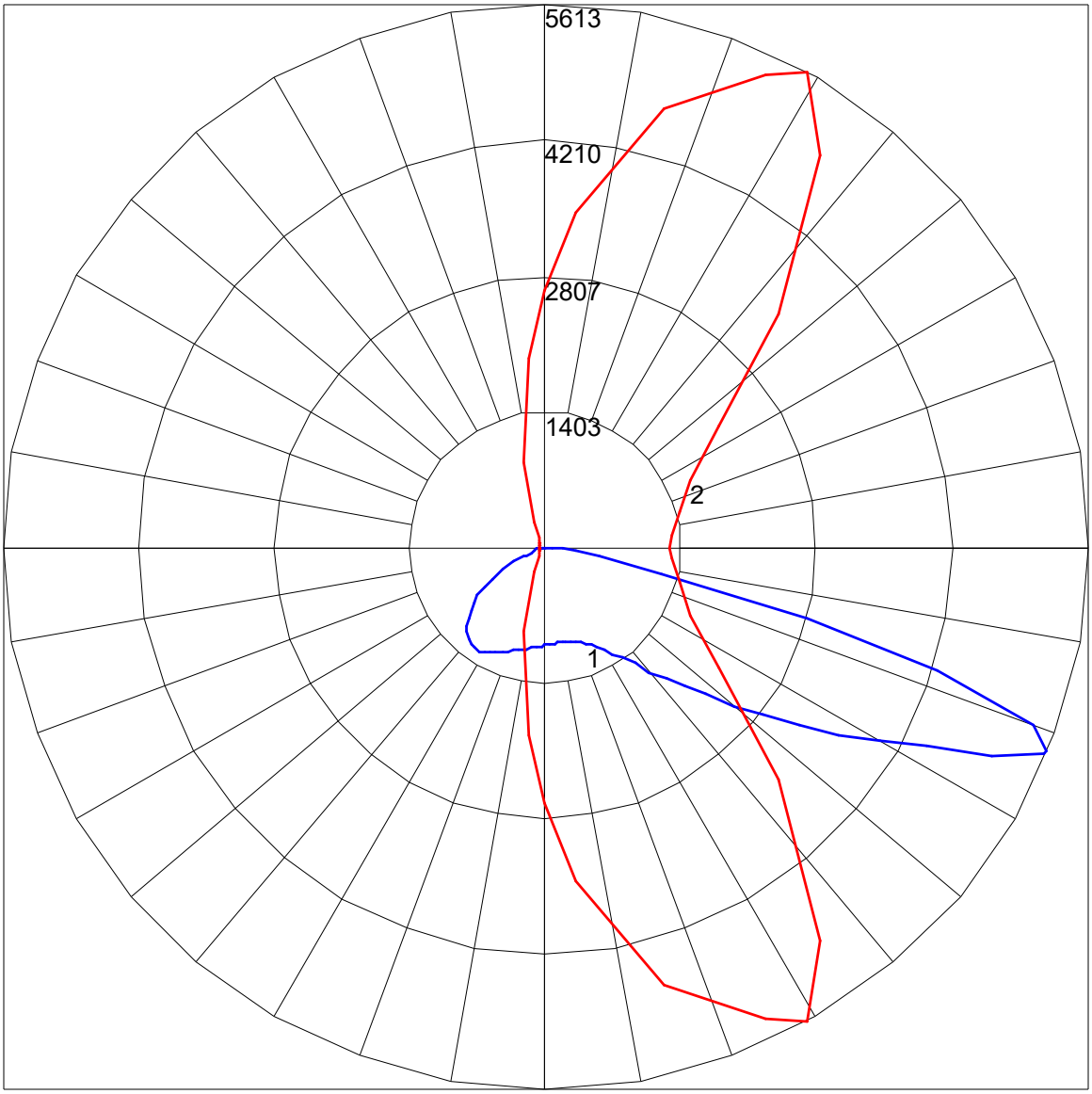
Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**POLAR GRAPH**




Maximum Candela = 5613  Located At Horizontal Angle = 61, Vertical Angle = 68
# 1 - Vertical Plane Through Horizontal Angles (61 - 241) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (68) (Through Max. Cd.)

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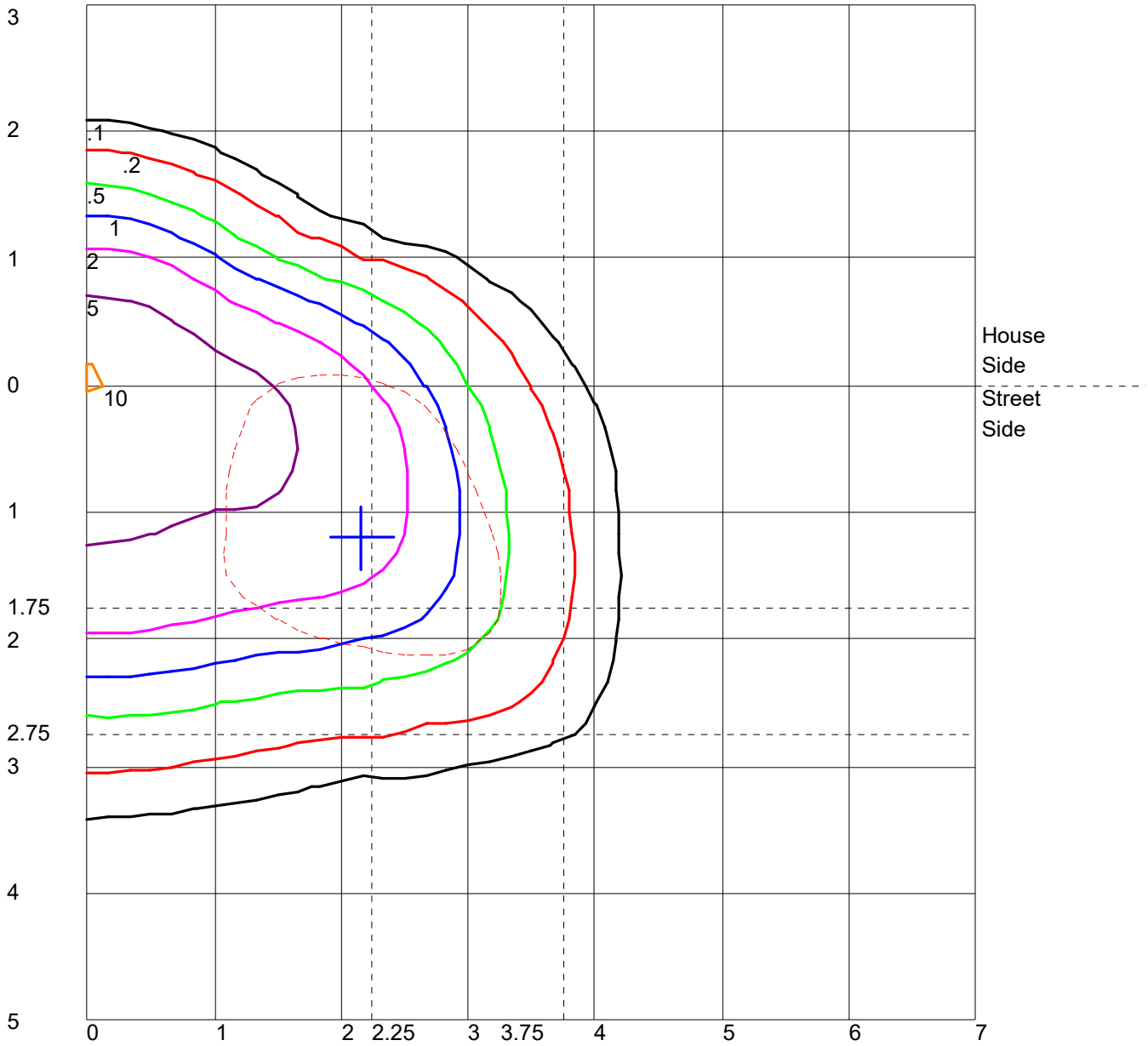
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

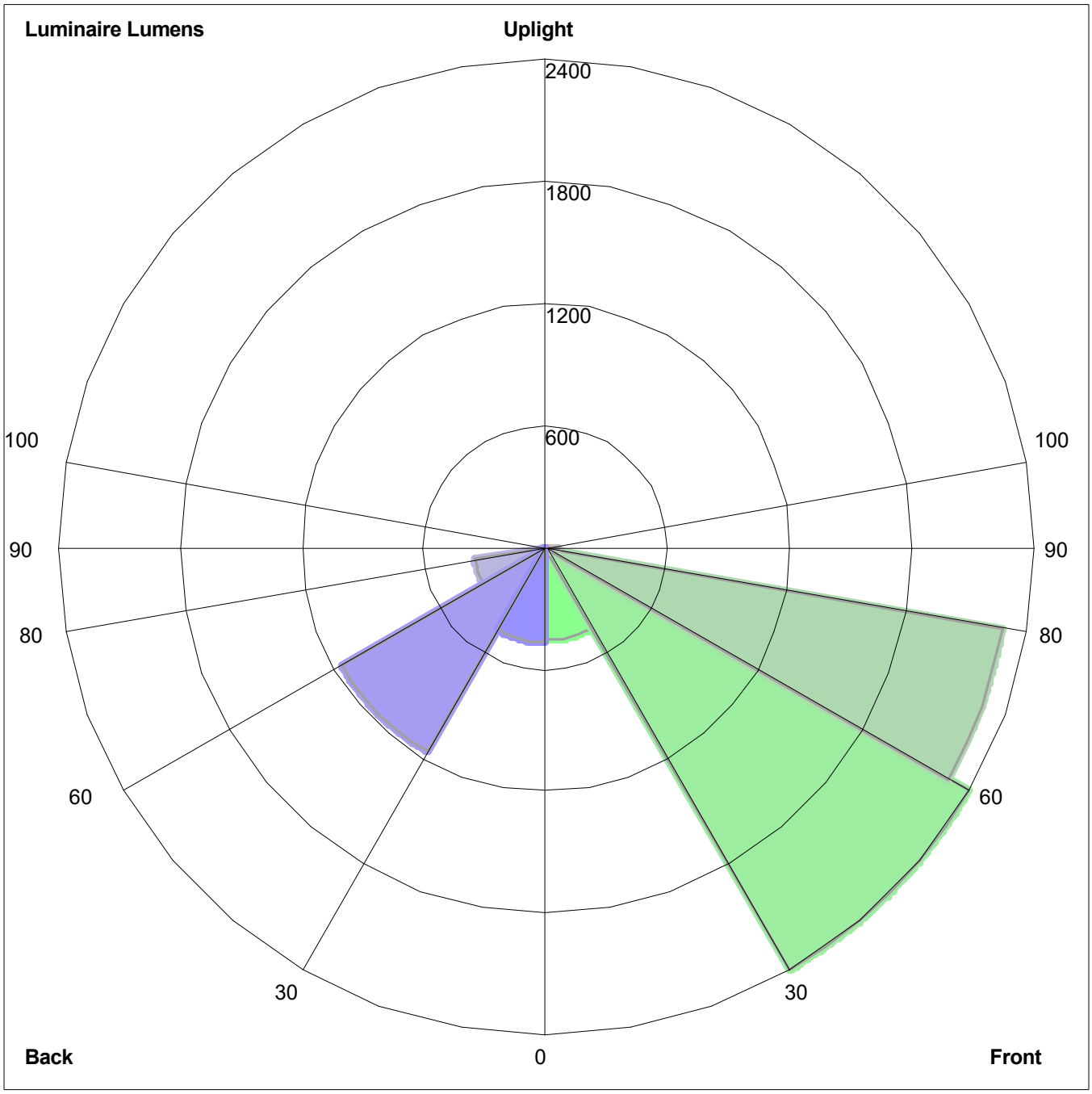
**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE**




Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH**




Luminaire Lumens:
Front: Low=457.9, Medium=2400.2, High= 2280.0, Very High=55.0
Back: Low=467.1, Medium=1158.6, High=353.5, Very High=16.3
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G2

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG 3MHS

# RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

### Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

### Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

### Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

### PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

### LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

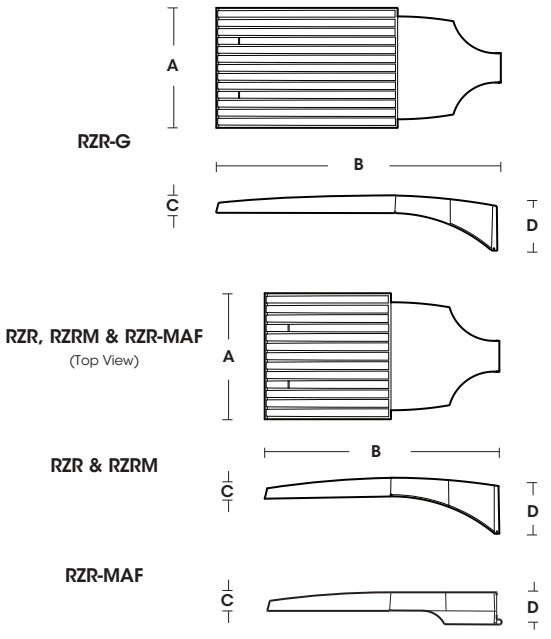
**True Amber LED's** TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

### LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

### Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.




| Fixture | A | B | C | D |
|---|---|---|---|---|
| RZR-G | 15" 381mm | 36.5" 927mm | 3" 76mm | 7" 187mm |
| RZR | 14.75" 375mm | 28.25" 718mm | 2.75" 70mm | 6.5" 165mm |
| RZRM | 11.5" 292mm | 22" 559mm | 2.5" 64mm | 5.25" 133mm |
| RZR-MAF | 15" 381mm | 28.25" 724mm | 2.5" 64mm | 4" 102mm |

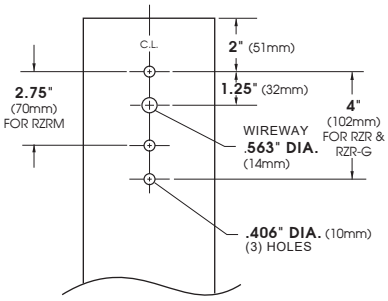
U.L. Listed for Wet Location

BABA COMPLIANT

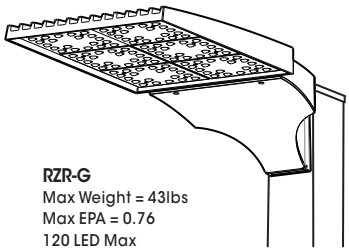
2024281

# SPECIFICATIONS

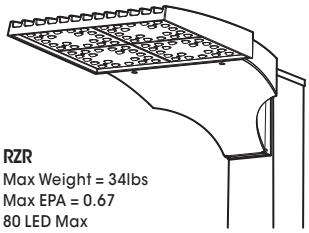
## POLE DRILLING TEMPLATE



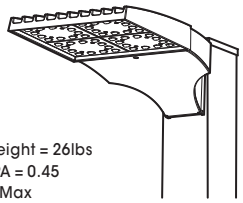

## EPA & WEIGHT



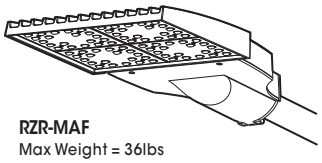
**RZR-G**
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



**RZR**
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

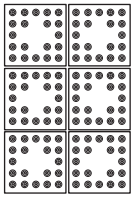


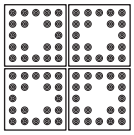
**RZRM**
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

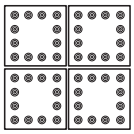


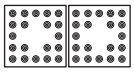
**RZR-MAF**
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

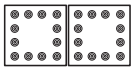
## PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

## ORDERING INFORMATION

**Spec/Order Example:** RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

| Luminaire | Optics | LED Mode | Voltage | Mounting | Finish | Options |
|---|---|---|---|---|---|---|
| **Luminaire** | **Optics** | **LED** | **Voltage** | **Mounting** | **Finish** | **Options** |
| ☐ RZR-G | PLED™ Distribution Type<br>☐ PLED-II<br>☐ PLED-II-FR<br>☐ PLED-II-MIL<br>☐ PLED-III<br>☐ PLED-III-W<br>☐ PLED-IV<br>☐ PLED-IV-FT<br>☐ PLED-VSQ-N<br>☐ PLED-V-SQ-M<br>☐ PLED-V-SQ-W | # of LEDs<br>**RZR-G**<br>☐ 120LED<br>☐ 80LED<br>**RZR / RZR-MAF**<br>☐ 80LED<br>☐ 40LED<br>**RZRM**<br>☐ 48LED<br>☐ 24LED | ☐ **UNV** (120-277)<br>☐ **347**<br>☐ **480** | Arm Mount<br>☐ **1**<br>☐ **2-180**<br>☐ **2-90**<br>☐ **3-90**<br>☐ **3-120**<br>☐ **4-90**<br>Wall Mount<br>☐ **WM**<br>WM - Wall Mount provided with mounting bracket and cover. | Standard Textured Finish<br>☐ Black **9005-T**<br>☐ White **9003-T**<br>☐ Grey **7004-T**<br>☐ Dark Bronze **8019-T**<br>☐ Green **6005-T**<br>Premium Finishes<br>☐ Rust<br>☐ Patina Copper **PC**<br>For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)<br>Consult factor for custom colors | ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**<br>☐ External Glare Shield 4 Sided **EGS4**<br>☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**<br>☐ Round Pole Adapter **RPA**<br>☐ Twist Lock Receptable Only **TPR**<br>☐ 7-Pin Twist Lock Receptable Only **TPR7**<br>☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**<br>☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**<br>☐ Photo Cell + Voltage (Example: PC120V) **PC+V**<br>☐ Single Fuse (120V, 277V) **SF**<br>☐ Double Fuse (208V, 240V) **DF**<br>☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311** |
| ☐ RZR<br>☐ RZR-MAF | | Drive Current<br>☐ 1400mA[1]<br>☐ 1225mA[1]<br>☐ 1050mA<br>☐ 875mA<br>☐ 700mA<br>☐ 525mA<br>☐ 350mA | | | | |
| ☐ RZRM | | Color Temp - CCT<br>☐ 27K (2700K)<br>☐ 30K (3000K)<br>☐ 40K (4000K)<br>☐ 50K (5000K)<br>☐ TRA True Amber<br>Consult Factory for Other LED Color, CCT, & CRI Options | | | | |

**NOTES:**
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

## ELECTRICAL DATA GUIDE - AMPERAGE CHART

| ELECTRICAL LOAD | | | CURRENT (Amps) | | | | |
|---|---|---|---|---|---|---|---|
| # of LEDs | mA | System Watts | 120V | 208V | 277V | 347V | 480V |
| 24 | 350 | 26 | 0.21 | 0.12 | 0.09 | 0.07 | 0.05 |
| 24 | 525 | 39 | 0.32 | 0.19 | 0.14 | 0.11 | 0.08 |
| 24 | 700 | 52 | 0.43 | 0.25 | 0.19 | 0.15 | 0.11 |
| 24 | 875 | 67 | 0.55 | 0.32 | 0.24 | 0.19 | 0.14 |
| 24 | 1050 | 81 | 0.67 | 0.39 | 0.29 | 0.23 | 0.17 |
| 48 | 350 | 52 | 0.43 | 0.25 | 0.19 | 0.15 | 0.11 |
| 48 | 525 | 78 | 0.65 | 0.37 | 0.28 | 0.22 | 0.16 |
| 48 | 700 | 104 | 0.87 | 0.50 | 0.38 | 0.30 | 0.22 |
| 48 | 875 | 133 | 1.11 | 0.64 | 0.48 | 0.38 | 0.28 |
| 48 | 1050 | 162 | 1.35 | 0.78 | 0.58 | 0.47 | 0.34 |
| 40 | 350 | 43 | 0.36 | 0.21 | 0.15 | 0.12 | 0.09 |
| 40 | 525 | 65 | 0.54 | 0.31 | 0.23 | 0.19 | 0.14 |
| 40 | 700 | 87 | 0.72 | 0.42 | 0.31 | 0.25 | 0.18 |
| 40 | 875 | 111 | 0.92 | 0.53 | 0.40 | 0.32 | 0.23 |
| 40 | 1050 | 135 | 1.12 | 0.65 | 0.49 | 0.39 | 0.28 |
| 40 | 1225 | 159 | 1.32 | 0.76 | 0.57 | 0.46 | 0.33 |
| 40 | 1400 | 183 | 1.53 | 0.88 | 0.66 | 0.53 | 0.38 |
| 80 | 350 | 86 | 0.72 | 0.41 | 0.31 | 0.25 | 0.18 |
| 80 | 525 | 130 | 1.08 | 0.62 | 0.47 | 0.37 | 0.27 |
| 80 | 700 | 174 | 1.45 | 0.83 | 0.63 | 0.50 | 0.36 |
| 80 | 875 | 222 | 1.85 | 1.06 | 0.80 | 0.64 | 0.46 |
| 80 | 1050 | 270 | 2.25 | 1.30 | 0.97 | 0.78 | 0.56 |
| 80 | 1225 | 318 | 2.65 | 1.53 | 1.15 | 0.92 | 0.66 |
| 80 | 1400 | 366 | 3.05 | 1.76 | 1.32 | 1.06 | 0.76 |
| 120 | 350 | 129 | 1.07 | 0.62 | 0.46 | 0.37 | 0.27 |
| 120 | 525 | 195 | 1.62 | 0.94 | 0.70 | 0.56 | 0.41 |
| 120 | 700 | 260 | 2.17 | 1.25 | 0.94 | 0.75 | 0.54 |
| 120 | 875 | 332 | 2.77 | 1.60 | 1.20 | 0.96 | 0.69 |
| 120 | 1050 | 404 | 3.37 | 1.94 | 1.46 | 1.17 | 0.84 |
| 120 | 1225 | 477 | 3.97 | 2.29 | 1.72 | 1.37 | 0.99 |
| 120 | 1400 | 549 | 4.58 | 2.64 | 1.98 | 1.58 | 1.14 |

## PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

| LED LUMEN MAINTENANCE (350mA to 1050mA) | | |
|---|---|---|
| LED Life / Operating Hours | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000 | L96 | 0.96x |
| 100,000 (6X LED Test Hrs) | L93 | 0.93x |
| 150,000 (Theoretical) | L89 | 0.90x |
| 200,000 (Theoretical) | L86 | 0.87x |

**TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.**

| LED LUMEN MAINTENANCE (1225mA & 1400mA) | | |
|---|---|---|
| LED Life / Operating Hours | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000 | L93 | 0.93x |
| 100,000 (6X LED Test Hrs) | L89 | 0.89x |
| 150,000 (Theoretical) | L84 | 0.84x |
| 200,000 (Theoretical) | L80 | 0.80x |

**TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.**
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

**IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html**

Photometric Toolbox

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K-HS.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] ITL85034-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-III-M-40LED-350mA-40K-HS
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_SHIELD] 1 BLACK PLASTIC HOUSE-SIDE SHIELD BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 42.9 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 5228
[_BUGRATING] LCS B0-U0-G2 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

