



WAUPUN

CITY OF SCULPTURE

A G E N D A
CITY OF WAUPUN PLAN COMMISSION
Waupun City Hall – 201 E. Main Street, Waupun WI
Wednesday, August 21, 2024 at 4:30 PM

The City of Waupun Plan Commission will meet in-person, virtually and teleconference. Instructions to join the meeting are provided below:

Virtual: <https://us02web.zoom.us/j/82624763823?pwd=QS9XZUpxK0pWeEdTdDNtTDlwQjRaZz09>

Meeting ID: 826 2476 3823

Phone: 312 626 6799 US (Chicago)

CALL TO ORDER

ROLL CALL

PERSONS WISHING TO ADDRESS THE PLAN COMMISSION--*State name, address, and subject of comments. (2 Minutes)*

No Public Participation after this point.

FUTURE MEETINGS AND GATHERING INVOLVING THE PLAN COMMISSION

1. Next Regularly Scheduled Meeting is September 18, 2024, 4:30 p.m.

CONSIDERATION - ACTION

- [2.](#) Approve Minutes from June 19, 2024 Plan Commission Meeting
- [3.](#) Public Hearing - Conditional Use Permit Application - Nicole Hill at 650 W Main St. to operate a Rage Room business per Municipal Code Section 16.04(2)(d)(ix).
- [4.](#) Public Hearing - Conditional Use Permit Application - Kwik Trip at 1001 E Main St. to operate a service station with car wash and for high rise sign per Municipal Code 16.04 and 16.11.
- [5.](#) Certified Survey Map for 1001 E Main Street
- [6.](#) Site Plan Review for Kwik Trip located at 1001 E Main Street
- [7.](#) Site Plan Review for United Cooperative located at 1236 Wilson Drive
- [8.](#) Site Plan Review Tony's Pizza located at 420 Fond du Lac Street
- [9.](#) Preliminary Review of Waupun Municipal Code Chapter 19 Floodplain Ordinance

ADJOURNMENT

Upon reasonable notice, efforts will be made to accommodate disabled individuals through appropriate aids and services. For additional information, contact the City Clerk at 920-324-7915.



MINUTES
CITY OF WAUPUN PLAN COMMISSION
Waupun City Hall – 201 E. Main Street, Waupun WI
Wednesday, June 19, 2024 at 4:30 PM

Chairman Bishop called the meeting to order at 4:30 pm.

Members Present: Chairman Bishop, Jason Whitford, Elton TerBeest, Jeff Daane, Gary DeJager, Jerry Medema, Mike Matoushek; Staff Present: Sue Leahy, Administrator Schlieve

No persons wishing to address the Plan Commission.

Motion Medema, second Whitford to approve minutes from May 15, 2024 meeting as presented. Carried unanimously.

Motion Medema, second Daane to open public hearing for petition by Samsyl Properties to rezone property located at 1134 W. Main St. from the B-3 Shopping Center Business District to the PCD Planned Community Development District. Zoning Administrator Leahy explains that Samsyl's use of the facility has evolved and they are currently doing more light manufacturing related work in facility. PCD zoning would permit more flexibility to accommodate their needs while retaining ability to convert back to commercial if needed in the future. This is consistent with zoning in the general vicinity. No public is present to comment on the request. Motion Matoushek, second Medema to close the public hearing. Carries unanimously.

Motion Whitford, second Medema to approve rezone petition for Samsyl Properties at 1134 W Main St from B-3 Shopping Center Business District to PCD Planned Community Development District. Carried unanimously.

Motion Medema, second Daane to adjourn the meeting at 4:45 p.m. Carried unanimously.

Fee: \$150.00

Paid: \$150.00 *charge card*

Date: August 5, 2024



CITY OF WAUPUN
201 E. Main Street
WAUPUN, WISCONSIN 53963

Conditional Use Permit Application

Applicant Name: Nicole Hill Phone # 920-904-1404

Address: 152 Olmstead Street E-mail: nikicomptonhill@gmail.com

City, State, Zip Waupun, WI 53963

Property Description and address:

650 West Main Street

Conditional Use Requested:

Rage Room Business - Office Space w/ Splatter Room & Rage Room

Zoning Ordinance Section Involved:

16.04(2)(d)(ix)

Date Presented to Plan Commission: _____

CONDITIONAL USE: Granted Denied

Comments:

Signature of Applicant (s)

Fee: \$150.00 Paid: _____ Date: _____



CITY OF WAUPUN
201 E. Main Street
WAUPUN, WISCONSIN 53963

Conditional Use Permit Application

Applicant Name: Seth Waddell Phone #608-793-4933

Address: 1813 kramer Street E-mail: swaddell@kwiktrip.com

City, State, Zip Lacrosse, WI 54602

Property Description and address:

Stop n Go store with fuel canopy and two lane car wash - 1001 E Main St, Waupun, WI 53963

Former Subway - 3 Shaler Dr, Waupun, WI 53963

Conditional Use Requested:

1. Car Wash

2. High Rise Freeway Sign

3. Service Station

Zoning Ordinance Section Involved:

Chapter 16.04 & 16.11

Date Presented to Plan Commission: _____

CONDITIONAL USE: Granted Denied

Comments: _____

Signature of Applicant (s)

Seth Waddell Digitally signed by Seth Waddell
DN: CN=Seth Waddell
Date: 2024.07.30 11:13:38-05'00'

Seth Waddell - Kwik Trip Development Manager



Client

Kwik Trip
Waupun, WI
Project
A - Highrise

Consultant
Kelly Voegele

Design Art
Danielle Hadley

Pylon Sign Specifications

- MAIN ID
- New Illuminated Faces For Existing Cabinet
- PRICER / CARWASH
- New 36" Pricers w/ Illuminated Products
- New Illuminated Carwash Faces Area
- Main ID 128.30 sqft
- Pricer Cabinet 112.97 sqft
- Total 241.27 sqft

Color Key

- ① ■ Black S/G
- ② ■ Cardinal Red (3630-53)
- ③ □ White of Lexan
- ④ ■ Black (3630-22)
- ⑤ ■ Yellow (3630-015)
- ⑥ □

Job Number

126291-A

Creation Date

7/31/2024

Revision Date **Revision Number**

File Path

C:\Users\Danielle\OneDrive - La Crosse Sign
Company\Shared Documents - Job Files\1 - Kwik
Trip\ZZ-STOP-N-GO\KT Acquisition\Waupun, WI SNG
1207\126291-Artwork SNG1207
Waupun\Design\1207 Waupun Art 126291 Highrise

Approved by: _____ Date: _____ Landlord: _____ Date: _____

*Colors on sketch are only a representation, actual color of finished product may differ from this sketch.

*To make the best use of standard sized materials and control costs the size of the finished product may vary slightly.

This artwork is copyright La Crosse Sign Group and may not otherwise be used without permission. It is the property of La Crosse Sign Group and must be returned to them upon request.

Client
 Kwik Trip
Project
 A - Pylon

Consultant **Design Art**
 Kelly Voegele Danielle Hadley

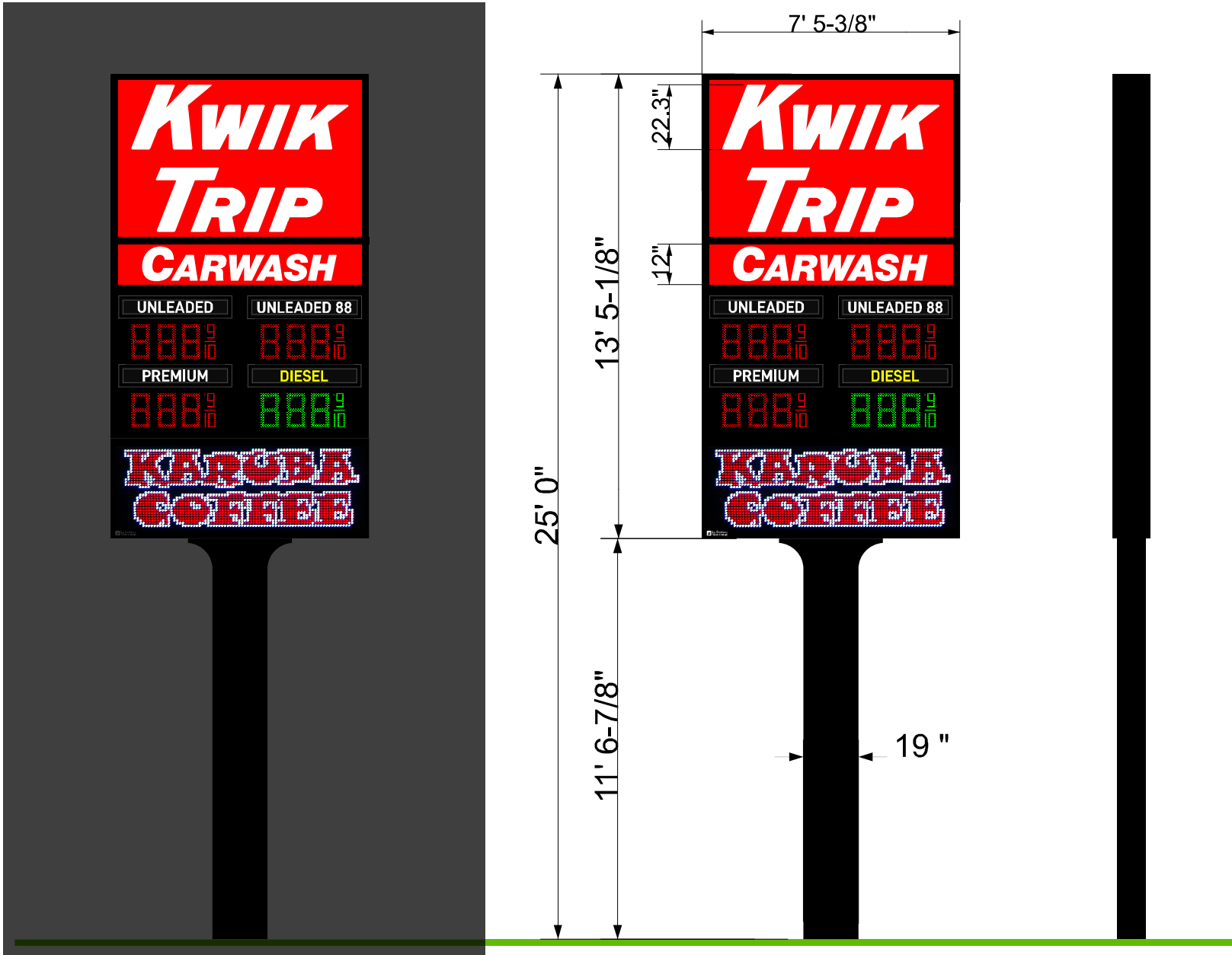
Pylon Sign Specifications
 MAIN ID / CARWASH
 -Fabricated Aluminum w/
 Translucent Faces & White LEDs
PRICER
 -Fabricated Aluminum w/ Opaque
 Faces & Illuminated Copy & 12"
 Pricers
EMC
 -Daktronics 90 x 270 x 8mm RGB
Area
 - Main ID 46.55 sqft
 - Pricer Cabinet 31.81 sqft
 - EMC 21.65 sqft
 - Total 100 sqft

