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 September 3, 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

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

July 14, 2025

Letter of Intent, UDC & Land Use City Submittal

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 School District is anticipating Common Council approval on September 16, 2025. It is the School District's objective to start site infrastructure construction and site development in early 2026, with building completion set for July 2027.

The proposed Sherman Middle School – Shabazz High School is a 150,000gsf two story structure, that will house sixth thru eighth grade for the middle school portion of the facility and ninth thru twelfth grade for the high school. Functionally, the new school will operate the same as the existing school, with typical staffing levels of 100 people. Since the school is important component of the community's school system, the site and building require special considerations for site access with safe and separate circulation for public entrances as well as separation between yellow bus and vehicle.

Enclosed for review please find the proposed site plan and architectural plans and elevations. Please contact Susan Bowersox with OPN Architects or Scott Chehak with Madison Metropolitan School District if additional information is needed prior to the upcoming review meeting.

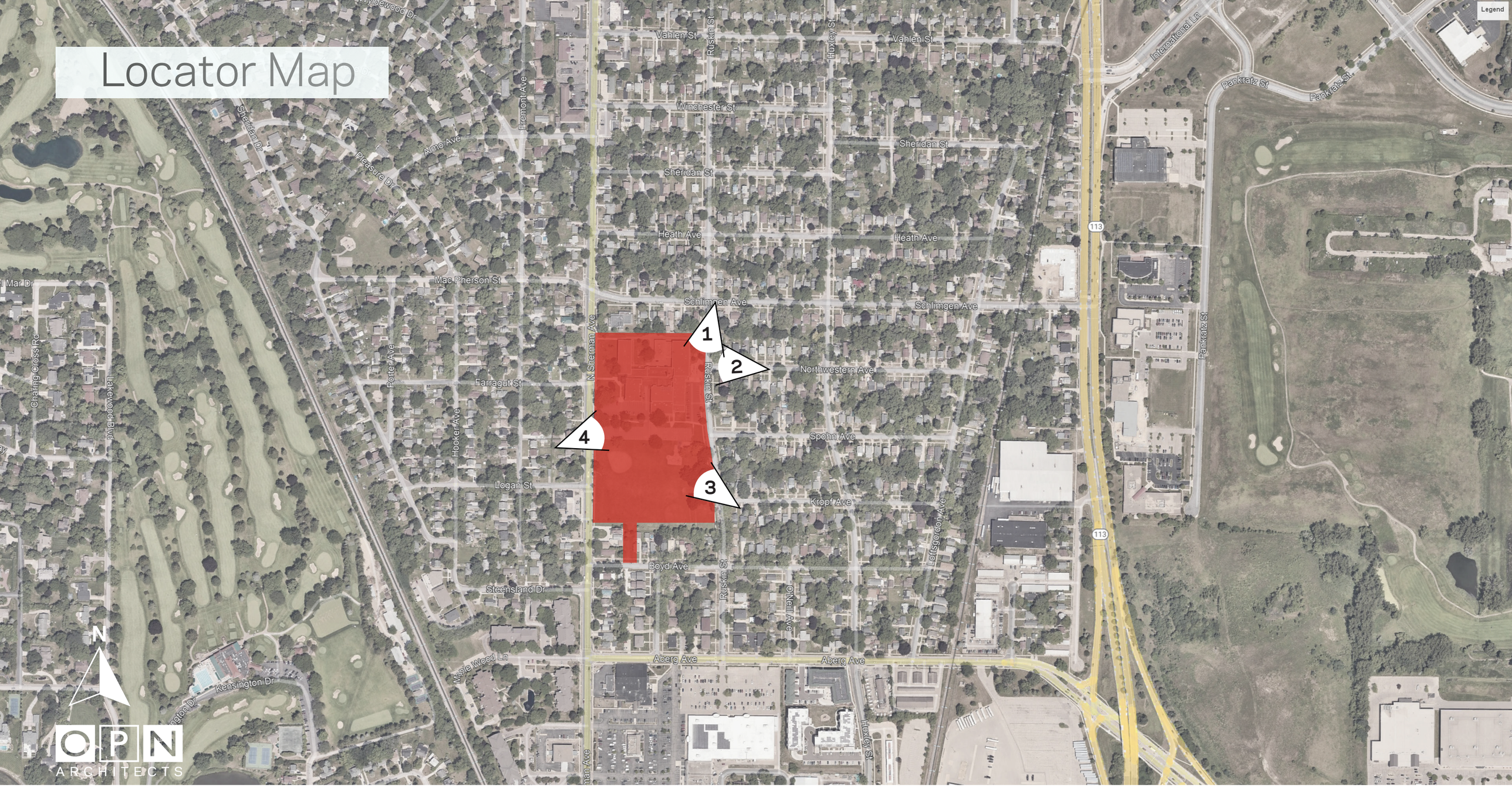
Sherman MS - Shabazz HS School

New School Design | UDC Final Submittal

7/14/25

OPN ARCHITECTS JSD

Locator Map



MMSD 2024 Referendum Ph. 1: Sherman MS Shabazz HS

Site Context

View South from Ruskin St

View West from Northwestern Ave

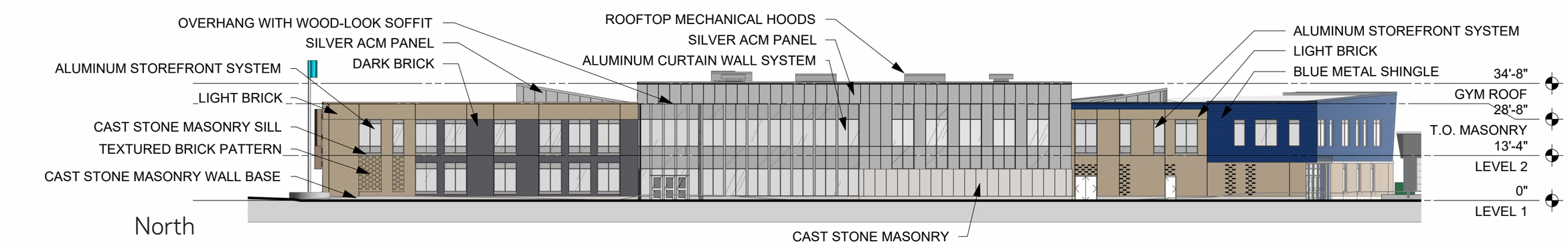
View Northwest from Ruskin St/Kropf Ave intersection

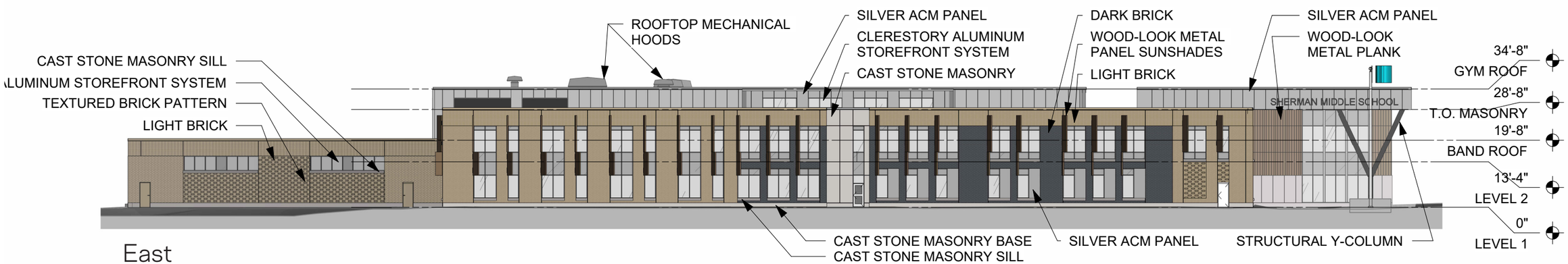
View East from Sherman Ave

Elevation - N & S

1″ = 30′

0 15 30 60



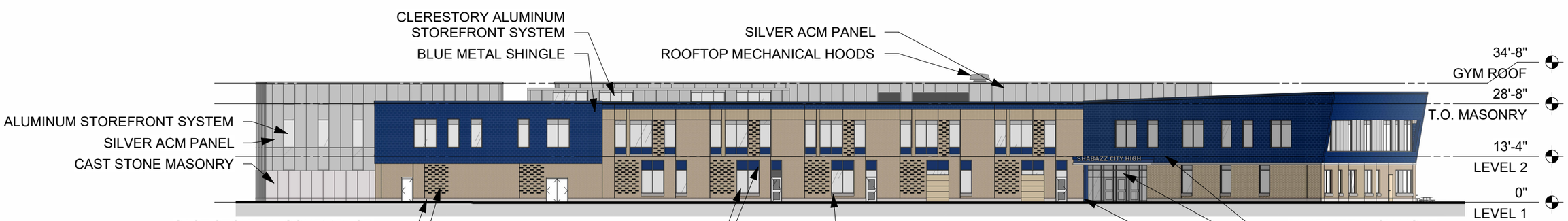


Elevation - E & W

1″ = 30′

0 15 30 60

South

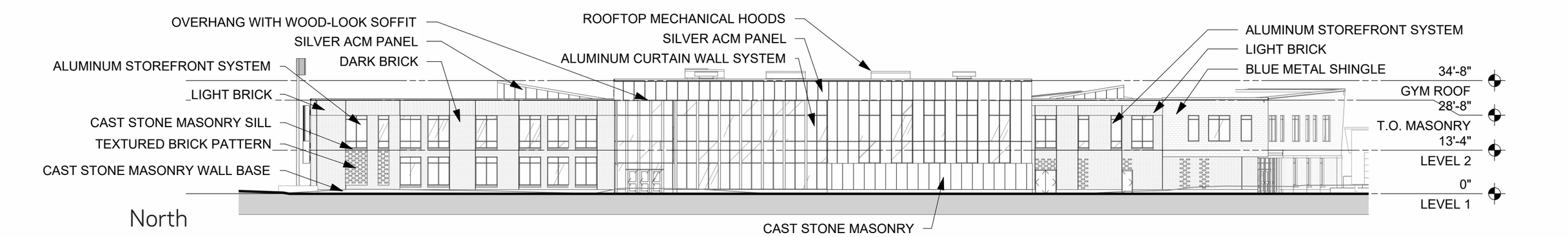


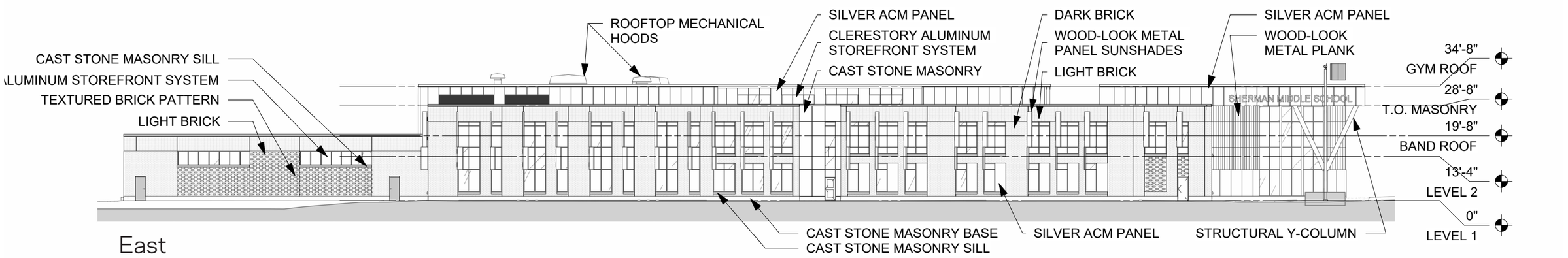
West

B&W Elevation - N & S

1″ = 30′

0 15 30 60

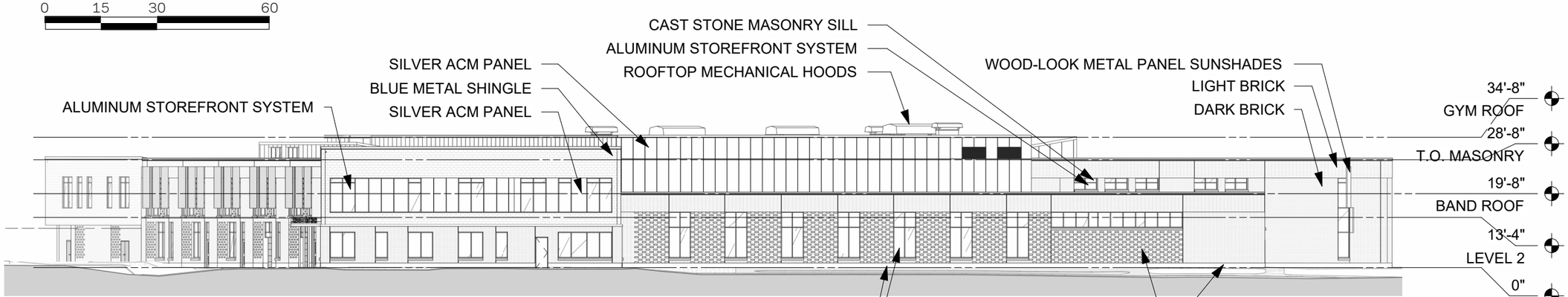




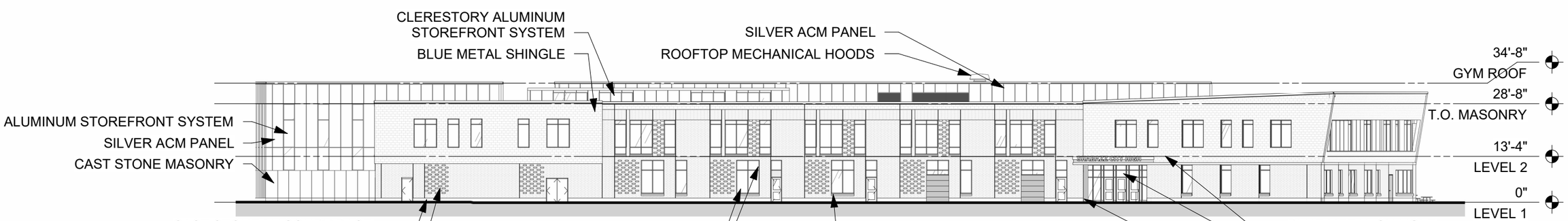
B&W Elevation - E & W

1″ = 30′

0 15 30 60



South



West

Perspective - NE

Perspective - Sherman Shading

Perspective - SW

MMSD 2024 Referendum Ph. 1: Sherman MS Shabazz HS

Perspective - NW

Sherman MS Entry

MMSD 2024 Referendum Ph. 1: Sherman MS Shabazz HS

Current Design - Exterior Material

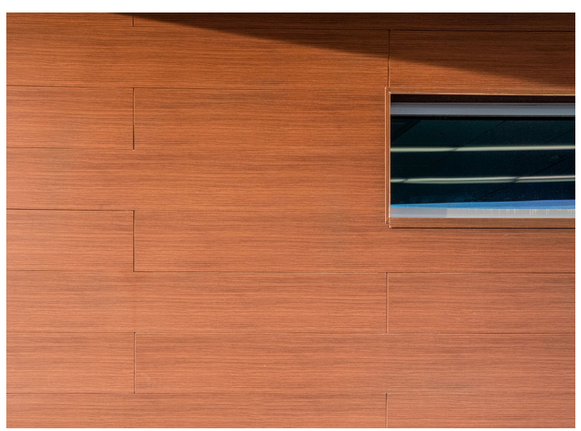
Brick A:
Manufacturer: Cloud Ceramics Utility
Color: Dove Grey Velour
Brick B:
Manufacturer: Yankee Hill Utility
Color: Charcoal Velour

Aluminum Composite
Metal Wall Panel

Millenium Stainless Steel
Cupped Tile, mill finish Blue

Cast Stone

Brick Texture



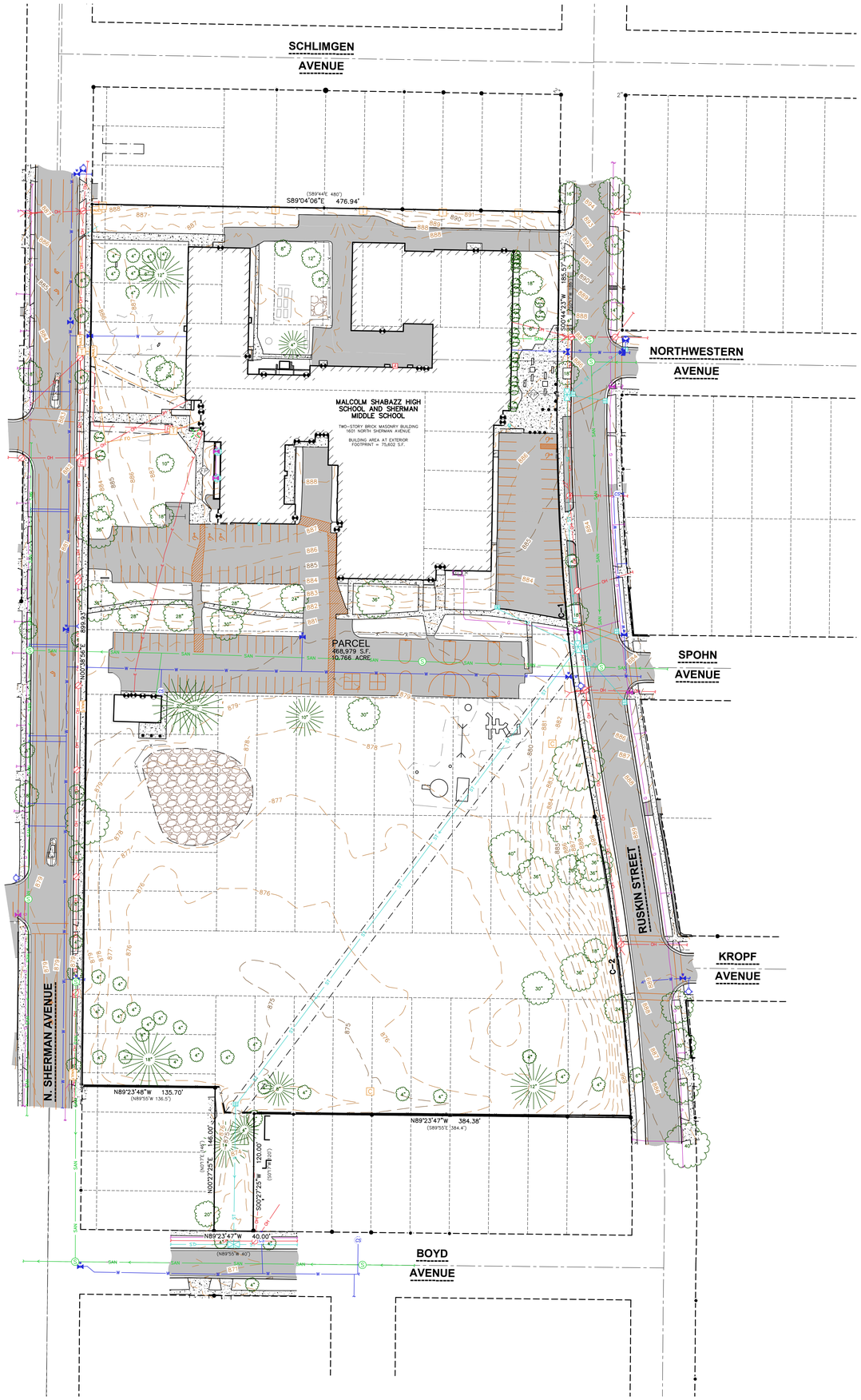
Armstrong Metalworks Linear – Synchro
Color: Effects Cherry

Thank You

OPN
ARCHITECTS

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
- SAN — SANITARY SEWER
- W — WATER LINE
- ST — STORM SEWER
- T — UNDERGROUND TELEPHONE
- G — NATURAL GAS
- OH — OVERHEAD LINE
- E — UNDERGROUND ELECTRIC
- BUILDING
- 875 — INDEX CONTOUR
- 874 — 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

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 DIGGER'S 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 DIGGER'S HOTLINE:
   CITY OF MADISON
   MCI.
   AT&T COMMUNICATIONS
   MGE (ELECTRIC AND GAS)
   METROPOLITIAN UNIFIED NETWORK CONSORTIUM
   LEVEL 3 NOW LUMEN
7. BEFORE EXCAVATION, APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED. FOR EXACT LOCATION OF UNDERGROUND UTILITIES, CONTACT DIGGER'S 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, S-2614
PROFESSIONAL LAND SURVEYOR

04-02-25
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		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Prepared By: ZHG 01/08/25

SHEET TITLE:
EXISTING CONDITIONS SURVEY

SHEET NUMBER:
1 OF 3

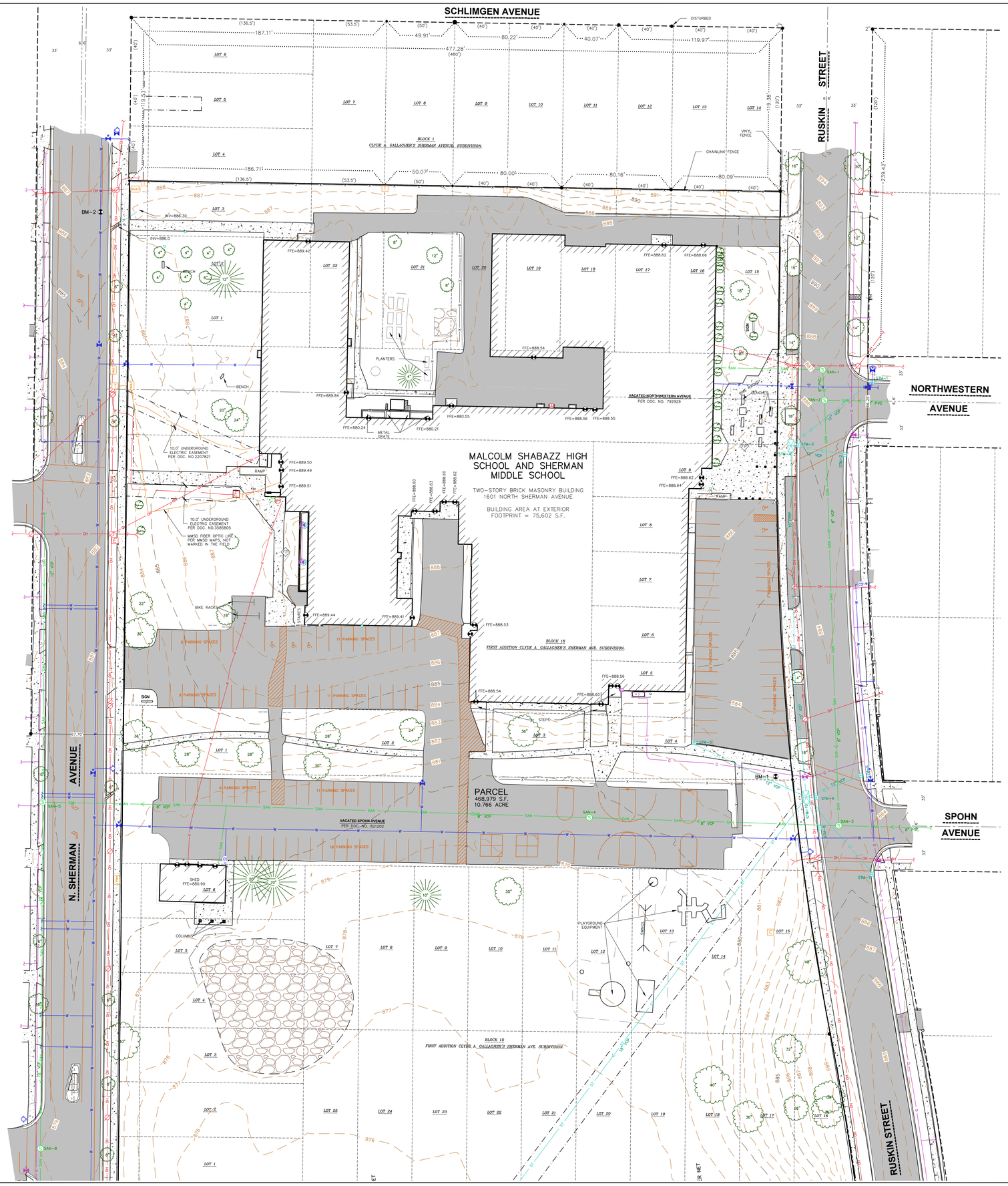
PROJECT NO: 24-14661

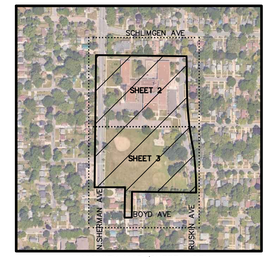
THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF JSD PROFESSIONAL SERVICES, INC.

File: \\JSDINC\projects2\2024\24-14661\DWG\Survey Sheets\24-14661 Existn.dwg Layout: Sheet1 User: john.krebs Plotted: Apr 01, 2025 3:25pm 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
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- END/WALL/END OF PIPE
- GAS VALVE
- ELECTRIC TRANSFORMER
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- YARD LIGHT
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- GRAVEL
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- 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
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STM-12	871.21	E	867.11	24"	VCP
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SANITARY SEWER MANHOLES

STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
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		NE	877.47	6"	PVC
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		N	877.16	8"	VCP
		E	877.37	8"	PVC
SAN-3	883.59	W	874.89	8"	VCP
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		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
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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
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BENCHMARKS

BENCH MARK	ELEVATION	DESCRIPTION
BM-1	882.85	REBAR WITH BLUE JSD CAP LOCATED AT THE NORTHEAST CORNER OF VACATED SPOHN AVENUE
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*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 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
3		
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Prepared By: ZHG 01/08/25

SHEET TITLE:
EXISTING CONDITIONS SURVEY

SHEET NUMBER:
2 OF 3

PROJECT NO: 24-14661

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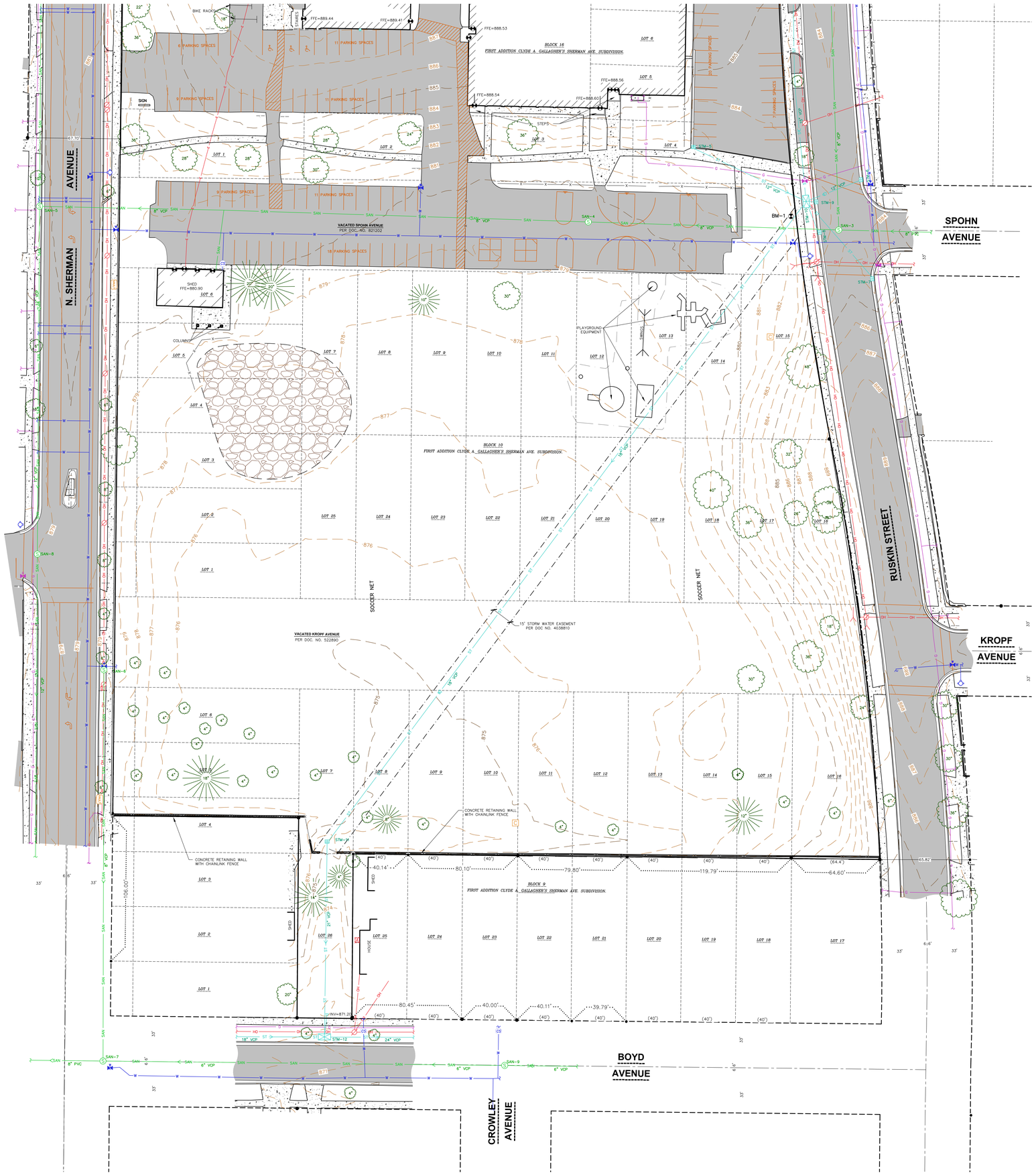

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Prepared By: ZHG 01/08/25

SHEET TITLE:
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File: \\JSDINC\projects\2024\24-14661\DWG\Survey Sheets\24-14661 Existing.dwg Layout: Sheet3 User: john.krebs Plotted: Apr 01, 2025 - 3:27pm Xref's:

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 **[FIRM NAME]**, TITLED **["REPORT TITLE"]**, ISSUE DATE **[DATE.]**. 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 **[FIRM NAME]**, TITLED **["REPORT TITLE"]**, ISSUE DATE **[DATE]**. 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.