**CHARACTERISTICS**

| | |
|---|---|
| IES Classification | Type III |
| Longitudinal Classification | Short |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 5228 |
| Downward Total Efficiency | N.A. (absolute) |
| Total Luminaire Efficiency | N.A. (absolute) |
| Luminaire Efficacy Rating (LER) | 122 |
| Total Luminaire Watts | 42.9 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 6860 |
| Maximum Candela Angle | 60H 67V |
| Maximum Candela (<90 Degrees Vertical) | 6860 |
| Maximum Candela Angle (<90 Degrees Vertical) | 60H 67V |
| Maximum Candela At 90 Degrees Vertical | 0 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 409 (7.8% Luminaire Lumens) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

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Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K-HS.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

| | Lumens | % Lamp | % Luminaire |
|---|---|---|---|
| FL - Front-Low (0-30) | 321.7 | N.A. | 6.2 |
| FM - Front-Medium (30-60) | 2382.0 | N.A. | 45.6 |
| FH - Front-High (60-80) | 2254.0 | N.A. | 43.1 |
| FVH - Front-Very High (80-90) | 34.0 | N.A. | 0.6 |
| BL - Back-Low (0-30) | 49.2 | N.A. | 0.9 |
| BM - Back-Medium (30-60) | 108.5 | N.A. | 2.1 |
| BH - Back-High (60-80) | 76.8 | N.A. | 1.5 |
| BVH - Back-Very High (80-90) | 1.7 | N.A. | 0.0 |
| UL - Uplight-Low (90-100) | 0.0 | N.A. | 0.0 |
| UH - Uplight-High (100-180) | 0.0 | N.A. | 0.0 |
| Total | 5227.9 | N.A. | 100.0 |
| BUG Rating | B0-U0-G2 | | |

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**IES ROAD REPORT**
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**CANDELA TABULATION**

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **0** | **5** | **15** | **25** | **35** | **45** | **55** | **60** | **65** | **75** |
| **0.0** | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 |
| **2.5** | 340 | 346 | 342 | 337 | 328 | 318 | 304 | 298 | 291 | 273 |
| **5.0** | 449 | 450 | 446 | 436 | 419 | 397 | 373 | 361 | 344 | 312 |
| **7.5** | 547 | 550 | 544 | 531 | 508 | 481 | 445 | 426 | 405 | 356 |
| **10.0** | 637 | 638 | 633 | 619 | 598 | 566 | 525 | 500 | 473 | 406 |
| **12.5** | 666 | 668 | 669 | 674 | 672 | 654 | 605 | 578 | 540 | 457 |
| **15.0** | 679 | 681 | 676 | 683 | 705 | 718 | 683 | 652 | 607 | 507 |
| **17.5** | 738 | 740 | 728 | 717 | 719 | 744 | 743 | 723 | 683 | 570 |
| **20.0** | 827 | 828 | 812 | 793 | 767 | 757 | 789 | 796 | 770 | 646 |
| **22.5** | 920 | 924 | 920 | 904 | 853 | 799 | 829 | 852 | 846 | 727 |
| **25.0** | 1017 | 1023 | 1041 | 1040 | 975 | 878 | 864 | 895 | 910 | 816 |
| **27.5** | 1087 | 1096 | 1130 | 1168 | 1120 | 990 | 910 | 936 | 962 | 911 |
| **30.0** | 1145 | 1156 | 1192 | 1262 | 1254 | 1125 | 981 | 987 | 1014 | 1011 |
| **32.5** | 1234 | 1247 | 1272 | 1330 | 1354 | 1262 | 1082 | 1057 | 1078 | 1116 |
| **35.0** | 1342 | 1353 | 1374 | 1410 | 1447 | 1386 | 1210 | 1160 | 1166 | 1237 |
| **37.5** | 1454 | 1463 | 1483 | 1510 | 1537 | 1508 | 1363 | 1299 | 1290 | 1381 |
| **40.0** | 1569 | 1578 | 1597 | 1623 | 1634 | 1651 | 1534 | 1478 | 1474 | 1563 |
| **42.5** | 1712 | 1718 | 1728 | 1749 | 1752 | 1812 | 1741 | 1703 | 1722 | 1782 |
| **45.0** | 1845 | 1850 | 1865 | 1886 | 1889 | 1995 | 1998 | 1972 | 2007 | 2020 |
| **47.5** | 1968 | 1968 | 1982 | 2005 | 2020 | 2174 | 2297 | 2289 | 2314 | 2278 |
| **50.0** | 2091 | 2099 | 2115 | 2136 | 2165 | 2337 | 2619 | 2645 | 2658 | 2630 |
| **52.5** | 2233 | 2239 | 2255 | 2283 | 2328 | 2526 | 2941 | 3028 | 3099 | 3062 |
| **55.0** | 2303 | 2315 | 2353 | 2423 | 2491 | 2750 | 3404 | 3584 | 3631 | 3427 |
| **57.5** | 2333 | 2346 | 2400 | 2525 | 2669 | 2991 | 3843 | 4103 | 4053 | 3672 |
| **60.0** | 2357 | 2371 | 2424 | 2583 | 2842 | 3314 | 4249 | 4585 | 4537 | 4169 |
| **62.5** | 2227 | 2242 | 2319 | 2527 | 2920 | 3643 | 4912 | 5321 | 5263 | 4864 |
| **65.0** | 1991 | 2007 | 2066 | 2232 | 2684 | 3785 | 5738 | 6363 | 6141 | 5432 |
| **67.0** | 1764 | 1781 | 1868 | 2003 | 2303 | 3557 | 6004 | 6860 | 6325 | 5476 |
| **67.5** | 1668 | 1682 | 1788 | 1945 | 2213 | 3452 | 5945 | 6843 | 6244 | 5378 |
| **70.0** | 874 | 901 | 1087 | 1454 | 1800 | 2670 | 4850 | 5689 | 4968 | 3889 |
| **72.5** | 287 | 294 | 347 | 562 | 1214 | 1927 | 3131 | 3469 | 2921 | 2030 |
| **75.0** | 151 | 153 | 155 | 176 | 357 | 1340 | 2244 | 1884 | 1412 | 767 |
| **77.5** | 99 | 107 | 131 | 145 | 164 | 415 | 1154 | 950 | 577 | 188 |
| **80.0** | 38 | 41 | 83 | 104 | 149 | 192 | 409 | 363 | 239 | 99 |
| **82.5** | 19 | 22 | 50 | 62 | 88 | 137 | 213 | 194 | 139 | 111 |
| **85.0** | 9 | 12 | 25 | 33 | 40 | 48 | 107 | 92 | 91 | 96 |
| **87.5** | 2 | 4 | 11 | 12 | 16 | 16 | 25 | 37 | 42 | 54 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **85** | **90** | **95** | **105** | **115** | **125** | **135** | **145** | **155** | **165** |
| **0.0** | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 |
| **2.5** | 257 | 248 | 238 | 220 | 203 | 187 | 175 | 165 | 159 | 154 |
| **5.0** | 276 | 256 | 238 | 202 | 170 | 148 | 135 | 126 | 122 | 121 |
| **7.5** | 301 | 272 | 243 | 188 | 148 | 128 | 121 | 118 | 116 | 115 |
| **10.0** | 332 | 291 | 250 | 175 | 134 | 121 | 117 | 114 | 112 | 111 |
| **12.5** | 361 | 308 | 252 | 158 | 124 | 117 | 113 | 110 | 108 | 107 |
| **15.0** | 389 | 321 | 249 | 140 | 115 | 111 | 108 | 106 | 104 | 103 |
| **17.5** | 426 | 340 | 248 | 126 | 108 | 104 | 103 | 102 | 99 | 98 |
| **20.0** | 472 | 362 | 247 | 115 | 102 | 97 | 95 | 94 | 91 | 89 |
| **22.5** | 523 | 388 | 248 | 107 | 95 | 90 | 87 | 83 | 81 | 79 |
| **25.0** | 581 | 416 | 252 | 100 | 89 | 83 | 78 | 74 | 72 | 70 |

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**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K-HS.IES**

**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **27.5** | 642 | 447 | 259 | 95 | 84 | 77 | 71 | 66 | 63 | 60 |
| **30.0** | 713 | 482 | 268 | 89 | 79 | 71 | 64 | 58 | 54 | 51 |
| **32.5** | 792 | 524 | 283 | 84 | 73 | 65 | 57 | 51 | 46 | 42 |
| **35.0** | 885 | 575 | 304 | 80 | 68 | 59 | 51 | 43 | 39 | 36 |
| **37.5** | 995 | 640 | 329 | 77 | 63 | 54 | 45 | 38 | 33 | 30 |
| **40.0** | 1132 | 723 | 359 | 74 | 59 | 49 | 39 | 32 | 27 | 25 |
| **42.5** | 1297 | 826 | 390 | 72 | 54 | 42 | 34 | 27 | 23 | 20 |
| **45.0** | 1482 | 939 | 420 | 69 | 47 | 37 | 30 | 24 | 20 | 16 |
| **47.5** | 1685 | 1054 | 445 | 64 | 41 | 32 | 26 | 21 | 17 | 14 |
| **50.0** | 1949 | 1199 | 475 | 57 | 37 | 27 | 23 | 18 | 14 | 11 |
| **52.5** | 2237 | 1354 | 507 | 52 | 33 | 23 | 20 | 15 | 11 | 9 |
| **55.0** | 2477 | 1478 | 529 | 48 | 29 | 21 | 17 | 12 | 9 | 8 |
| **57.5** | 2720 | 1603 | 554 | 45 | 27 | 18 | 14 | 10 | 7 | 6 |
| **60.0** | 3085 | 1769 | 601 | 42 | 25 | 17 | 13 | 8 | 6 | 5 |
| **62.5** | 3509 | 1962 | 670 | 39 | 23 | 15 | 11 | 7 | 5 | 3 |
| **65.0** | 3825 | 2122 | 750 | 35 | 21 | 13 | 9 | 6 | 4 | 3 |
| **67.0** | 3752 | 2054 | 731 | 31 | 19 | 11 | 8 | 5 | 3 | 2 |
| **67.5** | 3629 | 1985 | 708 | 30 | 18 | 10 | 7 | 5 | 3 | 2 |
| **70.0** | 2457 | 1374 | 510 | 26 | 17 | 8 | 6 | 5 | 3 | 2 |
| **72.5** | 1266 | 713 | 275 | 23 | 14 | 7 | 6 | 4 | 2 | 2 |
| **75.0** | 479 | 319 | 140 | 20 | 12 | 6 | 5 | 3 | 2 | 1 |
| **77.5** | 115 | 59 | 48 | 17 | 9 | 6 | 5 | 3 | 2 | 1 |
| **80.0** | 62 | 34 | 22 | 13 | 8 | 5 | 4 | 3 | 2 | 1 |
| **82.5** | 63 | 28 | 14 | 9 | 6 | 4 | 3 | 2 | 1 | 1 |
| **85.0** | 35 | 14 | 7 | 7 | 5 | 3 | 2 | 1 | 1 | 1 |
| **87.5** | 11 | 4 | 2 | 3 | 2 | 1 | 1 | 0 | 0 | 0 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| **Vert. Angles** | **Horizontal Angles** | |
|---|---|---|
| | **175** | **180** |
| **0.0** | 242 | 242 |
| **2.5** | 152 | 152 |
| **5.0** | 120 | 120 |
| **7.5** | 115 | 115 |
| **10.0** | 110 | 110 |
| **12.5** | 106 | 106 |
| **15.0** | 102 | 102 |
| **17.5** | 96 | 96 |
| **20.0** | 88 | 88 |
| **22.5** | 78 | 78 |
| **25.0** | 68 | 68 |
| **27.5** | 59 | 58 |
| **30.0** | 50 | 49 |
| **32.5** | 41 | 41 |
| **35.0** | 34 | 34 |
| **37.5** | 28 | 27 |
| **40.0** | 23 | 23 |
| **42.5** | 18 | 18 |
| **45.0** | 15 | 14 |
| **47.5** | 12 | 12 |
| **50.0** | 10 | 10 |
| **52.5** | 9 | 9 |
| **55.0** | 7 | 7 |
| **57.5** | 5 | 5 |
| **60.0** | 4 | 4 |