- Color Key**
- ① ■ Black S/G
 - ② ■ Cardinal Red
 - ③ □ #7328 White Acrylic
 - ④ □ White of Lexan
 - ⑤ ■ Black (3630-22)
 - ⑥ ■ Yellow (3630-015)

Job Number
 125767

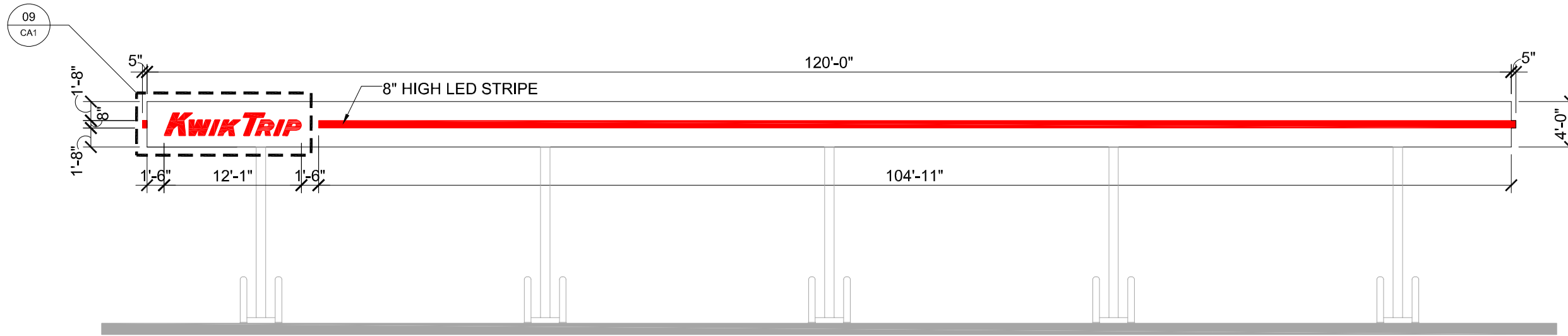
Creation Date
 8/5/2024
Revision Date **Revision Number**

File Path
 1 - Kwik Trip\KWIK TRIP STORES VENDOR
 704065\LA CROSSE\125767-Pylon Artwork
 Concepts\Design\KT\100SF\Kwik Trip 25FT 100SF



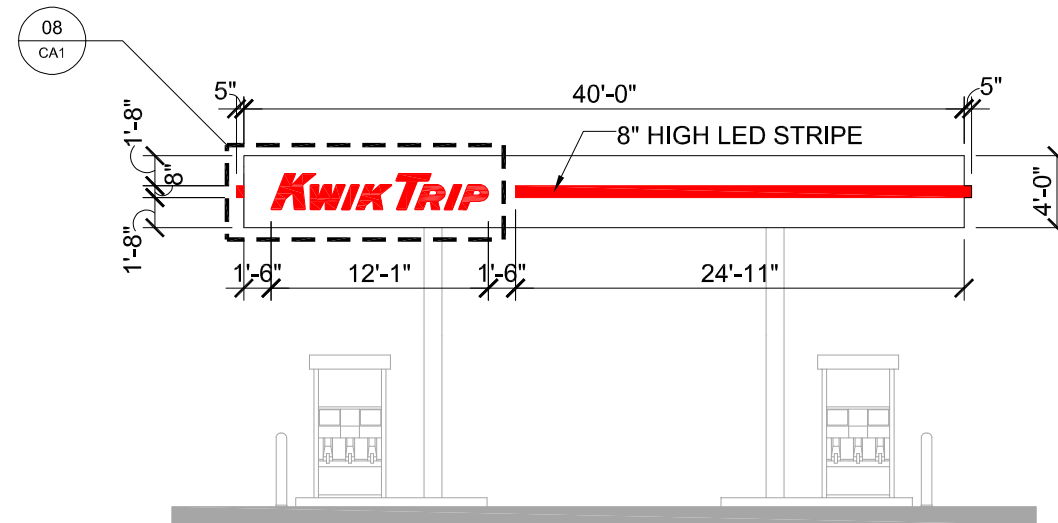
Approved by: _____ Date: _____ Landlord: _____ Date: _____

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CANOPY ELEVATION

SCALE: 3/32" = 1'-0"



CANOPY ELEVATION

SCALE: 3/32" = 1'-0"



LOGO DETAIL - SIGNS #08 & #09

SCALE: 1/2" = 1'-0"

**KWIK
TRIP**

**KWIK
STAR**

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

CANOPY SIGNAGE

CONVENIENCE STORE #2107
WITH 1 BAY CARWASH

SHALER DR & E MAIN ST
WAUPUN, WI

#	DATE	DESCRIPTION

DRAWN BY	X.XXXXX
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2024 07/30
SHEET	CA1

#18 KWIK TRIP FREESTANDING PYLON SIGN

SEE ATTACHED ARTWORK

#19 KWIK TRIP FREESTANDING HIGH RISE SIGN

SEE ATTACHED ARTWORK

**KWIK
TRIP**

**KWIK
STAR**

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P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

DIRECTIONAL SIGNAGE

CONVENIENCE STORE #2107
WITH 1 BAY CARWASH

SHALER DR & E MAIN ST
WAUPUN, WI

#	DATE	DESCRIPTION

DRAWN BY X.XXXXX
SCALE MULTIPLE
PROJ. NO. 0001
DATE 2024 07/30
SHEET DS3

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Client
 Kwik Trip
Project
 A - Pylon

Consultant **Design Art**
 Kelly Voegele Danielle Hadley

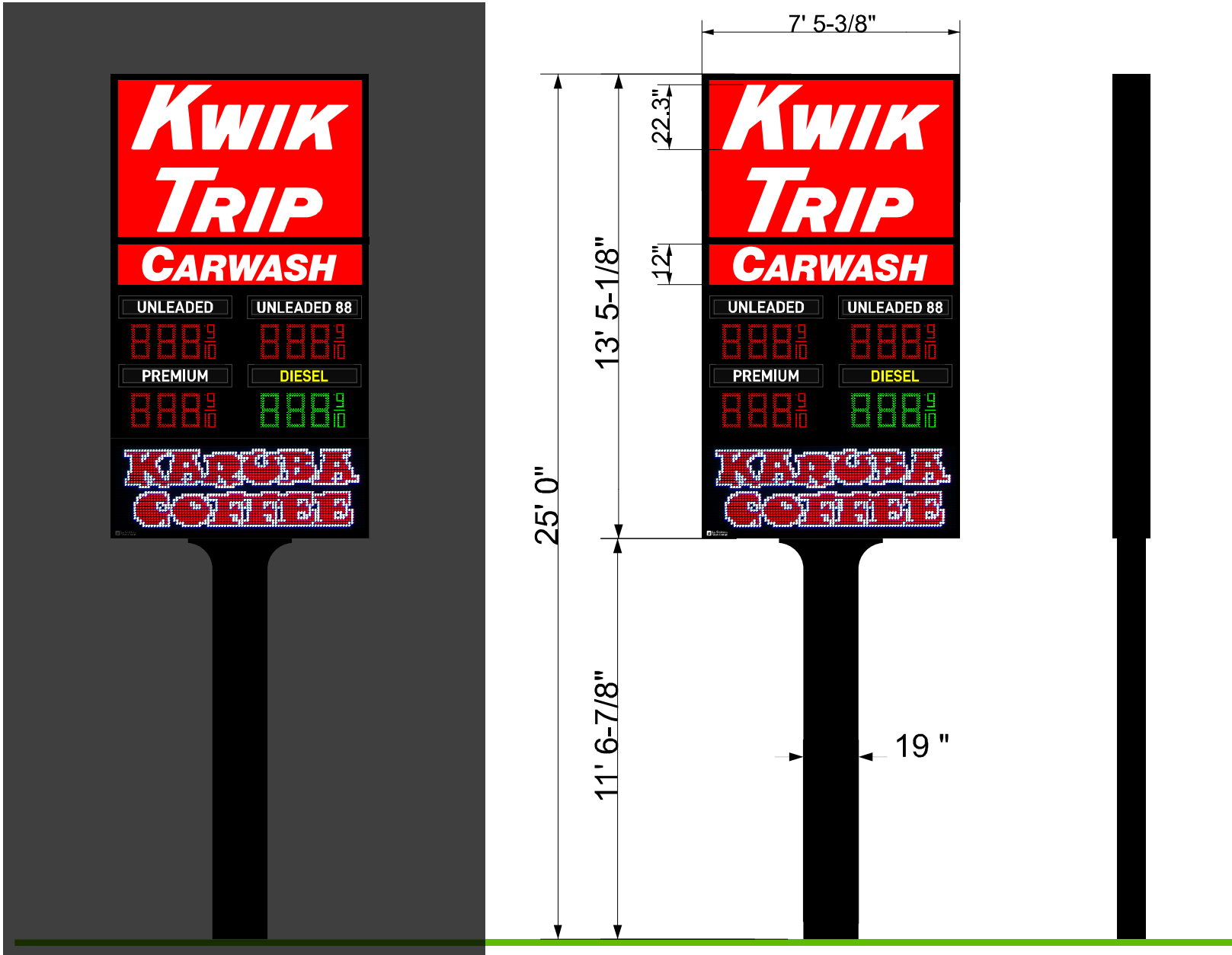
Pylon Sign Specifications
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 Translucent Faces & White LEDs
PRICER
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 Concepts\Design\KT\100SF\Kwik Trip 25FT 100SF