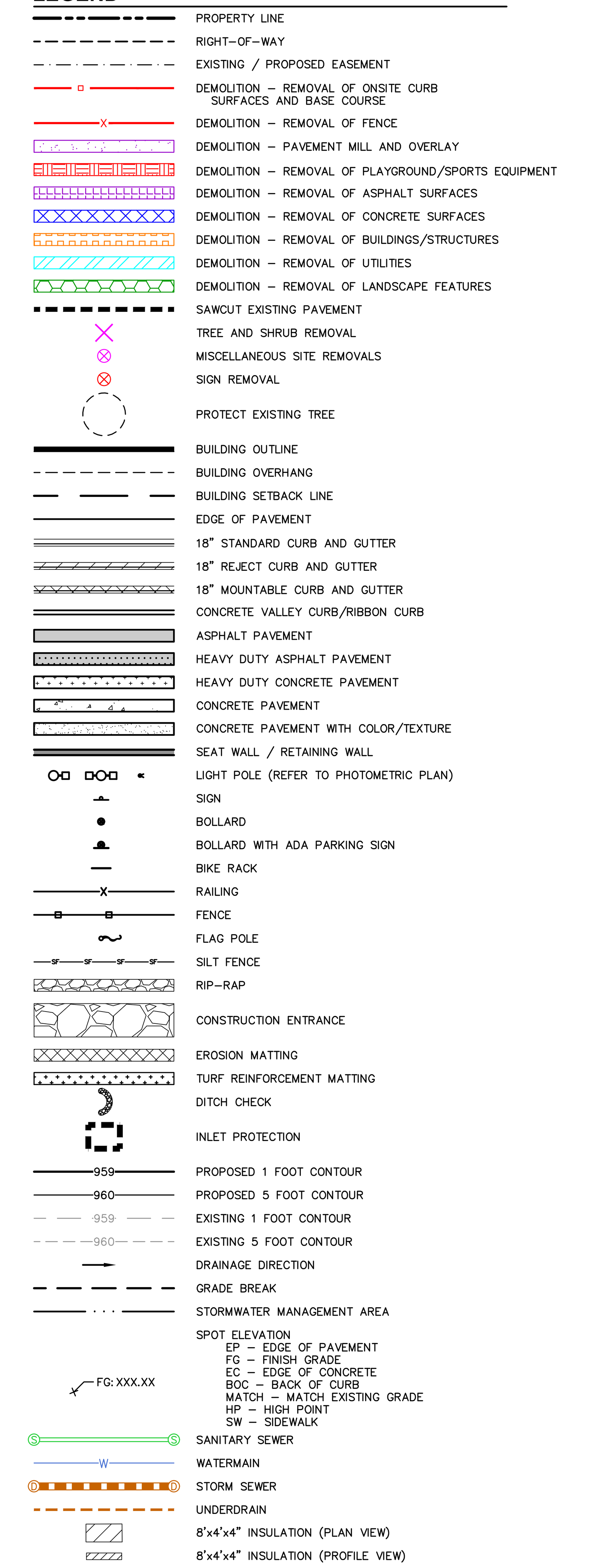
EXCAVATION, FILL PLACEMENT, & COMPACTION SPECIFICATIONS

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



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Key Plan

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
GENERAL NOTES & LEGEND

Sheet Number
C100

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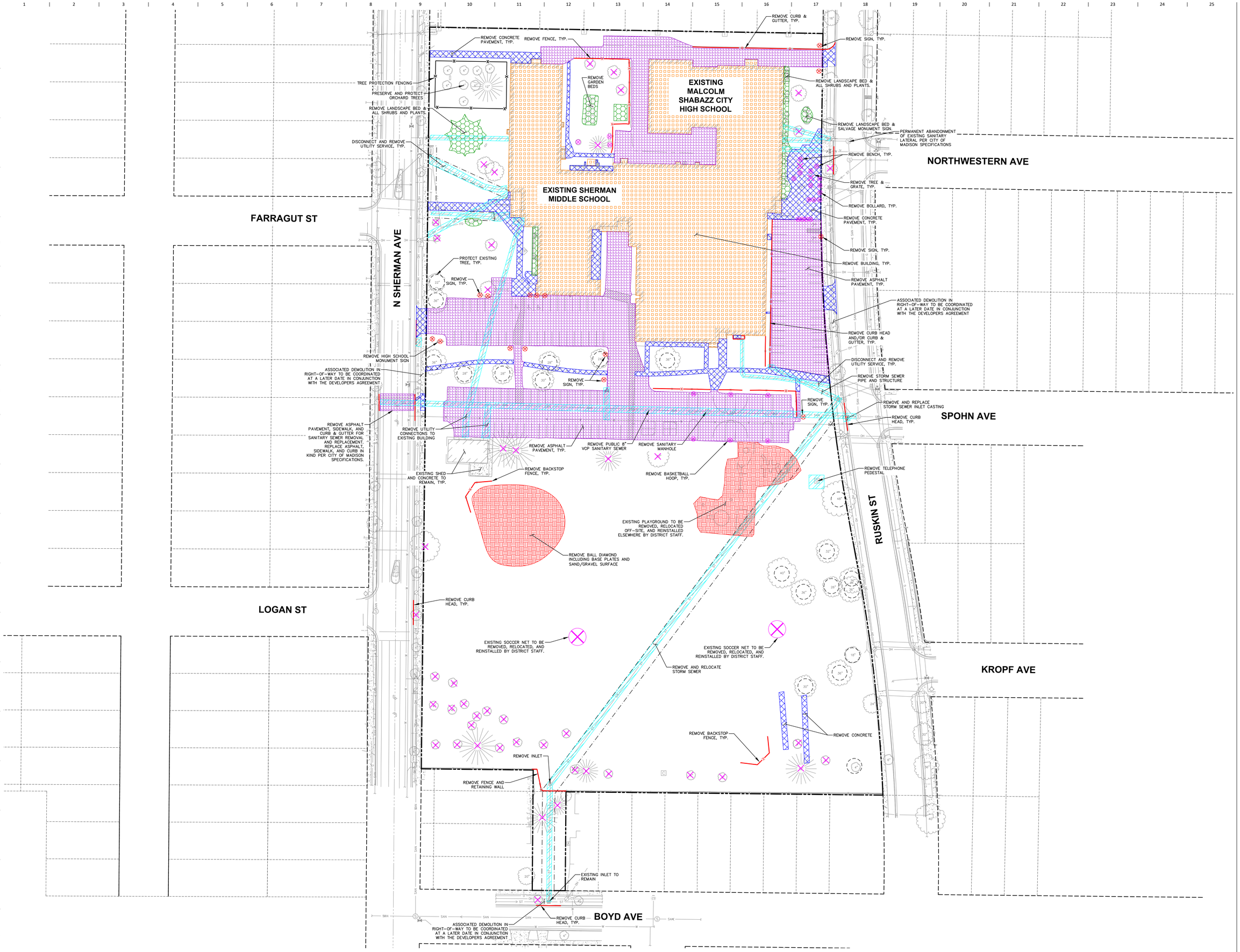

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Key Plan

north
SCALE IN FEET
40' 0 40'

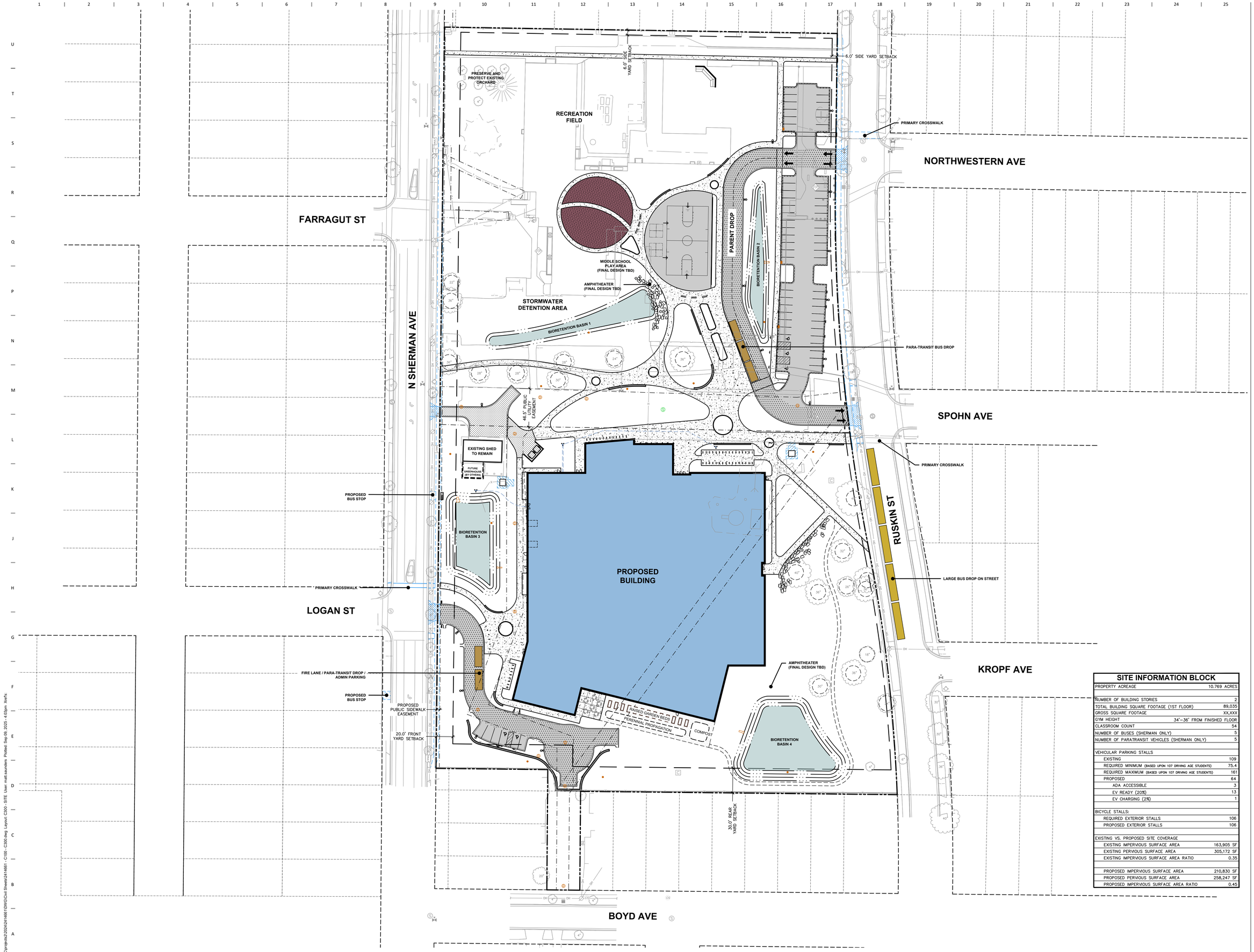
Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
DEMOLITION PLAN

Sheet Number
C200



SITE INFORMATION BLOCK

PROPERTY ACREAGE	10.769 ACRES
NUMBER OF BUILDING STORIES	2
TOTAL BUILDING SQUARE FOOTAGE (1ST FLOOR)	89,035
GROSS SQUARE FOOTAGE	XX,XXX
GYM HEIGHT	34'–36' FROM FINISHED FLOOR
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	3
EV READY (20%)	13
EV CHARGING (2%)	1
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	305,172 SF
EXISTING IMPERVIOUS SURFACE AREA RATIO	0.35
PROPOSED IMPERVIOUS SURFACE AREA	210,830 SF
PROPOSED PERVIOUS SURFACE AREA	258,247 SF
PROPOSED IMPERVIOUS SURFACE AREA RATIO	0.45

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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL 09/09/25

Sheet Name
SITE PLAN

Sheet Number
C300

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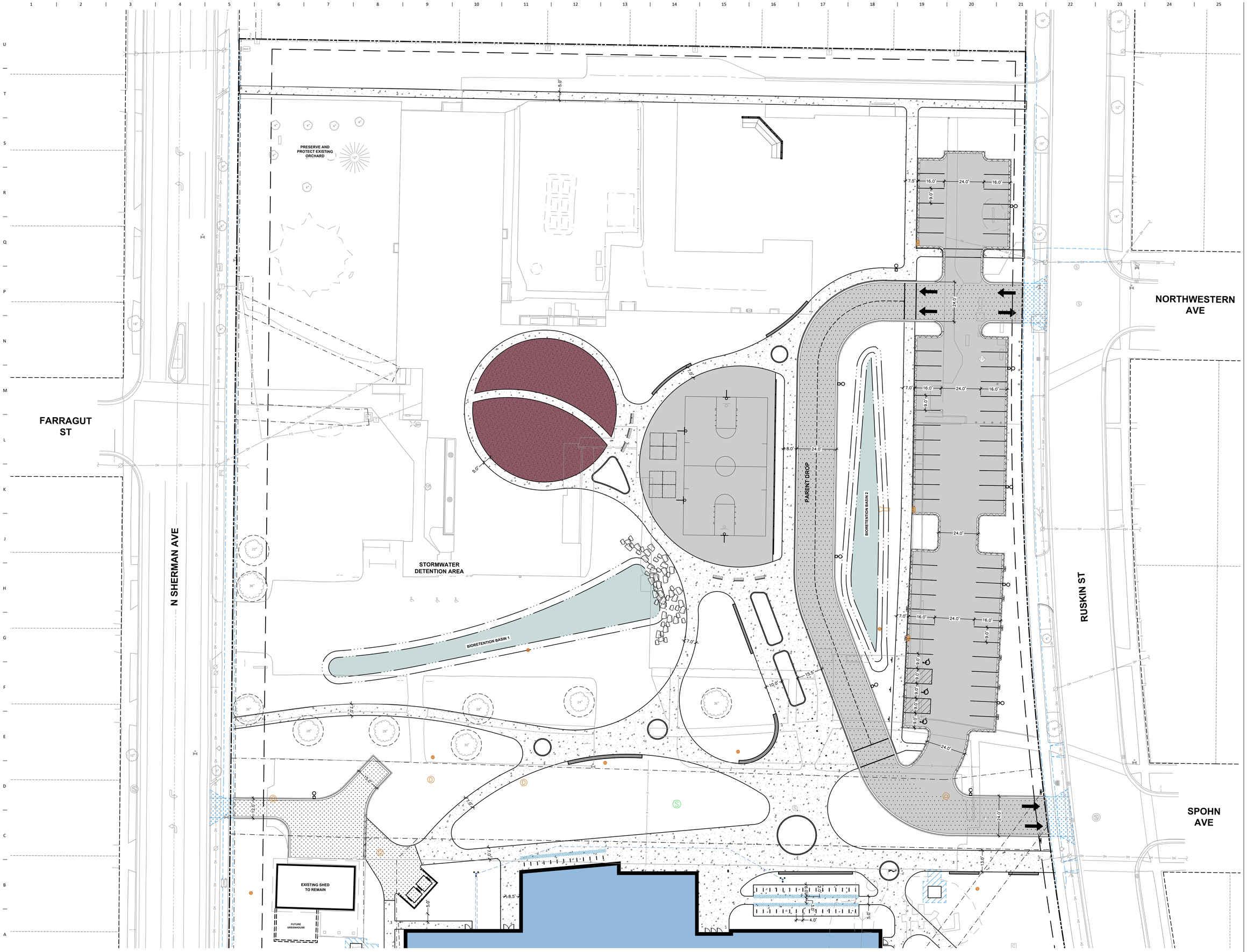

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Key Plan

north
SCALE IN FEET
20' 0 20'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
DIMENSIONED SITE PLAN - NORTH

Sheet Number
C301

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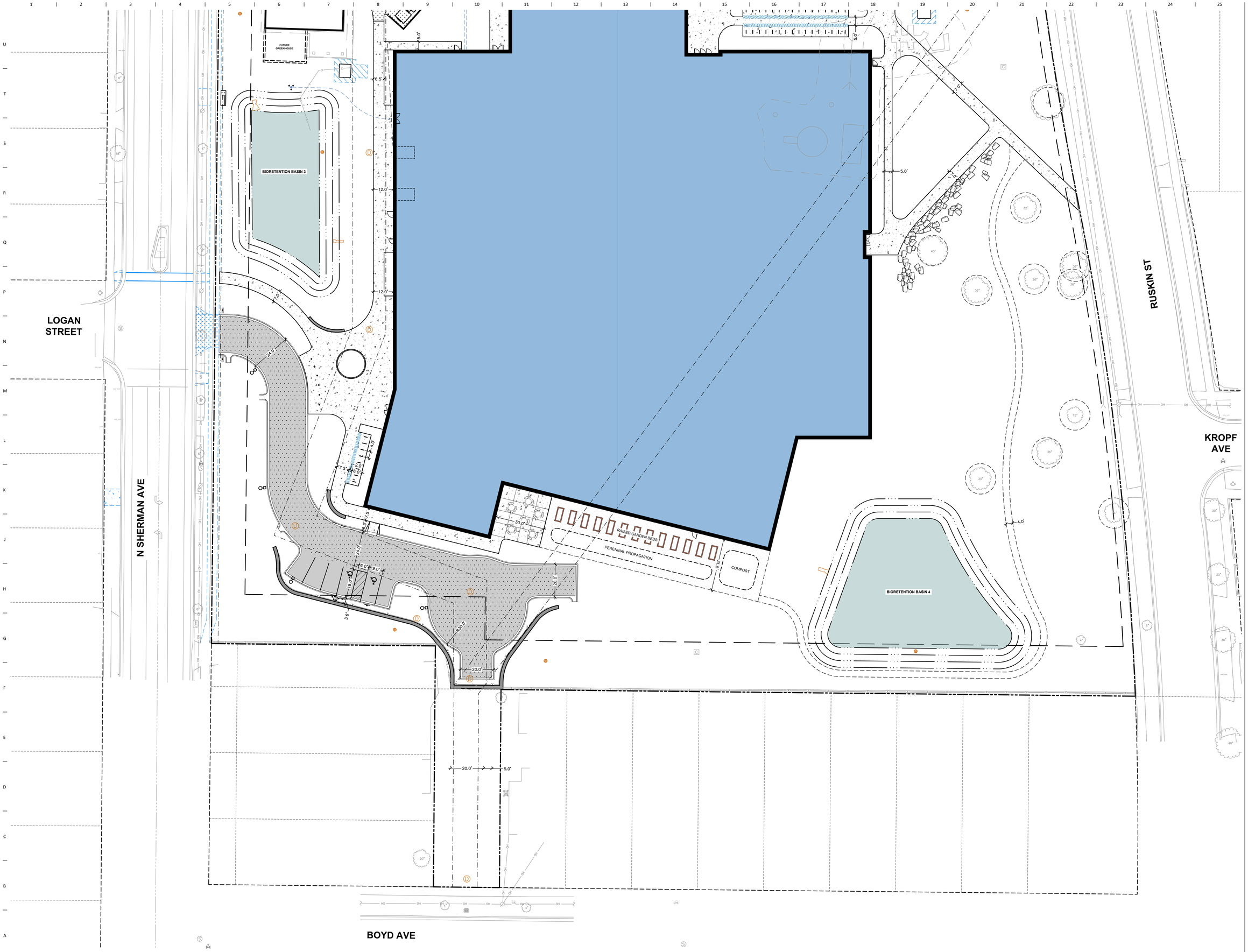

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Key Plan

north
SCALE IN FEET
20' 0 20'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
DIMENSIONED SITE PLAN - SOUTH

Sheet Number
C302

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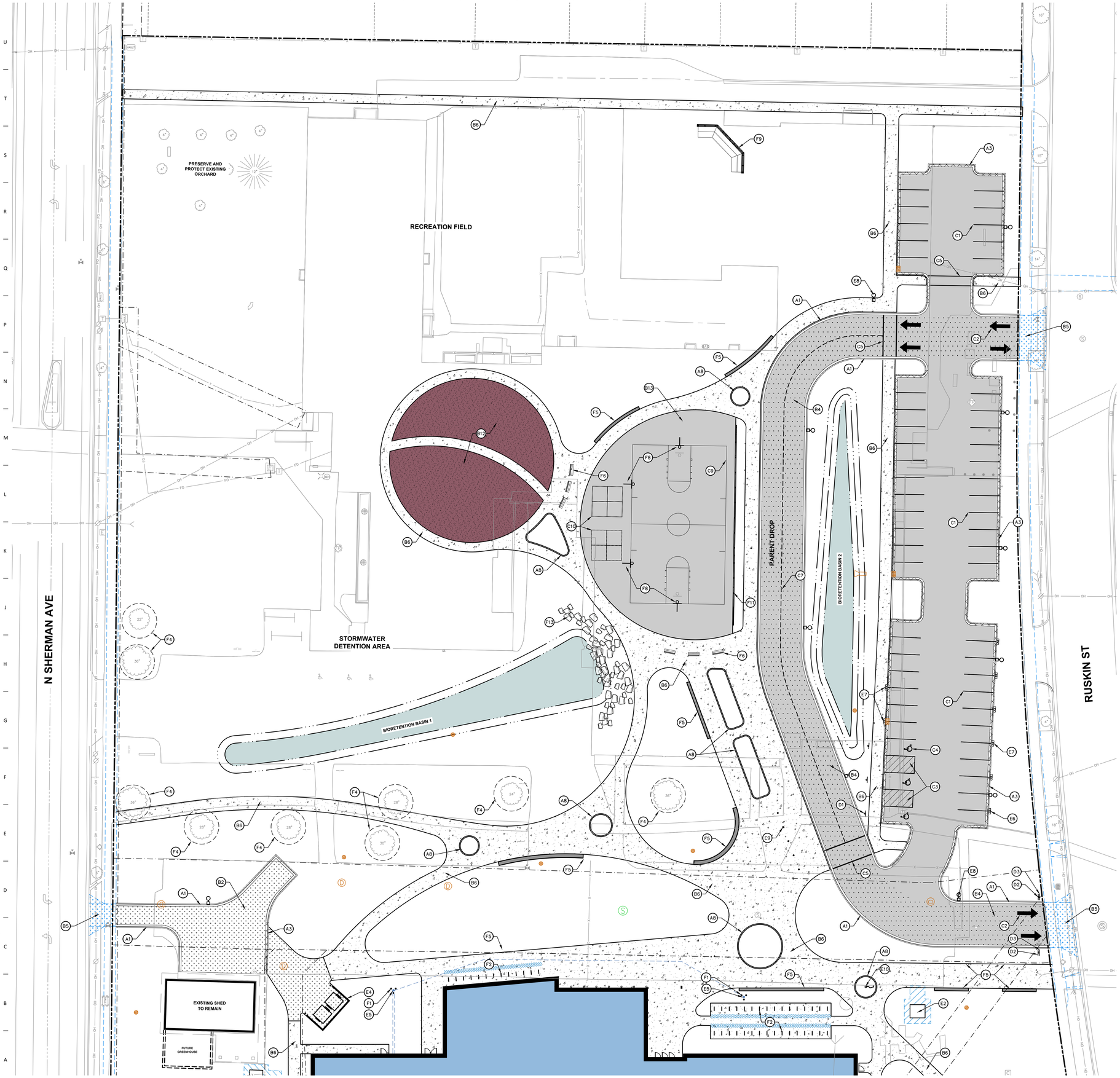

KEY NOTES

- 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 6" CURB

- 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 AGGREGATE WALKING PATH
- B12 PLAYGROUND SURFACES
- B13 ASPHALT PAVED RECREATION SPORT COURT

- 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

- D1 ACCESSIBLE PARKING SIGN
- D2 TYPE R1–1 STOP SIGN
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- E1 MONUMENT SIGN (REFER TO ARCHITECTURAL)
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- F13 LIMESTONE AMPHITHEATER
- F14 INTENTIONALLY OMITTED
- F15 LIMESTONE OUTCROPPING RETAINING WALL
- F16 PLAYGROUND
- F17 TRASH CAN

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Key Plan

north
SCALE IN FEET
20' 0 20'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL 09/09/25

Sheet Name
ANNOTATED SITE PLAN - NORTH

Sheet Number
C303

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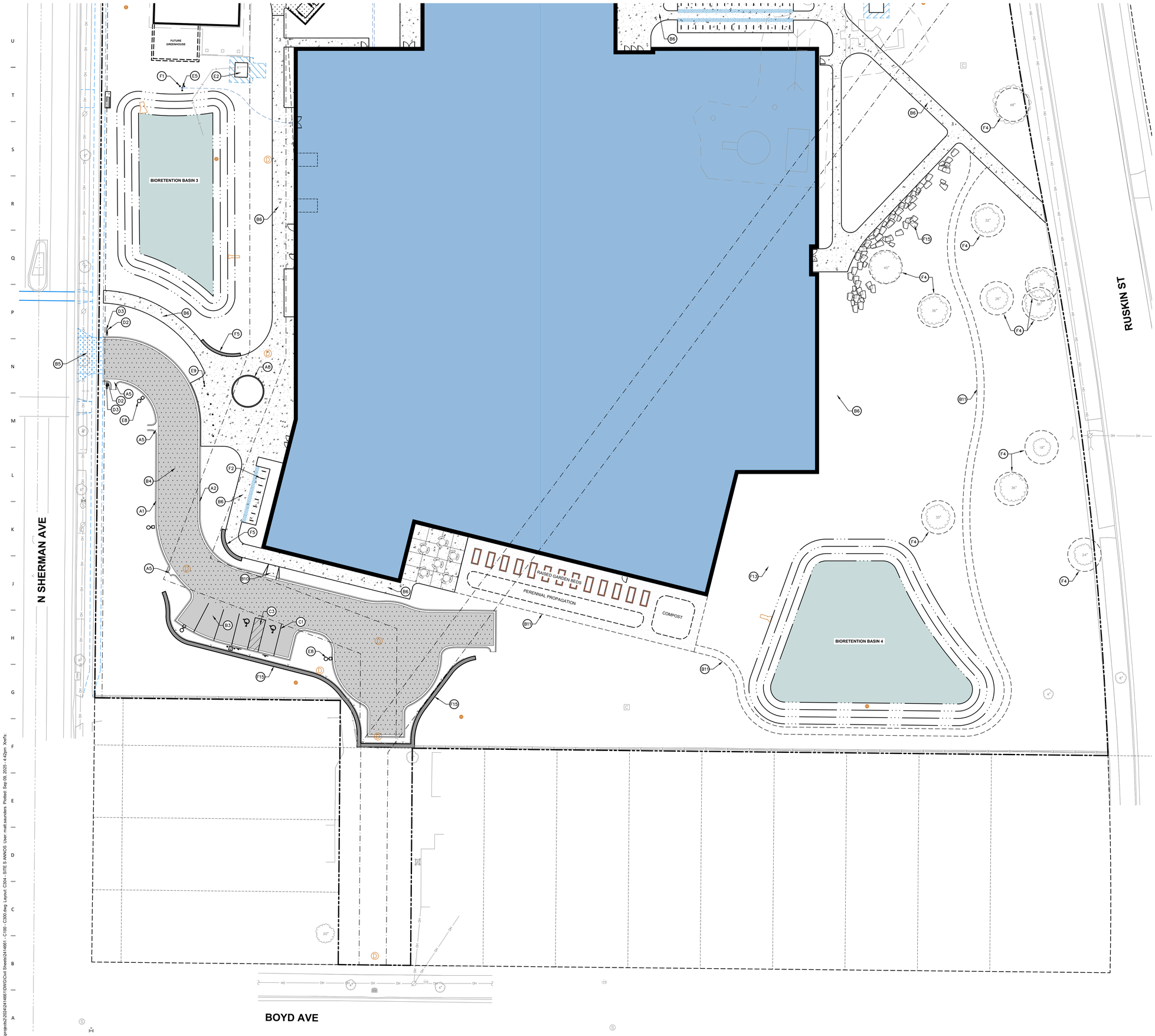

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MADISON METRO SCHOOL DISTRICT
545 West Dayton Street
Madison, WI 53703

Project

MALCOLM SHABAZZ HS & SHERMAN MS
1601 N Sherman Ave.
Madison, WI 53704

Construction Manager

Vogel Bros. Building Co.
5460 Fen Oak Dr.
Madiosn, WI 53718
P. 608-241-5454

Civil Engineer / Landscape Architect

JSD Professional Services
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Verona, WI 53593
P. 608-848-5060

Structural Engineer

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Madison, WI 53718
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Mechanical Engineer

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Electrical Engineer

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Key Plan

north
SCALE IN FEET
20' 0 20'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date

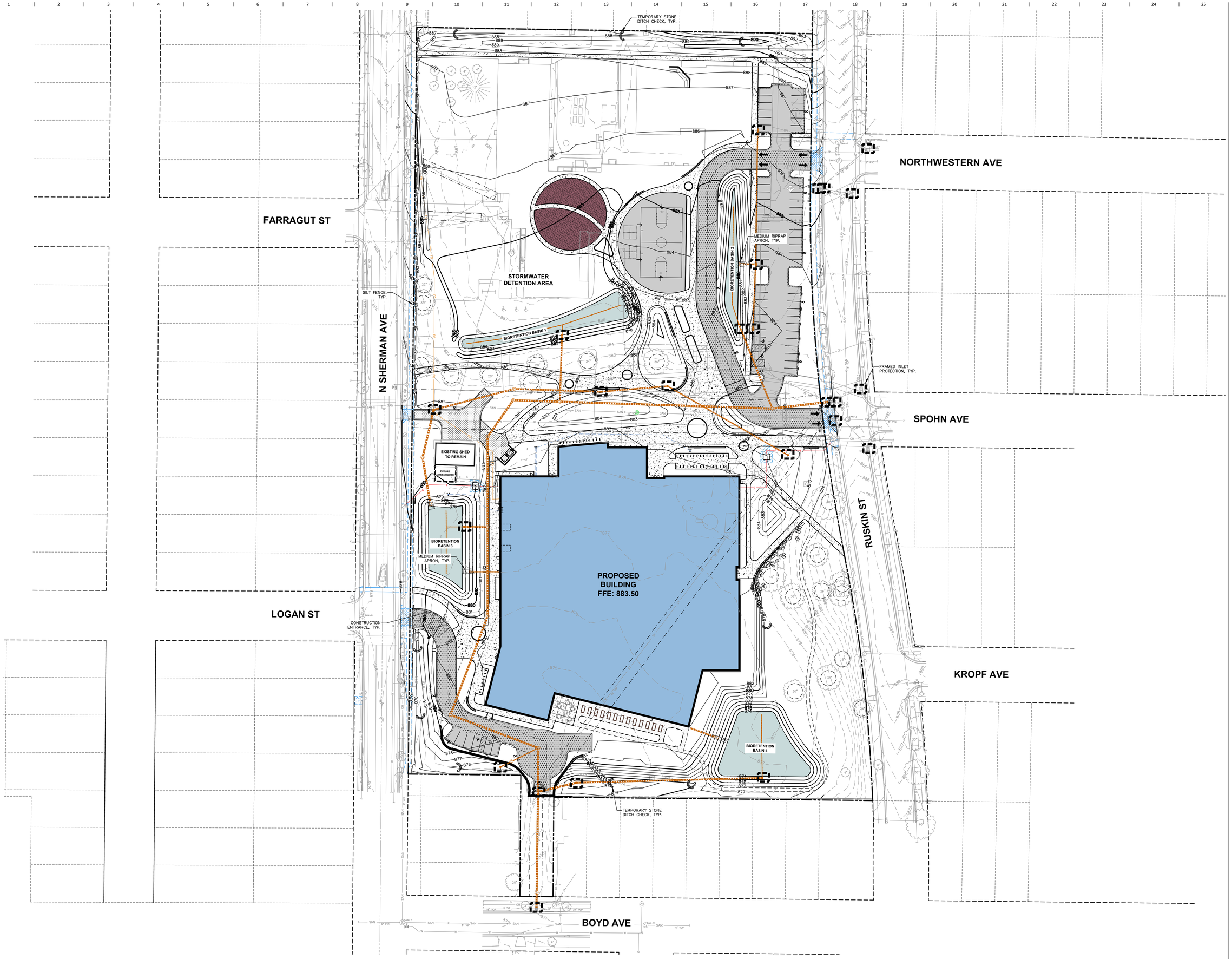
LAND USE/UDC RE-SUBMITTAL	**09/09/25**

Sheet Name

ANNOTATED SITE PLAN - SOUTH

Sheet Number
C304

File: \\JSDNC\projects\2024\24654661\DWG\Civil Sheets\24654661 - C100 - C500.dwg Layout: C304 - SITE S ANNOS User: matt.saunders Plotted: Sep 09, 2025 - 4:42pm Xref's:



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OPN ARCHITECTS

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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
EROSION CONTROL PLAN

Sheet Number
C400

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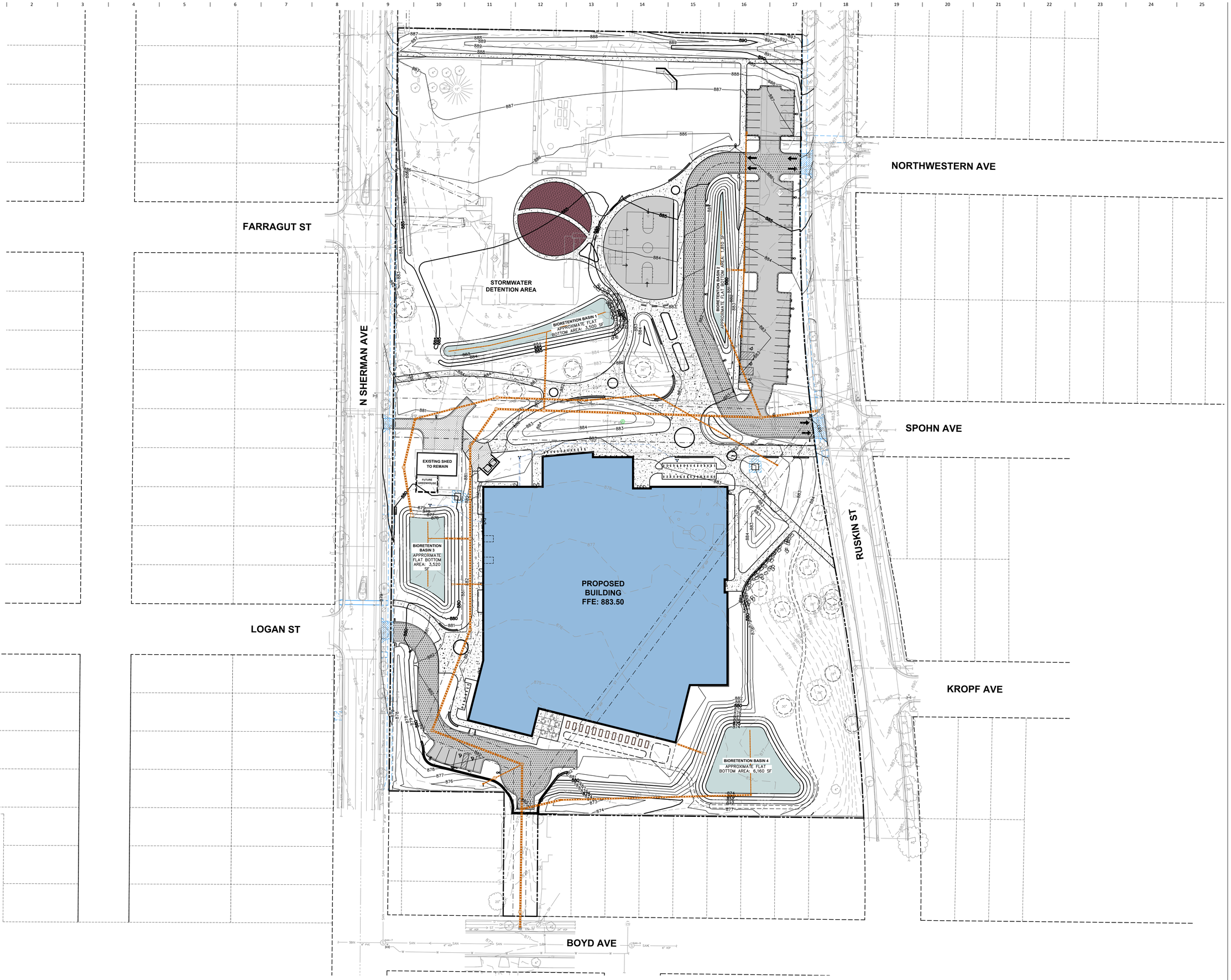

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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
GRADING PLAN

Sheet Number
C500

File: \\USDNC\projects2\2024\24146610\DWG\Civil Sheets\24146610 - C400 - C600.dwg Layout: C500 - Grading User: matt.saunders Plotted: Sep 09, 2025 - 3:53pm Xref's:

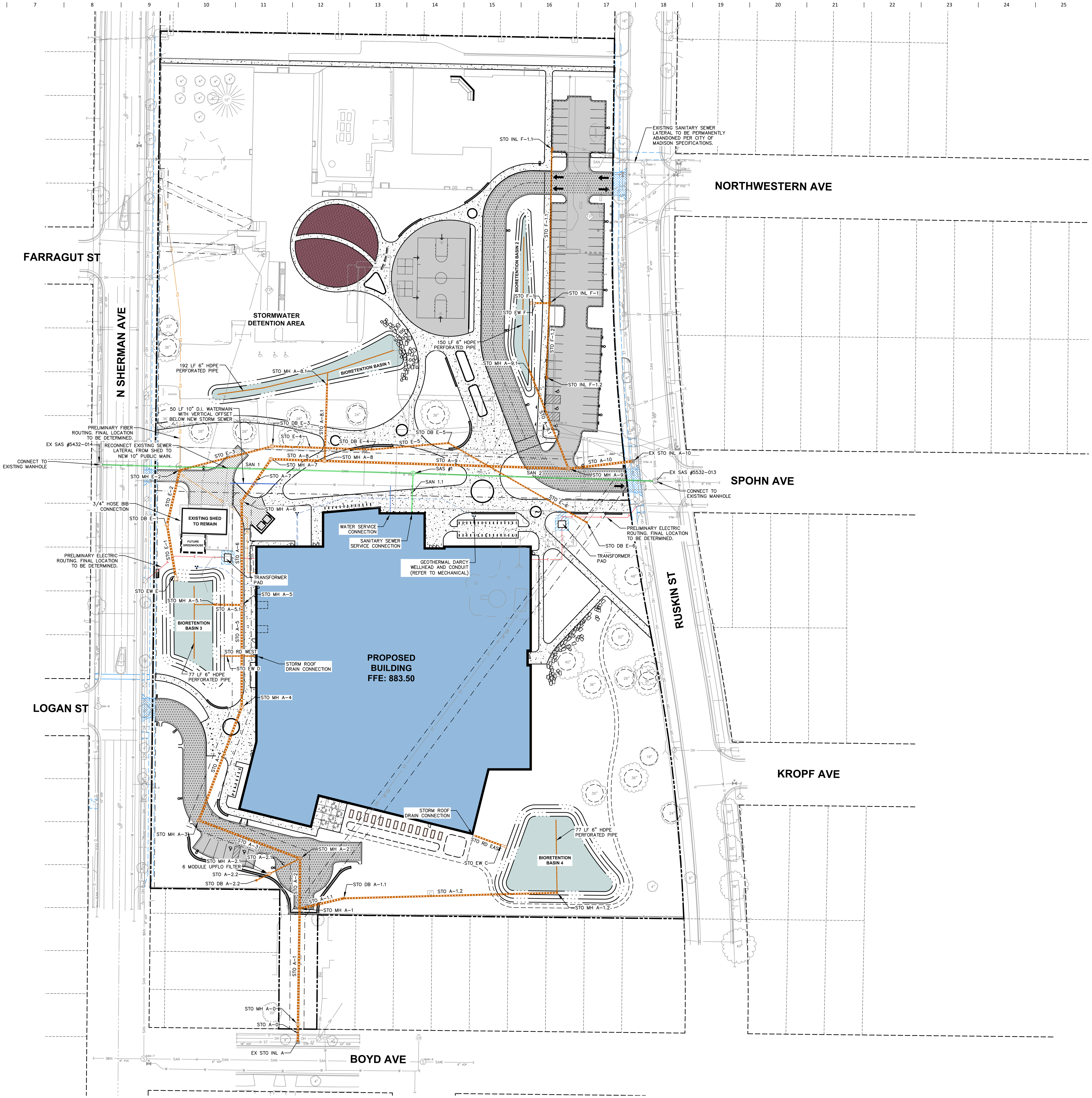
PROPOSED STORM SEWER STRUCTURE TABLE					
LABEL	RIM EL. (FT)	INVERT EL. (FT)	DEPTH (FT)	STRUCTURE DESC.	FRAME & GRATE
STO DB A-1.1	872.00	W INV: 868.65 (24") E INV: 868.75 (18")	3.3	24 IN DB	DUCTILE IRON DOME
STO DB A-2.2	875.00	NE INV: 871.58 (10")	3.4	12 IN DB	DUCTILE IRON DOME
STO DB E-1	880.41	S INV: 876.13 (24") 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") 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") E INV: 877.40 (15")	3.2	18 IN DB	DUCTILE IRON DOME
STO DB E-5	880.20	W INV: 877.72 (15") SE INV: 877.82 (12")	2.5	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 EW C	N/A	W INV: 877.00 (18")	N/A	18 IN HDPE FES	N/A
STO EW D	N/A	E INV: 878.00 (12")	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 INL F-1	883.39	W INV: 880.04 (18") S INV: 880.09 (12") N INV: 880.09 (12")	3.4	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") N INV: 867.40 (24")	4.2	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-1	882.03	S INV: 868.31 (24") E INV: 868.41 (24") N INV: 868.41 (24")	13.7	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-1.2	876.35	W INV: 869.87 (18") N INV: 871.50 (6") N INV: 875.00 (8")	6.5	48 IN MH (FLAT)	48 IN HAALA TRASH RACK
STO MH A-2	882.48	S INV: 868.80 (24") W INV: 868.90 (9") SW INV: 870.07 (10")	13.7	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-2.1	882.67	NE INV: 870.43 (10") SW INV: 871.43 (10")	15.2	48 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-3	881.50	E INV: 869.75 (24") N INV: 869.85 (24")	11.8	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-4	882.79	S INV: 870.80 (24") N INV: 870.90 (24")	12.0	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-5	882.85	S INV: 871.71 (24") N INV: 871.81 (24") W INV: 871.81 (18")	11.1	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-5.1	878.00	E INV: 872.00 (18") W INV: 873.50 (6") W INV: 877.00 (8")	6.0	48 IN MH (FLAT)	48 IN HAALA TRASH RACK
STO MH A-6	881.00	S INV: 872.63 (24") NE INV: 872.73 (9")	8.4	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-7	880.89	SW INV: 873.13 (24") E INV: 873.23 (24")	7.8	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-8	882.64	W INV: 873.65 (24") E INV: 873.75 (24") N INV: 873.75 (18")	9.0	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-8.1	884.50	S INV: 874.55 (18") N INV: 880.50 (6") N INV: 883.50 (6")	9.9	48 IN MH (FLAT)	48 IN HAALA TRASH RACK
STO MH A-9	883.49	W INV: 875.67 (24") E INV: 875.77 (24") N INV: 875.77 (18")	7.8	72 IN MH (FLAT)	R-1550 SOLID LID
STO MH A-9.1	881.00	S INV: 876.50 (18") N INV: 877.50 (6")	4.5	48 IN MH (FLAT)	48 IN HAALA TRASH RACK
STO MH E-2	880.12	S INV: 876.28 (24") 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

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	36'	870.43	870.07	1.00%	10 IN HDPE
STO A-2.2	STO DB A-2.2	STO MH A-2.1	15'	871.58	871.43	1.00%	10 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	80'	874.55	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	81'	877.72	877.40	0.40%	15 IN HDPE
STO E-6	STO DB E-6	STO DB E-5	167'	878.49	877.82	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 RD EAST	STO RD EAST	STO EW C	30'	877.59	877.00	2.00%	18 IN HDPE
STO RD WEST	STO RD WEST	STO EW D	29'	878.59	878.00	2.00%	12 IN HDPE

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") E INV: 869.22 (10") 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") E INV: 875.00 (8") N INV: 874.93 (8")	8.7	48 IN MH	R-1550 SOLID LID
SAS #1	884.00	W INV: 872.36 (10") E INV: 872.46 (10") S INV: 872.62 (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	SAS #1	EX SAS #5432-014	329'	872.36	869.22	0.95%	10 IN PVC
SAN 1.1	BLDG	SAS #1	41'	873.44	872.62	2.00%	8 IN PVC
SAN 2	EX SAS #5532-013	SAS #1	254'	874.89	872.46	0.96%	10 IN PVC



north
SCALE IN FEET
40' 0 40'

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Key Plan

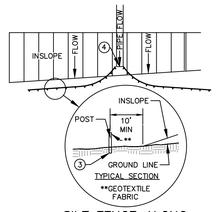
Revision Description Date

OPN Project No.
24654002

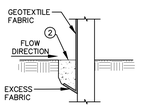
Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
UTILITY PLAN

Sheet Number
C600

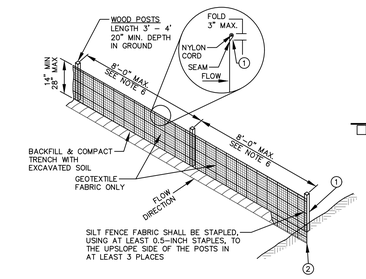


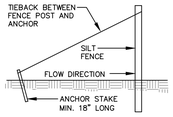
SILT FENCE ALONG SLOPES & OUTFALLS



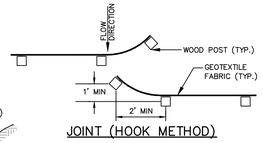
NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

TRENCH DETAIL

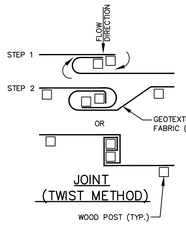




SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)



JOINT (HOOK METHOD)



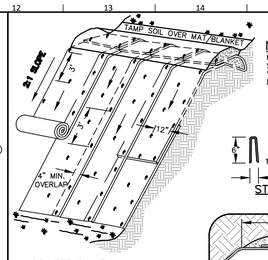
JOINT (TWIST METHOD)

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)

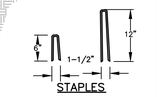
REV. 7-01-2019

SILT FENCE
N.T.S.

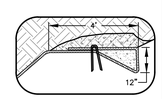


ISOMETRIC VIEW TYPICAL SLOPE SOIL STABILIZATION

NOTE:
MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.



STAPLES



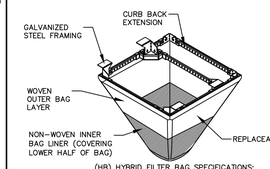
BERM

GENERAL NOTES:

1. EROSION MAT CONSTRUCTION SHALL BE IN ACCORDANCE WITH WSCONSIN 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.

FLEXSTORM INLET FILTERS TO MEET DANE COUNTY EROSION CONTROL STANDARDS



(HB) HYBRID FILTER BAG SPECIFICATIONS:

CATCH-IT INLET FILTER (Temporary Inlet Protection)							
Neenah Casting	Inlet Type	Grate Size	Opening Size	Bag Cap (ft^3)	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 18	20.5 x 13.5	1.6	0.7	2.2	62MCB2318HB
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

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"

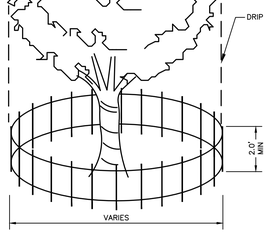
MAINTENANCE GUIDELINES:
1. EMPTY THE SEDIMENT BAG IF MORE THAN HALF FILLED WITH SEDIMENT AND DEBRIS
2. REMOVE THE GRATE, ENGAGE THE LIFTING POINTS, AND LIFT FILTER FROM THE DRAINAGE STRUCTURE.
3. DISPOSE OF SEDIMENT AND DEBRIS BY THE ENGINEERING OR MAINTENANCE CONTRACT 4. ALTERNATIVELY, AN INDUSTRIAL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

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	110 x 75 Lbs	45 Lbs
UV RESISTANCE	ASTM D4355	90%	70%
OPENING SIZE (AOS)	ASTM D4751	20 US STD SIEVE	40 US STD SIEVE
PERMITTIVITY	ASTM D4491	$1.5 Sec^{-1}$	$2.0 Sec^{-1}$
WATER FLOW RATE	ASTM D4491	200 gal/min/ft^2	145 gal/min/ft^2
MINIMUM FILTER BAG VOLUME		2 CUBIC FT	

REV. 7-01-2019

FRAMED INLET PROTECTION
N.T.S.

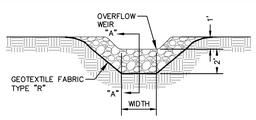
FLEXSTORM INLET FILTERS
CATCH IT
IPP Flexstorm HD Specification



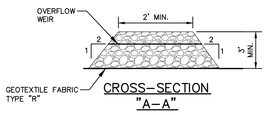
NOTE:
FENCE TO BE INSTALLED TO PROTECT EXISTING TREE(S) DURING CONSTRUCTION. CONTRACTOR TO COORDINATE FENCE LOCATION WITH OWNER PRIOR TO INSTALLATION. SILT FENCE MATERIAL OR OTHER APPROVED BARRIER MATERIAL MAY BE USED.

REV. 11-26-2018

TREE PROTECTION
N.T.S.



ELEVATION

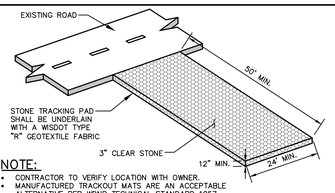


CROSS-SECTION "A-A"

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.

REV. 7-31-2018

TEMPORARY DITCH CHECK (STONE)
N.T.S.



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

REV. 04-24-2024

CONSTRUCTION ENTRANCE
N.T.S.

PRELIMINARY. NOT FOR CONSTRUCTION.

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Key Plan

Revision	Description	Date

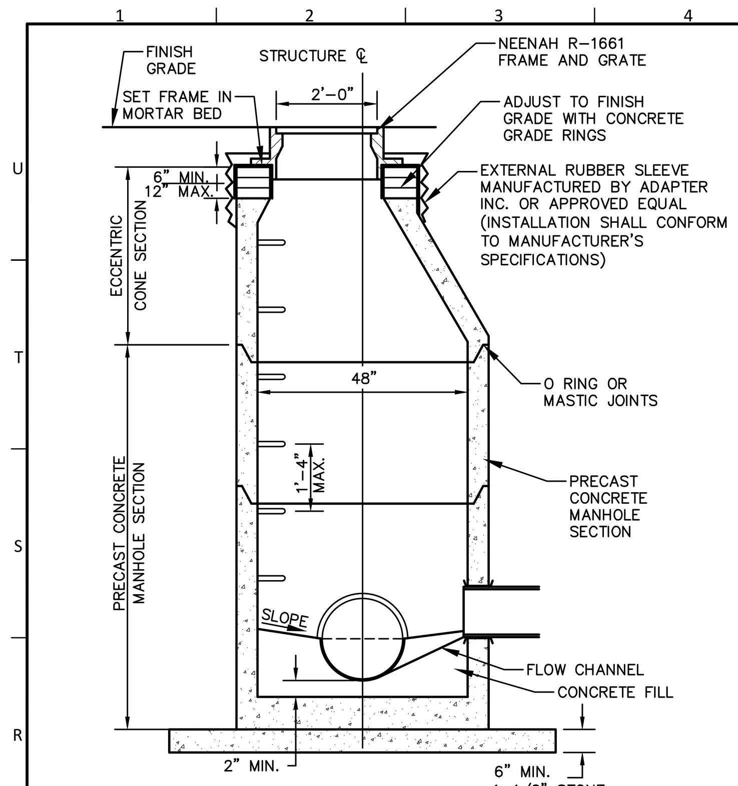
OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
CONSTRUCTION DETAILS

Sheet Number
C700

File: \\JSDINC\projects\2020\24146610\DWG\Civil Sheets\24146610 - C700.dwg Layout: C700 - EC Details User: matt.saunders Plotted: Sep 09, 2025 - 4:46pm XrefS:



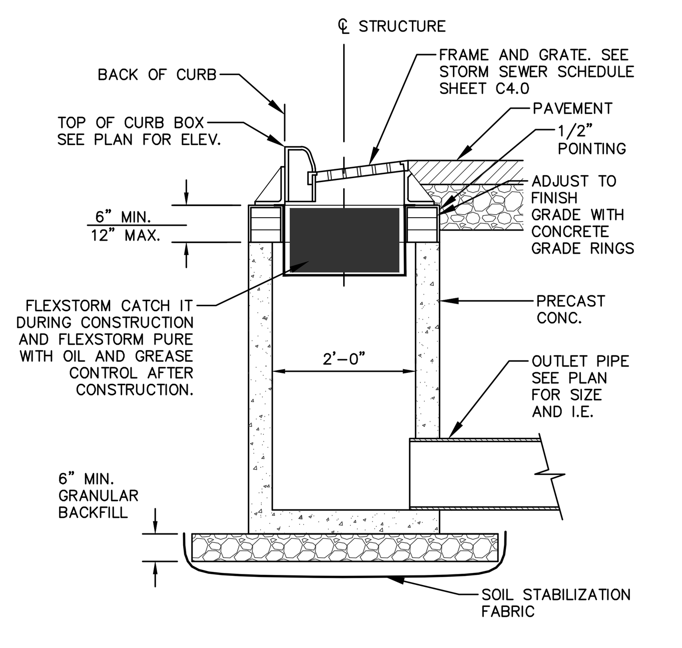
GENERAL NOTES:

1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
3. USE MORTAR FOR PIPE CONNECTIONS.
4. ALL MANHOLES SHALL HAVE RUBBER CHIMNEY BOOT SEALS.

SANITARY SEWER MANHOLE

N.T.S.

REV. 12-6-2018

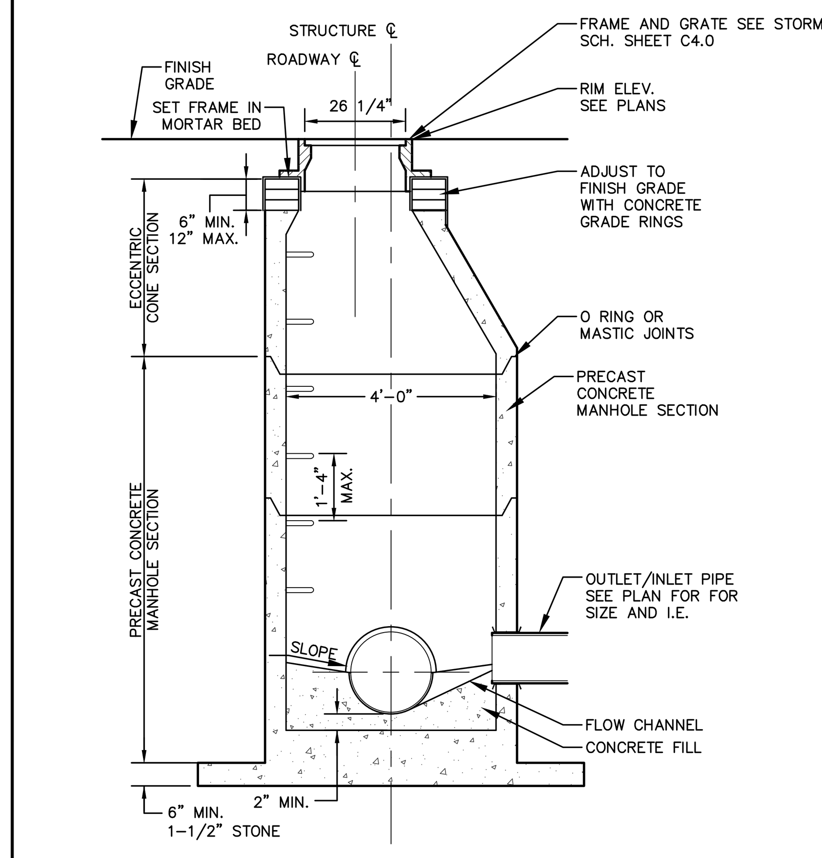


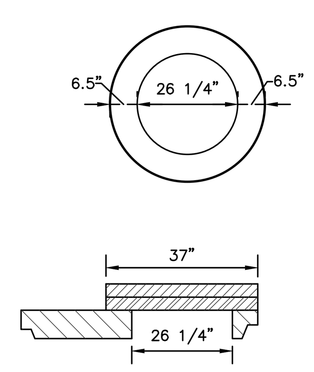
NOTE:
*INSTALL FLOGARD PLUS CATCH BASIN FILTER INSERT AS MANUFACTURED BY KRISTAR ENTERPRISES, INC. OR EQUIVALENT. FILTER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS.

STORM INLET W/ OIL & GREASE FILTER

N.T.S.

REV. 11-26-2018





FLAT TOP SLAB

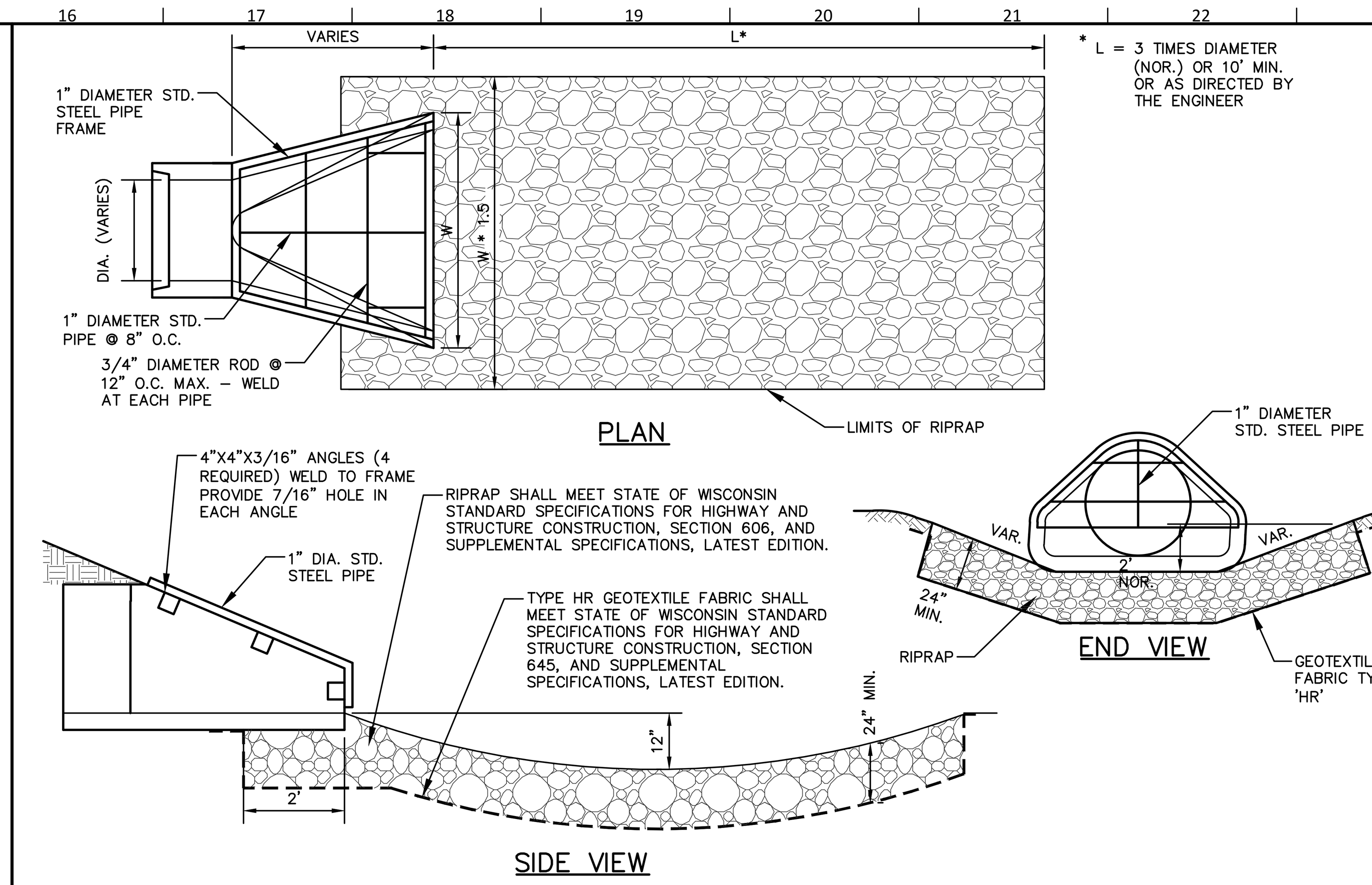
GENERAL NOTES:

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

N.T.S.