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**CANDELA TABULATION - (Cont.)**

| | | |
|---|---|---|
| **62.5** | 3 | 3 |
| **65.0** | 2 | 2 |
| **67.0** | 2 | 2 |
| **67.5** | 2 | 2 |
| **70.0** | 2 | 1 |
| **72.5** | 1 | 1 |
| **75.0** | 1 | 1 |
| **77.5** | 1 | 1 |
| **80.0** | 1 | 1 |
| **82.5** | 1 | 1 |
| **85.0** | 1 | 0 |
| **87.5** | 0 | 0 |
| **90.0** | 0 | 0 |

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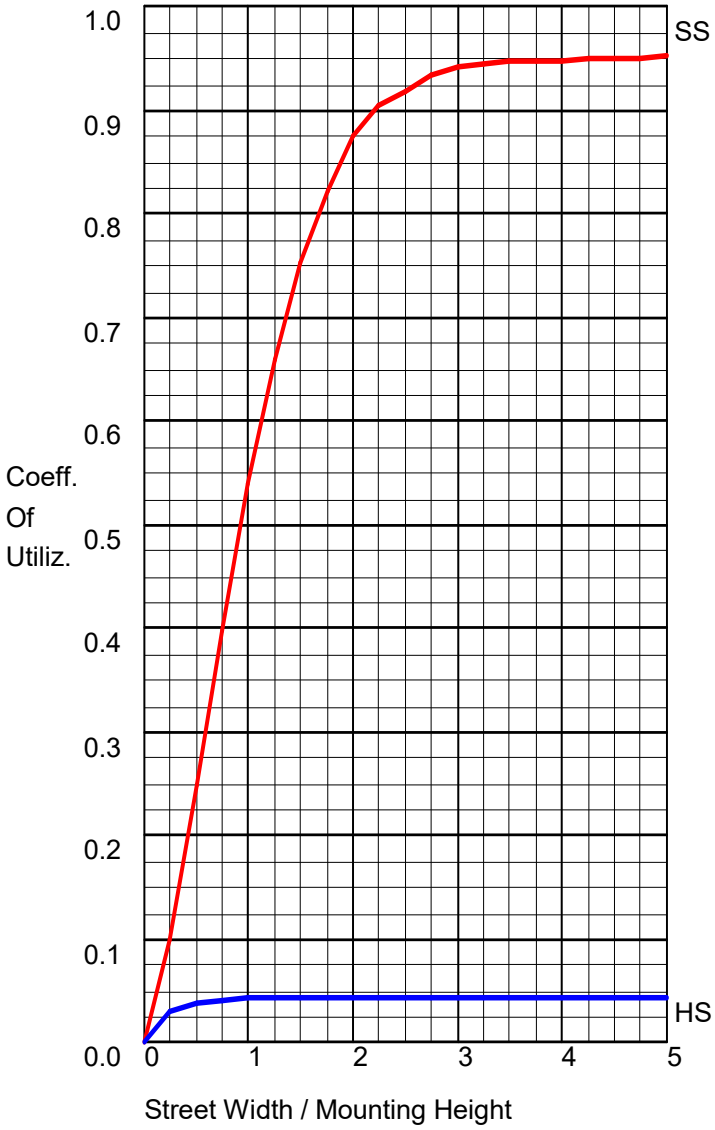
**COEFFICIENTS OF UTILIZATION**




**FLUX DISTRIBUTION**

| | Lumens | Percent Of Luminaire |
|---|---|---|
| Downward Street Side | 4991.7 | 95.5 |
| Downward House Side | 236.2 | 4.5 |
| Downward Total | 5227.9 | 100.0 |
| Upward Street Side | 0.0 | 0.0 |
| Upward House Side | 0.0 | 0.0 |
| Upward Total | 0.0 | 0.0 |
| Total Flux | 5227.9 | 100.0 |

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**IES ROAD REPORT**
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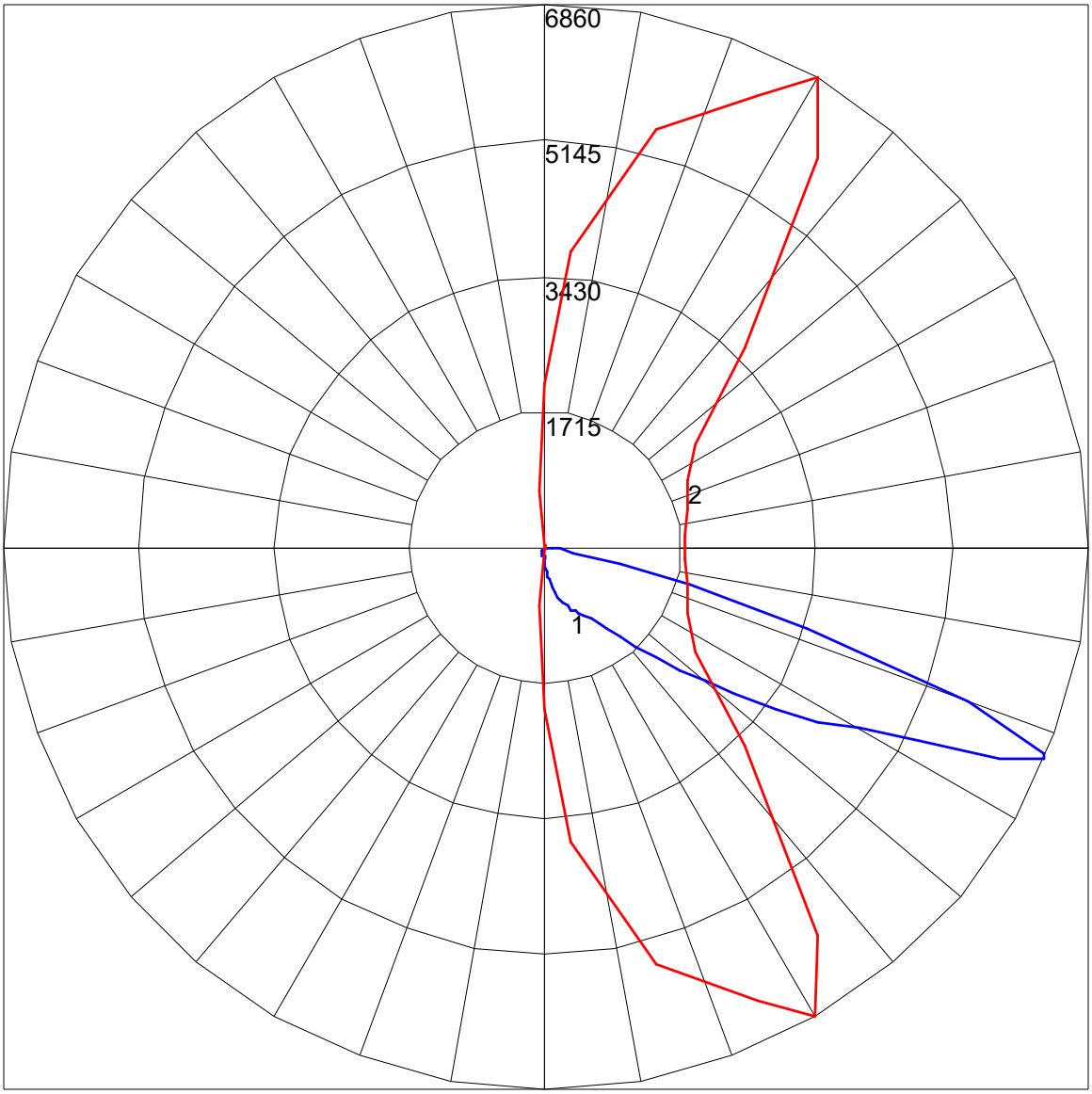
**POLAR GRAPH**




Maximum Candela = 6860  Located At Horizontal Angle = 60, Vertical Angle = 67
# 1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (67) (Through Max. Cd.)