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Client

Kwik Trip
Waupun, WI
Project
A - Highrise

Consultant
Kelly Voegele

Design Art
Danielle Hadley

Pylon Sign Specifications

- MAIN ID
- New Illuminated Faces For Existing Cabinet
- PRICER / CARWASH
- New 36" Pricers w/ Illuminated Products
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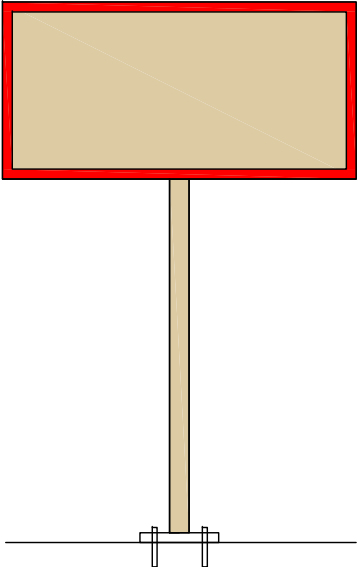
C:\Users\Danielle\OneDrive - La Crosse Sign
Company\Shared Documents - Job Files\1 - Kwik
Trip\ZZ-STOP-N-GO\KT Acquisition\Waupun, WI SNG
1207\126291-Artwork SNG1207
Waupun\Design\1207 Waupun Art 126291 Highrise

Approved by: _____ Date: _____ Landlord: _____ Date: _____

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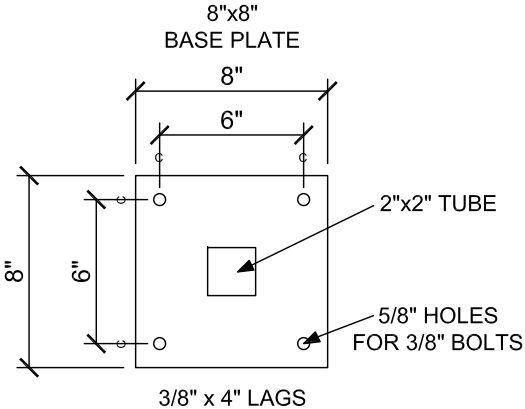
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SINGLE SIDED NON-LIT DIRECTIONAL SIGN



DIRECTIONAL SIGN EXAMPLE

SCALE: NTS



NOTES:

- Sign vendor to anchor sign/s to concrete pad
- Sign vendor to anchor signs with (4) 3/8" x 4" lags & shield anchors. Use stainless steel hardware
- Stainless steel flat washers may be used under base plate as needed to shim sign to be plumb
- Concrete Pad installed by others (Kwik Trip/Kwik Star Concrete Vendor)
 - Concrete Pad to be 5"x 36"x 36"
 - Center of footing to be installed 48" from face of curb



DIRECTIONAL SIGN BASE PLATE

SCALE: 1 1/2" = 1'-0"

	KWIK TRIP, Inc. P.O. BOX 2107 1626 OAK STREET LA CROSSE, WI 54602-2107 PH. (608) 781-8988 FAX (608) 781-8960	PROJECT: Store- All Stores Date - 08/31/2023 DESCRIPTION: All Directional signs will have a single post per the detail above	SCB #1

CERTIFIED SURVEY MAP NO. _____

LOT 1 & PART OF LOT 2, CSM NO. 1718 & PART OF VACATED
JEFFERSON STREET & SHALER DRIVE, BEING PART OF THE
NORTHEAST 1/4 OF THE NORTHWEST 1/4,
SECTION 4, TOWNSHIP 13 NORTH, RANGE 15 EAST,
CITY OF WAUPUN, DODGE COUNTY, WISCONSIN.

SURVEYOR'S CERTIFICATE

I, Ryan Wilgreen, Professional Land Surveyor, hereby certify:

That I have surveyed, divided and mapped a parcel of land described below.

That I have made such Certified Survey under the direction of Kwik Trip, Inc. bounded and described as follows:

Lot 1 and part of Lot 2 of Certified Survey Map No. 1718, recorded in Volume 11 of Certified Survey Maps on Page 219 in the Dodge County Register of Deeds Office as Document No. 670490 and part of vacated Jefferson Street and vacated Shaler Drive, being part of the Northeast 1/4 of the Northwest 1/4 of Section 4, Township 13 North, Range 15 East, City of Waupun, Dodge County, Wisconsin being more particularly described as follows:

Commencing at Northeast corner of the Northwest 1/4 of said Section 4; thence South 89°-40'-15" West along the North line of said Northwest 1/4, a distance of 647.49 feet to the Northerly extension of the East right-of-way line of Shaler Drive; thence South 00°-21'-15" East along said Northerly extension, a distance of 52.78 feet to the Northwest corner of said Lot 1, said point being the point of beginning; thence continuing South 00°-21'-15" East along said East line, a distance of 150.00 feet; thence Southeasterly 197.73 feet along the Northeasterly right-of-way line of Shaler Drive on a curve to the left having a radius of 217.00 feet, the chord of said curve bears South 26°-29'-40" East, a chord distance of 190.96 feet; thence South 52°-36'-25" East along said Northeasterly line, a distance of 257.71 feet to the Westerly right-of-way line of U.S.H. "151"; thence North 00°-10'-12" East along said Westerly line, a distance of 136.47 feet; thence North 08°-22'-12" West along said Westerly line, a distance of 345.31 feet to the South right-of-way line of S.T.H. "49"; thence South 89°-49'-55" West along said South line, a distance of 241.00 feet to the point of beginning and containing 2.213 acres (96,398 sq. ft.) of land more or less.

That such is a correct representation of all the exterior boundaries of the land surveyed and the land division thereof made.

That I have fully complied with the provisions of Section 236.34 of the Wisconsin Statutes and the Subdivision Ordinance of the City of Waupun in surveying, dividing and mapping the same.

Ryan Wilgreen, P.L.S. No. S-2647
ryan.w@excelengineer.com
Excel Engineering, Inc.
Fond du Lac, Wisconsin 54935
Project Number: 240224500

CERTIFIED SURVEY MAP NO. _____

LOT 1 & PART OF LOT 2, CSM NO. 1718 & PART OF VACATED
JEFFERSON STREET & SHALER DRIVE, BEING PART OF THE
NORTHEAST 1/4 OF THE NORTHWEST 1/4,
SECTION 4, TOWNSHIP 13 NORTH, RANGE 15 EAST,
CITY OF WAUPUN, DODGE COUNTY, WISCONSIN.

OWNER'S CERTIFICATE

Kwik Trip, Inc., a corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, does hereby certify that said corporation caused the land described on this map to be surveyed, divided and mapped as represented on this map. Kwik Trip, Inc. does further certify that this map is required by s.236.10 or s.236.12 to be submitted to the following for approval or objection:

- 1. City of Waupun

WITNESS the hand and seal of said owner this _____ day of _____, 20____.

Kwik Trip, Inc.

_____, _____
(Print) (Title)

STATE OF _____)
_____ COUNTY)SS

Personally came before me this _____ day of _____, 20____, the above named
_____ to me known to be the person who executed the foregoing instrument and
acknowledged the same.