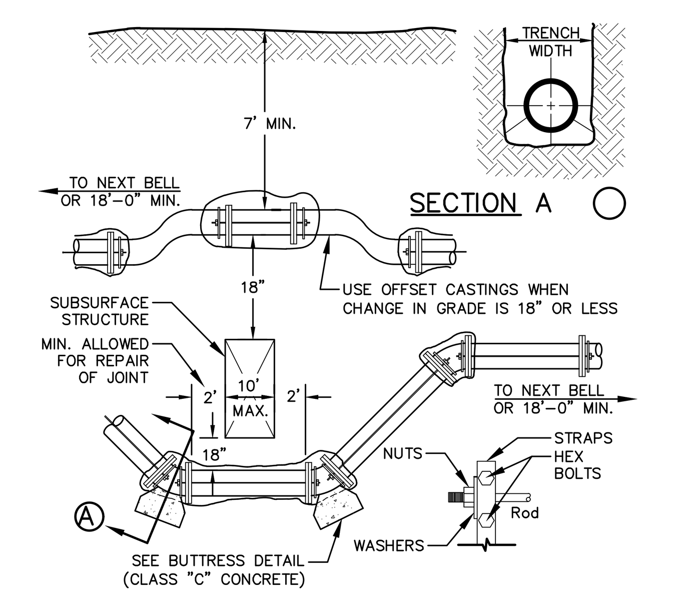
REV. 12-07-2018



APRON ENDWALL W/ GRATE - RIPRAP

N.T.S.

REV. 12-7-2018



Strapping Material						
Pipe Size	D	Rods		Strap	Bolt Dia.	Washer
		No.	Dia.			
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"	"

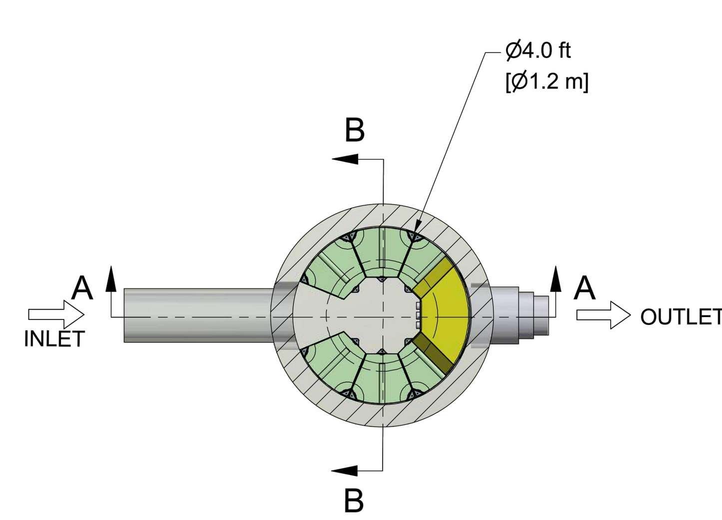
GENERAL NOTES:

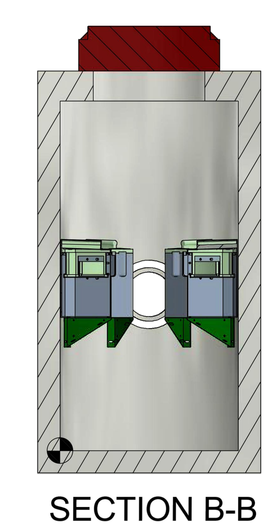
1. JOINT RESTRAINTS: RODS AND CONCRETE BUTTRESSES MAY BE USED IN LIEU OF MEG-A-LUGS IF APPROVED BY THE ENGINEER.
2. RODS & WASHERS TO BE ASTM A-575 MERCHANT QUALITY .17-.24 CARBON. NUTS TO BE AM. STD. HEAVY HOT PRESSED. TIE RODS, BOLTS, NUTS, BANDS, AND WASHERS TO BE FURNISHED & APPLIED BY CONTRACTOR. 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

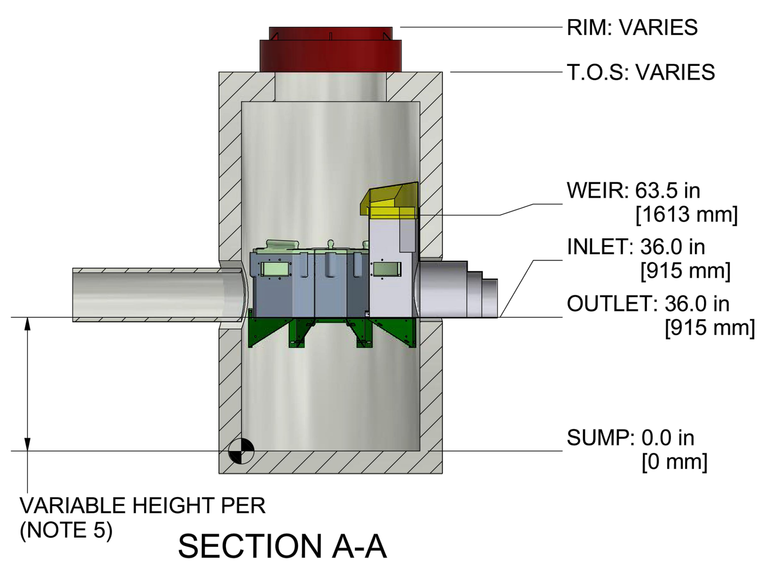
STRAPPING WATERMAIN OFFSETS

N.T.S.

REV. 12-05-2018







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

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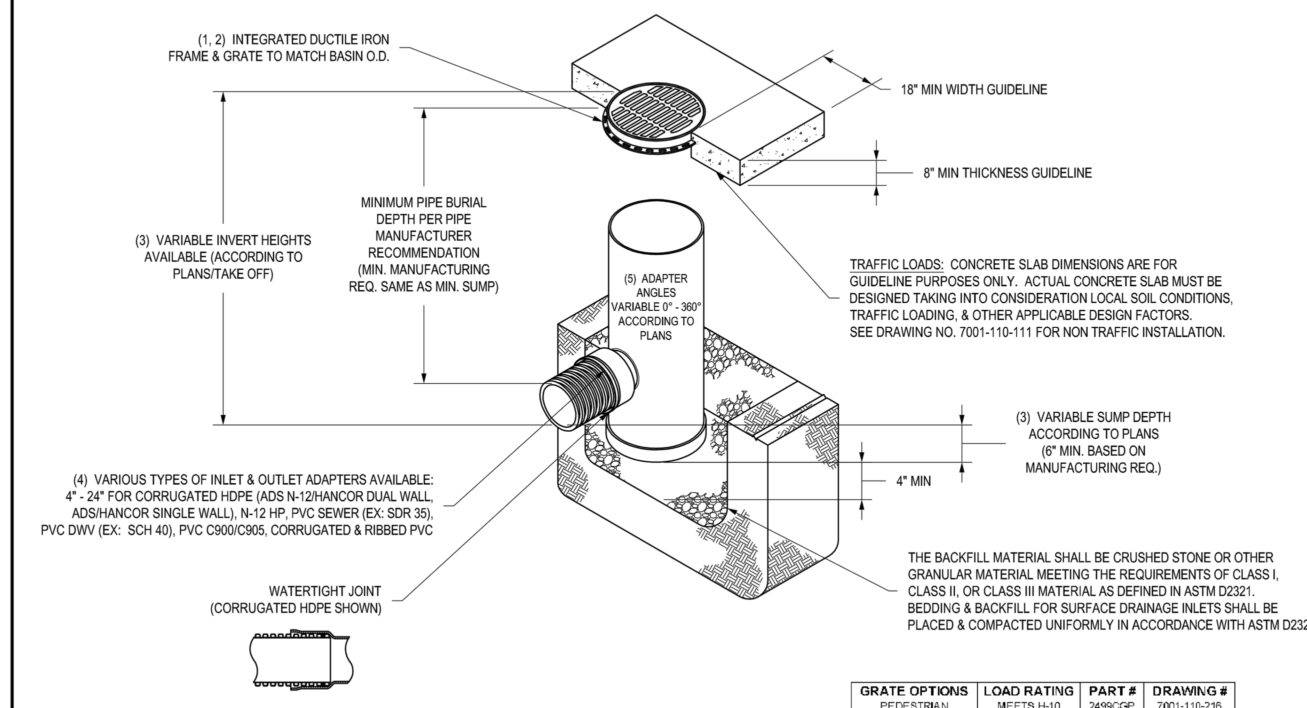
DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
TOLERENCES ARE: FRACTIONS ± 1/16, DECIMALS: .X.X ± .06, .X.XX ± .03, .X.XXX ± .015, ANGLES ± .5°

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	7001-110-216
STANDARD	MEETS H-20	2499CGS	7001-110-217
SOLID COVER	MEETS H-20	2499CGC	7001-110-218
DOME	N/A	2499CGD	7001-110-219
DROP IN GRATE	LIGHT DUTY	2401DI	7001-110-075

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 EBC | DATE 04-03-06 | REVISED BY NMH | DATE 03-14-16 | DWG SIZE A
MATERIAL | PROJECT NO./NAME | SCALE 1:40 | SHEET 1 OF 1

ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 24 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DWG NO. 7001-110-192 | REV E

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Key Plan

Revision | Description | Date

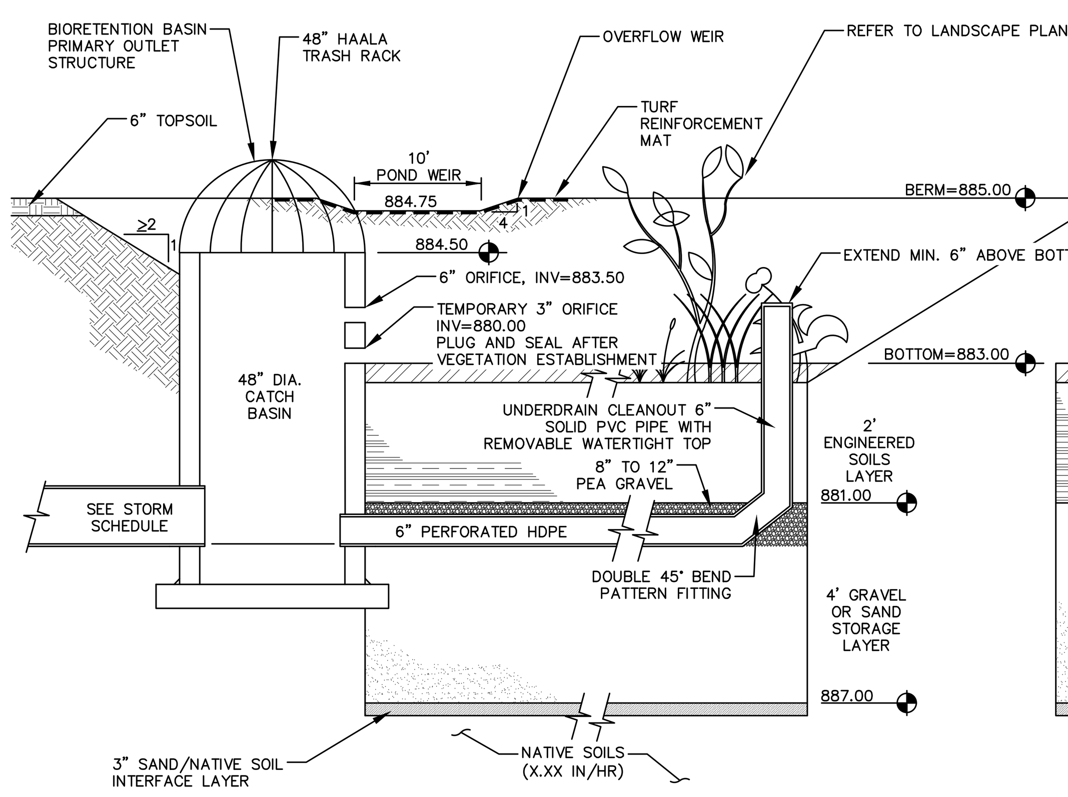
OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

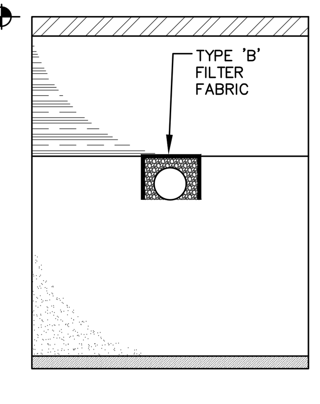
Sheet Name
CONSTRUCTION DETAILS

Sheet Number
C701

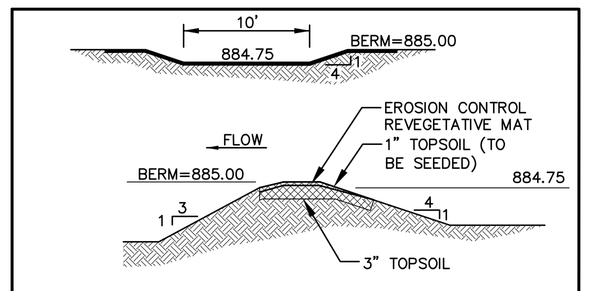
PRELIMINARY. NOT FOR CONSTRUCTION.



A SECTION



B SECTION



BIORETENTION BASIN EMERGENCY OVERFLOW WEIR DETAIL

N.T.S.

THE STORMWATER MANAGEMENT FEATURES CONTAINED WITHIN THIS PLAN SET HAVE BEEN DESIGNED IN ACCORDANCE WITH APPLICABLE STANDARDS SET FORTH IN WISCONSIN DNR NR151 AND LOCAL ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER CONSTRUCTION PRACTICES HAVE BEEN UTILIZED AND THAT STORMWATER MANAGEMENT FEATURES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH APPROVED DESIGN PLANS. JSD PROFESSIONAL SERVICES, INC. (JSD) SHALL NOT BE LIABLE FOR ANY CONSTRUCTION PRACTICES OR INSTALLATION WHICH DEVIATES FROM THE APPROVED PLAN SET. ONCE THE OWNER HAS PROVIDED FINAL APPROVAL TO THE WORK PERFORMED BY THE CONTRACTOR AND ENSURED COMPLIANCE WITH THE PLAN, IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN STORMWATER MANAGEMENT FEATURES IN ACCORDANCE WITH THE RECORDED MAINTENANCE AGREEMENT. PROPER OPERATION IS DEPENDENT ON A MULTITUDE OF VARIABLES INCLUDING WEATHER. THESE COMPONENTS REQUIRE ONGOING MAINTENANCE FOR WHICH THE OWNER IS RESPONSIBLE. JSD TAKES NO RESPONSIBILITY FOR PROPER OPERATION OF THE WATER QUALITY COMPONENTS.

SAND STORAGE LAYER: IF NATIVE SOIL INFILTRATION RATES ARE GREATER THAN OR EQUAL TO THE DESIGN SAND LAYER (3.6 IN/HR), NATIVE SOILS MAY BE USED. GEOTECHNICAL CONSULTANT SHALL PROVIDE THIS INFORMATION IN WRITTEN DOCUMENTATION FOR VERIFICATION PRIOR TO CONSTRUCTION.

AS-BUILT SURVEY AND CERTIFICATION: UPON CONSTRUCTION COMPLETION AND STABILIZATION, AN AS-BUILT SURVEY IS TO BE CONDUCTED FOR BASIN AND CERTIFIED BY THE ISSUING ENGINEER. SURVEYOR IS TO CONFIRM THE TEMPORARY 3" ORIFICE IN THE BIORETENTION BASIN OUTLET HAS BEEN PLUGGED AND SEALED. AS-BUILT PLANS ARE TO BE SUBMITTED TO MUNICIPALITY FOR FINAL APPROVAL.

GENERAL NOTES:

1. ALL CONSTRUCTION PRACTICES SHALL MEET THE SPECIFICATIONS OF THE WDNR TECHNICAL STANDARD 1004 – BIORETENTION FOR INFILTRATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THIS STANDARD AND CONSTRUCT THE BIORETENTION DEVICE IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED THEREIN.
2. CONTRACTOR SHALL INSTALL 24" OF ENGINEERED SOIL CONSISTING OF: 85% ASTM C33 SAND, 15% CERTIFIED COMPOST (SEE GENERAL NOTE 3).
3. CERTIFIED COMPOST SHALL CONSIST OF: >40% ORGANIC MATTER, <60% ASH CONTENT, pH OF 6–8, AND MOISTURE CONTENT OF 35–50% BY WEIGHT.
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.
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REV. 12-7-2018

BIORETENTION BASIN 1

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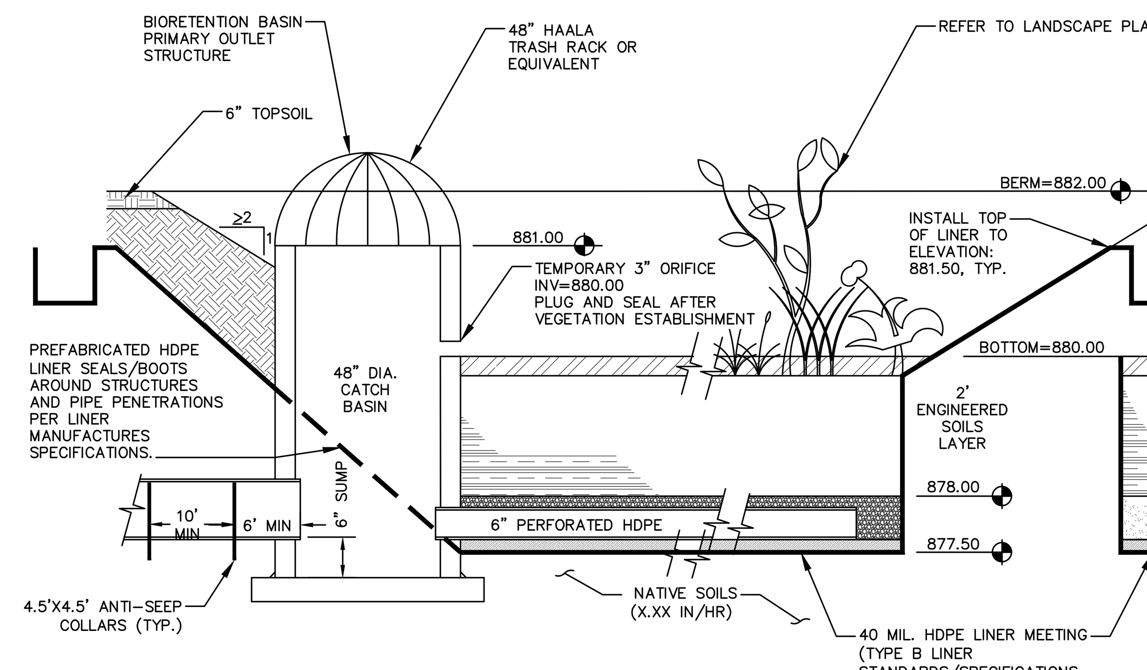

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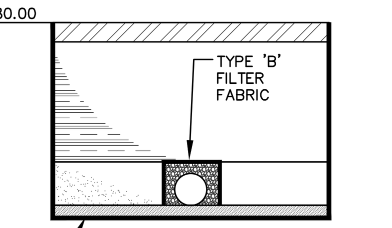

B SECTION

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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2. CONTRACTOR SHALL INSTALL 24" OF ENGINEERED SOIL CONSISTING OF: 85% ASTM C33 SAND, 15% CERTIFIED COMPOST (SEE GENERAL NOTE 3).
3. CERTIFIED COMPOST SHALL CONSIST OF: >40% ORGANIC MATTER, <60% ASH CONTENT, pH OF 6–8, AND MOISTURE CONTENT OF 35–50% BY WEIGHT.
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.
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REV. 12-7-2018

BIORETENTION BASIN 2

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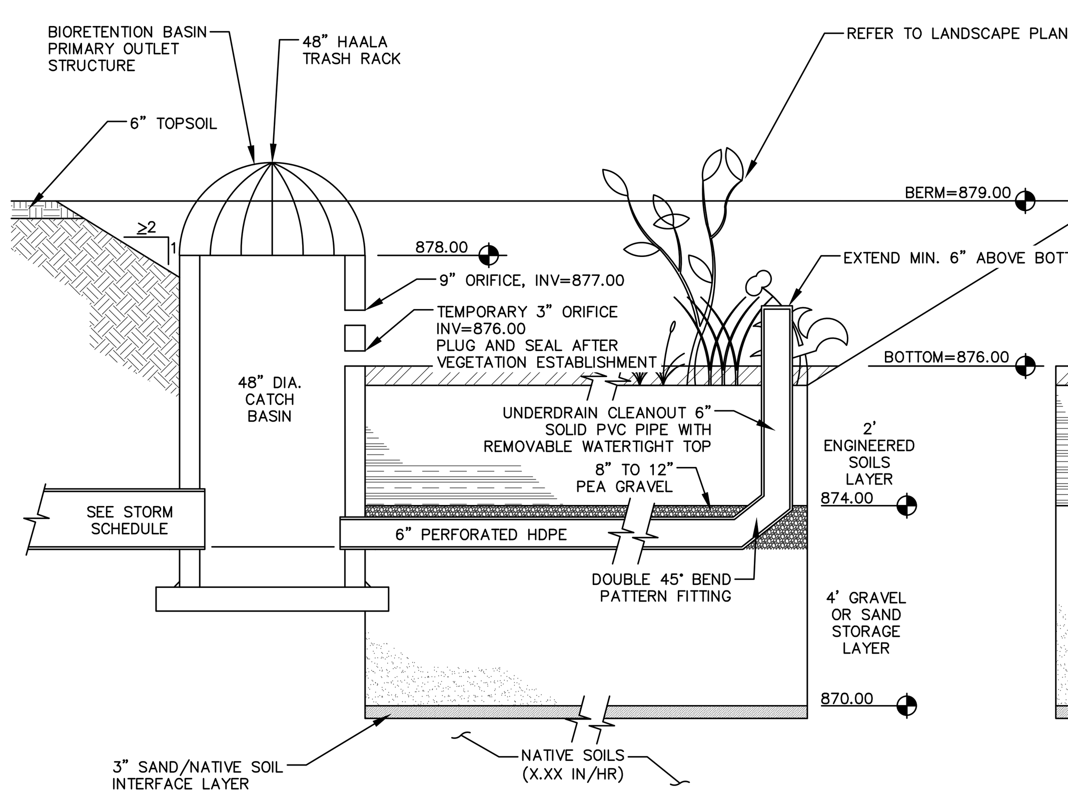

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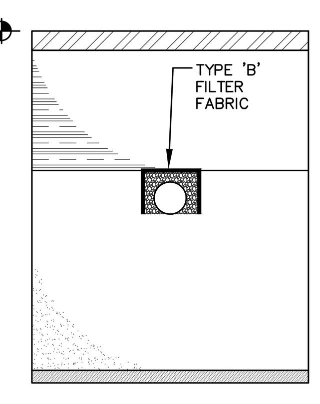

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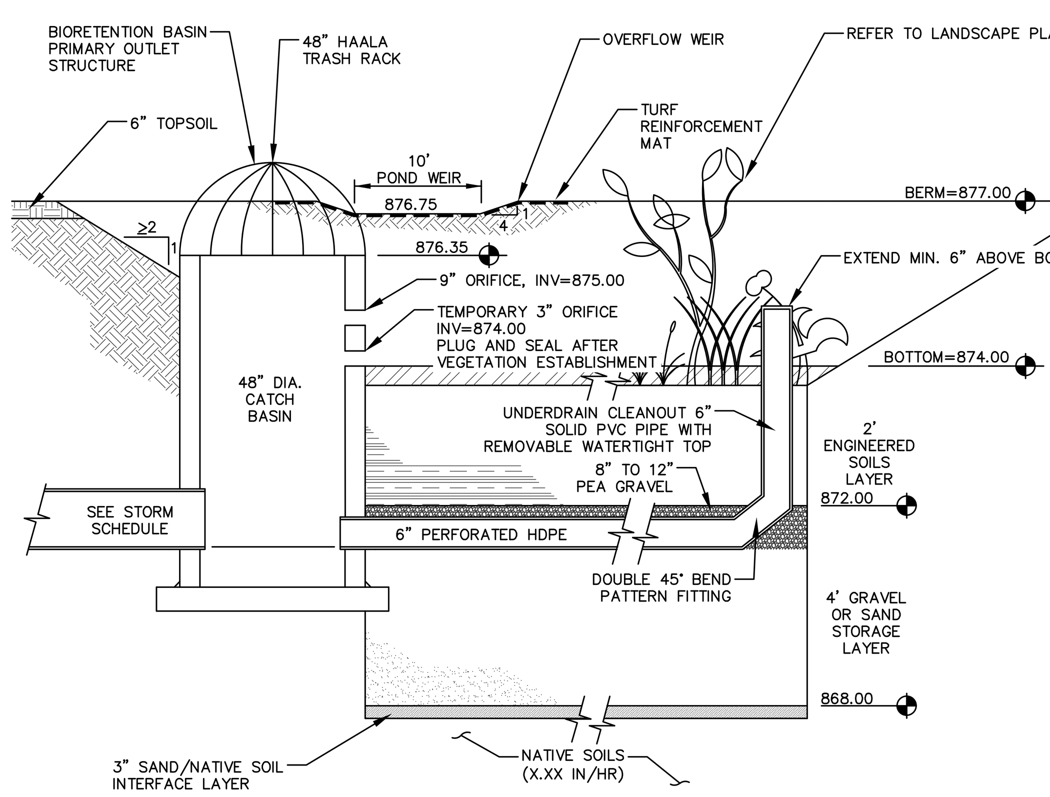
REV. 12-7-2018

BIORETENTION BASIN 3

N.T.S.



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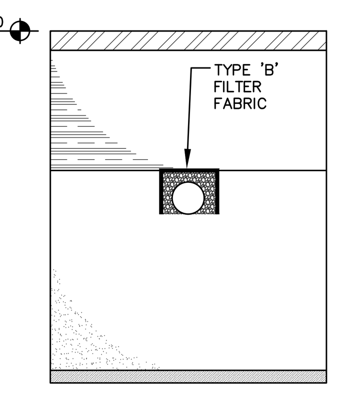

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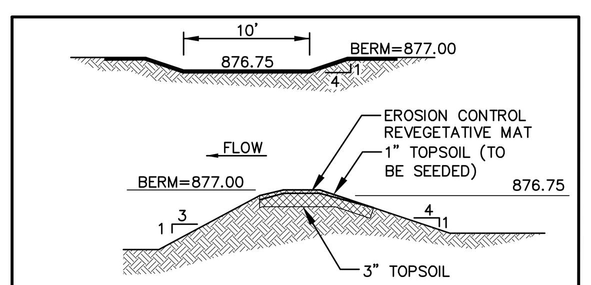

BIORETENTION BASIN EMERGENCY OVERFLOW WEIR DETAIL

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BIORETENTION BASIN 4

N.T.S.

PRELIMINARY. NOT FOR CONSTRUCTION.

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P. 608-241-5454

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Mechanical Engineer
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Electrical Engineer
IMEG
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Madison, WI 53718
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Key Plan

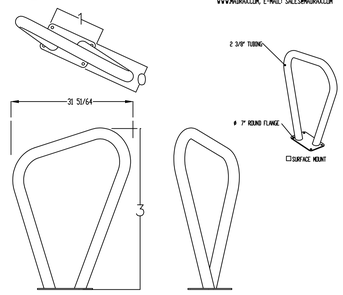
Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name
CONSTRUCTION DETAILS

Sheet Number
C702



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

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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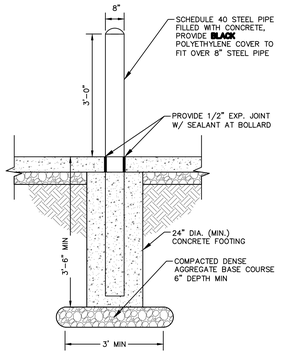
BIKE RACK DETAIL

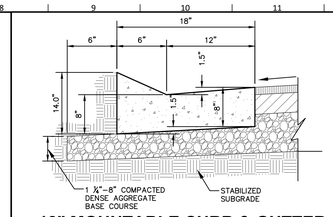
N.T.S.



REV. 12-17-2018

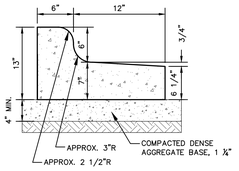
CONCRETE BOLLARD

N.T.S.



18" MOUNTABLE CURB & GUTTER

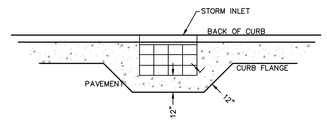
N.T.S.



REV. 12-17-2018

18" REJECT CURB & GUTTER

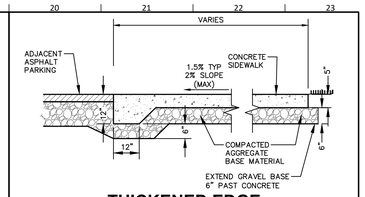
N.T.S.



REV. 11-20-2018

CONCRETE INLET COLLAR

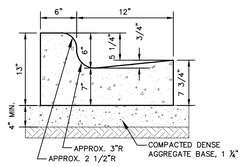
N.T.S.



REV. 07-14-2020

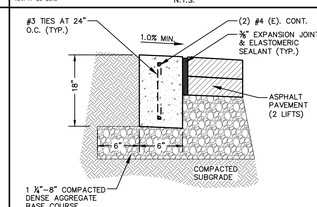
THICKENED EDGE SIDEWALK - FLUSH

N.T.S.



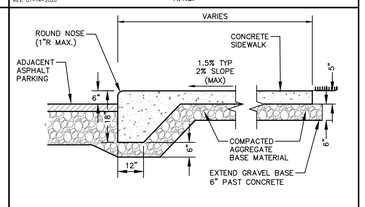
18" STANDARD CURB & GUTTER

N.T.S.



6" RIBBON CURB

N.T.S.



REV. 07-14-2020

THICKENED EDGE SIDEWALK

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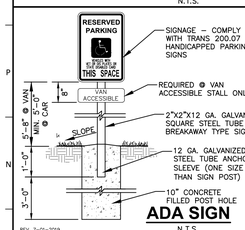
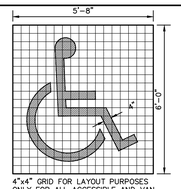


NOTE:
OPTION: DRIVEN POST MAY BE UTILIZED IN LIEU OF CONCRETE BASE. PROVIDE MIN. 3'-0" LONG ANCHOR POST SLEEVE.

REV. 7-01-2019

ADA SIGN

N.T.S.