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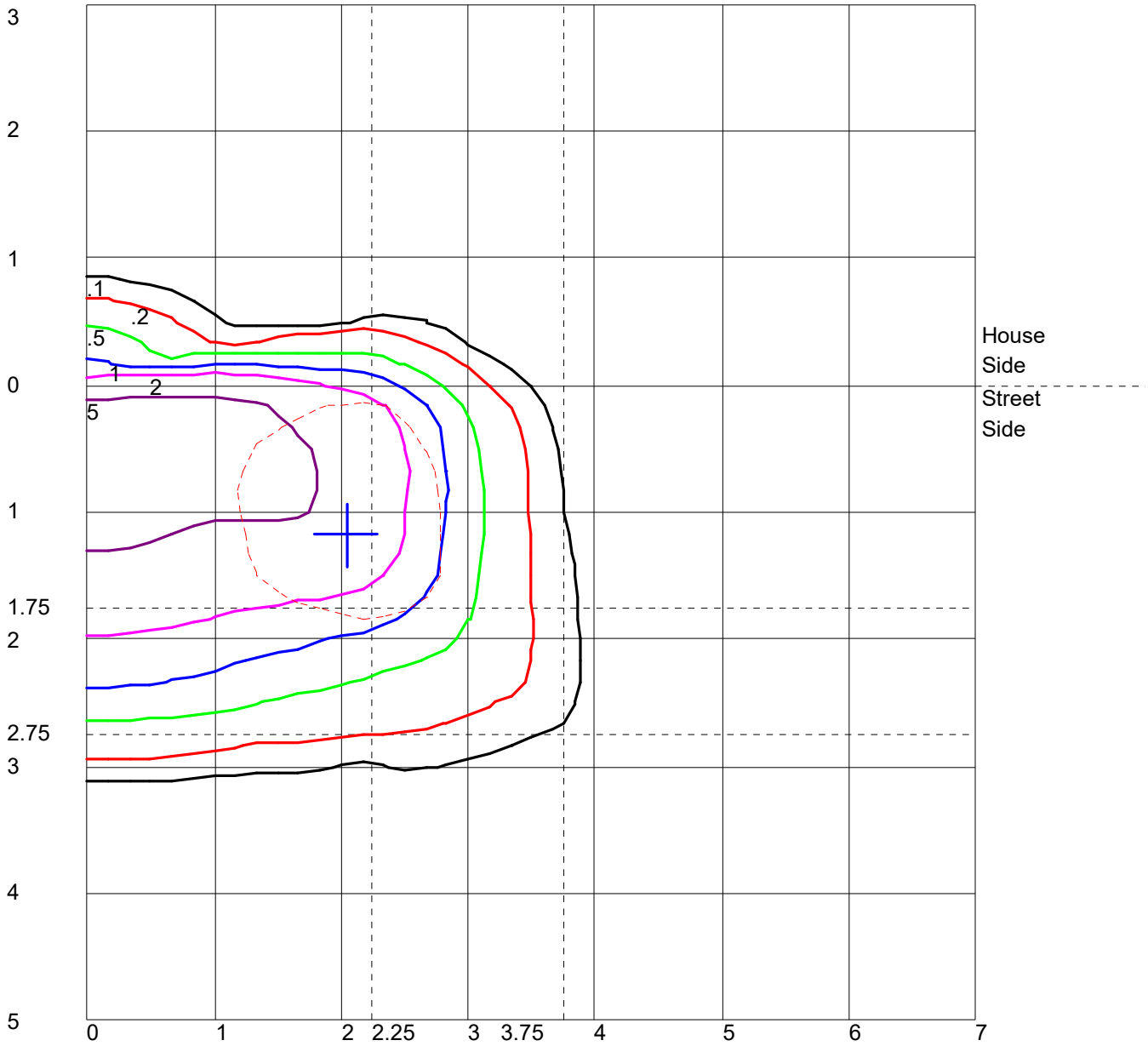
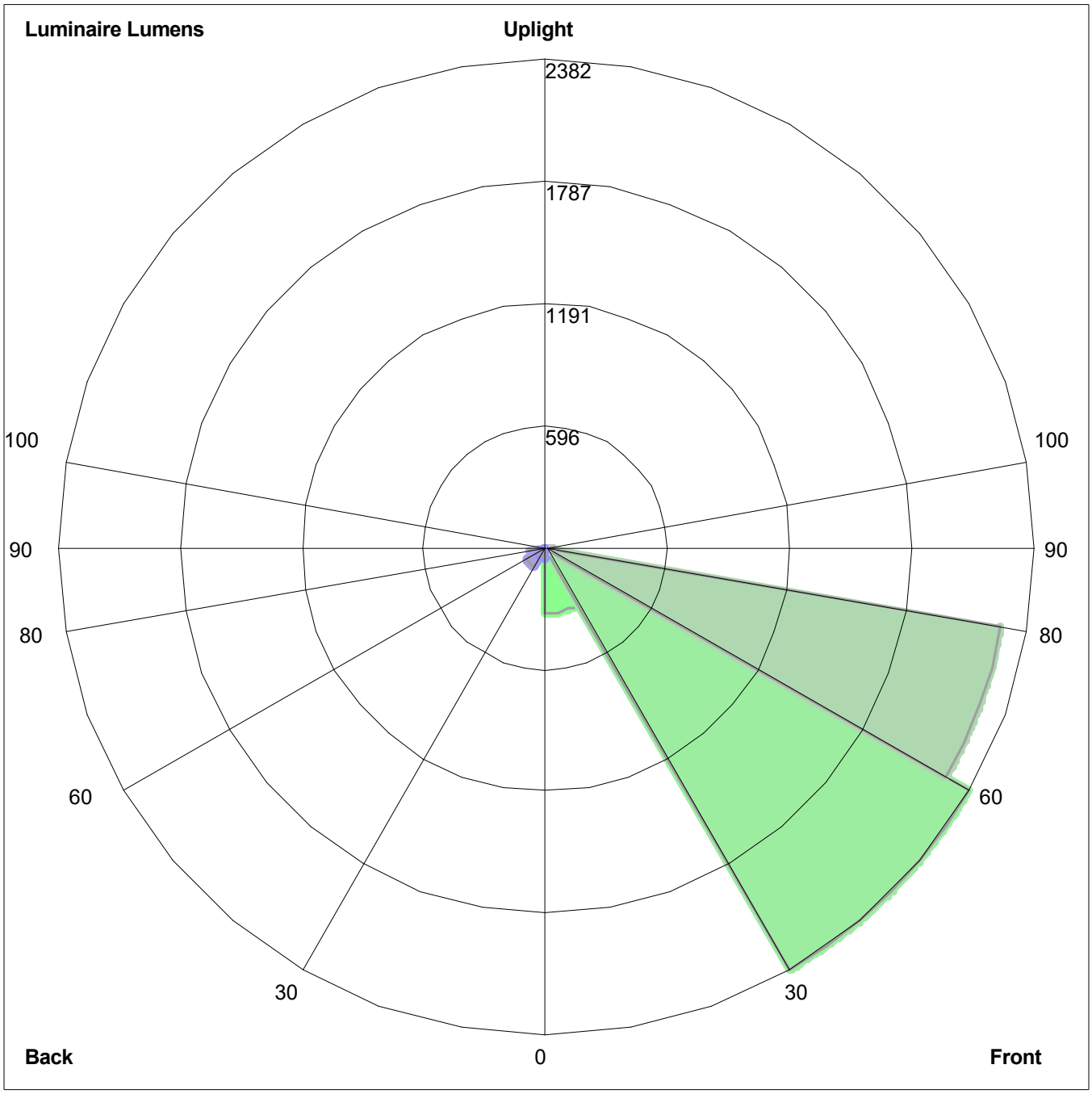
**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE**




Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K-HS.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH**




Luminaire Lumens:
Front: Low=321.7, Medium= 2382.0, High= 2254.0, Very High=34.0
Back: Low=49.2, Medium=108.5, High=76.8, Very High=1.7
Uplight: Low=0.0, High=0.0

BUG Rating : B0-U0-G2

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U.S. ARCHITECTURAL LIGHTING

AREA & ROADWAY LIGHTING

PROJECT NAME:

PROJECT TYPE:

IMEG 4FTHS

# RAZAR SERIES - LED

LOW PROFILE AREA LUMINAIRE

RZR

(Models: RZRM, RZR, RZR-G & RZR-MAF)

### Optical Housing

Heavy cast aluminum assembly minimum wall thickness .188". LED Module mounting area is machined to within a 0.002" surface flatness variance for maximum surface contact and thermal conductivity from the LED modules to the radiating fins. Passive radiating fins above the LED Optics provide superior thermal management and long LED life.The optical and electrical compartments are integrated with the support arm to create one assembly. Cast and hinged driver compartment cover allows access to the drivers and wiring.

### Electrical Housing w/ Integrated Arm

Heavy cast aluminum assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

### Mast Arm Fitter/Electrical Housing

Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

### PLED™ Optics

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. All fixture optical options will provide a "U0" no uplight optical package and is are dark sky friendly.

### LED Emitters

LED thermal management is designed to maintain LED operating temperature below 90 °C, well below the manufacturers thermal max of 150 °C for long life, high lumen maintenance and color stabilit. High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Warm White (2700K & 3000K), Neutral White (4000K), or Cool White (5000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

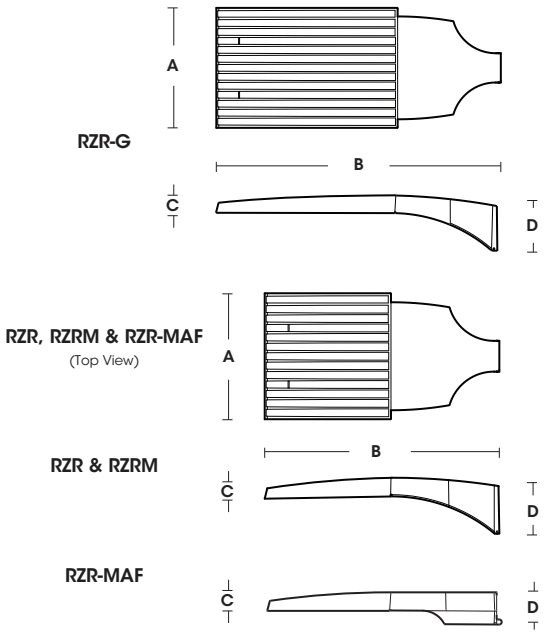
**True Amber LED's** TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

### LED Driver

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with a separate 20KV surge protector for field installation.

### Finish

Super TGIC polyester powder coating is applied onto a metal substrate this has been pretreated with a four-stage process for maximum adhesion and color retention. The top coat is baked at 400° F for maximum hardness and exterior durability.




| Fixture | A | B | C | D |
|---|---|---|---|---|
| RZR-G | 15" 381mm | 36.5" 927mm | 3" 76mm | 7" 187mm |
| RZR | 14.75" 375mm | 28.25" 718mm | 2.75" 70mm | 6.5" 165mm |
| RZRM | 11.5" 292mm | 22" 559mm | 2.5" 64mm | 5.25" 133mm |
| RZR-MAF | 15" 381mm | 28.25" 724mm | 2.5" 64mm | 4" 102mm |

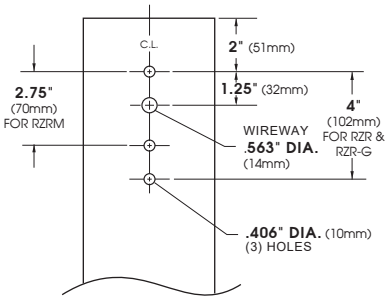
U.L. Listed for Wet Location

BABA COMPLIANT

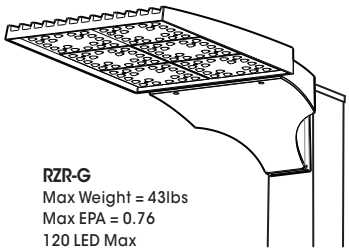
2024281

# SPECIFICATIONS

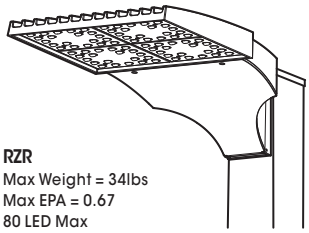
## POLE DRILLING TEMPLATE



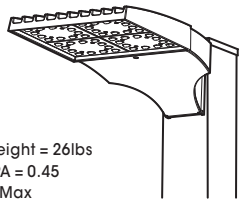

## EPA & WEIGHT



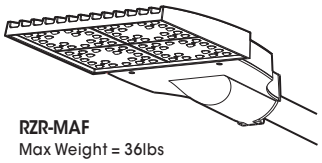
**RZR-G**
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



**RZR**
Max Weight = 34lbs
Max EPA = 0.67
80 LED Max

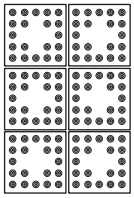


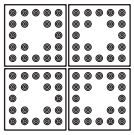
**RZRM**
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

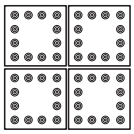


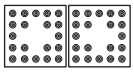
**RZR-MAF**
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

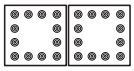
## PLED™ MODULES


120 LED Module


80 LED Module


48 LED Module


40 LED Module


24 LED Module

## ORDERING INFORMATION

**Spec/Order Example:** RZR/PLED-IV/80LED-700mA/CW/UNV/8019-S

| Luminaire | Optics | LED Mode | Voltage | Mounting | Finish | Options |
|---|---|---|---|---|---|---|
| **Luminaire** | **Optics** | **LED** | **Voltage** | **Mounting** | **Finish** | **Options** |
| ☐ RZR-G | PLED™ Distribution Type<br>☐ PLED-II<br>☐ PLED-II-FR<br>☐ PLED-II-MIL<br>☐ PLED-III<br>☐ PLED-III-W<br>☐ PLED-IV<br>☐ PLED-IV-FT<br>☐ PLED-VSQ-N<br>☐ PLED-V-SQ-M<br>☐ PLED-V-SQ-W | # of LEDs<br>**RZR-G**<br>☐ 120LED<br>☐ 80LED<br>**RZR / RZR-MAF**<br>☐ 80LED<br>☐ 40LED<br>**RZRM**<br>☐ 48LED<br>☐ 24LED | ☐ **UNV** (120-277)<br>☐ **347**<br>☐ **480** | Arm Mount<br>☐ **1**<br>☐ **2-180**<br>☐ **2-90**<br>☐ **3-90**<br>☐ **3-120**<br>☐ **4-90**<br>Wall Mount<br>☐ **WM**<br>WM - Wall Mount provided with mounting bracket and cover. | Standard Textured Finish<br>☐ Black **9005-T**<br>☐ White **9003-T**<br>☐ Grey **7004-T**<br>☐ Dark Bronze **8019-T**<br>☐ Green **6005-T**<br>Premium Finishes<br>☐ Rust<br>☐ Patina Copper **PC**<br>For smooth finish replace suffix "T" with suffix "S" (Example: 9500-S)<br>Consult factor for custom colors | ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**<br>☐ External Glare Shield 4 Sided **EGS4**<br>☐ External Glare Shield 3 Sided Rear Wedge **EGS3W**<br>☐ Round Pole Adapter **RPA**<br>☐ Twist Lock Receptable Only **TPR**<br>☐ 7-Pin Twist Lock Receptable Only **TPR7**<br>☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**<br>☐ Twist Lock Photocell + Voltage (Example: TPC347V) **TPC+V**<br>☐ Photo Cell + Voltage (Example: PC120V) **PC+V**<br>☐ Single Fuse (120V, 277V) **SF**<br>☐ Double Fuse (208V, 240V) **DF**<br>☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311** |
| ☐ RZR<br>☐ RZR-MAF | | | | | | |
| ☐ RZRM | | | | | | |

Drive Current
☐ **1400mA**[1]
☐ **1225mA**[1]
☐ **1050mA**
☐ **875mA**
☐ **700mA**
☐ **525mA**
☐ **350mA**

Color Temp - CCT
☐ **27K** (2700K)
☐ **30K** (3000K)
☐ **40K** (4000K)
☐ **50K** (5000K)
☐ **TRA** True Amber

Consult Factory for Other LED Color, CCT, & CRI Options

**NOTES:**
1 - 1400mA & 1225mA drive currents not available in RZRM
2 - TRA available in 350mA & 525mA drive currents only.