Notary Public, _____ County, _____
My Commission Expires: _____

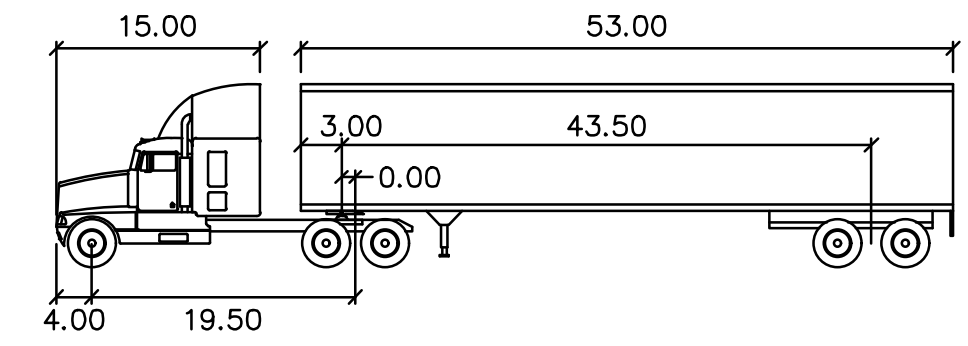
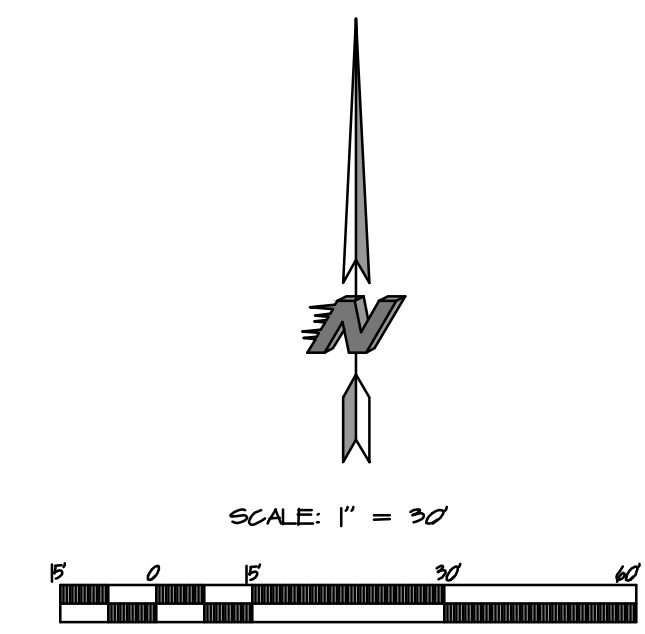
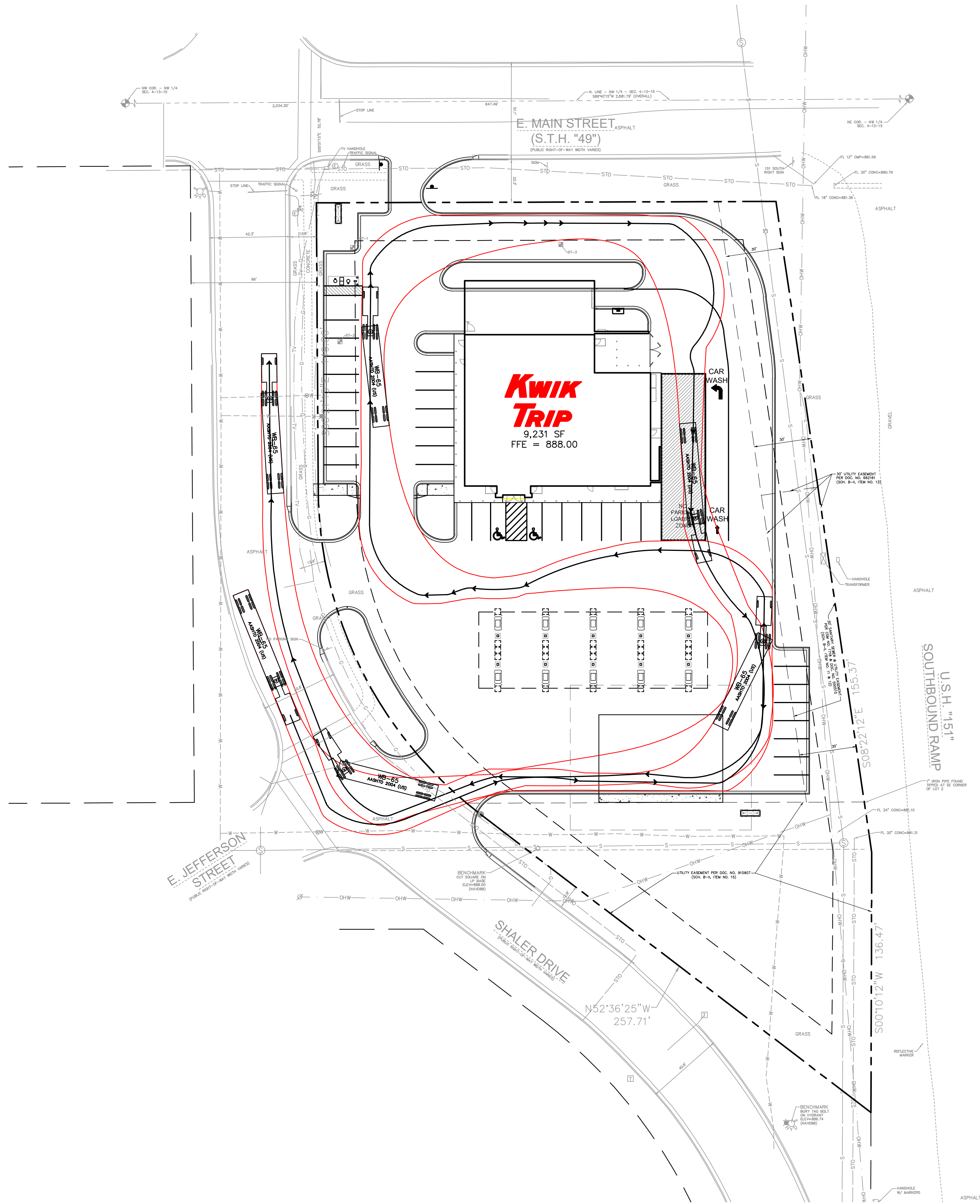
CERTIFICATE OF THE CITY OF WAUPUN

This certified survey map in the City of Waupun, is hereby approved by the City of Waupun Plan
Commission this _____ day of _____, 20____.

Chairperson

This certified survey map in the City of Waupun, is hereby approved by the
City of Waupun Common Council this _____ day of _____, 20____.

Chairperson



WB-65

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

**Kwik
TRIP**

**Kwik
STAR**

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

raSmith 16745 W. Bluemound Road
Brookfield, WI 53005-9938
(262) 781-1000
creativity beyond engineering rasmith.com

SITE CIRCULATION PLAN
GEN 3 CONVENIENCE STORE #1207
10 MPD, 1 BAY CW
EAST MAIN STREET
WAUPUN, WI

#	DATE	DESCRIPTION

DRAWN BY	CBW
SCALE	GRAPHIC
PROJ. NO.	3240139
DATE	07/31/2024
SHEET	C180

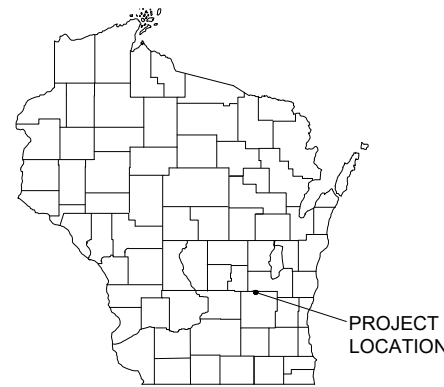


Know what's below.
Call before you dig.

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UNITED COOPERATIVE DEVELOPMENT PROJECT

UNITED COOPERATIVE CITY OF WAUPUN, DODGE COUNTY, WISCONSIN



PROJECT LOCATION



PROJECT LOCATION

LOCATION MAP
NOT TO SCALE

SHEET INDEX

- G - GENERAL SHEETS**
- G 1 TITLE SHEET
- D - DETAIL SHEETS**
- D 1 - 6 CONSTRUCTION DETAILS
- ST - SITE PLANS**
- ST 1 EROSION CONTROL & REMOVAL PLAN
- ST 2 - ST 3 GRADING PLAN
- ST 4 POND GRADING DETAIL
- PP1 - SANITARY SEWER & WATER MAIN PLANS**
- PP 1 - PP 7 SANITARY SEWER & WATER MAIN PLAN & PROFILE SHEETS
- SS - STORM SEWER PLANS**
- SS 1 - SS 2 STORM SEWER PLAN
- PM - STORM WATER POND LIFT STATION PLANS**
- PM 1 - PM 2 STORM WATER POND LIFT STATION SECTIONS
- PM 3 STORM WATER POND LIFT STATION DETAILS
- R - ROAD CONSTRUCTION & PAVING PLANS**
- R 1 - R 3 PAVING PLAN

LEGEND

- W — EXISTING WATER MAIN
- W — G — EXISTING WATER MAIN, VALVE & HYDRANT
- W — G — EXISTING WATER SERVICE & CURB STOP
- W — G — PROPOSED WATER MAIN, VALVE, & HYDRANT
- W — G — PROPOSED WATER SERVICE & CURB STOP
- SAN — G — EXISTING SANITARY SEWER & MANHOLE
- SAN — G — PROPOSED SANITARY SEWER & MANHOLE
- FM — EXISTING FORCEMAIN
- SS — INLET EXISTING STORM SEWER & INLET
- SS — INLET PROPOSED STORM SEWER & INLET
- E — BURIED ELECTRIC
- G — BURIED GAS & VALVE
- TV — BURIED CABLE TELEVISION
- T — BURIED TELEPHONE
- FO — BURIED FIBER OPTICS
- OH — OVERHEAD UTILITY
- RAILROAD TRACKS
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- CP — EXISTING CULVERT PIPE
- PROPOSED CULVERT PIPE
- X — X — X — FENCE LINE
- DRAINAGE ARROW
- SILT FENCE
- RIGHT-OF-WAY
- BASELINE
- PROPERTY LINE
- TREE LINE
- BENCHMARK
- IRON PIPE
- IRON ROD
- CONTROL POINT
- UTILITY POLE & GUY
- NO EL — SOIL BORING
- LIGHT POLE
- PEDESTAL
- STREET SIGN
- MAILBOX
- FLAGPOLE
- TREE - DECIDUOUS
- TREE - CONIFEROUS
- X — TREE TO BE REMOVED