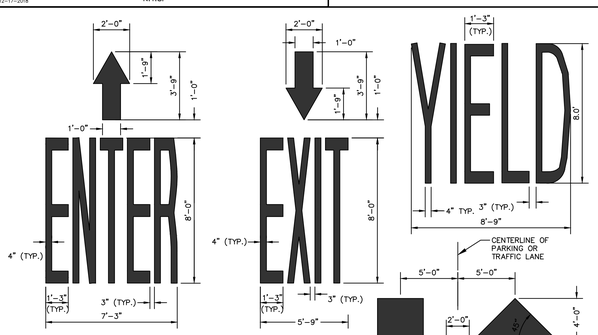
NOTE:
SYMBOL DETAILS ARE SHOWN FOR INTENT ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS PRIOR TO CONSTRUCTION.

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

REV. 11-20-2018

ADA PARKING STALL MARKING

N.T.S.

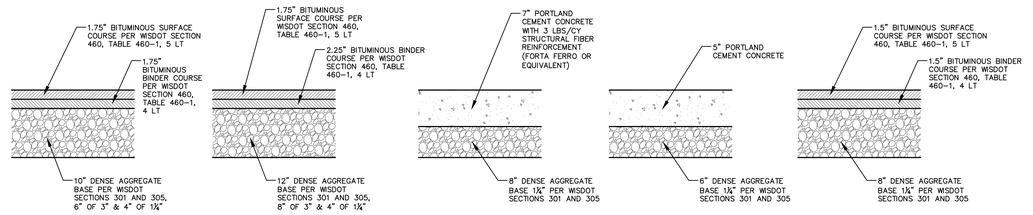


GENERAL NOTES:
1. ALL TRAFFIC FLOW ARROWS TO BE SOLID YELLOW, HIGH-VISIBILITY EPOXY TRAFFIC PAINT AS PER DIMENSIONS ABOVE.
2. FOR ONE WAY LANES, CENTER SINGLE ARROW IN LANE.

REV. 11-20-2018

TYPICAL PAVEMENT MARKINGS

N.T.S.



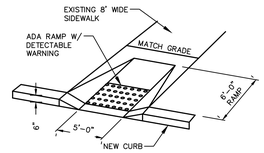
STANDARD ASPHALT PAVEMENT SECTION | HEAVY DUTY ASPHALT PAVEMENT SECTION | HEAVY DUTY CONCRETE PAVEMENT SECTION | CONCRETE SIDEWALK SECTION | RECREATION SPORT COURTS ASPHALT PAVEMENT SECTION

GENERAL NOTES:
1. REFER TO PAVEMENT RECOMMENDATIONS IN THE GEOTECHNICAL INVESTIGATION REPORT, PREPARED BY [GEOTECH NAME] TITLED "[GEOTECH REPORT TITLE]" DATED [DATE]. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND THE PAVEMENT RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL INVESTIGATION REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN.
2. WSDOT 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 CEMENTER CONCRETE WITH W2.9xW2.9 WELDED WIRE REINFORCEMENT OVER COMPACTED 8" THICK 1¼" DENSE GRADED BASE COURSE.

REV. 7-01-2019

PAVEMENT SECTIONS

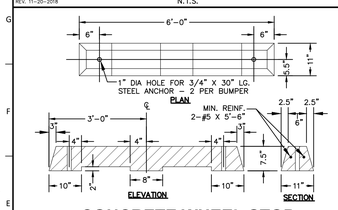
N.T.S.



REV. 11-20-2018

ADA ACCESSIBLE RAMP - INLINE

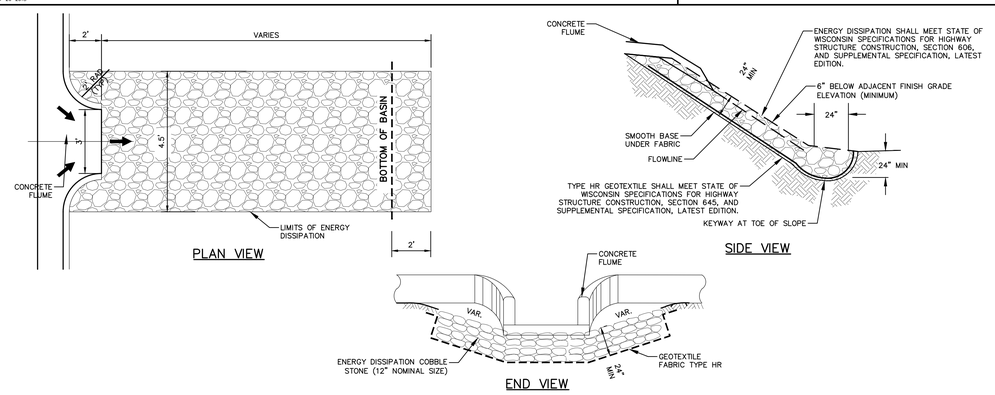
N.T.S.



REV. 11-26-2018

CONCRETE WHEEL STOP

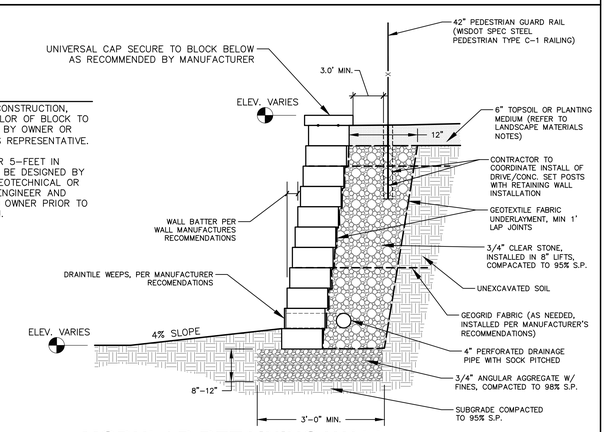
N.T.S.



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

CURB WEIR WITH CONC.FLUME DETAIL

N.T.S.



NOTES:
– PRIOR TO CONSTRUCTION, MAKE AND COLOR OF BLOCK TO BE APPROVED BY OWNER OR CONTRACTOR'S REPRESENTATIVE.
– WALLS OVER 5-FEET IN HEIGHT SHALL BE DESIGNED BY REGISTERED GEOTECHNICAL OR STRUCTURAL ENGINEER AND SUBMITTED TO OWNER PRIOR TO CONSTRUCTION.

REV. 07-16-2019

MODULAR RETAINING WALL

N.T.S.

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Madison, WI 53703

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Madison, WI 53704

Construction Manager
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Key Plan

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL 09/09/25

Sheet Name
CONSTRUCTION DETAILS

Sheet Number
C703

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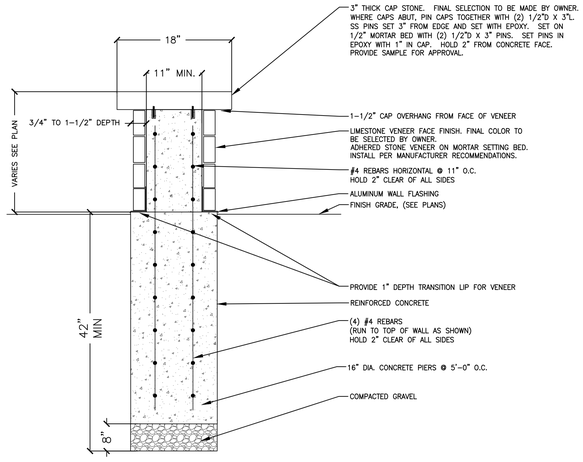
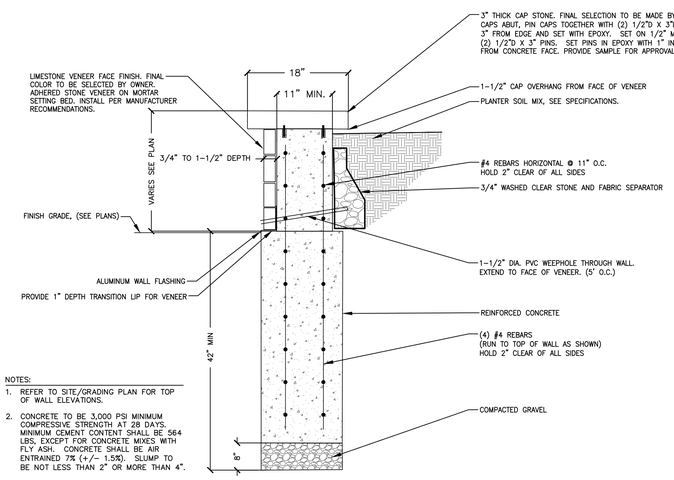


NOTES:

1. REFER TO SITE/GRADING PLAN FOR TOP OF WALL ELEVATIONS.
2. CONCRETE TO BE 3,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. MINIMUM CEMENT CONTENT SHALL BE 564 LBS, EXCEPT FOR CONCRETE MIXES WITH FLY ASH. CONCRETE SHALL BE AIR ENTRAINED 7% (+/- 1.5%). SLUMP TO BE NOT LESS THAN 2" OR MORE THAN 4".

FREESTANDING SEAT WALL

N.T.S.



NOTES:

1. REFER TO SITE/GRADING PLAN FOR TOP OF WALL ELEVATIONS.
2. CONCRETE TO BE 3,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. MINIMUM CEMENT CONTENT SHALL BE 564 LBS, EXCEPT FOR CONCRETE MIXES WITH FLY ASH. CONCRETE SHALL BE AIR ENTRAINED 7% (+/- 1.5%). SLUMP TO BE NOT LESS THAN 2" OR MORE THAN 4".

PLANTER/SEAT WALL

N.T.S.

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Key Plan

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date

LAND USE/UDC RE-SUBMITTAL **09/09/25**

Sheet Name

CONSTRUCTION DETAILS

Sheet Number

C704

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LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING OUTLINE
- BUILDING OVERHANG
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- 20' WIDE FIRE LANE
- EXISTING HYDRANT LOCATION

City of Madison Fire Department

314 W Dayton Street, Madison, WI 53703
Phone: 608-266-4420 • Fax: 608-267-1100 • E-mail: fire@cityofmadison.com

Project Address: 1610 RUSKIN ST

Contact Name & Phone #: MATT HAASE, PE. (608-893-0085)

FIRE APPARATUS ACCESS AND FIRE HYDRANT WORKSHEET

	Yes	No	N/A
1. Is the building completely protected by an NFPA 13 or 13R automatic fire sprinkler system?	☒	☐	☐
If non-sprinklered, fire lanes extend to within 150-feet of all portions of the exterior wall?	☐	☐	☒
If sprinklered, fire lanes are within 250-feet of all portions of the exterior wall?	☒	☐	☐
2. Is the fire lane constructed of concrete or asphalt, designed to support a minimum load of 85,000 lbs?	☒	☐	☐
a) Is the fire lane a minimum unobstructed width of at least 20-feet?	☒	☐	☐
b) Is the fire lane unobstructed with a vertical clearance of at least 13½-feet?	☒	☐	☐
c) Is the minimum inside turning radius of the fire lane at least 28-feet?	☒	☐	☐
d) Is the grade of the fire lane not more than a slope of 8%?	☒	☐	☐
e) Is the fire lane posted as fire lane? (Provide detail of signage.)	☒	☐	☐
f) Is a roll-able curb used as part of the fire lane? (Provide detail of curb.)	☐	☒	☐
g) Is part of a sidewalk used as part of the required fire lane? (Must support +85,000 lbs.)	☐	☒	☐
3. Is the fire lane obstructed by security gates or barricades? If yes:	☐	☒	☐
a) Is the gate a minimum of 20-feet clear opening?	☐	☐	☒
b) Is an approved means of emergency operations installed, key vault, padlock or key switch?	☐	☐	☒
4. Is the Fire lane dead-ended with a length greater than 150-feet?	☐	☒	☐
If yes, does the area for turning around fire apparatus comply with IFC D103?	☐	☐	☒
5. Is any portion of the building to be used for high-piled storage in accordance with IFC Chapter 3206.6 If yes, see IFC 3206.6 for further requirements.	☐	☒	☐
6. Is any part of the building greater than 30-feet above the grade plane?	☐	☒	☐
If yes, answer the following questions:			
a) Is the aerial apparatus fire lane parallel to one entire side of the building and covering at least 25% of the perimeter?	☐	☐	☒
b) Is the near edge of the aerial apparatus fire lane between 15' and 30' from the building?	☐	☐	☒
c) Are there any overhead power or utility lines located across the aerial apparatus fire lane?	☐	☐	☒
d) Are there any tree canopies expected to grow across the aerial fire lane? (Based on mature canopy width of tree species)	☐	☐	☒
e) Does the aerial apparatus fire lane have a minimum unobstructed width of 26-feet?	☐	☐	☒
f) Is the space between the aerial lane and the building free of trees exceeding 20' in heights?	☐	☐	☒
7. Are all portions of the required fire lanes within 500-feet of at least (2) hydrants?	☒	☐	☐
Note: Distances shall be measured along the path of the hose lay as it comes off the fire apparatus.			
a) Is the fire lane at least 26' wide for at least 20-feet on each side of the hydrants?	☒	☐	☐
b) Is there at least 40' between a hydrant and the building?	☒	☐	☐
c) Are the hydrant(s) setback no less than 5-feet nor more than 10-feet from the curb or edge of the street or fire lane?	☒	☐	☐
d) Are hydrants located in parking lot islands a minimum of 3½-feet from the hydrant to the curb?	☐	☐	☒
e) Are there no obstructions, including but not limited to: power poles, trees, bushes, fences, posts located, or grade changes exceeding 1½-feet, within 5-feet of a fire hydrant?	☐	☒	☐
Note: Hydrants shall be installed and in-service prior to combustible construction on the project site.			

Attach an additional sheet if further explanation is required for any answers.

This worksheet is based on **MGO 34.503** and **IFC 2021 Edition Chapter 5 and Appendix D**; please see the codes for further information.

Revised 06/2022

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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC RE-SUBMITTAL 09/09/25

Sheet Name
FIRE ACCESS

Sheet Number
EXHIBIT

File: \\JSDINCfprojects2\2024\24146910\DWG\Civil Sheets\2414691 - Fire Access Exhibit.dwg Layout: FIRE User: matt.haase Plotted: Sep 09, 2025 - 4:31pm XrefS:

COMPREHENSIVE PLANT SCHEDULE

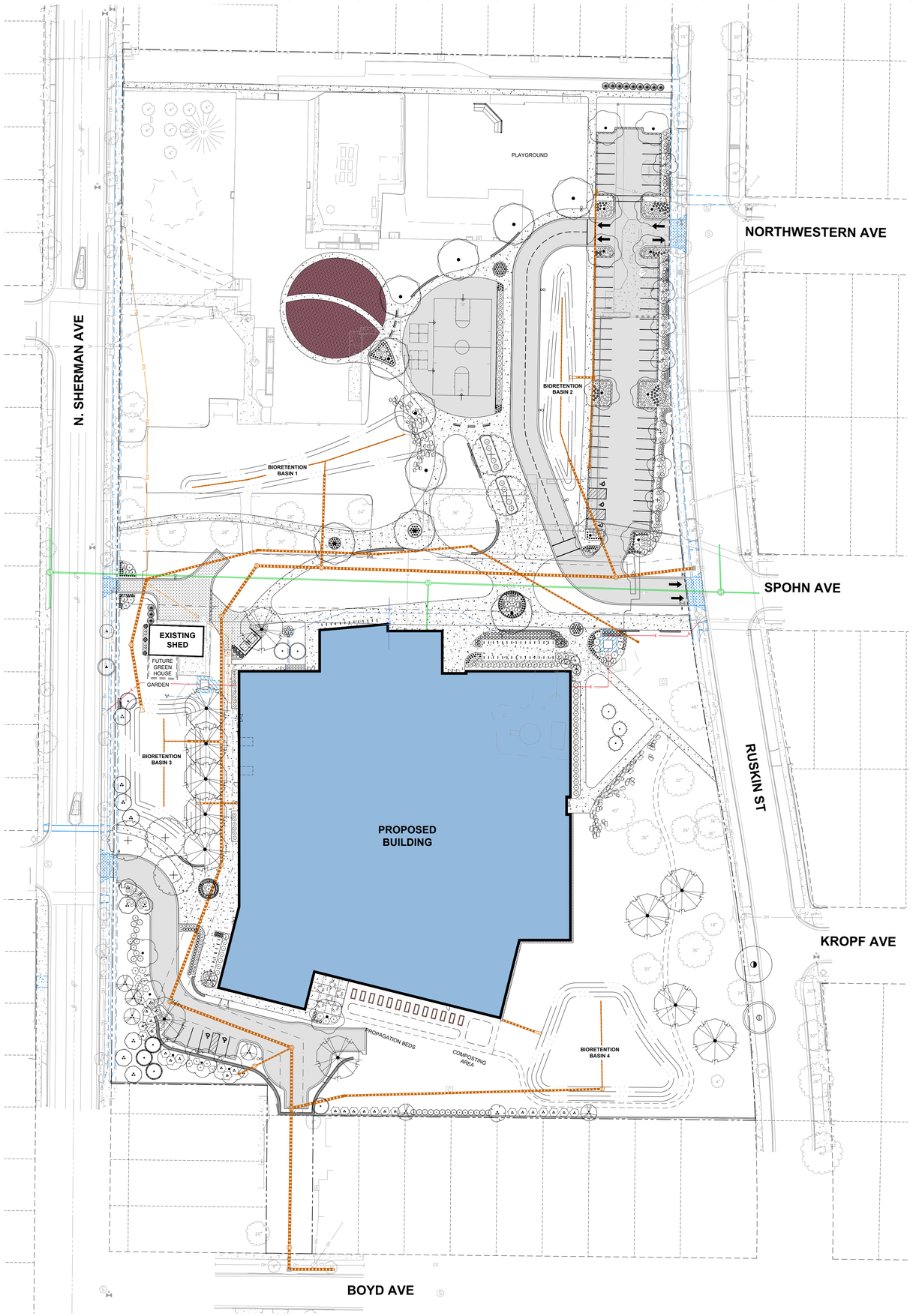
SYMBOL	CODE	BOTANICAL / COMMON NAME	CONT	SIZE	QTY
EVERGREEN TREE					
	PIGL	*Picea glauca / White Spruce*	B & B	6' Ht. (min)	4
	PIST	*Pinus strobus / White Pine*	B & B	6' Ht. (min)	3
	TADI	*Taxodium distichum 'Mickelson' TM / Shawnee Brave Bald Cypress*	B & B	6' Ht. (min)	5
ORNAMENTAL TREES					
	ATGA	*Acer tataricum 'GarAnn' / Hot Wings® Tatarian Maple*	B & B	2" Cal	1
	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)	7
	HEMIT	*Heptacodium miconioides 'SMNHMRF' / Temple of Bloom® Seven Son Flower*	B & B	8' Ht. (min)	5
	SYPM	*Syringa pekinensis 'Morton' / China Snow® Peking Lilac*	B & B	2" Cal	1
OVERSTORY DECIDUOUS TREES					
	ACMI	*Acer miyabei 'Morton' / State Street™ Miyabe Maple*	B & B	2.5"Cal	5
	BENI	*Betula nigra 'BNMTF' TM / Dura Heat River Birch*	B & B	8' Ht. (min)	10
	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	11
	LITU	*Liriodendron tulipifera / Tulip Poplar*	B & B	2" Cal	1
	QUBI	*Quercus bicolor / Swamp White Oak*	B & B	2.5" Cal	12
	QUEL	*Quercus ellipsoidalis / Northern Pin Oak*	B & B	2.5" Cal	10
	ULMG	*Ulmus x 'Morton Glossy' / Triumph™ Elm*	B & B	2" Cal	1
UPRIGHT EVERGREEN SHRUB					
	THOC	*Thuja occidentalis 'Emerald' / Emerald Arborvitae*	B & B	6' Ht. (min)	6
	THTE	*Thuja occidentalis 'Techny' / Techny Arborvitae*	B & B	6' Ht. (min)	12
DECIDUOUS SHRUBS					
	ARME	*Aronia melanocarpa 'Morton' TM / Iroquis Beauty Black Chokeberry*	#3	12" Ht. (min)	138
	ARMEL	*Aronia melanocarpa 'UCONNAM165' TM / Low Scape Mound Chokeberry*	#3	8" Ht. (min)	98
	CEAM	*Ceanothus americanus / New Jersey Tea*	#3	12" Ht. (min)	20
	COBA	*Cornus baileyi / Bailey's Red-twig Dogwood*	B & B	36" Ht. (min)	29
	CORA	*Cornus racemosa / Gray Dogwood*	#5	36" Ht. (min)	28
	COSE	*Cornus sericea 'Farrow' / Arctic Fire® Red Twig Dogwood*	#3	24" Ht. (min)	17
	HYPALL	*Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea*	#3	18" Ht. (min)	78
	RHAR	*Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac* *	#3	24" Dia. (min)	38
	VIJU	*Viburnum x juddii / Judd Viburnum*	B & B	36" Ht. (min)	25
EVERGREEN SHRUBS					
	JUCHK	*Juniperus chinensis 'Kallays Compacta' / Kally Pfitzer Compact Juniper*	#5	18" Dia. (min)	15
	TAMET	*Taxus x media 'Tauntonii' / Taunton's Anglo-Japanese Yew*	#5	24" Ht. (min)	31
PERENNIALS & GRASSES					
	ALSU	*Allium x 'Summer Beauty' / Summer Beauty Allium*	#1	Min. 8"-18"	21
	AQCA	*Aquilegia canadensis / Eastern Columbine*	#1	Min. 8"-18"	47
	ASOB	*Aster oblongifolius 'October Skies / October Skies Fall Aster*	#1	Min 8"-18"	9
	CAAC	*Calamagrostis x acutiflora 'Karl Foerster' / Karl Foerster Feather Reed Grass*	#1	Min. 8"-18"	5
	PAVI	*Panicum virgatum 'Shenandoah' / Shenandoah Switch Grass*	#1	Min. 8"-18"	189
	RUAG	*Rudbeckia x 'American Gold Rush' / American Gold Rush Coneflower*	#1	Min. 8"-18"	84
	SCSC	*Schizachyrium scoparium 'Prairie Blues' / Prairie Blues Little Bluestem* *	#1	Min. 8"-18"	91
	SPHET	*Sporobolus heterolepis 'Tara' / Prairie Dropseed*	#1	Min. 8"-18"	322

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



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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision	Description	Date

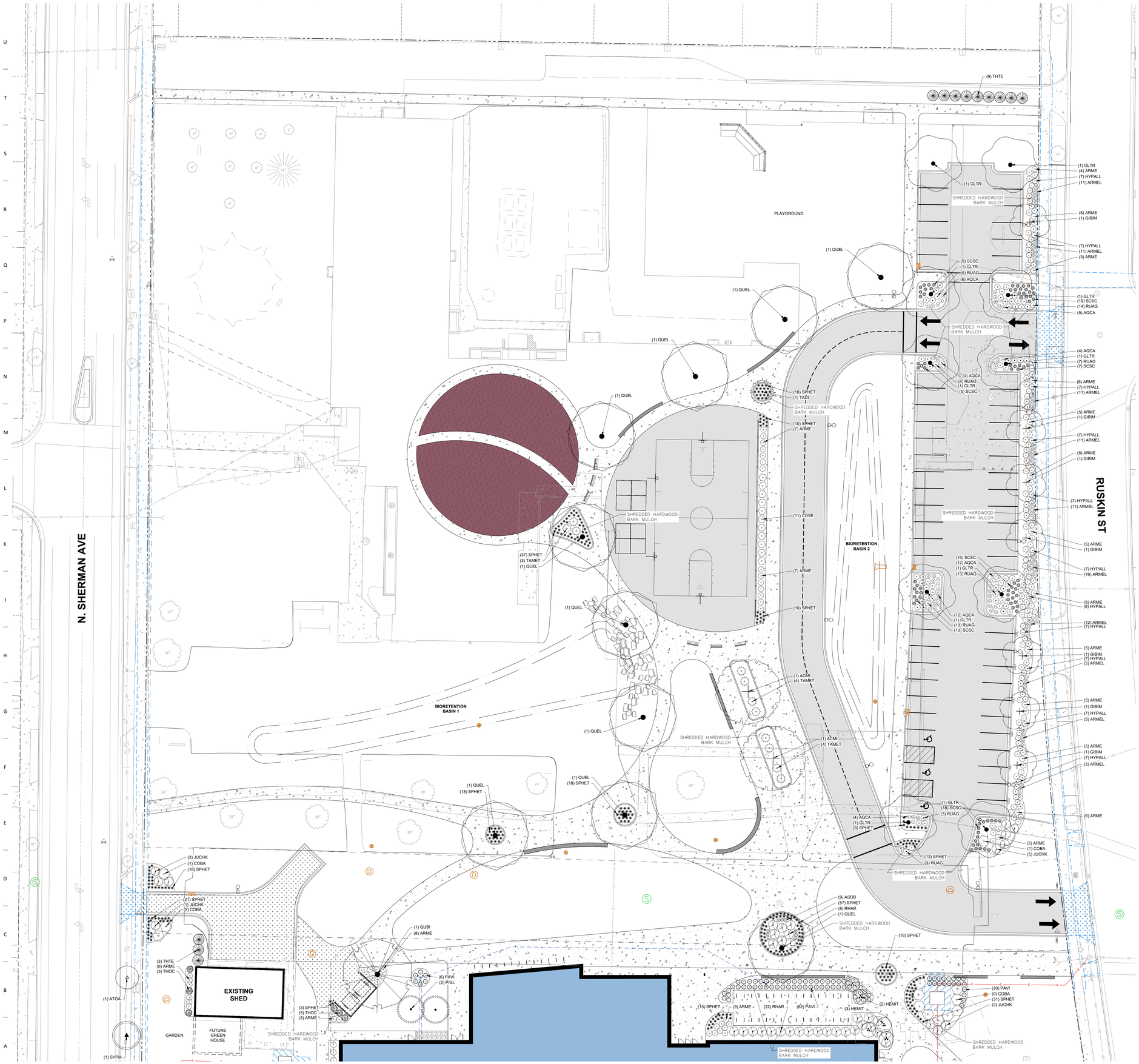
OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC SUBMITTAL 07/14/25

Sheet Name
OVERALL LANDSCAPE PLANTING PLAN

Sheet Number
L100

File: \\JSDINC\projects2\2024\24146\10\WG\Landscape Sheets\24146\1 - Landscape Sheets.dwg Layout: L100 User: michael.sinscalchi Plotted: Sep 09, 2025 - 5:18pm Xrefs: 24146\1 MMSD Sherman Shabazz



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		
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Key Plan

north
SCALE IN FEET
20' 0 20'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC SUBMITTAL 07/14/25

Sheet Name
PARTIAL LANDSCAPE PLANTING PLAN - NORTH

Sheet Number
L101

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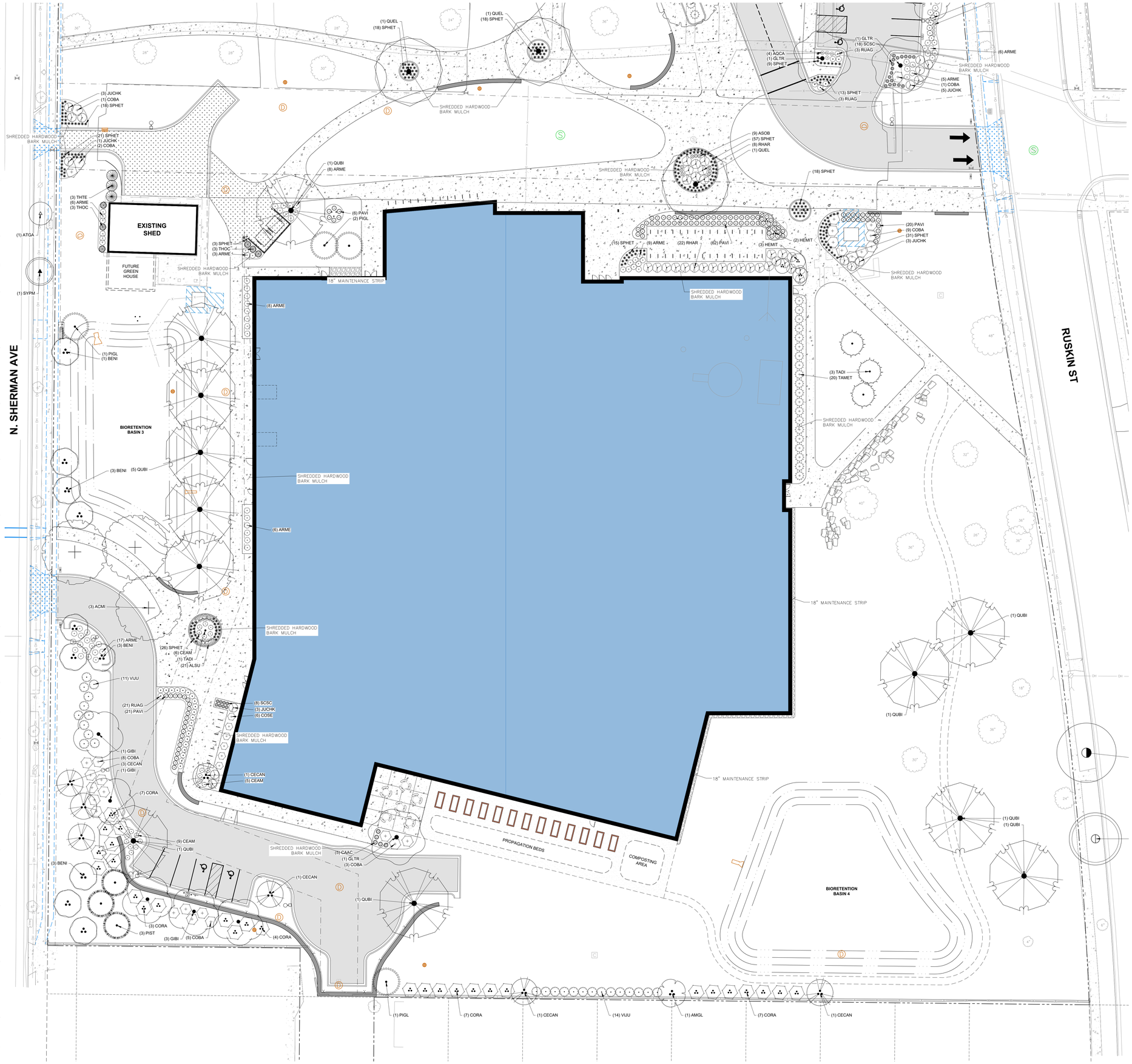