Consult Factory for Other Drive Currents

## ELECTRICAL DATA GUIDE - AMPERAGE CHART

| ELECTRICAL LOAD | | | CURRENT (Amps) | | | | |
|---|---|---|---|---|---|---|---|
| # of LEDs | mA | System Watts | 120V | 208V | 277V | 347V | 480V |
| 24 | 350 | 26 | 0.21 | 0.12 | 0.09 | 0.07 | 0.05 |
| 24 | 525 | 39 | 0.32 | 0.19 | 0.14 | 0.11 | 0.08 |
| 24 | 700 | 52 | 0.43 | 0.25 | 0.19 | 0.15 | 0.11 |
| 24 | 875 | 67 | 0.55 | 0.32 | 0.24 | 0.19 | 0.14 |
| 24 | 1050 | 81 | 0.67 | 0.39 | 0.29 | 0.23 | 0.17 |
| 48 | 350 | 52 | 0.43 | 0.25 | 0.19 | 0.15 | 0.11 |
| 48 | 525 | 78 | 0.65 | 0.37 | 0.28 | 0.22 | 0.16 |
| 48 | 700 | 104 | 0.87 | 0.50 | 0.38 | 0.30 | 0.22 |
| 48 | 875 | 133 | 1.11 | 0.64 | 0.48 | 0.38 | 0.28 |
| 48 | 1050 | 162 | 1.35 | 0.78 | 0.58 | 0.47 | 0.34 |
| 40 | 350 | 43 | 0.36 | 0.21 | 0.15 | 0.12 | 0.09 |
| 40 | 525 | 65 | 0.54 | 0.31 | 0.23 | 0.19 | 0.14 |
| 40 | 700 | 87 | 0.72 | 0.42 | 0.31 | 0.25 | 0.18 |
| 40 | 875 | 111 | 0.92 | 0.53 | 0.40 | 0.32 | 0.23 |
| 40 | 1050 | 135 | 1.12 | 0.65 | 0.49 | 0.39 | 0.28 |
| 40 | 1225 | 159 | 1.32 | 0.76 | 0.57 | 0.46 | 0.33 |
| 40 | 1400 | 183 | 1.53 | 0.88 | 0.66 | 0.53 | 0.38 |
| 80 | 350 | 86 | 0.72 | 0.41 | 0.31 | 0.25 | 0.18 |
| 80 | 525 | 130 | 1.08 | 0.62 | 0.47 | 0.37 | 0.27 |
| 80 | 700 | 174 | 1.45 | 0.83 | 0.63 | 0.50 | 0.36 |
| 80 | 875 | 222 | 1.85 | 1.06 | 0.80 | 0.64 | 0.46 |
| 80 | 1050 | 270 | 2.25 | 1.30 | 0.97 | 0.78 | 0.56 |
| 80 | 1225 | 318 | 2.65 | 1.53 | 1.15 | 0.92 | 0.66 |
| 80 | 1400 | 366 | 3.05 | 1.76 | 1.32 | 1.06 | 0.76 |
| 120 | 350 | 129 | 1.07 | 0.62 | 0.46 | 0.37 | 0.27 |
| 120 | 525 | 195 | 1.62 | 0.94 | 0.70 | 0.56 | 0.41 |
| 120 | 700 | 260 | 2.17 | 1.25 | 0.94 | 0.75 | 0.54 |
| 120 | 875 | 332 | 2.77 | 1.60 | 1.20 | 0.96 | 0.69 |
| 120 | 1050 | 404 | 3.37 | 1.94 | 1.46 | 1.17 | 0.84 |
| 120 | 1225 | 477 | 3.97 | 2.29 | 1.72 | 1.37 | 0.99 |
| 120 | 1400 | 549 | 4.58 | 2.64 | 1.98 | 1.58 | 1.14 |

## PHOTOMETRIC DATA GUIDE - LM-80 LUMEN MAINTENANCE

| LED LUMEN MAINTENANCE (350mA to 1050mA) | | |
|---|---|---|
| LED Life / Operating Hours | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000 | L96 | 0.96x |
| 100,000 (6X LED Test Hrs) | L93 | 0.93x |
| 150,000 (Theoretical) | L89 | 0.90x |
| 200,000 (Theoretical) | L86 | 0.87x |

**TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.**

| LED LUMEN MAINTENANCE (1225mA & 1400mA) | | |
|---|---|---|
| LED Life / Operating Hours | Lumen Depreciation | Lumen Depreciation Scale Factor |
| 60,000 | L93 | 0.93x |
| 100,000 (6X LED Test Hrs) | L89 | 0.89x |
| 150,000 (Theoretical) | L84 | 0.84x |
| 200,000 (Theoretical) | L80 | 0.80x |

**TM-21 6x Test Time Dicatates that L93 > 100,000 Hours.**
Lumen Depreciation Calculations Done in Accordance With IESNA TM-21 & LM-80 (25°C Ambient)

**IES File downloads for this product can be found at www.usaltg.com/downloads/asr.html**

Photometric Toolbox

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] ITL85917-PR
[TESTLAB] INDEPENDENT TESTING LABORATORIES, INC.
[ISSUEDATE] 10/4/2024
[MANUFAC] U.S. ARCHITECTURAL LIGHTING
[LUMCAT] RZR-PLED-IV-FT-40LED-350mA-40K-HS
[LUMINAIRE] CAST BLACK PAINTED FINNED METAL HOUSING.
[LAMP] 40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.
[_OPTIC] 1 CLEAR PLASTIC OPTIC BELOW EACH LED.
[_SHIELD] 1 BLACK PLASTIC HOUSE-SIDE SHIELD BELOW EACH LED.
[_LUMEN_SCALE] PRORATED FROM 2020 PLED TO 2023 PLED TESTS.
[_INPUT_ELECTRICAL] 120.0 VOLTS, 42.9 WATTS
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTELUMENS] 5103
[_BUGRATING] LCS B0-U0-G2 RATING
[_SEARCH_SOURCETYPE] LED
[_SEARCH_COLORTEMP] 4000K
[_SEARCH_CRI] 70
[_SEARCH_MOUNTING] Arm, Pole, Wall
[_SEARCH_APPLICATION] Outdoor, Architectural, Area, Amusement, Automotive, Government, Healthcare, Hospitality, Hotel, In
[MORE] Street, Walkway, Corrosion Resistant, Vandal Resistant, Wet Location

**CHARACTERISTICS**

| | |
|---|---|
| IES Classification | Type IV |
| Longitudinal Classification | Short |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 5103 |
| Downward Total Efficiency | N.A. (absolute) |
| Total Luminaire Efficiency | N.A. (absolute) |
| Luminaire Efficacy Rating (LER) | 119 |
| Total Luminaire Watts | 42.9 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 5883 |
| Maximum Candela Angle | 31H 73V |
| Maximum Candela (<90 Degrees Vertical) | 5883 |
| Maximum Candela Angle (<90 Degrees Vertical) | 31H 73V |
| Maximum Candela At 90 Degrees Vertical | 0 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 1202 (23.6% Luminaire Lumens) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

| | Lumens | % Lamp | % Luminaire |
|---|---|---|---|
| FL - Front-Low (0-30) | 185.5 | N.A. | 3.6 |
| FM - Front-Medium (30-60) | 1761.8 | N.A. | 34.5 |
| FH - Front-High (60-80) | 2766.5 | N.A. | 54.2 |
| FVH - Front-Very High (80-90) | 164.9 | N.A. | 3.2 |
| BL - Back-Low (0-30) | 42.8 | N.A. | 0.8 |
| BM - Back-Medium (30-60) | 94.7 | N.A. | 1.9 |
| BH - Back-High (60-80) | 82.9 | N.A. | 1.6 |
| BVH - Back-Very High (80-90) | 3.6 | N.A. | 0.1 |
| UL - Uplight-Low (90-100) | 0.0 | N.A. | 0.0 |
| UH - Uplight-High (100-180) | 0.0 | N.A. | 0.0 |
| Total | 5102.7 | N.A. | 100.0 |
| BUG Rating | B0-U0-G2 | | |