UTILITIES

- GAS:**
- ALLIANT ENERGY
- 120 E. MAPLE AVENUE
- BEAVER DAM, WI 53916
- PHONE: 920-887-8041
- CONTACT: JEREMY RENTMEESTER
- ELECTRIC:**
- WAUPUN UTILITIES
- 817 S. MADISON STREET
- WAUPUN, WI 53963
- PHONE: 920-324-7920
- CONTACT: STEVE BROOKS
- TELEPHONE:**
- AT&T
- 70 E. DIVISION STREET, FLOOR 1
- FOND DU LAC, WI 54935
- PHONE: 920-929-1013
- CONTACT: CHUCK BARTELT
- SANITARY & WATER:**
- WAUPUN UTILITIES
- 817 S. MADISON STREET
- WAUPUN, WI 53963
- PHONE: 920-324-7920
- CONTACT: STEVE SCHRAMM
- STORM SEWER & STREET**
- CITY OF WAUPUN
- 201 E. MAIN STREET
- WAUPUN, WI 53963
- PHONE: 920-210-8200
- CONTACT: JEFF DAANE
- CATV:**
- CHARTER COMMUNICATIONS
- N3760 C.T.H. "DJ"
- JUNEAU, WI 53039
- PHONE: 920-349-3201
- CONTACT: NICK FRASE

DIGGERS HOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

NOTE:
UTILITY LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND CONTRACTOR SHALL HAVE APPROPRIATE UTILITY MARK EXACT LOCATIONS PRIOR TO CONSTRUCTION.

PROJECT DATE: 8/2022	NO.	DATE	REVISION	BY
DRAWN BY:	-	-	-	-
DESIGNED BY:	-	-	-	-
CHECKED BY:	-	-	-	-



ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
201 Corporate Drive, Beaver Dam WI 53916
(920) 887-4242 www.msa-ps.com
© MSA Professional Services, Inc.

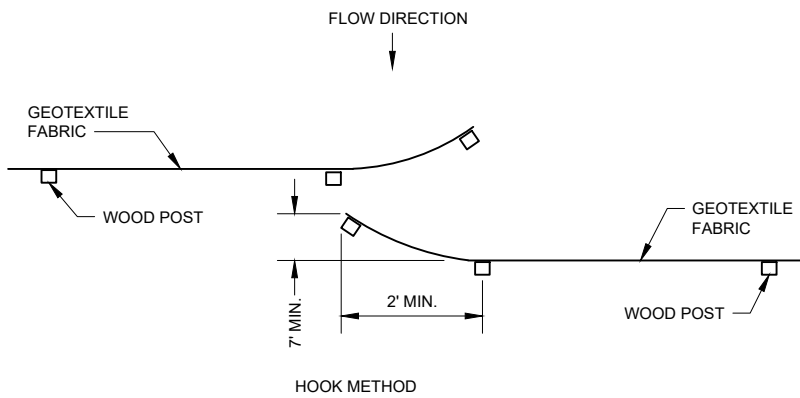
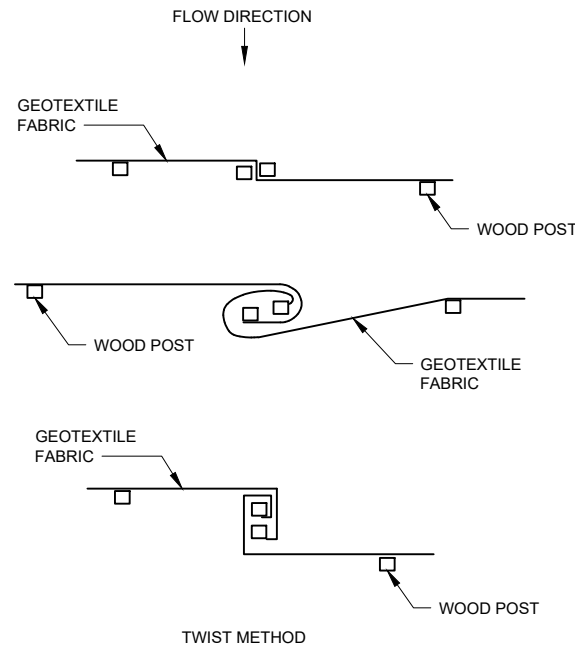
UNITED COOPERATIVE DEVELOPMENT PROJECT
UNITED COOPERATIVE
CITY OF WAUPUN, DODGE COUNTY, WISCONSIN