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Key Plan

north
SCALE IN FEET
20' 0 20'

Revision	Description	Date

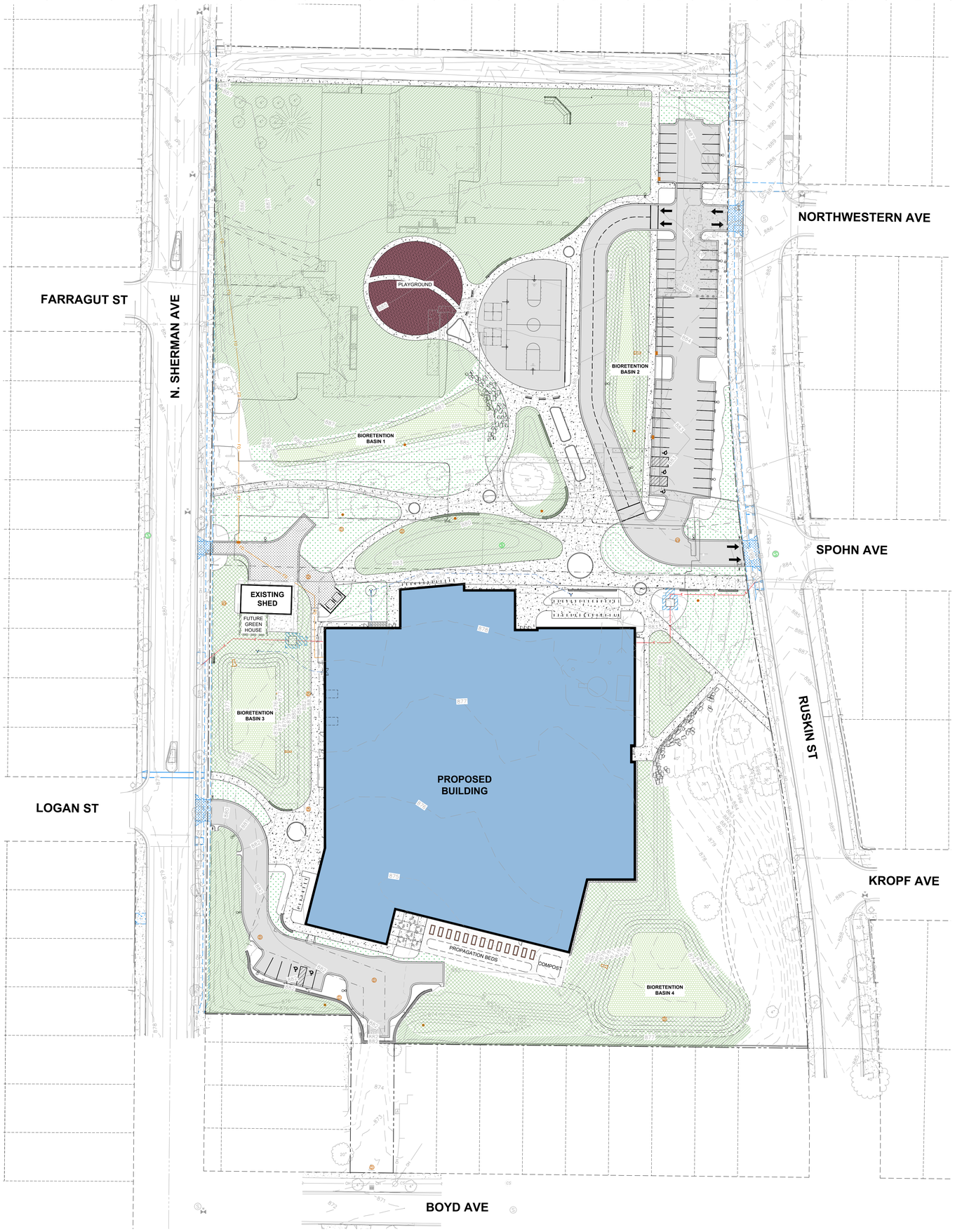
OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC SUBMITTAL **07/14/25**

Sheet Name
PARTIAL LANDSCAPE PLANTING PLAN - SOUTH

Sheet Number
L102

File: \\JSDINCprojects2\2024\24146911\DWG\Landscape Sheets\24146911 - Landscape Sheets.dwg Layout: L102 User: michael.sinisca3ki Plotted: Sep 09, 2025 - 5:19pm Xrefs: 24146911 MMSD Sherman Shabazz



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Key Plan

north
SCALE IN FEET
40' 0 40'

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC SUBMITTAL 07/14/25

Sheet Name
OVERALL LANDSCAPE SEEDING PLAN

Sheet Number
L110

File: \\JSDINC\projects2\2024\24146610\DWG\Landscape Sheets\24146610 - Landscape Sheets.dwg Layout: L110 User: michael.sinscalchi Plotted: Sep 09, 2025 - 5:24pm Xrefs: 24146610 - MMSD Sherman Shabazz

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	25
Evergreen Trees	7
Ornamental Trees	7
Evergreen Shrubs	16
Deciduous Shrubs	115
Perennials & Grasses	145

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

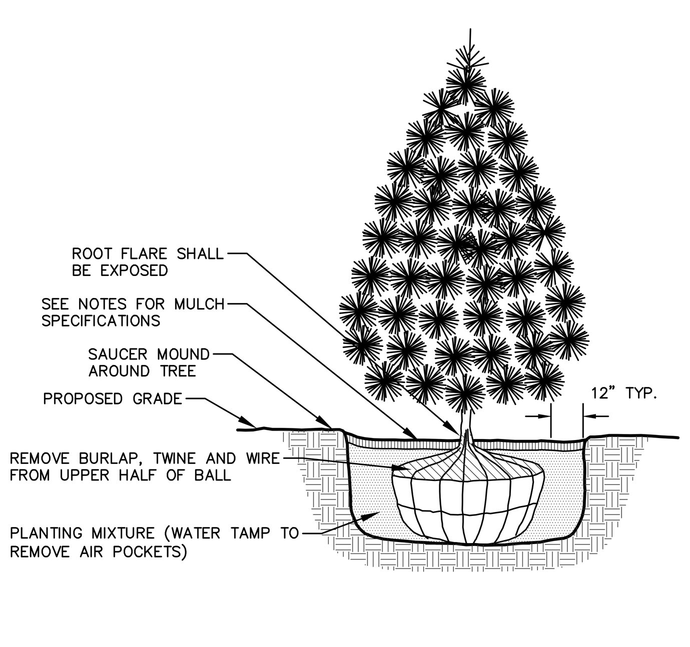
Plant Type	***Quantity***
Existing Significant Specimen Trees	12
Overstory Deciduous Trees	16
Evergreen Trees	3
Ornamental Trees	6
Evergreen Shrubs	35
Deciduous Shrubs	230
Perennials & Grasses	138

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 9 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	60	2100
TALL EVERGREEN TREE	5-6' TALL MIN.	35	0	0	12	420
ORNAMENTAL TREE	1.5" CAL MIN.	15	0	0	13	195
UPRIGHT EVERGREEN SHRUB	3-4' TALL, MIN.	10	0	0	18	180
SHRUB, DECIDUOUS	#3 CONT., MIN. 12"-24"	3	0	0	463	1389
SHRUB, EVERGREEN	#3 CONT., MIN. 12"-24"	4	0	0	46	184
ORNAMENTAL GRASS & PERENNIAL	#1 CONT., MIN. 8"-18"	2	0	0	688	1376
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**		**5,844**
		TOTAL NUMBER OF POINTS PROVIDED	**5,844**			

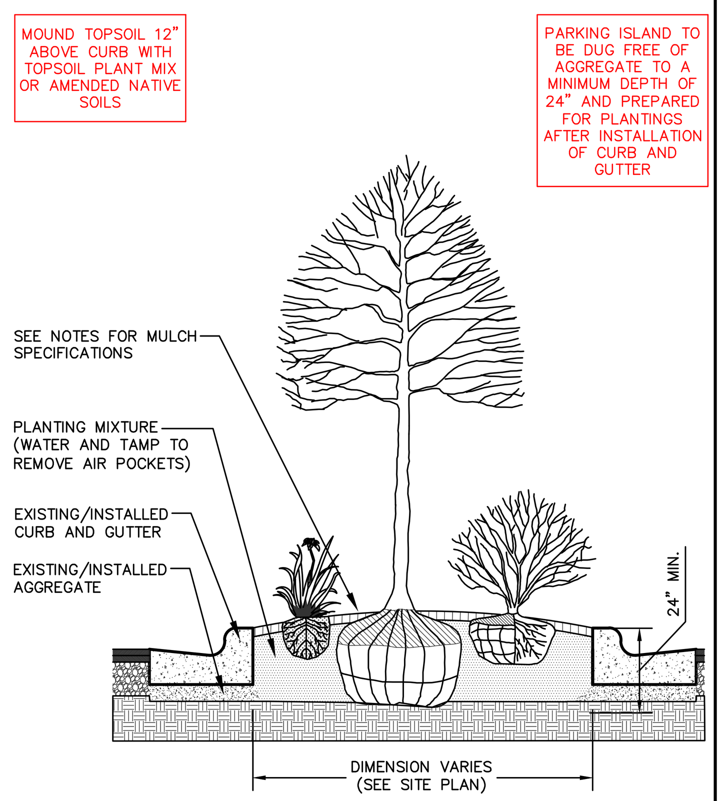


NOTE:
1. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE. ROOT BALL TO BE SET ON UNDISTURBED SOIL UNLESS COMPACTED AGGREGATE STONE REMAINS FROM SITE EXCAVATOR. REMOVE REMAINING AGGREGATE STONE UNTIL SOIL LAYER IS REACHED

EVERGREEN TREE PLANTING DETAIL

N.T.S.

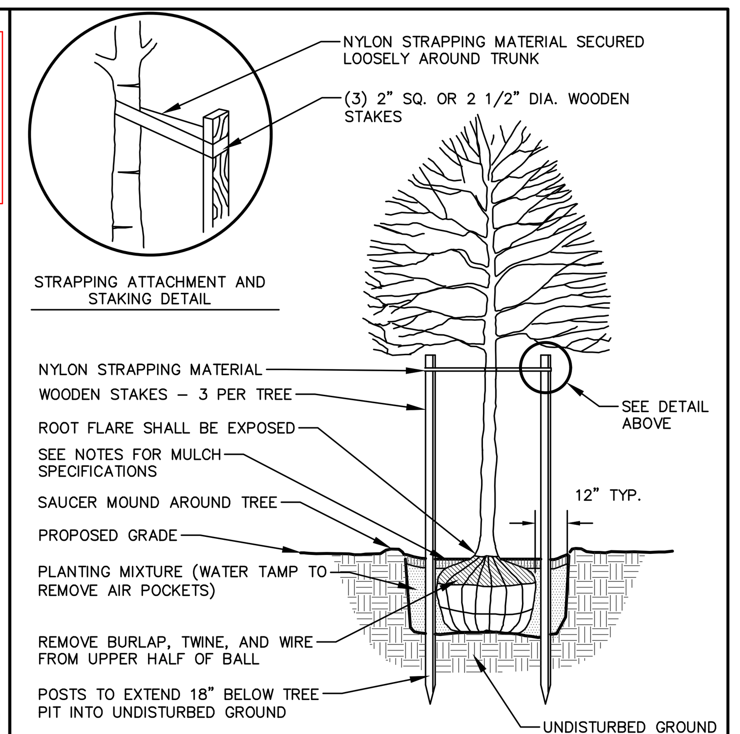
REV. 01-03-2019



PARKING ISLAND LANDSCAPE DETAIL

N.T.S.

REV. 01-03-2019

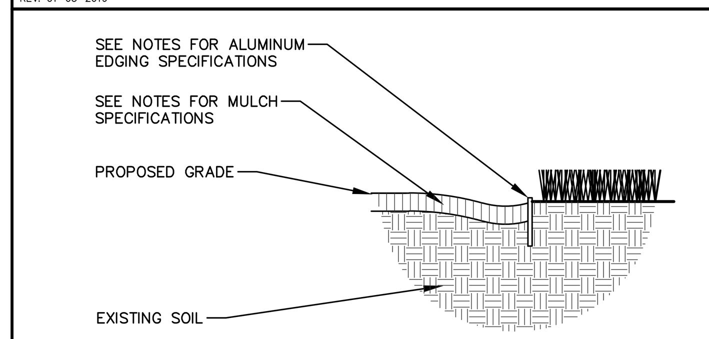


NOTE:
1. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE. ROOT BALL TO BE SET ON UNDISTURBED SOIL UNLESS COMPACTED AGGREGATE STONE REMAINS FROM SITE EXCAVATOR. REMOVE REMAINING AGGREGATE STONE UNTIL SOIL LAYER IS REACHED.
2. REMOVE NYLON STRAPPING WITHIN 9-18 MONTHS FOLLOWING INSTALLATION

DECIDUOUS TREE PLANTING DETAIL

N.T.S.

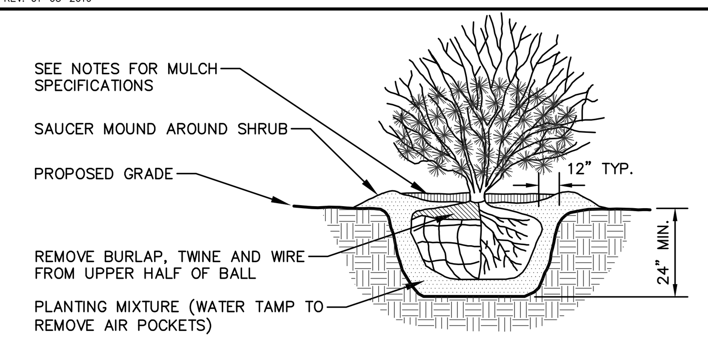
REV. 01-04-2019



ALUMINUM LANDSCAPE EDGING DETAIL

N.T.S.

REV. 01-03-2019

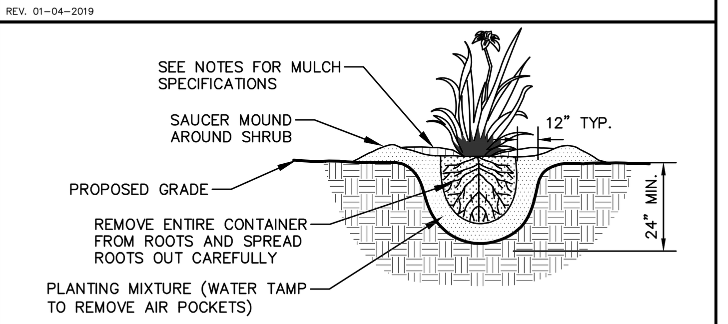


NOTE:
1. ROOT FLARE TO BE EXPOSED.

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 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 – 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.

6.1. 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 THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGEND.
15. DRAWING FOR REVIEW – NOT FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE TITLE BLOCK.
16. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL FINE GRADING AND TOPSOILING WITH GENERAL CONTRACTOR
17. 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
18. REFER TO C100 CITY FORESTRY NOTES

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Key Plan

Revision	Description	Date

OPN Project No.
24654002

Sheet Issue Date
LAND USE/UDC SUBMITTAL **07/14/25**

Sheet Name
LANDSCAPE NOTES & DETAILS

Sheet Number
L200

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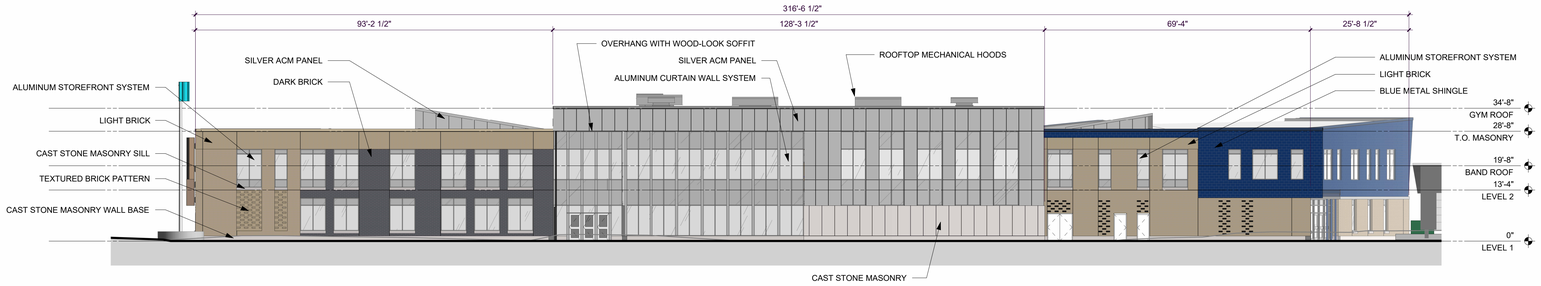
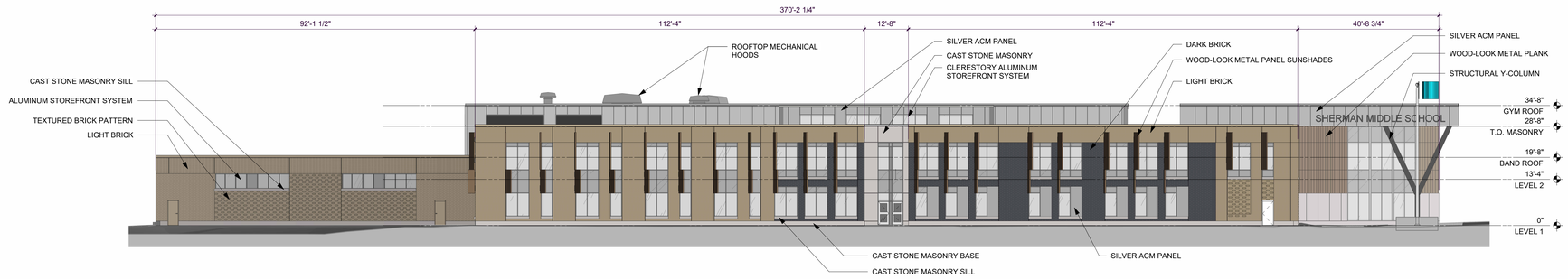
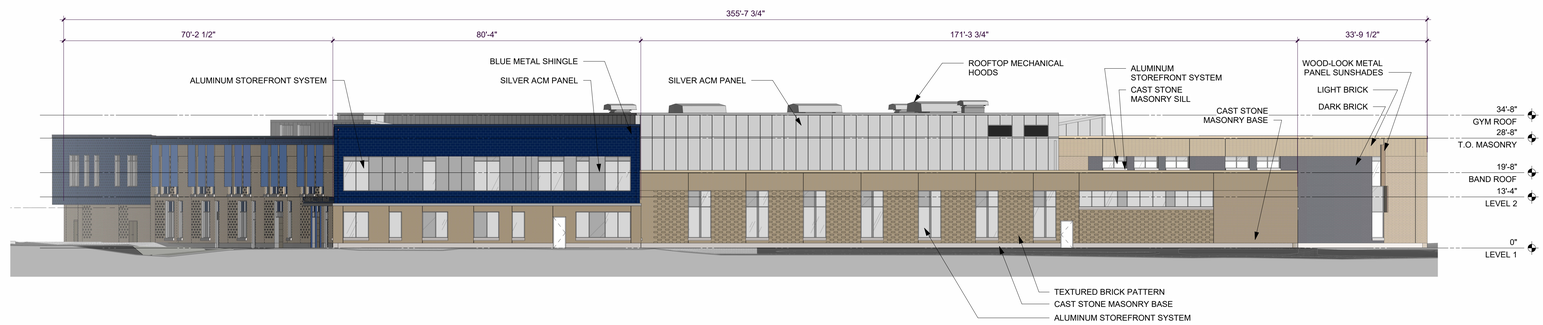


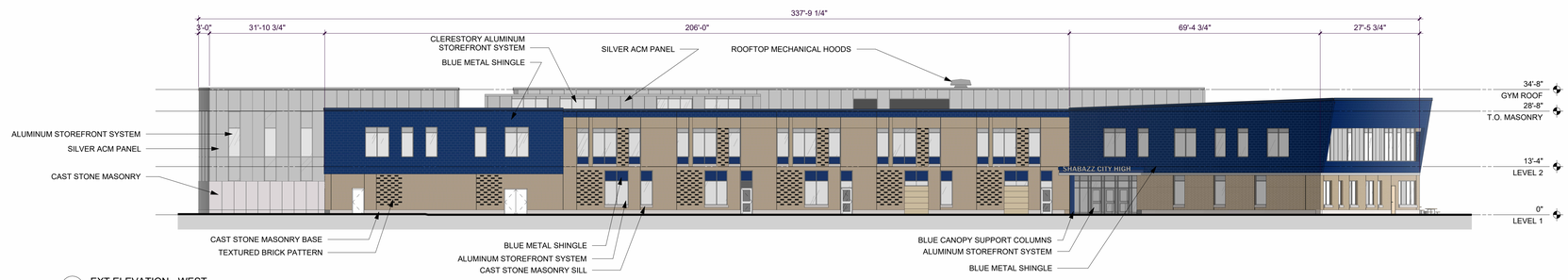
R8 EXT ELEVATION - NORTH
1/16" = 1'-0"



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



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



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

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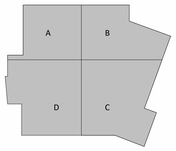


Revision	Description	Date

OPN Project No.
24654001

Sheet Issue Date
CITY SUBMITTAL **07/14/2025**

Sheet Name
OVERALL EXTERIOR ELEVATIONS

Sheet Number
A211

Current Design - Exterior Material

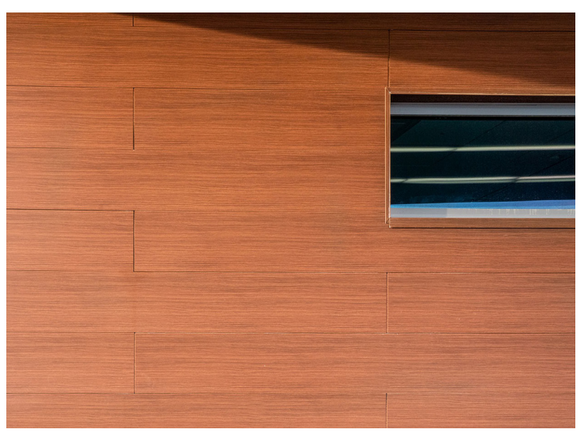
Brick A:
Manufacturer: Cloud Ceramics Utility
Color: Dove Grey Velour
Brick B:
Manufacturer: Yankee Hill Utility
Color: Charcoal Velour

Aluminum Composite
Metal Wall Panel

Millenium Stainless Steel
Cupped Tile, mill finish Blue

Cast Stone

Brick Texture



Armstrong Metalworks Linear – Synchro
Color: Effects Cherry

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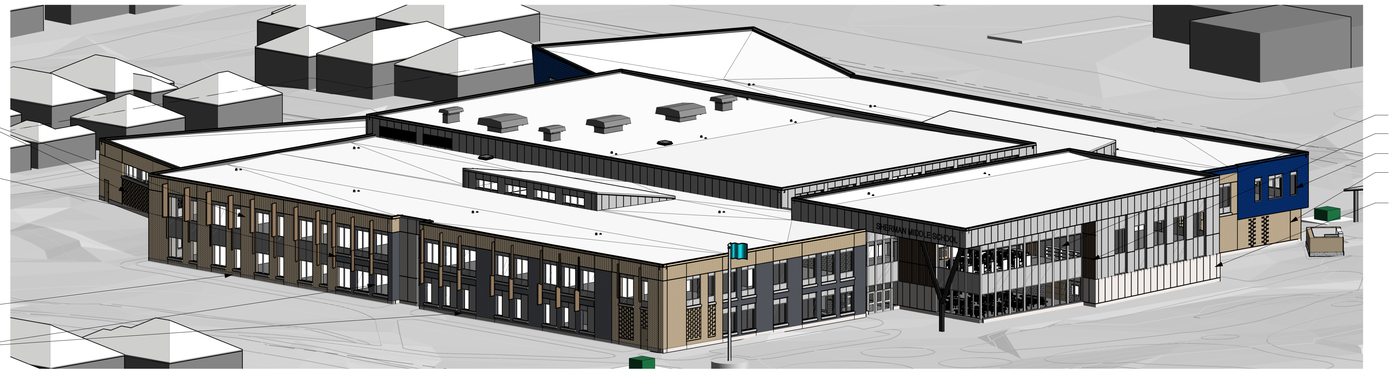
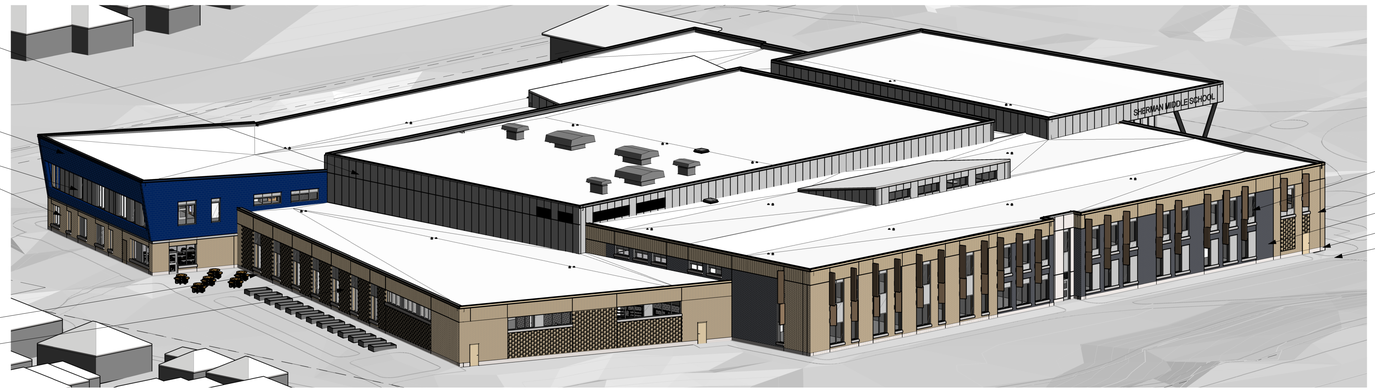
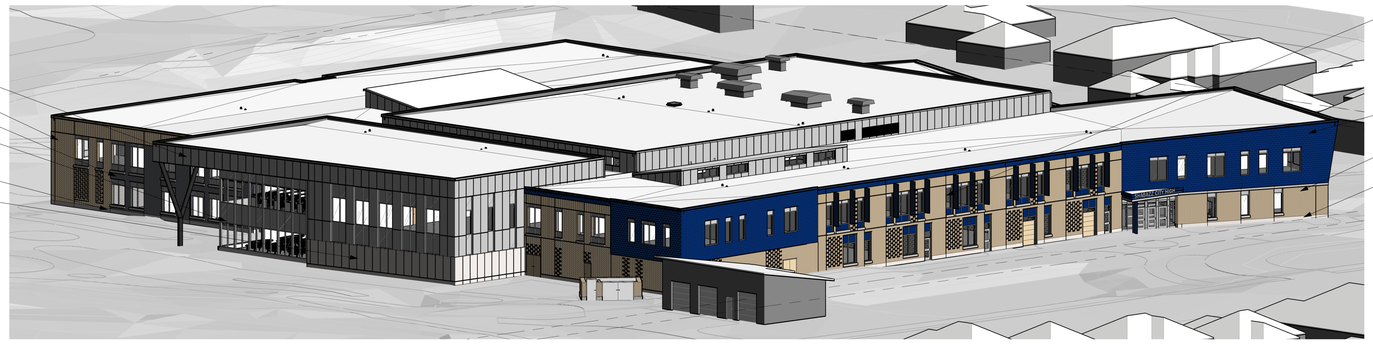


Q6 ISOMETRIC DIAGRAM NE



K6 ISOMETRIC DIAGRAM SE



F6 ISOMETRIC DIAGRAM NW

A6 ISOMETRIC DIAGRAM SW

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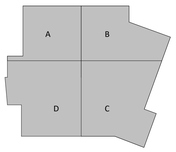

Revision	Description	Date

OPN Project No.
24654001

Sheet Issue Date
CITY SUBMITTAL **07/14/2025**

Sheet Name
EXTERIOR AXONOMETRICS

Sheet Number
A200

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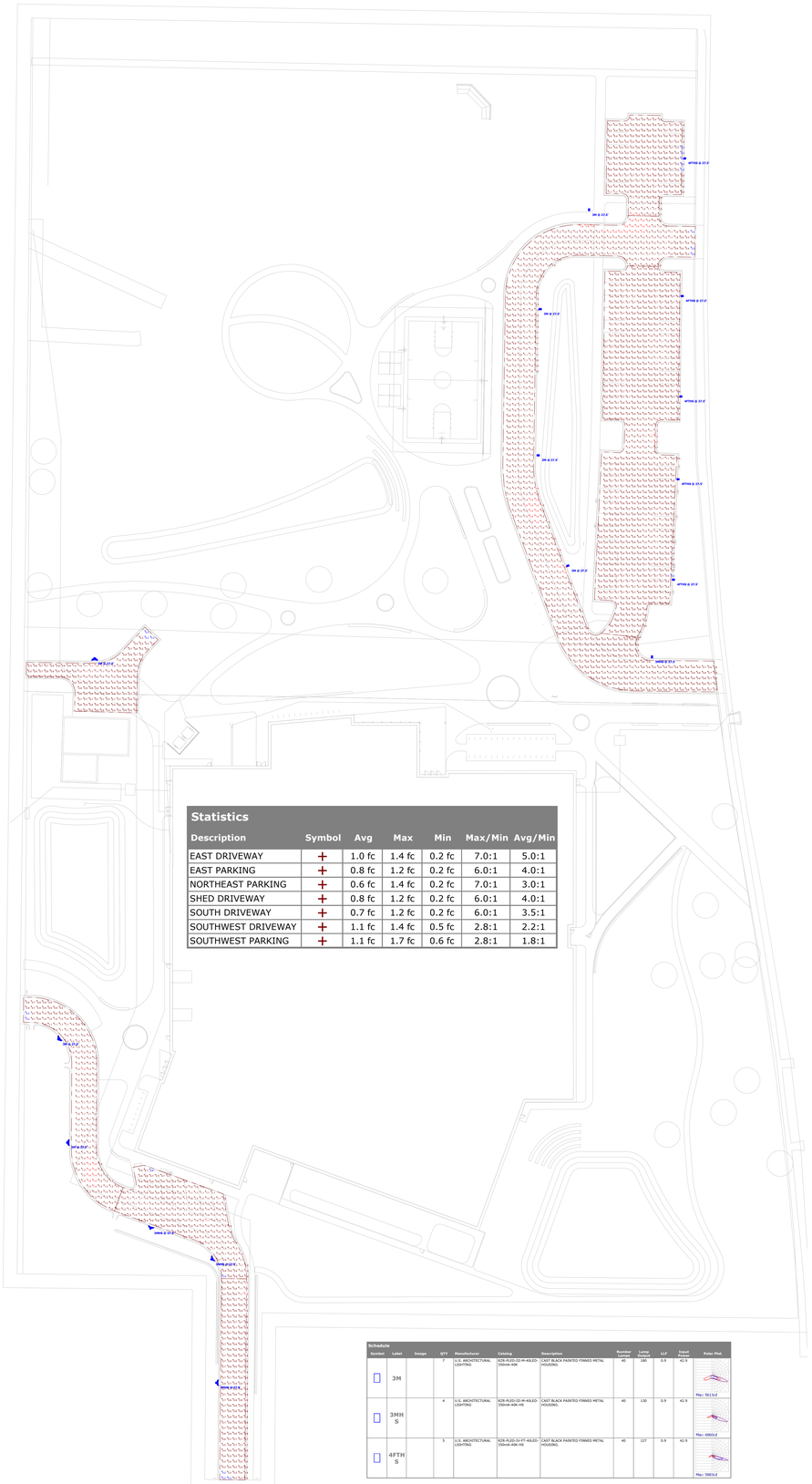