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**CANDELA TABULATION**

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **0** | **5** | **15** | **25** | **31** | **35** | **45** | **55** | **65** | **75** |
| **0.0** | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 |
| **2.5** | 126 | 126 | 126 | 126 | 126 | 126 | 125 | 124 | 124 | 124 |
| **5.0** | 137 | 137 | 135 | 134 | 133 | 131 | 129 | 127 | 126 | 124 |
| **7.5** | 186 | 184 | 178 | 168 | 161 | 156 | 145 | 134 | 128 | 124 |
| **10.0** | 269 | 271 | 261 | 244 | 231 | 220 | 195 | 161 | 138 | 126 |
| **12.5** | 369 | 366 | 354 | 333 | 317 | 303 | 267 | 216 | 166 | 132 |
| **15.0** | 464 | 461 | 449 | 425 | 405 | 389 | 347 | 288 | 212 | 146 |
| **17.5** | 552 | 553 | 535 | 515 | 494 | 477 | 430 | 361 | 267 | 172 |
| **20.0** | 636 | 635 | 622 | 601 | 580 | 563 | 517 | 440 | 332 | 209 |
| **22.5** | 698 | 695 | 684 | 673 | 662 | 648 | 606 | 525 | 404 | 256 |
| **25.0** | 722 | 719 | 707 | 708 | 720 | 721 | 699 | 617 | 481 | 308 |
| **27.5** | 745 | 741 | 720 | 718 | 743 | 763 | 790 | 714 | 565 | 364 |
| **30.0** | 781 | 775 | 748 | 739 | 760 | 786 | 867 | 817 | 657 | 428 |
| **32.5** | 819 | 814 | 786 | 780 | 798 | 822 | 925 | 929 | 758 | 501 |
| **35.0** | 854 | 854 | 840 | 844 | 858 | 874 | 974 | 1050 | 878 | 590 |
| **37.5** | 897 | 905 | 916 | 923 | 925 | 926 | 1018 | 1175 | 1029 | 704 |
| **40.0** | 1142 | 943 | 958 | 964 | 975 | 979 | 1072 | 1301 | 1211 | 854 |
| **42.5** | 1353 | 1365 | 1399 | 1043 | 1060 | 1070 | 1153 | 1434 | 1407 | 1020 |
| **45.0** | 1473 | 1483 | 1531 | 1210 | 1229 | 1229 | 1287 | 1584 | 1589 | 1197 |
| **47.5** | 1612 | 1639 | 1738 | 1446 | 1478 | 1469 | 1475 | 1739 | 1747 | 1366 |
| **50.0** | 1750 | 1779 | 1913 | 1707 | 1786 | 1788 | 1706 | 1900 | 1890 | 1551 |
| **52.5** | 1885 | 1920 | 2083 | 2001 | 2125 | 2142 | 1981 | 2090 | 2053 | 1779 |
| **55.0** | 2109 | 2148 | 2353 | 2358 | 2484 | 2505 | 2308 | 2281 | 2272 | 2072 |
| **57.5** | 2519 | 2553 | 2728 | 2739 | 2893 | 2888 | 2696 | 2520 | 2581 | 2452 |
| **60.0** | 2867 | 2909 | 3071 | 3147 | 3294 | 3295 | 3066 | 2808 | 2994 | 2750 |
| **62.5** | 2873 | 2928 | 3129 | 3500 | 3691 | 3726 | 3444 | 3182 | 3334 | 2760 |
| **65.0** | 3160 | 3226 | 3482 | 3895 | 4166 | 4141 | 3817 | 3554 | 3332 | 2481 |
| **67.5** | 3535 | 3608 | 3909 | 4315 | 4623 | 4614 | 4196 | 3572 | 2923 | 1960 |
| **70.0** | 3872 | 3949 | 4304 | 4907 | 5146 | 5097 | 4393 | 3073 | 2109 | 1276 |
| **72.5** | 3952 | 4004 | 4541 | 5429 | 5800 | 5646 | 3840 | 2009 | 1243 | 771 |
| **73.0** | 3847 | 3891 | 4477 | 5504 | 5883 | 5613 | 3568 | 1746 | 1067 | 693 |
| **75.0** | 3212 | 3160 | 3463 | 4830 | 5008 | 4451 | 1900 | 966 | 615 | 444 |
| **77.5** | 2311 | 2241 | 1853 | 2171 | 2144 | 1884 | 1134 | 995 | 811 | 768 |
| **80.0** | 1198 | 1202 | 1182 | 1081 | 898 | 725 | 456 | 263 | 195 | 147 |
| **82.5** | 938 | 943 | 1019 | 1013 | 828 | 601 | 238 | 103 | 78 | 43 |
| **85.0** | 557 | 601 | 737 | 808 | 607 | 392 | 100 | 59 | 52 | 34 |
| **87.5** | 188 | 241 | 395 | 425 | 280 | 159 | 31 | 21 | 18 | 17 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Vert. Angles | Horizontal Angles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **85** | **90** | **95** | **105** | **115** | **125** | **135** | **145** | **155** | **165** |
| **0.0** | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 |
| **2.5** | 124 | 123 | 123 | 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| **5.0** | 123 | 122 | 122 | 121 | 121 | 121 | 120 | 120 | 120 | 120 |
| **7.5** | 122 | 122 | 121 | 121 | 120 | 119 | 119 | 118 | 118 | 117 |
| **10.0** | 122 | 122 | 121 | 120 | 119 | 117 | 116 | 115 | 114 | 113 |
| **12.5** | 123 | 121 | 120 | 118 | 116 | 114 | 112 | 111 | 109 | 108 |
| **15.0** | 123 | 120 | 118 | 116 | 113 | 111 | 107 | 106 | 105 | 104 |
| **17.5** | 123 | 119 | 116 | 112 | 110 | 106 | 104 | 102 | 101 | 101 |
| **20.0** | 126 | 117 | 114 | 109 | 105 | 103 | 100 | 99 | 97 | 96 |
| **22.5** | 131 | 115 | 111 | 105 | 102 | 99 | 96 | 94 | 93 | 93 |
| **25.0** | 139 | 114 | 107 | 102 | 98 | 95 | 92 | 90 | 89 | 88 |

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**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**CANDELA TABULATION - (Cont.)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **27.5** | 153 | 113 | 104 | 97 | 93 | 90 | 88 | 86 | 84 | 84 |
| **30.0** | 173 | 114 | 101 | 93 | 89 | 86 | 83 | 82 | 80 | 80 |
| **32.5** | 202 | 116 | 98 | 89 | 84 | 80 | 78 | 78 | 77 | 77 |
| **35.0** | 240 | 122 | 95 | 85 | 79 | 75 | 73 | 73 | 74 | 74 |
| **37.5** | 291 | 134 | 93 | 79 | 73 | 70 | 68 | 70 | 72 | 73 |
| **40.0** | 356 | 150 | 90 | 73 | 67 | 63 | 63 | 67 | 72 | 74 |
| **42.5** | 442 | 176 | 89 | 67 | 61 | 58 | 60 | 65 | 71 | 76 |
| **45.0** | 546 | 214 | 90 | 61 | 56 | 55 | 58 | 63 | 71 | 77 |
| **47.5** | 671 | 269 | 96 | 57 | 51 | 53 | 57 | 62 | 67 | 75 |
| **50.0** | 820 | 356 | 116 | 57 | 50 | 53 | 58 | 61 | 65 | 73 |
| **52.5** | 1014 | 475 | 150 | 61 | 50 | 53 | 58 | 59 | 63 | 71 |
| **55.0** | 1579 | 934 | 191 | 59 | 47 | 51 | 58 | 61 | 63 | 70 |
| **57.5** | 1882 | 1106 | 234 | 54 | 47 | 54 | 60 | 63 | 63 | 67 |
| **60.0** | 2089 | 1223 | 254 | 42 | 56 | 61 | 63 | 66 | 62 | 64 |
| **62.5** | 2114 | 1272 | 265 | 36 | 73 | 73 | 72 | 71 | 65 | 59 |
| **65.0** | 1906 | 1223 | 261 | 30 | 86 | 95 | 88 | 77 | 64 | 53 |
| **67.5** | 1519 | 1033 | 228 | 28 | 90 | 121 | 103 | 74 | 56 | 41 |
| **70.0** | 1095 | 798 | 185 | 26 | 88 | 115 | 104 | 72 | 47 | 31 |
| **72.5** | 807 | 638 | 140 | 23 | 63 | 88 | 88 | 64 | 38 | 24 |
| **73.0** | 765 | 616 | 134 | 22 | 57 | 82 | 80 | 58 | 35 | 22 |
| **75.0** | 635 | 545 | 109 | 19 | 35 | 59 | 51 | 38 | 28 | 17 |
| **77.5** | 515 | 384 | 59 | 15 | 18 | 38 | 32 | 25 | 22 | 11 |
| **80.0** | 134 | 102 | 26 | 12 | 11 | 22 | 21 | 17 | 17 | 7 |
| **82.5** | 29 | 19 | 13 | 9 | 9 | 13 | 13 | 13 | 11 | 4 |
| **85.0** | 17 | 10 | 7 | 7 | 8 | 8 | 8 | 8 | 6 | 2 |
| **87.5** | 6 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 0 |
| **90.0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| **Vert. Angles** | **Horizontal Angles** | |
|---|---|---|
| | **175** | **180** |
| **0.0** | 123 | 123 |
| **2.5** | 121 | 121 |
| **5.0** | 120 | 120 |
| **7.5** | 117 | 117 |
| **10.0** | 113 | 113 |
| **12.5** | 108 | 108 |
| **15.0** | 105 | 105 |
| **17.5** | 101 | 101 |
| **20.0** | 97 | 97 |
| **22.5** | 93 | 93 |
| **25.0** | 88 | 89 |
| **27.5** | 84 | 84 |
| **30.0** | 80 | 80 |
| **32.5** | 77 | 77 |
| **35.0** | 75 | 75 |
| **37.5** | 74 | 74 |
| **40.0** | 76 | 76 |
| **42.5** | 78 | 78 |
| **45.0** | 81 | 81 |
| **47.5** | 82 | 83 |
| **50.0** | 82 | 83 |
| **52.5** | 80 | 82 |
| **55.0** | 78 | 79 |
| **57.5** | 74 | 75 |
| **60.0** | 68 | 68 |

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Results derived from content of manufacturers photometric file.

**CANDELA TABULATION - (Cont.)**

| | | |
|---|---|---|
| **62.5** | 59 | 58 |
| **65.0** | 45 | 44 |
| **67.5** | 34 | 34 |
| **70.0** | 25 | 24 |
| **72.5** | 17 | 16 |
| **73.0** | 16 | 14 |
| **75.0** | 10 | 8 |
| **77.5** | 4 | 3 |
| **80.0** | 1 | 1 |
| **82.5** | 1 | 0 |
| **85.0** | 0 | 0 |
| **87.5** | 0 | 0 |
| **90.0** | 0 | 0 |

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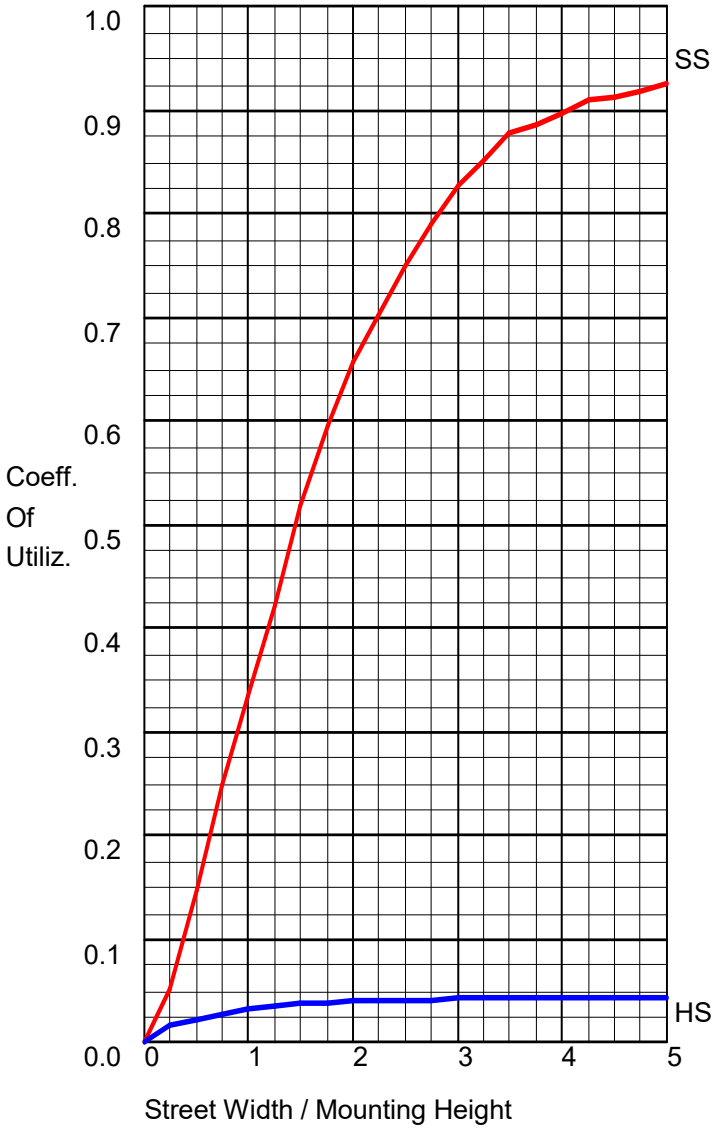
**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**COEFFICIENTS OF UTILIZATION**




**FLUX DISTRIBUTION**

| | Lumens | Percent Of Luminaire |
|---|---|---|
| Downward Street Side | 4878.8 | 95.6 |
| Downward House Side | 224.0 | 4.4 |
| Downward Total | 5102.8 | 100.0 |
| Upward Street Side | 0.0 | 0.0 |
| Upward House Side | 0.0 | 0.0 |
| Upward Total | 0.0 | 0.0 |
| Total Flux | 5102.8 | 100.0 |