TITLE SHEET

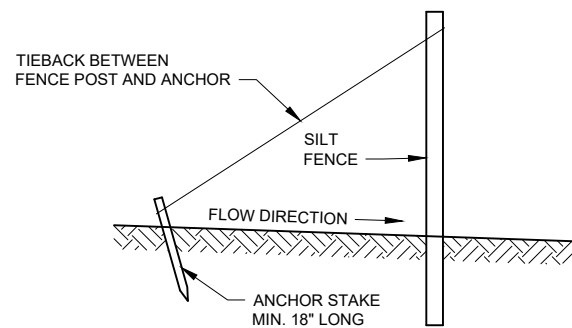
PROJECT NO.
02678018
SHEET
G1

**CONSTRUCTION SITE
EROSION CONTROL REQUIREMENTS**

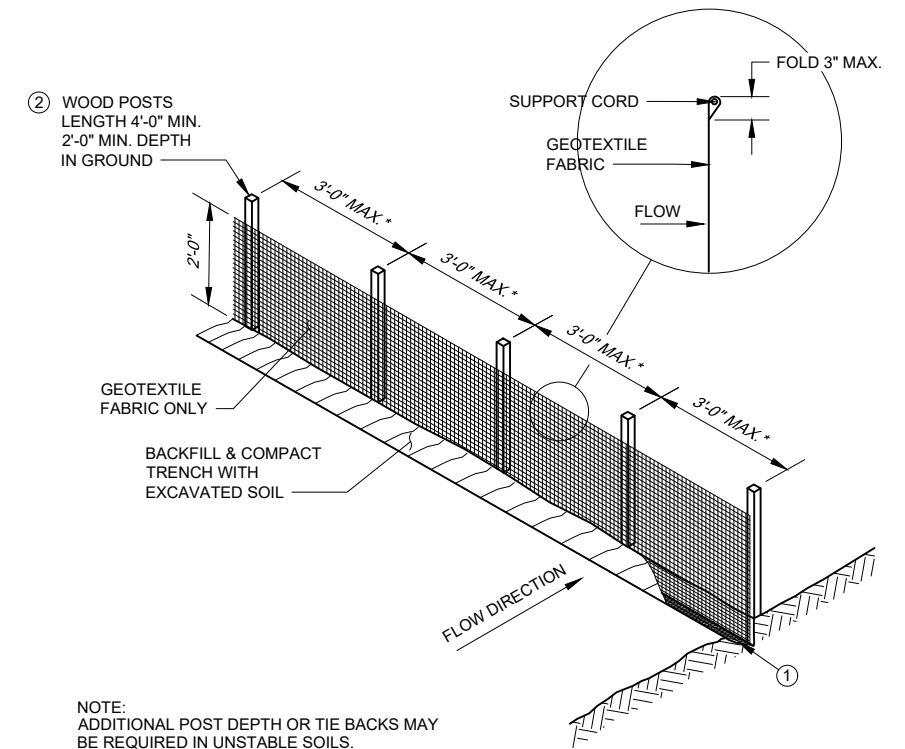
- SECTION NR216.46 OF WISCONSIN STATE ADMINISTRATIVE CODE IDENTIFIES REQUIREMENTS FOR CONSTRUCTION SITE AND POST-CONSTRUCTION EROSION CONTROL. IT IS THE INTENT OF THESE PLANS TO SATISFY THESE REQUIREMENTS. THE METHODS AND STRUCTURES USED TO CONTROL EROSION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL IMPLEMENT AN APPROPRIATE MEANS OF CONTROLLING EROSION DURING SITE OPERATION AND UNTIL THE VEGETATION IS RE-ESTABLISHED. ADJUSTMENTS TO THE CONTROL SYSTEM SHALL BE MADE AS REQUIRED.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE WISCONSIN DNR'S CONSERVATION PRACTICE STANDARDS. THESE STANDARDS ARE PERIODICALLY UPDATED AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND REFERENCE THE MOST RECENTLY RELEASED STANDARD.
- THIS INFORMATION IS ONLY ONE PART OF THE OVERALL EROSION CONTROL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY ALSO BE SHOWN ON THE CONTRACT DRAWINGS AND IN THE ACCOMPANYING SPECIFICATIONS.
- ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE OWNER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.
- THE AREA OF EROSION EXPOSED TO THE ELEMENTS BY GRUBBING, EXCAVATION, TRENCHING, BORROW AND FILL OPERATIONS AT ANY ONE TIME SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. FOR ANY DISTURBED AREA THAT REMAINS INACTIVE FOR GREATER THAN 7 WORKING DAYS, OR WHERE GRADING WORK EXTENDS BEYOND THE PERMANENT SEEDING DEADLINES, THE SITE MUST BE TREATED WITH TEMPORARY STABILIZATION MEASURES SUCH AS SOIL TREATMENT, TEMPORARY SEEDING AND/OR MULCHING. ALL DISTURBED AREAS SHALL BE TREATED WITH PERMANENT STABILIZATION MEASURES WITHIN 3 WORKING DAYS OF FINAL GRADING.
- ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF THE TIME 0.5 INCHES OF RAIN HAS OCCURRED. ALL NECESSARY REPAIR AND MAINTENANCE WILL BE DONE AT THIS INSPECTION TIME.
- ALL EROSION CONTROL DEVICES AND/OR STRUCTURES SHALL BE PROPERLY INSTALLED PRIOR TO CLEARING AND GRUBBING OPERATIONS WITHIN THEIR RESPECTIVE DRAINAGE AREAS. THESE SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS RE-ESTABLISHED.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY INSTALLED PRIOR TO ANY SOIL DISTURBANCE.
- ANY SLOPES STEEPER THAN 3H:1V SHALL BE STAKED WITH EROSION CONTROL FABRIC UNLESS INDICATED ON THE PLAN.
- ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
- WIND EROSION SHALL BE KEPT TO A MINIMUM DURING CONSTRUCTION. WATERING, MULCH, OR A TACKING AGENT MAY BE REQUIRED TO PROTECT NEARBY RESIDENCES AND WATER RESOURCES.
- CHANNELIZED RUNOFF ENTERING THE PROJECT SITE FROM ADJOINING LANDS SHALL BE DIVERTED THROUGH NATURALLY OR ARTIFICIALLY EROSION-RESISTANT CONVEYANCES. IF CHANNELIZED RUNOFF CANNOT BE DIVERTED, SITE BEST MANAGEMENT PRACTICES MUST ACCOUNT FOR THE ADDITIONAL FLOW RATES AND EROSION POTENTIAL THAT SUCH RUNOFF PRESENTS.
- THE CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS TO PREVENT SOILS FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEEPED AND/OR SCRAPED (NOT FLUSHED) PERIODICALLY TO REMOVE SOIL, DIRT, AND/OR DUST.
- EROSION CONTROLS SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF TEMPORARY STOCKPILES. ANY SOIL STOCKPILE THAT REMAINS FOR MORE THAN 30 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING. ALL STOCK PILES SHALL BE PLACED AT LEAST 75 FEET FROM STREAMS OR WETLANDS.
- ADDITIONAL EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.) SHALL INCLUDE THE FOLLOWING:
 - PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
 - BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
 - DISCHARGE OF TRENCH WATER OR DEWATERING EFFLUENT MUST BE PROPERLY TREATED TO REMOVE SEDIMENT IN ACCORDANCE WITH THE WDNR CONSERVATION PRACTICE STANDARD 1061 - DEWATERING OR A SUBSEQUENT WDNR DEWATERING STANDARD PRIOR TO DISCHARGE INTO A STORM SEWER, DITCH, DRAINAGEWAY, OR WETLAND OR LAKE.
- ALL DRAINAGE CULVERTS, STORM DRAIN INLETS, MANHOLES, OR ANY OTHER EXISTING STRUCTURES THAT COULD BE DAMAGED BY SEDIMENTATION SHALL BE PROTECTED ACCORDING TO THE VARIOUS METHODS PROVIDED IN THE PRINTED CONSERVATION PRACTICE STANDARDS.
- ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR STABILIZATION MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
- THE FIRST SIX WEEKS AFTER INITIAL STABILIZATION, ALL NEWLY SEEDED AND MULCHED AREAS SHALL WATERED WHENEVER 7 DAYS ELAPSE WITHOUT A RAIN EVENT.
- WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY BMP'S SUCH AS SILT FENCES, STRAW BALES, AND SEDIMENT TRAPS SHALL BE REMOVED AND THESE AREAS STABILIZED.
- ALL TEMPORARY BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED.
- ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITH SEED AND MULCH UNLESS OTHERWISE SPECIFIED. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE APPLIED TO ALL AREAS TO BE SEEDED OR SODDED.



JOINING TWO LENGTHS OF SILT FENCE ③



**SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)**



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

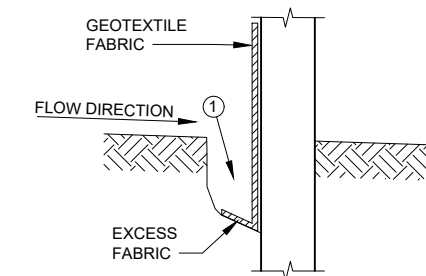
* 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED, OR IF THE SILT FENCE IS FACTORY ASSEMBLED.

ATTACH THE FABRIC TO THE POSTS WITH WIRE STAPLES OR WOODEN LATH AND NAILS.

SILT FENCE

GENERAL NOTES

- TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/2" x 1 1/2" OF OAK OR HICKORY.
- CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) TWIST METHOD -- OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK METHOD -- HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL

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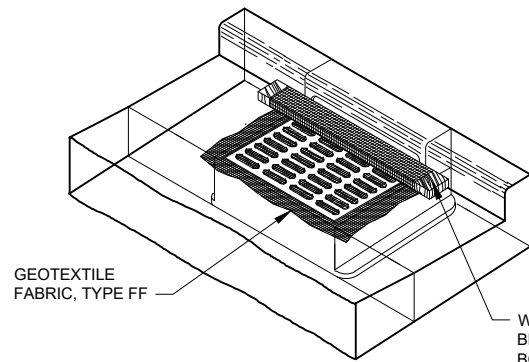


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**UNITED COOPERATIVE DEVELOPMENT PROJECT
UNITED COOPERATIVE
CITY OF WAUPUN, DODGE COUNTY, WISCONSIN**

CONSTRUCTION DETAILS

PROJECT NO.
02678018
SHEET
D1



GEOTEXTILE FABRIC, TYPE FF

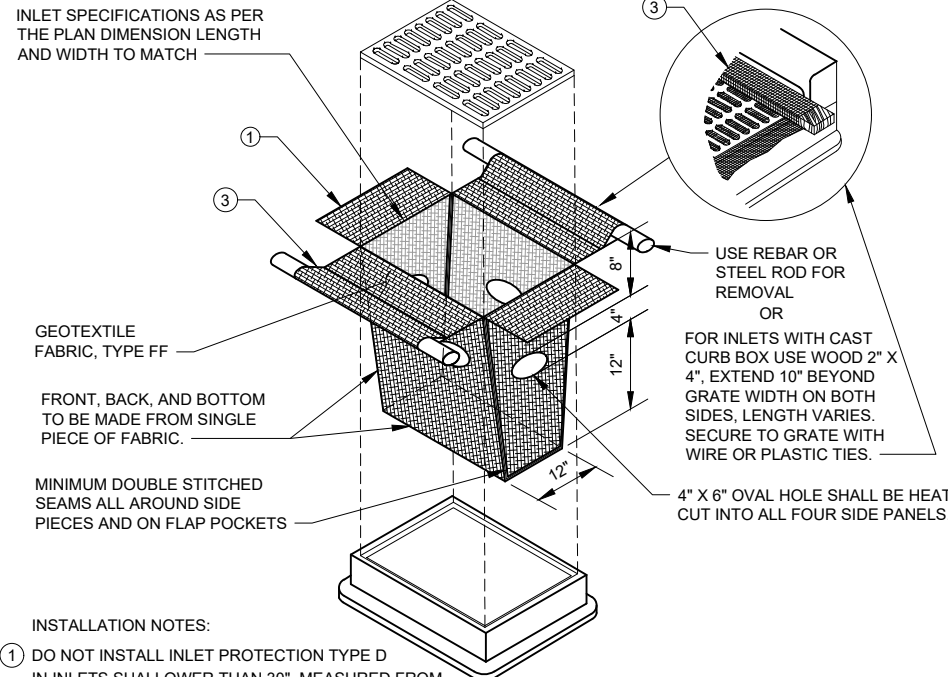
WOOD 2" x 4" EXTENDS 8" BEYOND GRATE WIDTH ON BOTH SIDES. LENGTH VARIES. SECURE TO GRATE WITH WIRE OR PLASTIC TIES

INSTALLATION NOTES:

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

INLET PROTECTION, TYPE C

NO SCALE
CAN BE INSTALLED IN ANY INLET TYPE WITH A CURB BOX



INSTALLATION NOTES:

- DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.
- TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
- THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