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
EAST DRIVEWAY	+	1.0 fc	1.4 fc	0.2 fc	7.0:1	5.0:1
EAST PARKING	+	0.8 fc	1.2 fc	0.2 fc	6.0:1	4.0:1
NORTHEAST PARKING	+	0.6 fc	1.4 fc	0.2 fc	7.0:1	3.0:1
SHED DRIVEWAY	+	0.8 fc	1.2 fc	0.2 fc	6.0:1	4.0:1
SOUTH DRIVEWAY	+	0.7 fc	1.2 fc	0.2 fc	6.0:1	3.5:1
SOUTHWEST DRIVEWAY	+	1.1 fc	1.4 fc	0.5 fc	2.8:1	2.2:1
SOUTHWEST PARKING	+	1.1 fc	1.7 fc	0.6 fc	2.8:1	1.8:1

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Lumens	LLF	Input Power	Polar Plot
	3M		7	U.S. ARCHITECTURAL LIGHTING	N26-PLED-22-P1-40LED-350mA-40K	CAST BLACK PAINTED FINNED METAL HOUSING.	40	190	0.9	42.9	Max: 561cd
	3MH S		4	U.S. ARCHITECTURAL LIGHTING	N26-PLED-22-P1-40LED-350mA-40K-HS	CAST BLACK PAINTED FINNED METAL HOUSING.	40	130	0.9	42.9	Max: 686cd
	4FTM S		5	U.S. ARCHITECTURAL LIGHTING	N26-PLED-2x-F1-40LED-350mA-40K-HS	CAST BLACK PAINTED FINNED METAL HOUSING.	40	127	0.9	42.9	Max: 580cd

NORTH

1 SITE PLAN - CITY PHOTOMETRIC

1" = 40'-0"

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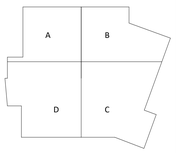

Revision	Description	Date

OPN Project No.
24654001

Sheet Issue Date
CITY OF MADISON SUBMITTAL 07/14/25

Sheet Name
SITE PLAN - CITY PHOTOMETRICS

Sheet Number
EC050

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REF. SCALE IN INCHES
PROJECT #25000140.01

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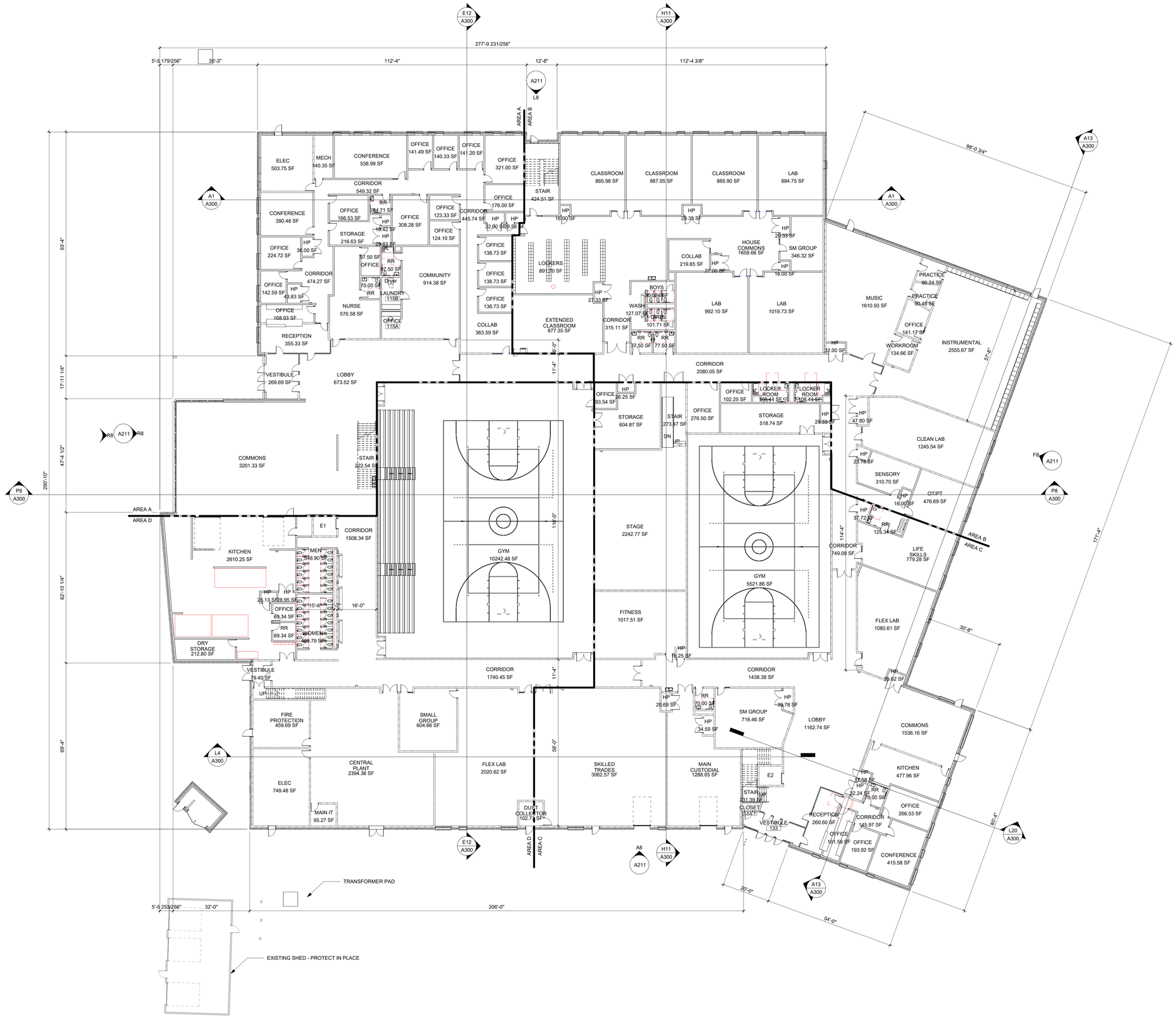

N B4 OVERALL FLOOR PLAN - LEVEL 1
1/16" = 1'-0"

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 A1.d.0 UNLESS NOTED AS OTHERWISE.

KEYNOTE LEGEND

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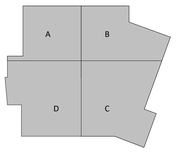

Revision	Description	Date

OPN Project No.
24654001

Sheet Issue Date
CITY SUBMITTAL **07/14/2025**

Sheet Name
OVERALL FLOOR PLAN - LEVEL 1

Sheet Number
A101

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B4 FLOOR PLAN - LEVEL 2
1/16" = 1'-0"

GENERAL NOTES

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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.
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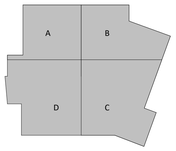

Revision	Description	Date

OPN Project No.
24654001

Sheet Issue Date
CITY SUBMITTAL **07/14/2025**

Sheet Name
OVERALL FLOOR PLAN - LEVEL 2

Sheet Number
A102

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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).

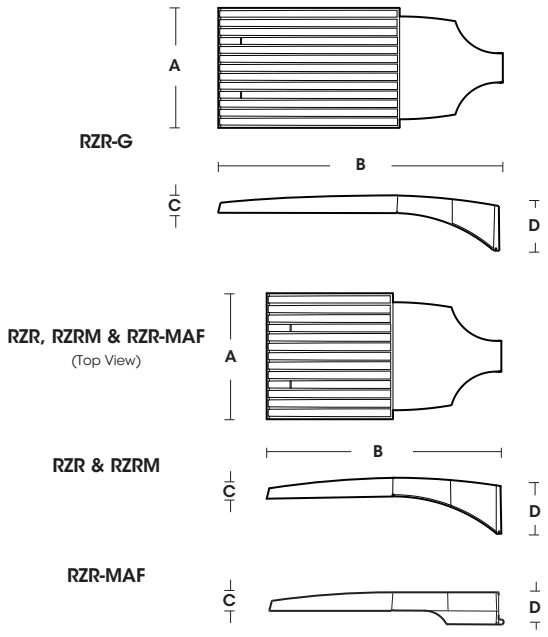
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

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

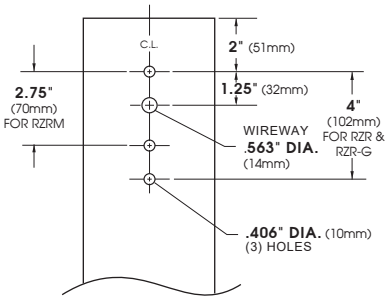
U.L. Listed for Wet Location

BABA COMPLIANT

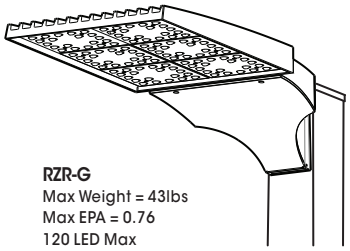
2024281

SPECIFICATIONS

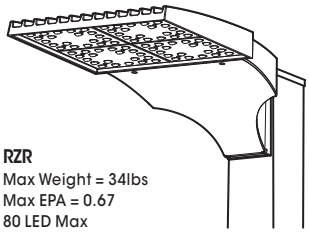
POLE DRILLING TEMPLATE



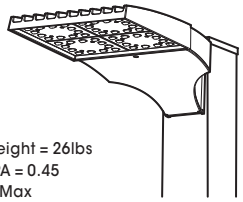
EPA & WEIGHT



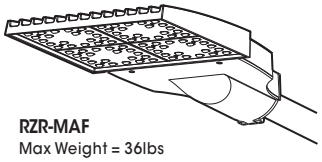
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



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

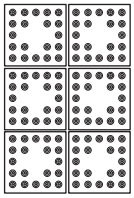


RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

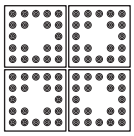


RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

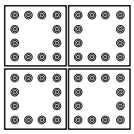
PLED™ MODULES



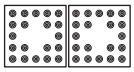
120 LED Module



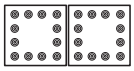
80 LED Module



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

Drive Current	Color Temp - CCT
☐ 1400mA[1]	☐ 27K (2700K)
☐ 1225mA[1]	☐ 30K (3000K)
☐ 1050mA	☐ 40K (4000K)
☐ 875mA	☐ 50K (5000K)
☐ 700mA	☐ TRA True Amber
☐ 525mA	Consult Factory for Other LED Color, CCT, & CRI Options
☐ 350mA	

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

COOPER Lighting

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

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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Results derived from content of manufacturers photometric file.

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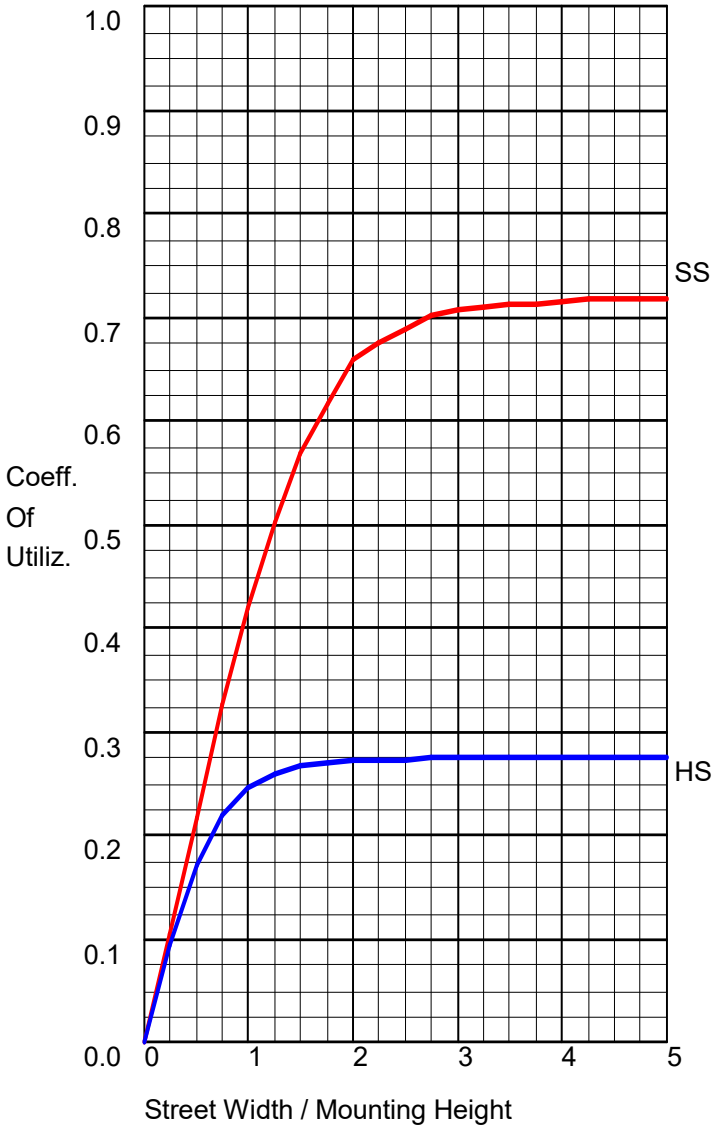
IES ROAD REPORT
PHOTOMETRIC FILENAME : RZR-PLED-III-M-40LED-350MA-40K.IES

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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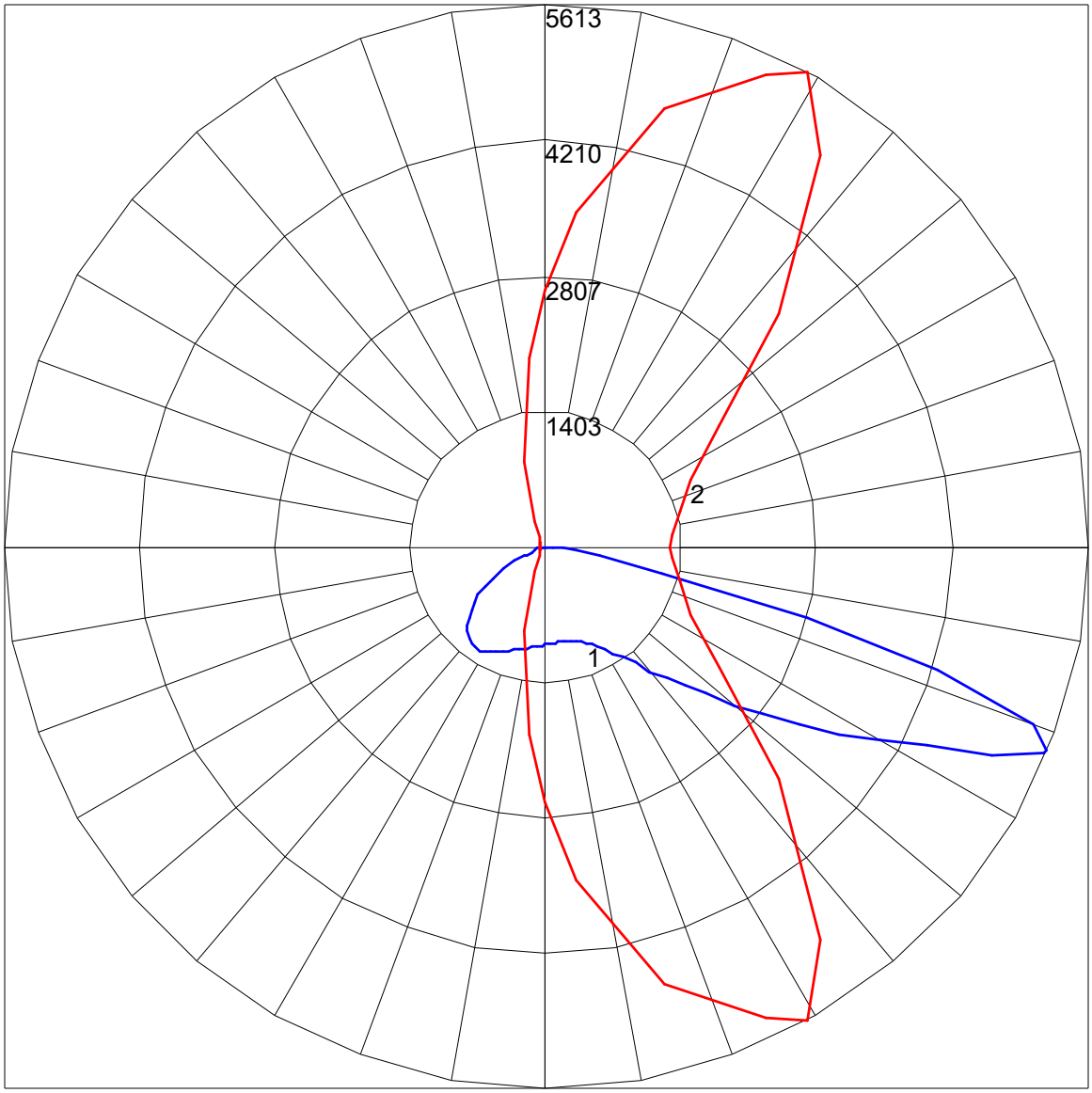
Results derived from content of manufacturers photometric file.

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

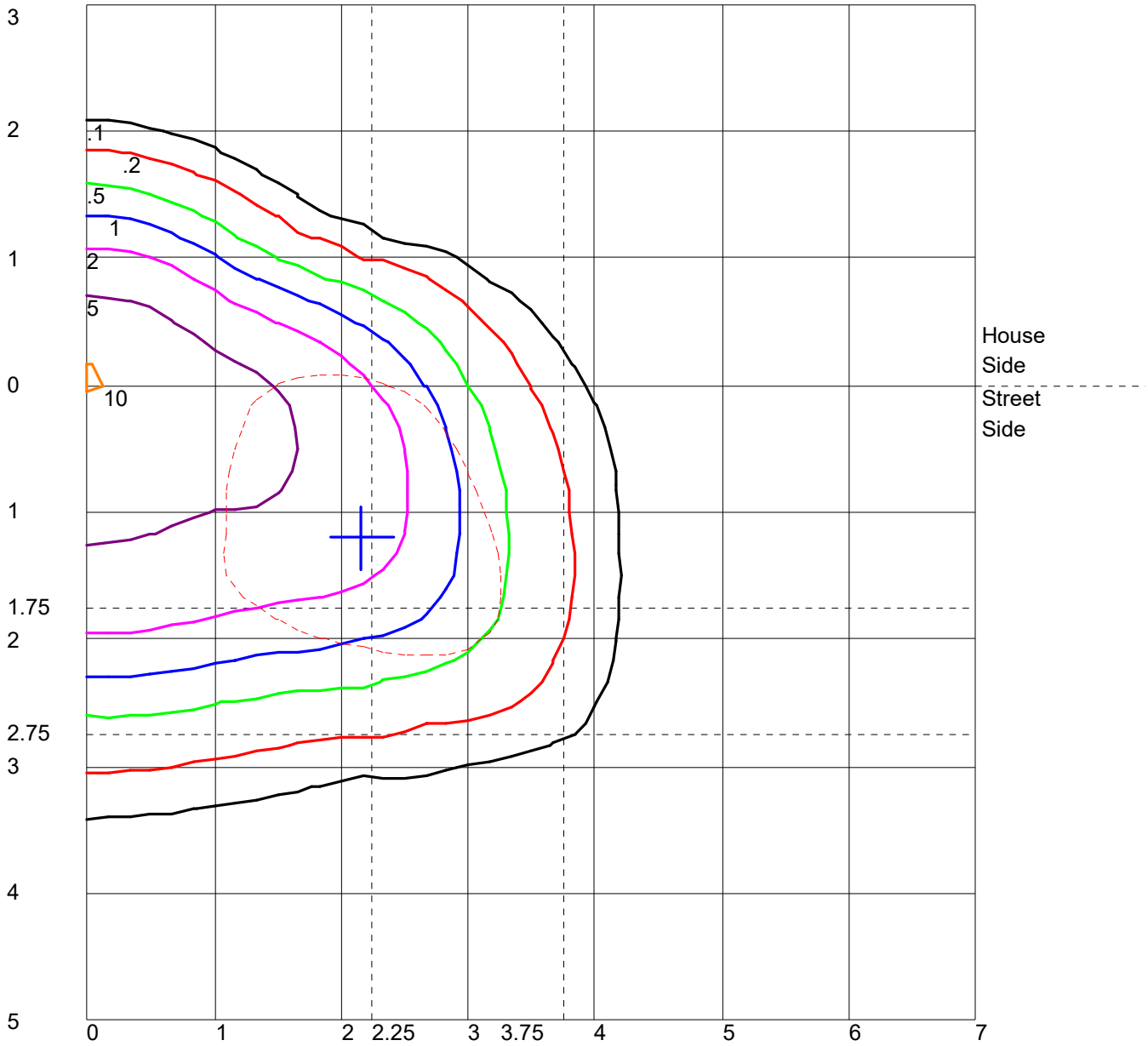
POLAR GRAPH



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.)

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

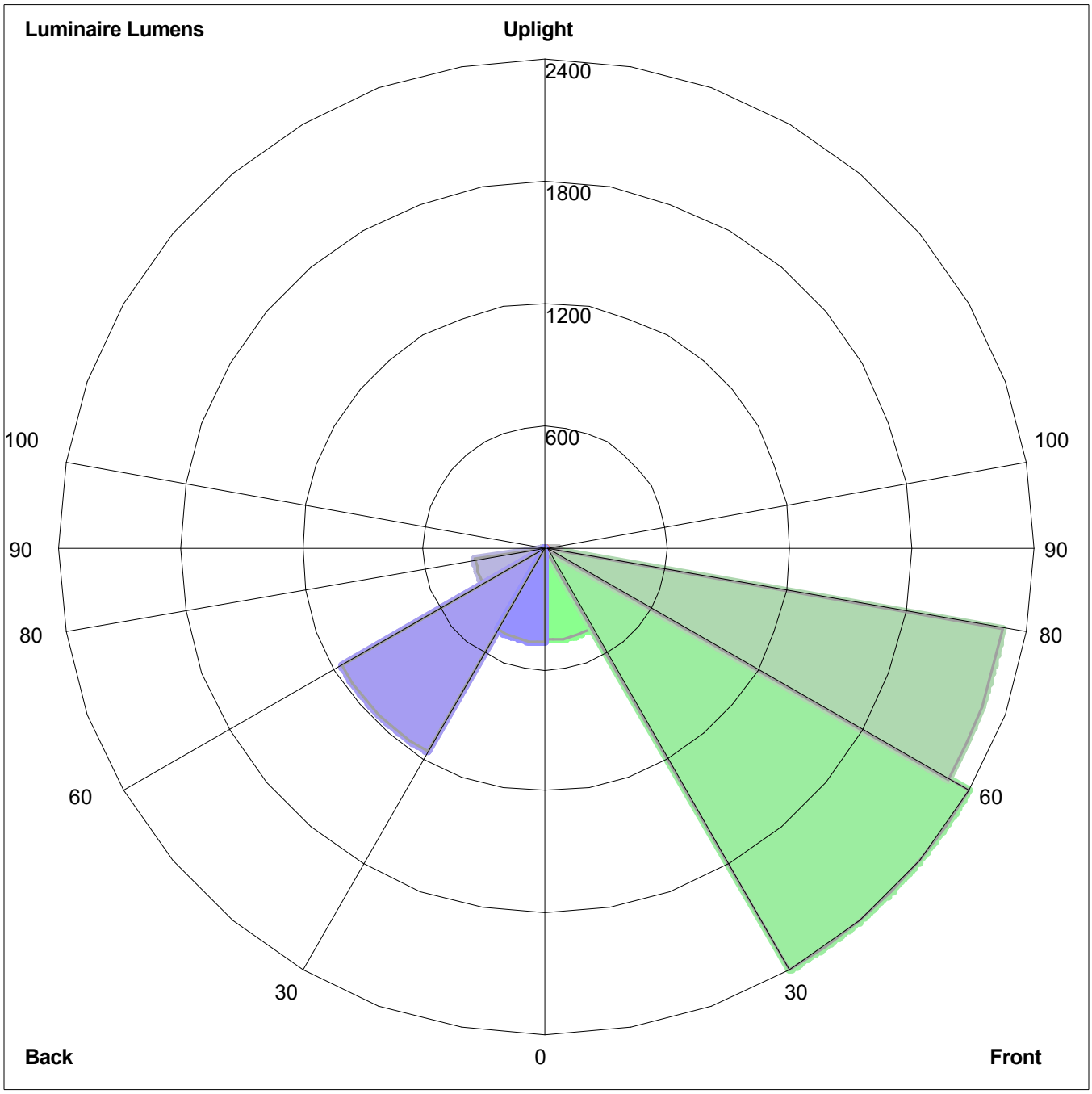
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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

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).