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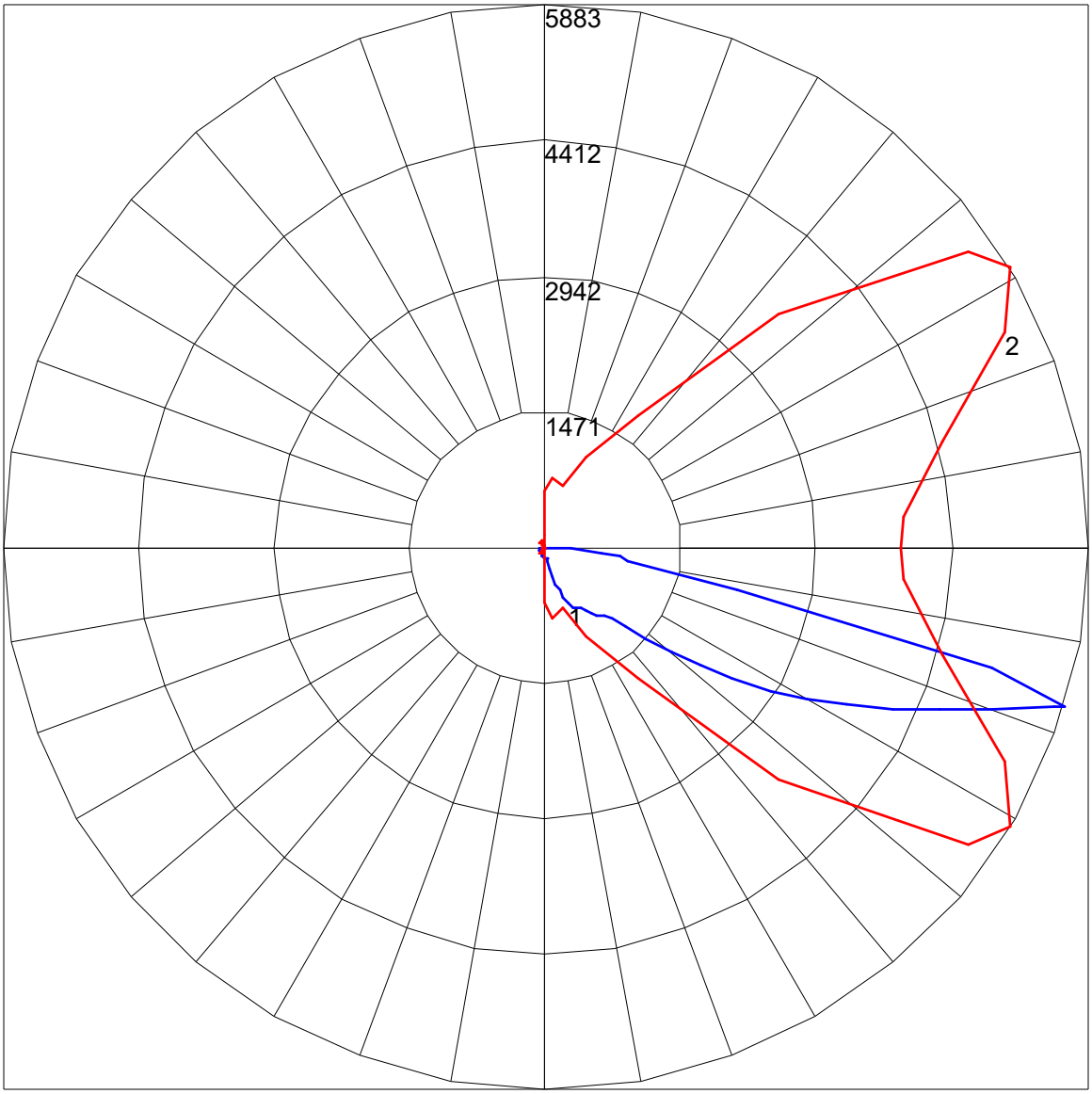
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**POLAR GRAPH**




Maximum Candela = 5883  Located At Horizontal Angle = 31, Vertical Angle = 73
# 1 - Vertical Plane Through Horizontal Angles (31 - 211) (Through Max. Cd.)
# 2 - Horizontal Cone Through Vertical Angle (73) (Through Max. Cd.)

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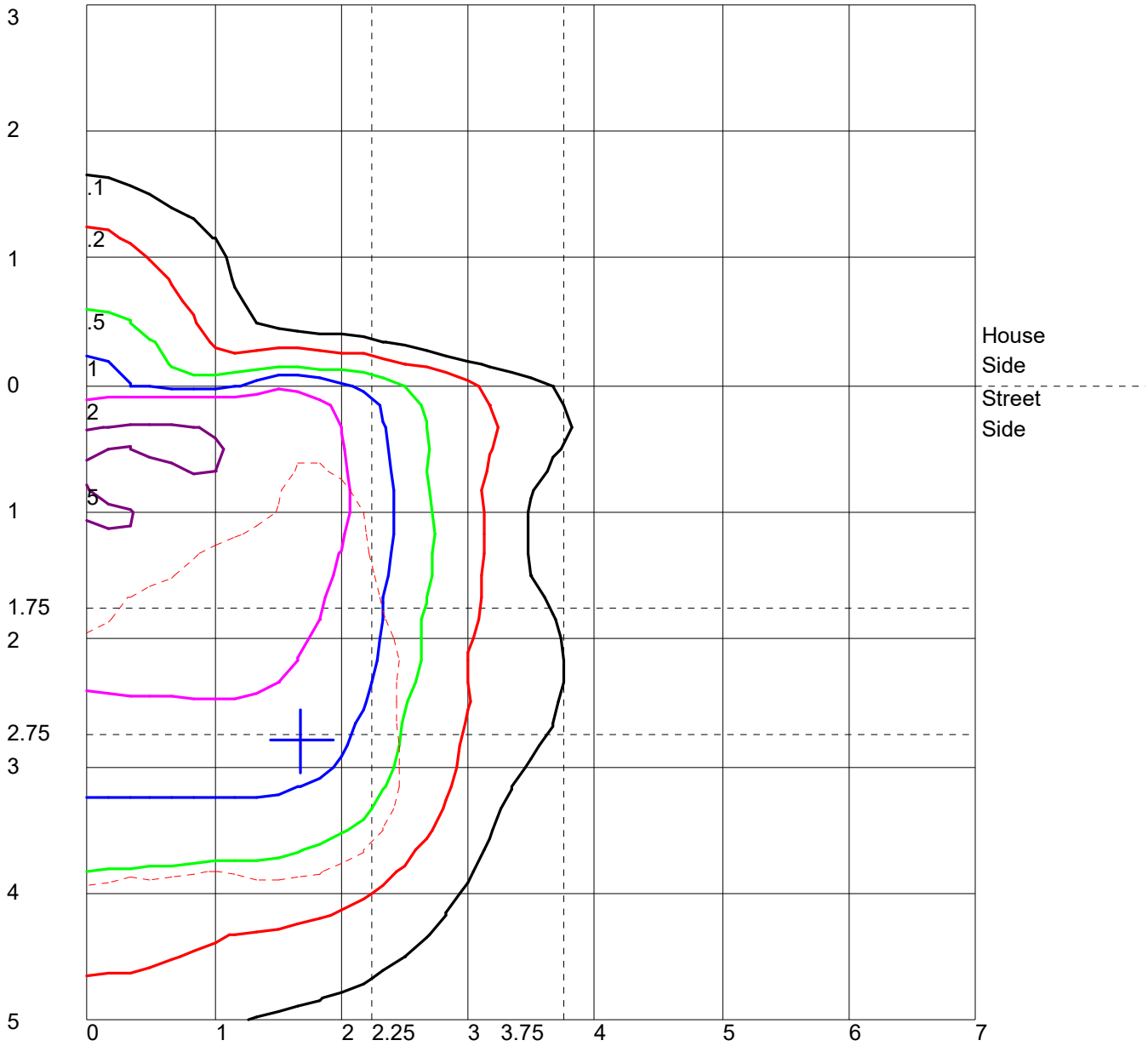
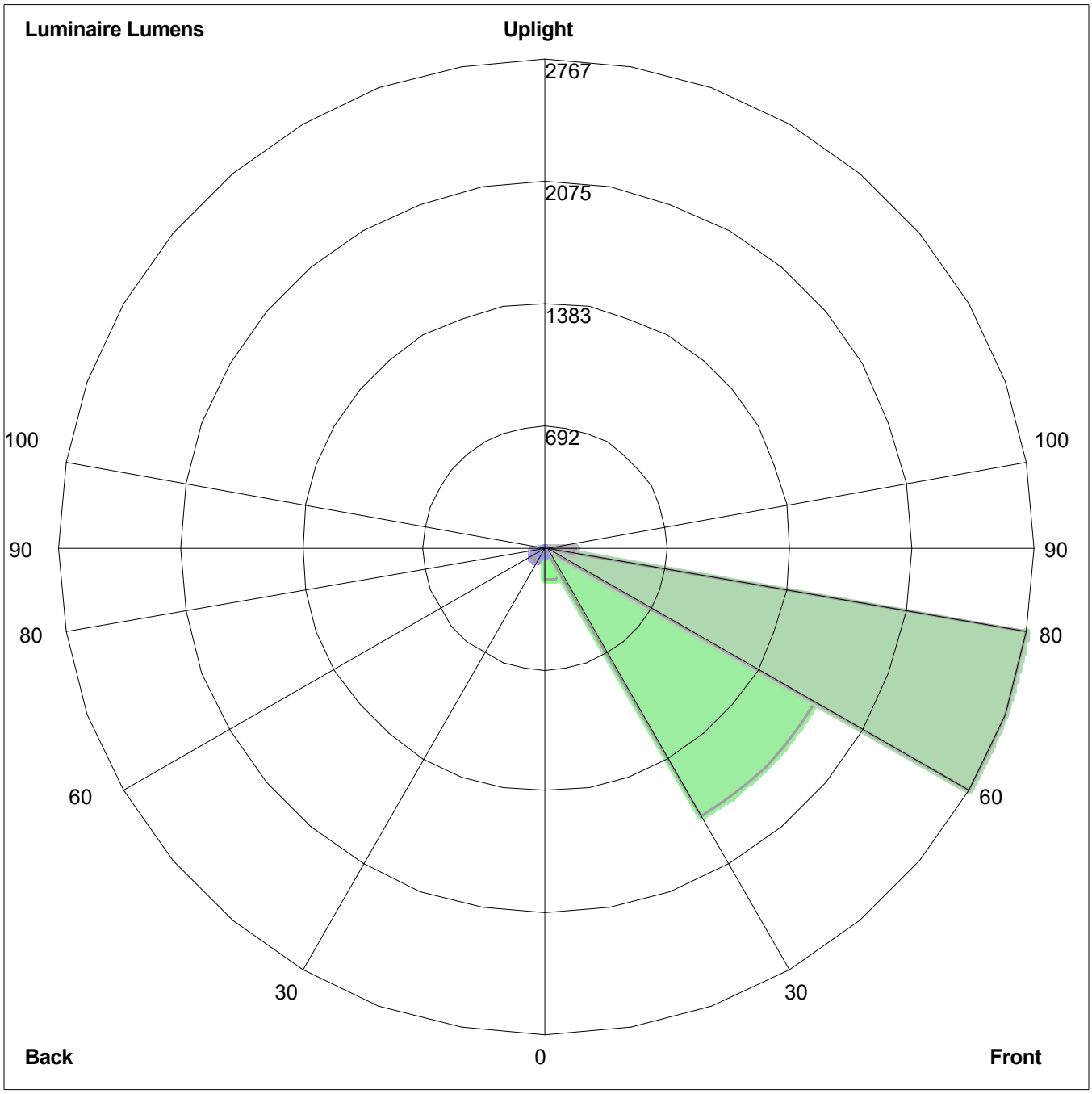
**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE**




Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

**IES ROAD REPORT**
**PHOTOMETRIC FILENAME : RZR-PLED-IV-FT-40LED-350MA-40K-HS.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH**




Luminaire Lumens:
Front: Low=185.5, Medium=1761.8, High=2766.5, Very High=164.9
Back: Low=42.8, Medium=94.7, High=82.9, Very High=3.6
Uplight: Low=0.0, High=0.0

BUG Rating : B0-U0-G2

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