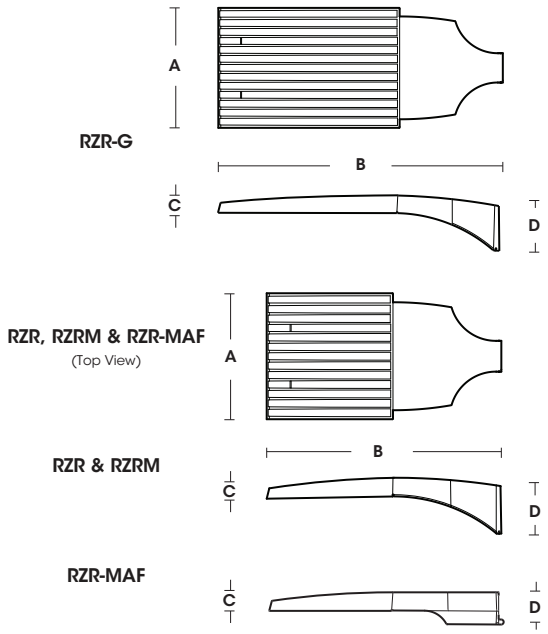
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

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

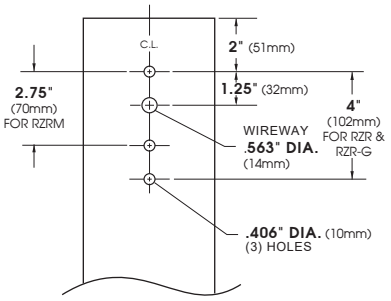
U.L. Listed for Wet Location

BABA COMPLIANT

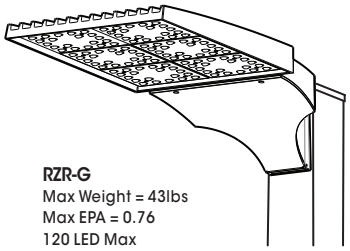
2024281

SPECIFICATIONS

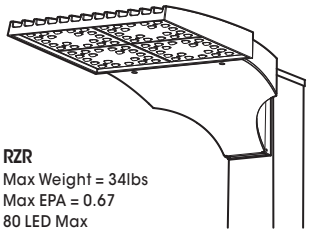
POLE DRILLING TEMPLATE



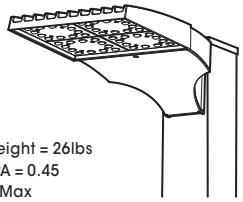
EPA & WEIGHT



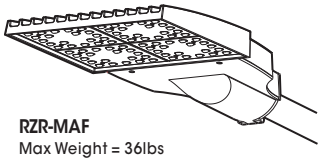
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



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

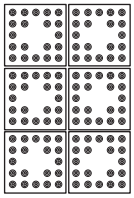


RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

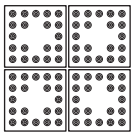


RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

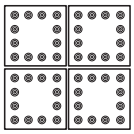
PLED™ MODULES



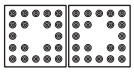
120 LED Module



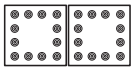
80 LED Module



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

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

COOPER Lighting

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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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-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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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-HS.IES

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

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

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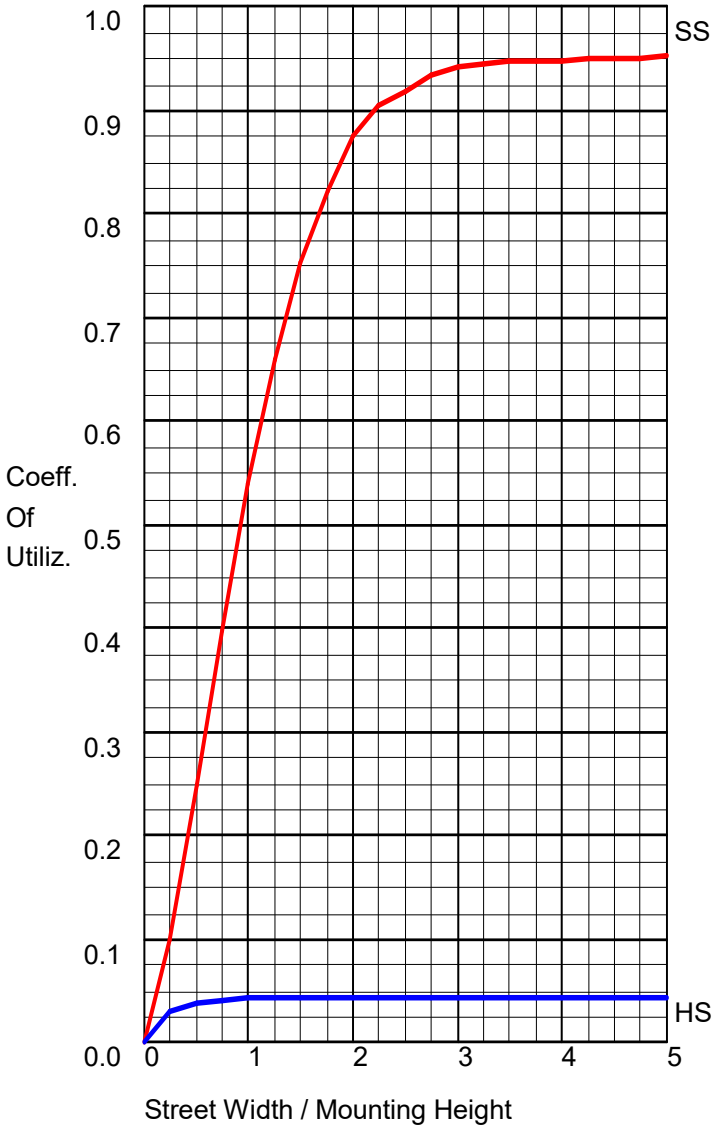
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

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

COEFFICIENTS OF UTILIZATION



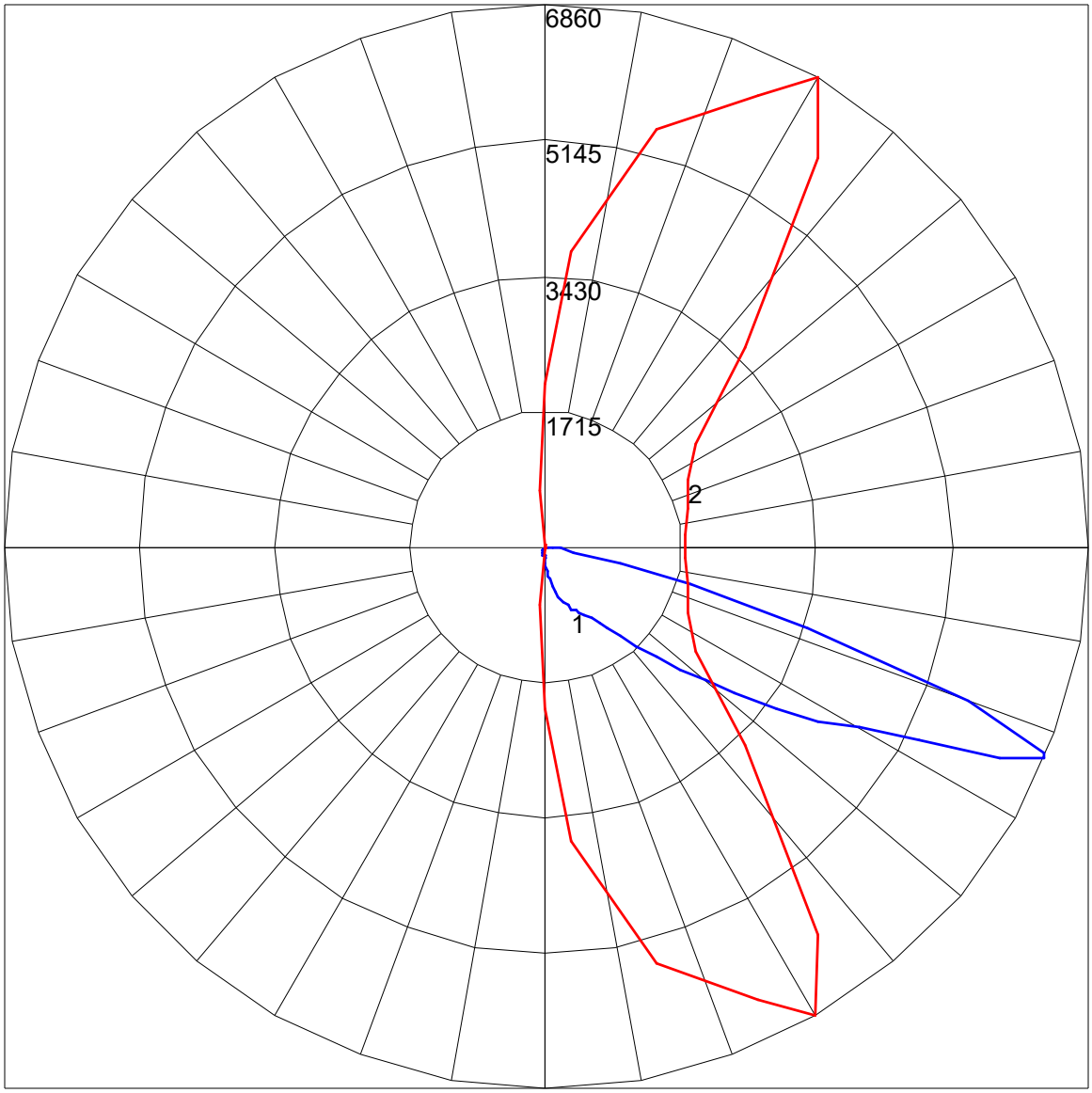
FLUX DISTRIBUTION

	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

Photometric Toolbox Professional Edition - Copyright 2002-2011 by Lighting Analysts, Inc.
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-HS.IES

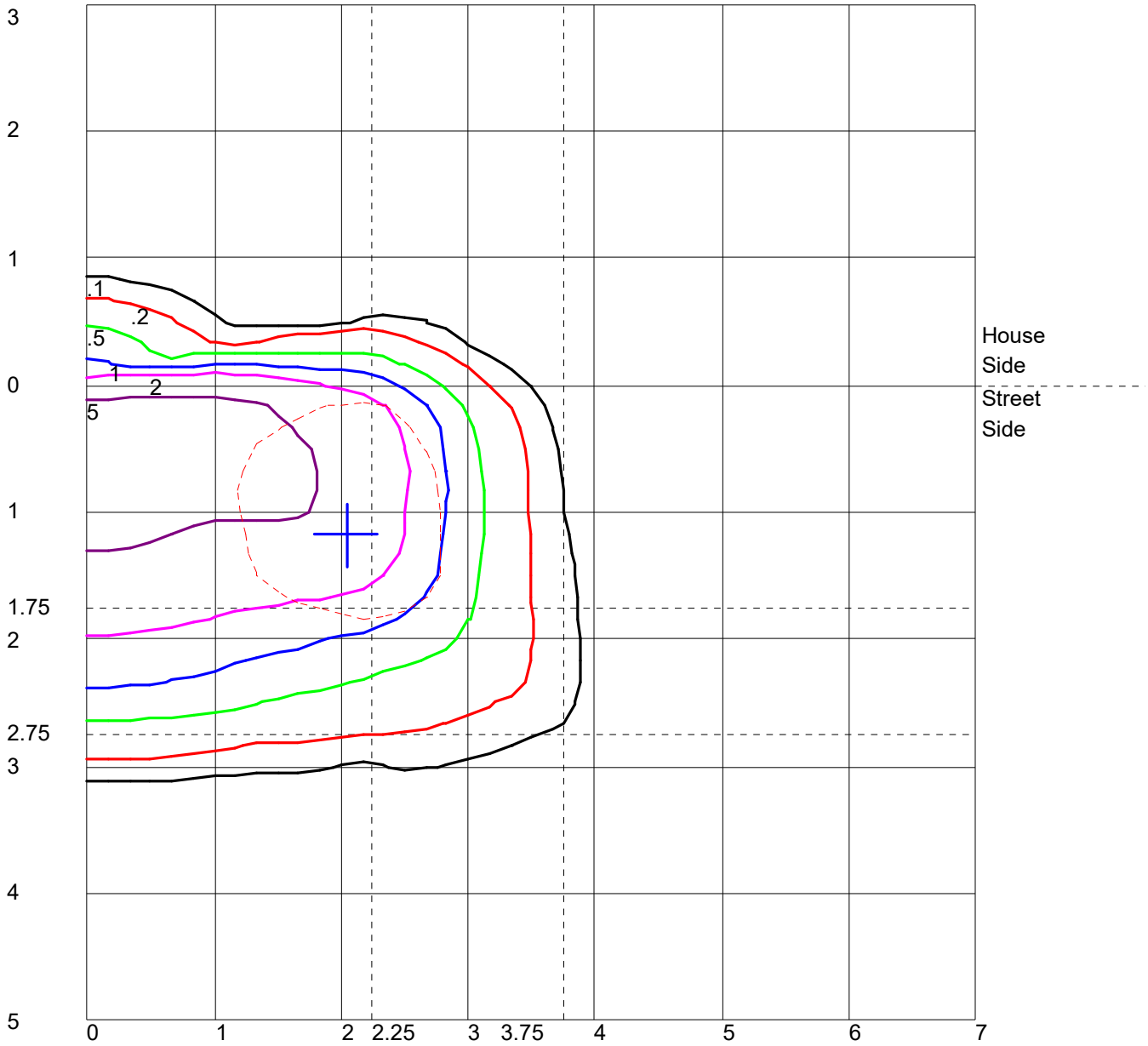
POLAR GRAPH



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.)

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

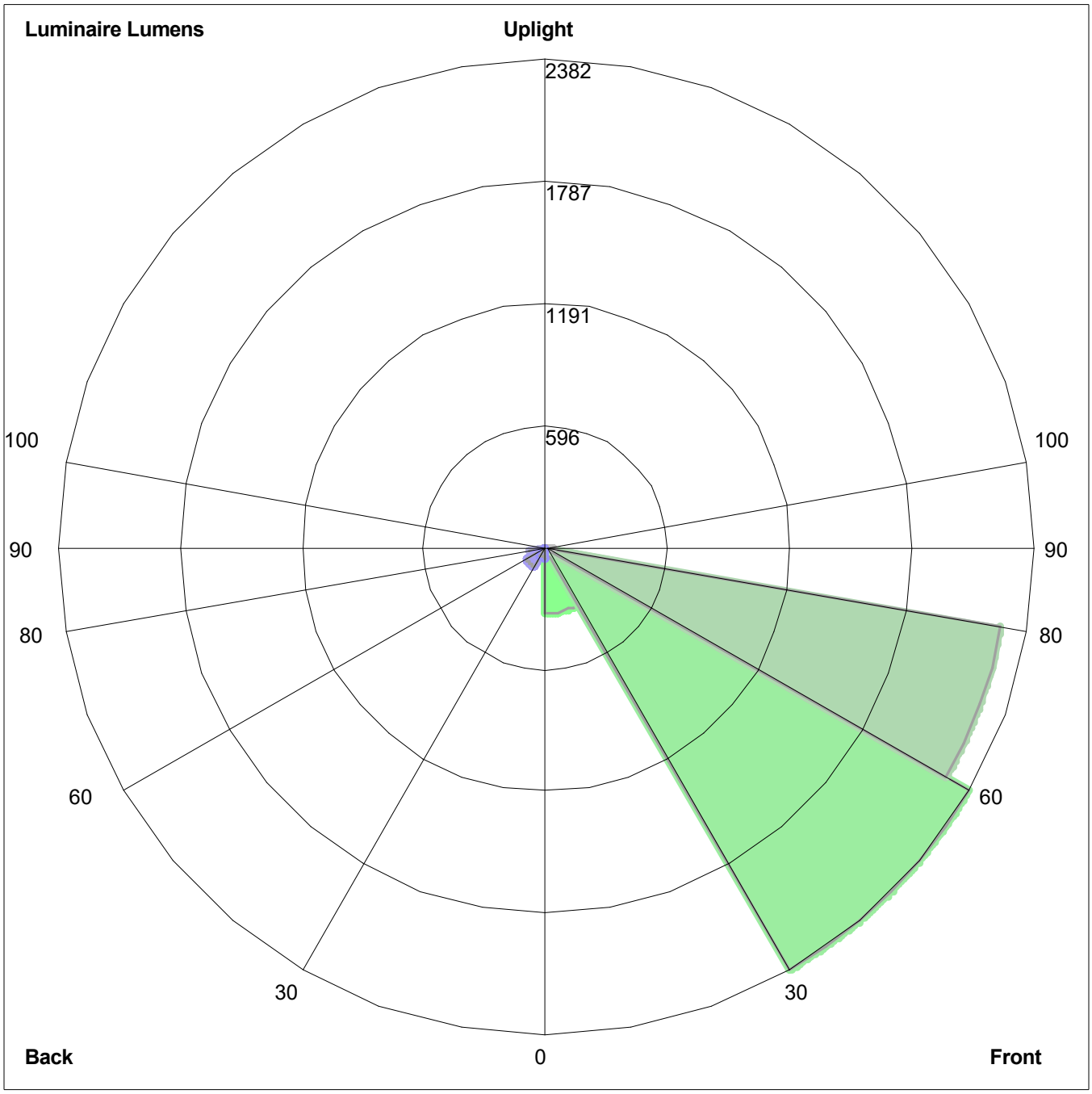
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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-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

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).

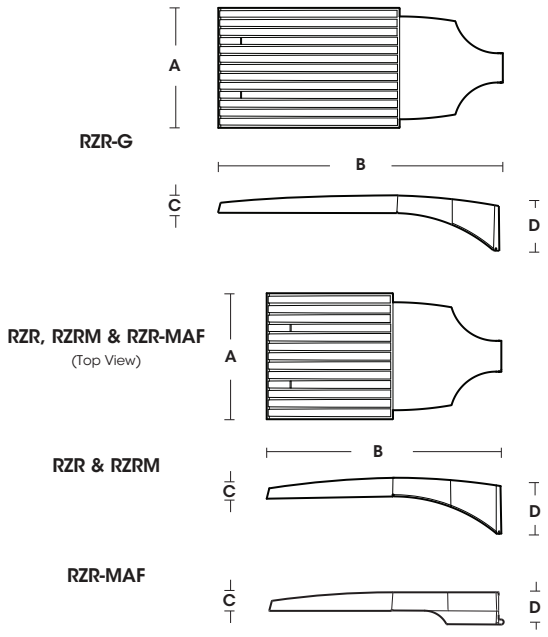
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

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

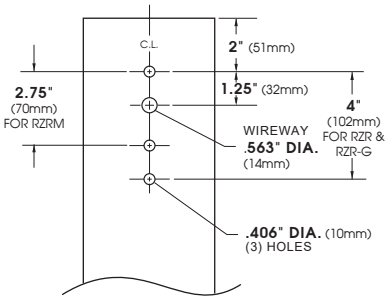
U.L. Listed for Wet Location

BABA COMPLIANT

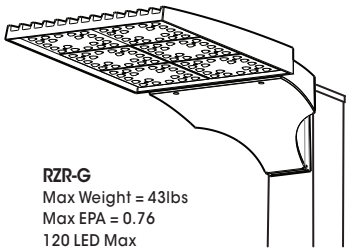
2024281

SPECIFICATIONS

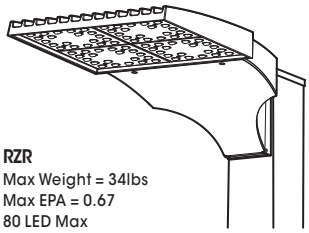
POLE DRILLING TEMPLATE



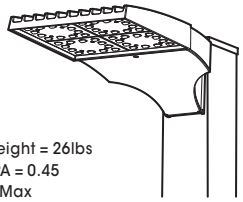
EPA & WEIGHT



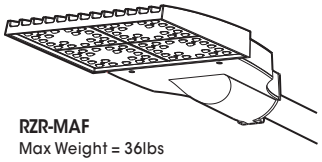
RZR-G
Max Weight = 43lbs
Max EPA = 0.76
120 LED Max



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

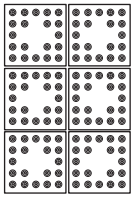


RZRM
Max Weight = 26lbs
Max EPA = 0.45
48 LED Max

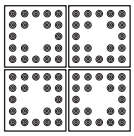


RZR-MAF
Max Weight = 36lbs
Max EPA = 0.56
80 LED Max

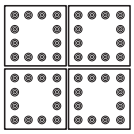
PLED™ MODULES



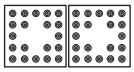
120 LED Module



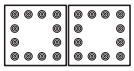
80 LED Module



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

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

COOPER Lighting

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		

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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

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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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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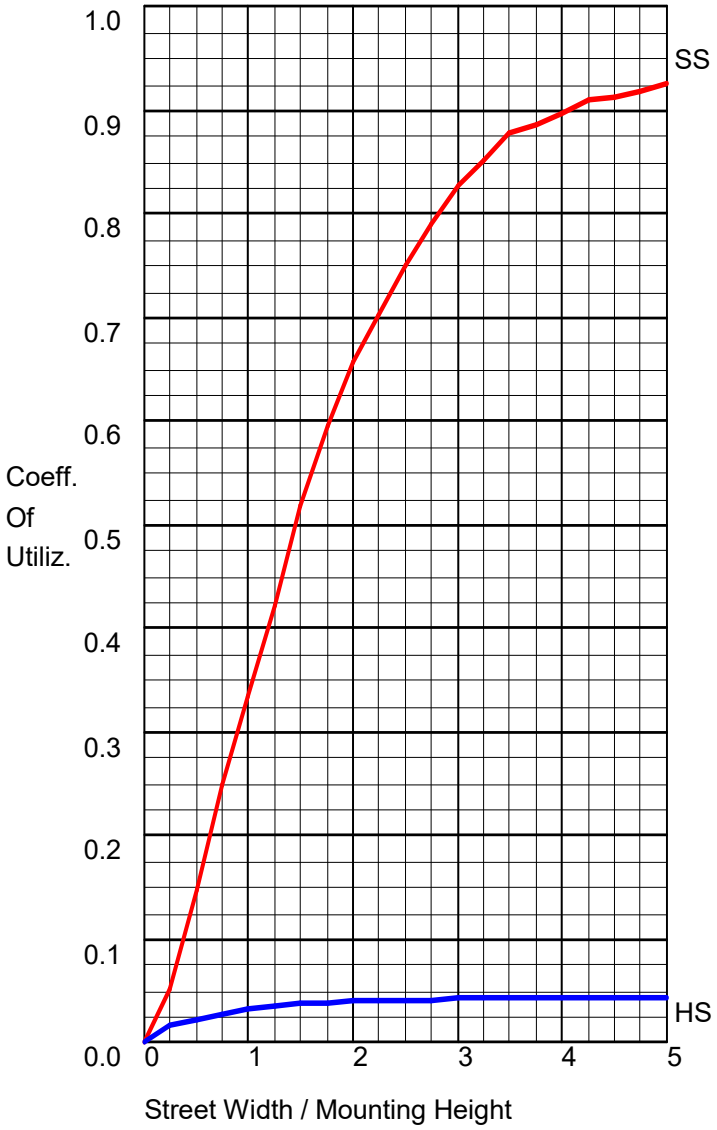
COEFFICIENTS OF UTILIZATION



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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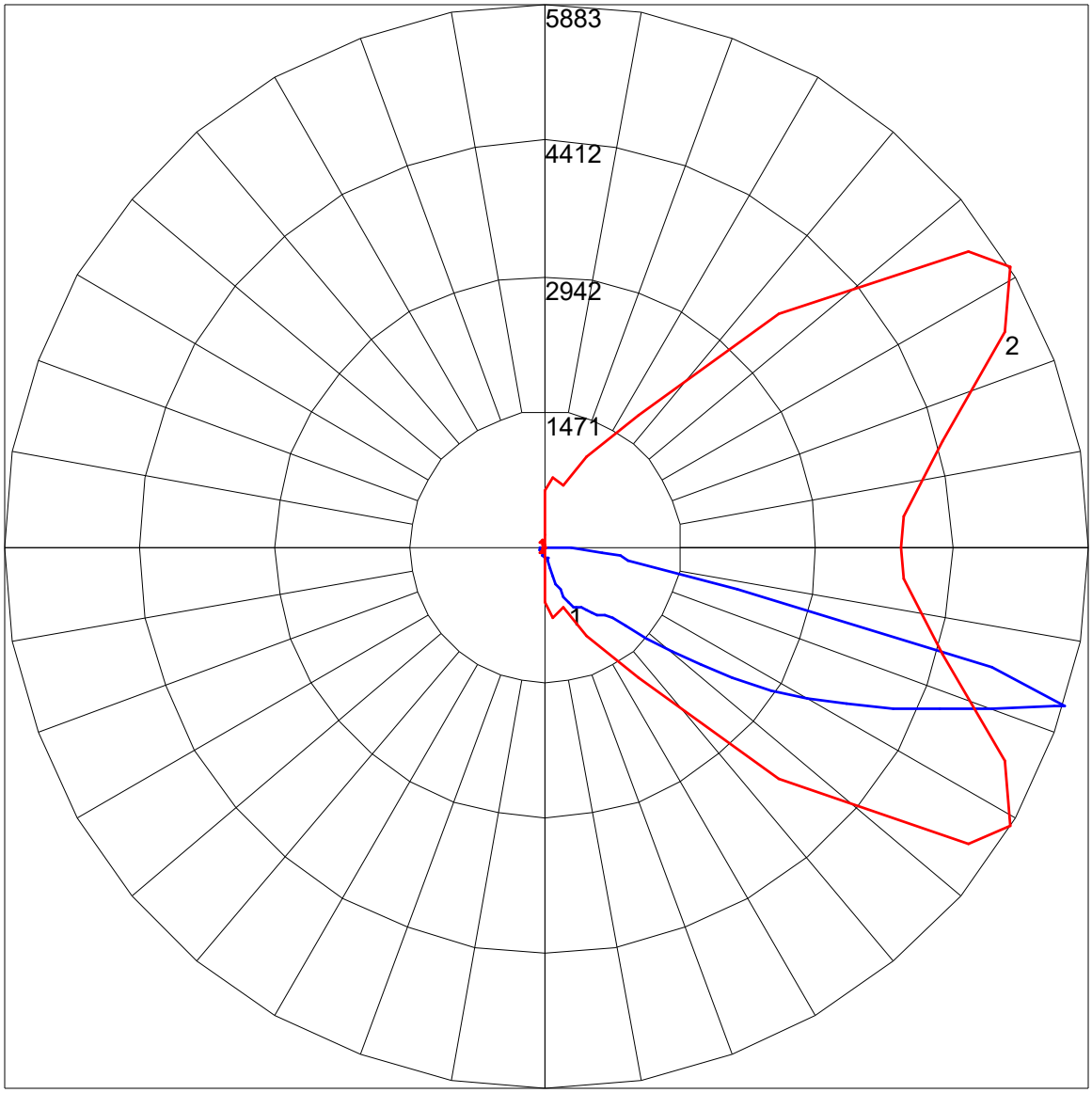
POLAR GRAPH



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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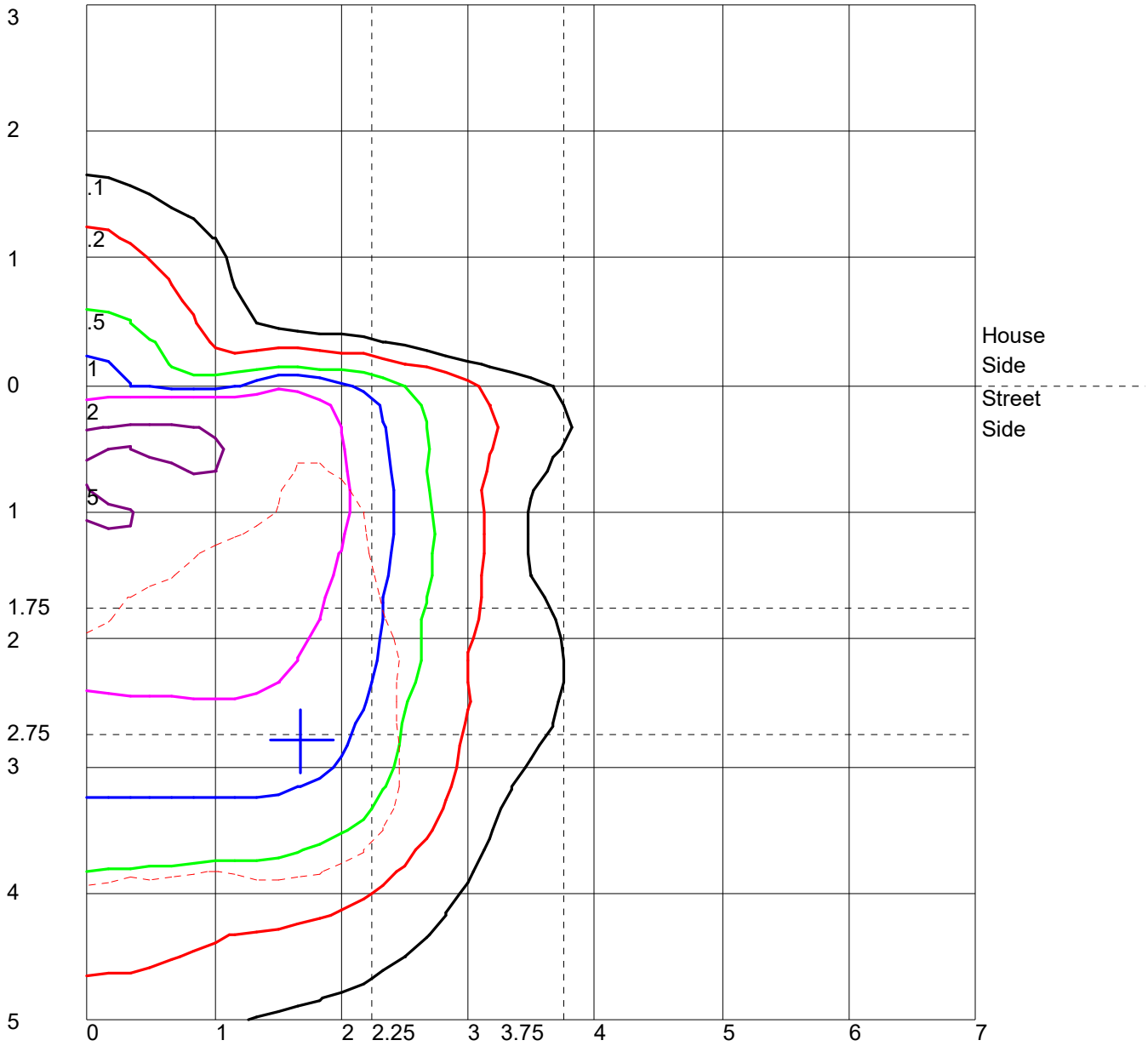
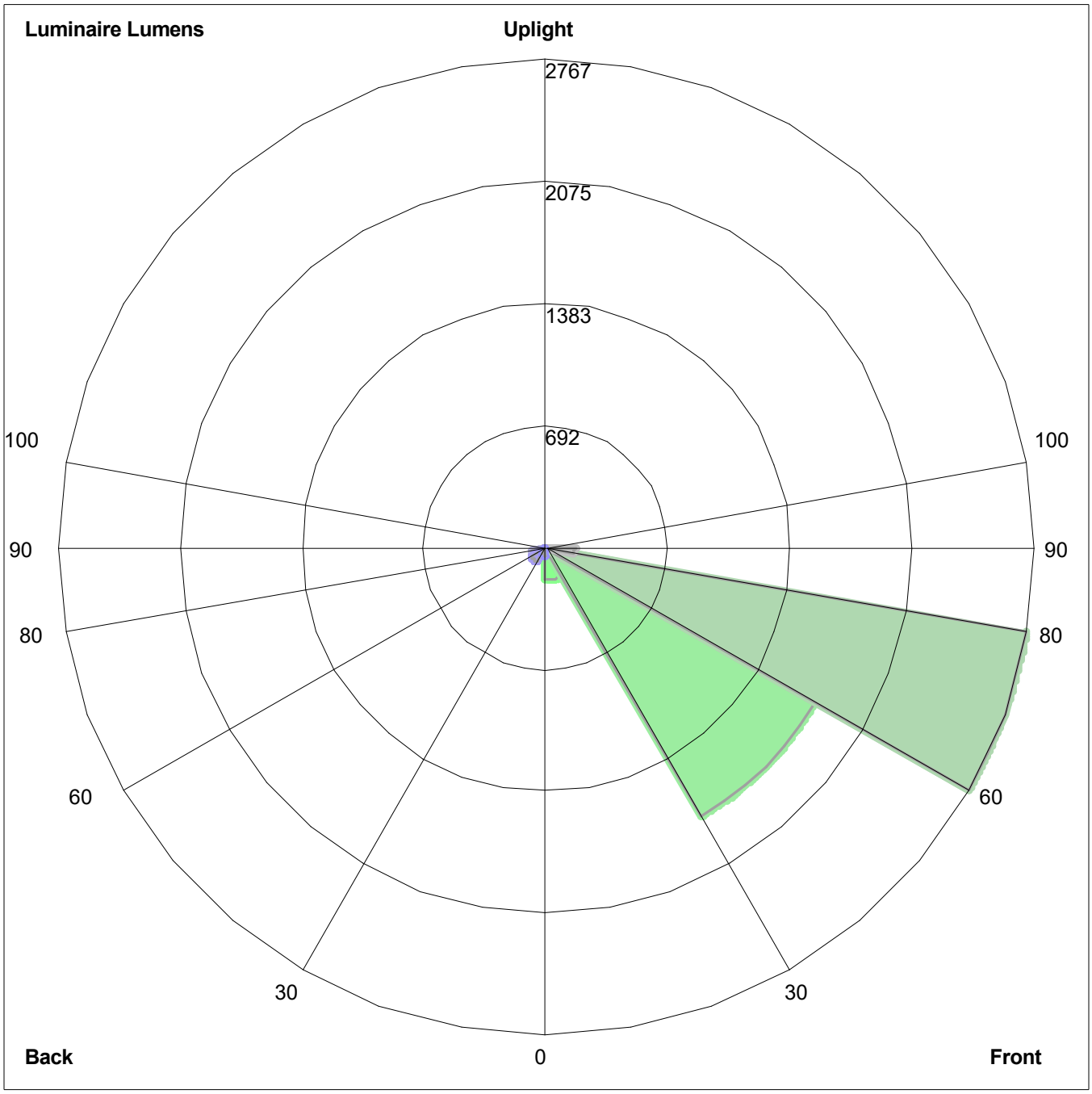
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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