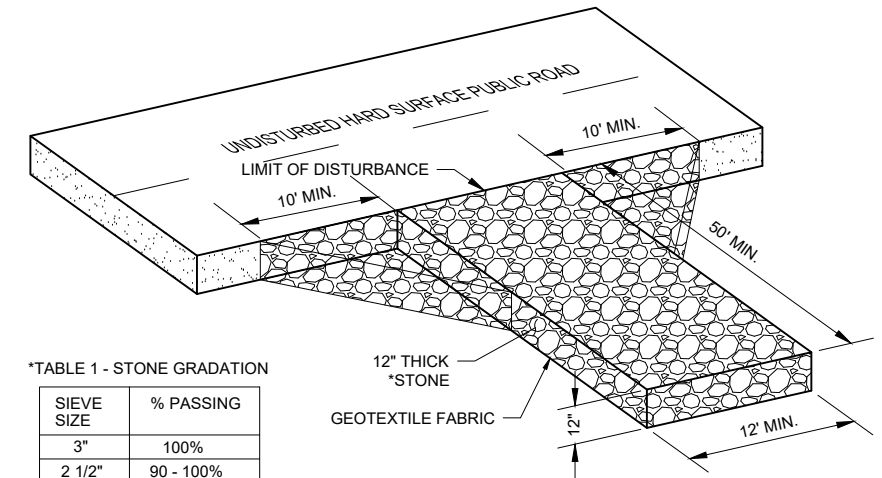
INLET PROTECTION, TYPE D

NO SCALE
CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE

GENERAL NOTES - INLET PROTECTION

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



*TABLE 1 - STONE GRADATION

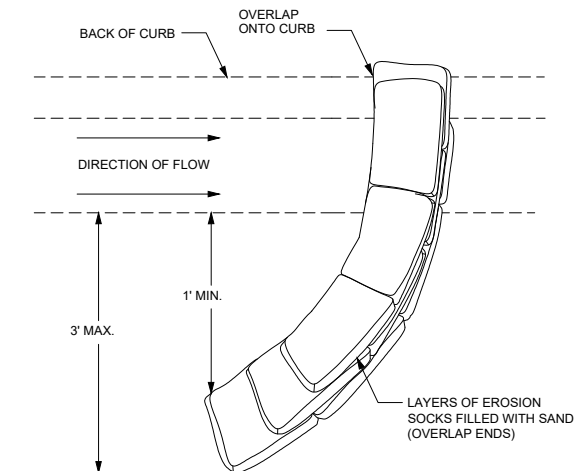
SIEVE SIZE	% PASSING
3"	100%
2 1/2"	90 - 100%
1 1/2"	25 - 60%
3/4"	0 - 20%
3/8"	0 - 5%

NOTES:

- TRACKING PAD WIDTH SHALL BE AT LEAST THE FULL WIDTH OF THE EGRESS POINT OR 12' WIDE MINIMUM.
- TRACKING PAD LENGTH SHALL BE 50' FOR CONSTRUCTION SITES, 30' FOR SINGLE FAMILY RESIDENTIAL, OR AS SPECIFIED IN THE CONTRACT DOCUMENTS. LENGTH OF TRACKING PAD MAY NEED TO BE INCREASED OR ADDITIONAL SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED BY THE CONTRACTOR IF SEDIMENT TRACK-OUT OCCURS.
- GEOTEXTILE FABRIC TYPE R SHALL BE INSTALLED BETWEEN THE STONE AND SUBGRADE ON SITES WHERE HIGH GROUND WATER IS OBSERVED.
- CONTRACTOR SHALL CLEAN STREET/ROADWAY ADJACENT TO ALL CONSTRUCTION ACCESS POINTS AT THE END OF EACH WORKDAY OR MORE FREQUENTLY IF REQUESTED.

STONE TRACKING PAD

NO SCALE

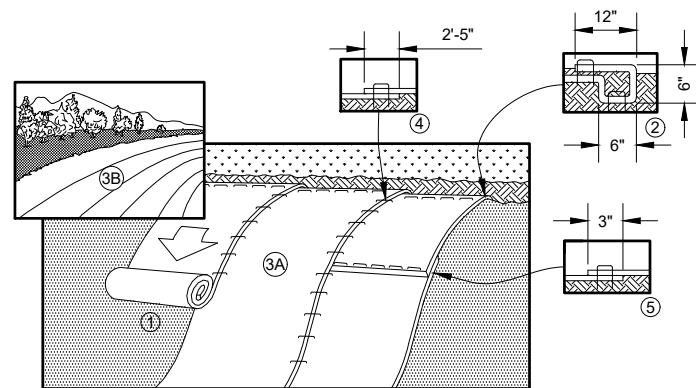


GENERAL NOTES:

- DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
- ALTERNATIVE MATERIALS PLANNED BY THE CONTRACTOR SHALL BE APPROVED BY THE CITY AND ENGINEER PRIOR TO INSTALLATION.

TEMPORARY EROSION BARRIER DETAIL

NO SCALE



- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5 CM-12.5 CM) OVERLAP DEPENDING ON BLANKET TYPE.
- CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET DETAIL

NO SCALE

GENERAL NOTES:

- DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO ASTM D2321.
- CLASS II EMBEDMENT MATERIAL SHALL BE CLEAN, COARSE-GRAINED SOILS WITH LITTLE TO NO FINES. NO PARTICLES LARGER THAN 1 1/2 - INCHES SHALL BE USED IN THE PIPE EMBEDMENT.
- WHERE HYDRAULIC GRADIENT EXISTS USE A WELL-GRADED MIXTURE TO MINIMIZE MIGRATION OF FINES FROM ADJACENT SOIL.
- CLASS II MATERIAL IS SUITABLE AS A FOUNDATION AND FOR REPLACING OVER-EXCAVATED AND UNSTABLE TRENCH BOTTOM. INSTALL AND COMPACT IN 6-INCH MAXIMUM LAYERS.
- INSTALL AND COMPACT BEDDING IN 6-INCH MAXIMUM LAYERS. LEVEL FINAL GRADE BY HAND. MINIMUM DEPTH 4 INCH (6 INCH IN ROCK CUTS.)
- INSTALL AND COMPACT HAUNCHING IN 6-INCH MAXIMUM LAYERS. WORK IN AROUND PIPE BY HAND TO PROVIDE UNIFORM SUPPORT.
- INSTALL AND COMPACT INITIAL BACKFILL TO A MINIMUM OF 6 INCH ABOVE PIPE CROWN.
- EMBEDMENT COMPACTION:
MINIMUM DENSITY 85% STANDARD PROCTOR. USE HAND TAMPERS OR VIBRATORY COMPACTORS.
- EMBEDMENT INCLUDES BEDDING, HAUNCHING, AND INITIAL BACKFILL.

CLASS II - FLEXIBLE PIPE EMBEDMENT DETAIL

NO SCALE

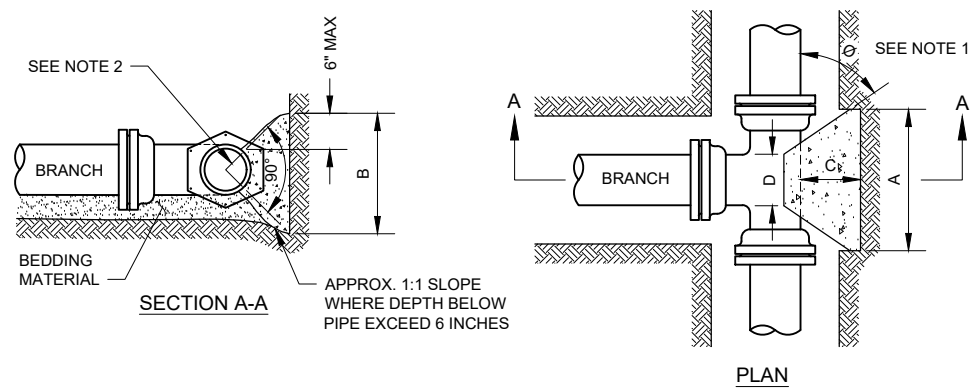


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UNITED COOPERATIVE DEVELOPMENT PROJECT
UNITED COOPERATIVE
CITY OF WAUPUN, DODGE COUNTY, WISCONSIN

CONSTRUCTION DETAILS

PROJECT NO.
02678018
SHEET
D2



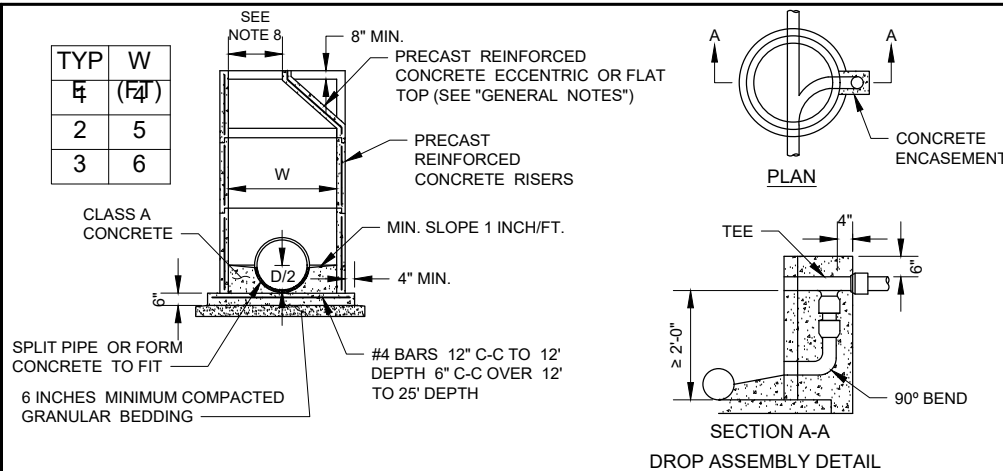
NOTES:

- DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ GREATER THAN OR EQUAL TO 45°.
- CONCRETE SHOULD BEAR ON THIS QUADRANT OF PIPE AT A MINIMUM.
- DIMENSION 'D' SHOULD BE AS LARGE AS POSSIBLE BUT CONCRETE SHOULD NOT INTERFERE WITH MECHANICAL JOINTS.
- BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI. INFORM THE ENGINEER IF ON-SITE SOIL DOES NOT MEET THIS CONDITION OR PRESSURES EXCEED 150 PSI.
- BUTTRESS TO BE PLACED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
- CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
- ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
- IN ADDITION TO BUTTRESSES, ALL JOINTS SURROUNDING TEES SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

BUTTRESS DIMENSIONS				
DIA.	A	B	C	D
6"	1'-3"	1'-0"	SEE NOTE NO. 1	SEE NOTE NO. 3
8"	1'-6"	1'-4"		
10"	1'-10"	1'-8"		
12"	2'-3"	2'-0"		
16"	3'-2"	2'-6"		
20"	4'-0"	3'-0"		
24"	5'-3"	3'-4"		

DIA. = BRANCH DIAMETER

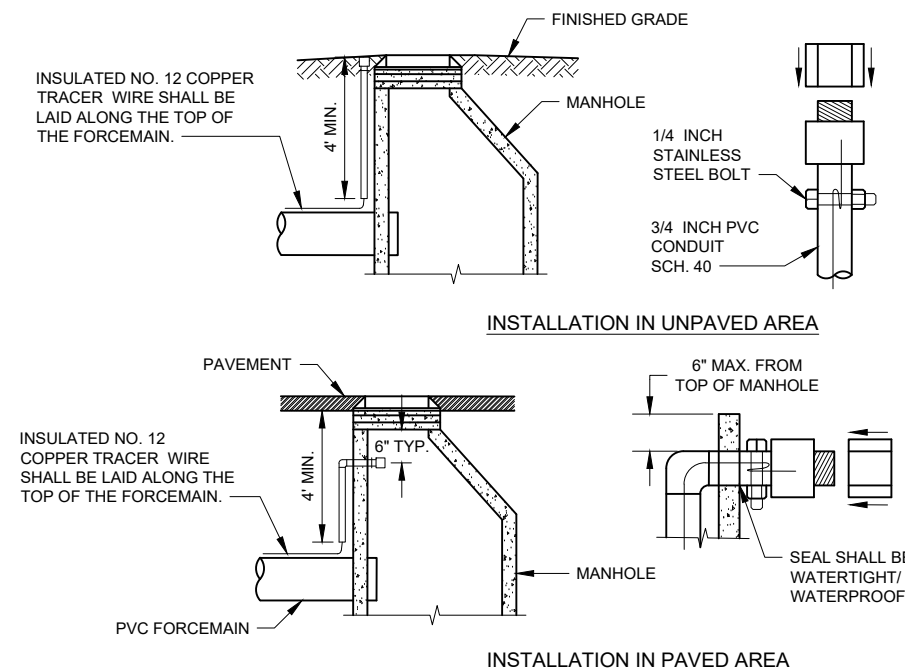
BUTTRESS FOR TEES DETAIL
NO SCALE



GENERAL NOTES:

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING AND THE APPLICABLE SPECIAL CONDITIONS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
- DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.
- PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
- ECCENTRIC CONE TOPS SHALL BE USED ON ALL STRUCTURES 5 FEET OR GREATER IN DEPTH, AND FLAT TOPS SHALL BE USED ONLY ON STRUCTURES LESS THAN 5 FEET IN DEPTH, UNLESS DIRECTED BY THE ENGINEER.
- PRECAST REINFORCED CONCRETE RISERS MAY BE PLACED WITH TONGUE UP OR DOWN.
- ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.
- DROP CONNECTIONS SHALL BE USED WHEN THE PIPE INVERT IS MORE THAN 2 FEET ABOVE THE MANHOLE INVERT. PRECAST STRUCTURE MANWAY CLEAR OPENING SHALL MATCH CASTING - REFER TO STANDARD SPECIFICATION
- DIVISION 33 AND THE APPLICABLE SPECIAL CONDITIONS.
 - OPENING SHALL BE 24" FOR R-1550 CASTINGS
 - OPENING SHALL BE 27" FOR R-1642 CASTINGS
- DROP CONNECTION AND ASSEMBLY SHALL BE CONSTRUCTED WITH DUCTILE IRON PIPE.

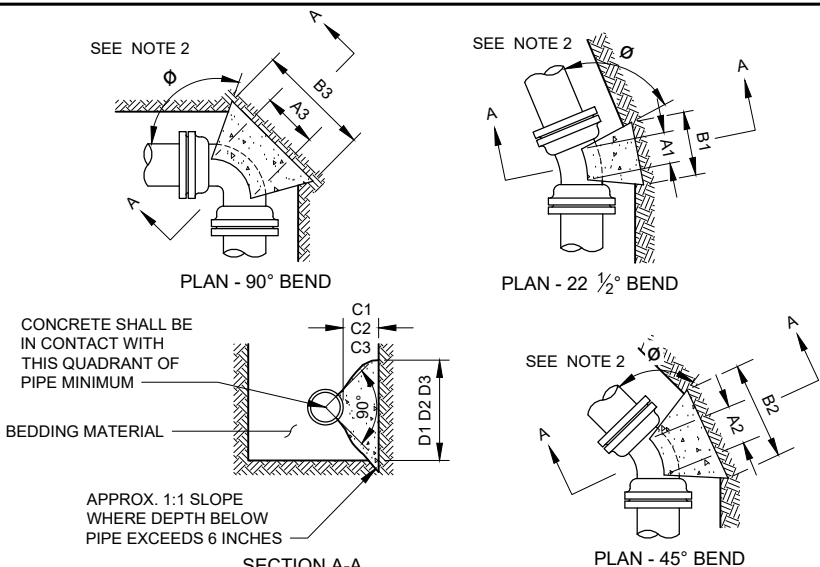
PRECAST REINFORCED CONCRETE MANHOLE DETAIL
NO SCALE



GENERAL NOTES:

- THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE.
- A THREADED, FEMALE PVC SCHEDULE 40 PLUG AND MALE COUPLING GLUED TO 3/4 INCH SCHEDULE 40 SHALL BE INSTALLED IN OR ADJACENT TO THE VALVE VAULT AND MANHOLE.
- WIRE PIGTAIL SHALL BE WRAPPED AROUND BOLT AND READILY ACCESSIBLE, WITH SUFFICIENT LENGTH FOR EASY CONNECTION.

TRACER WIRE INSTALLATION FOR PVC FORCEMAIN
NO SCALE

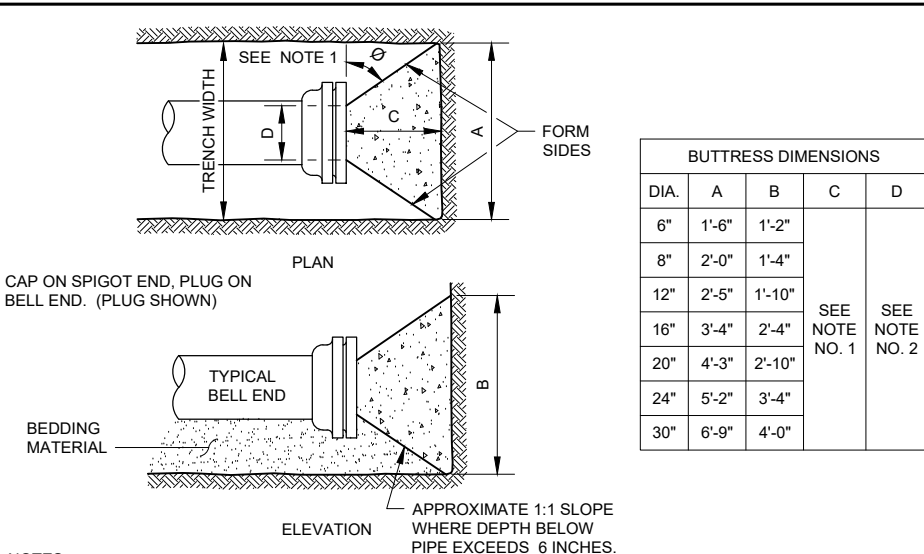


NOTES:

- DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 P.S.I. AND AN EARTH RESISTANCE OF 2 TONS PER SQ. FT. INFORM THE ENGINEER IF PRESSURES EXCEED 150 PSI, OR ON-SITE SOIL DOES NOT MEET THIS CONDITION.
- DIMENSION C1 C2 C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ EQUAL TO OR LARGER THAN 45°.
- DIMENSION A1 A2 A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH THE MECHANICAL JOINT.
- BUTTRESS TO BE POURED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
- ALL BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
- CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
- IN ADDITION TO BUTTRESS, ALL JOINTS SURROUNDING BENDS SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

PIPE SIZE	BUTTRESS DIMENSIONS					
	22 1/2° BENDS		45° BENDS		90° BENDS	
	B1	D1	B2	D2	B3	D3
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-2"
8"	1'-0"	1'-0"	1'-4"	1'-2"	1'-10"	1'-6"
10"	1'-2"	1'-2"	1'-7"	1'-7"	2'-3"	1'-10"
12"	1'-4"	1'-4"	1'-10"	1'-10"	2'-8"	2'-3"
16"	1'-10"	1'-8"	2'-6"	2'-4"	3'-10"	2'-10"
20"	2'-4"	2'-0"	3'-3"	2'-10"	5'-0"	3'-4"
24"	2'-10"	2'-4"	4'-0"	3'-3"	6'-4"	3'-10"

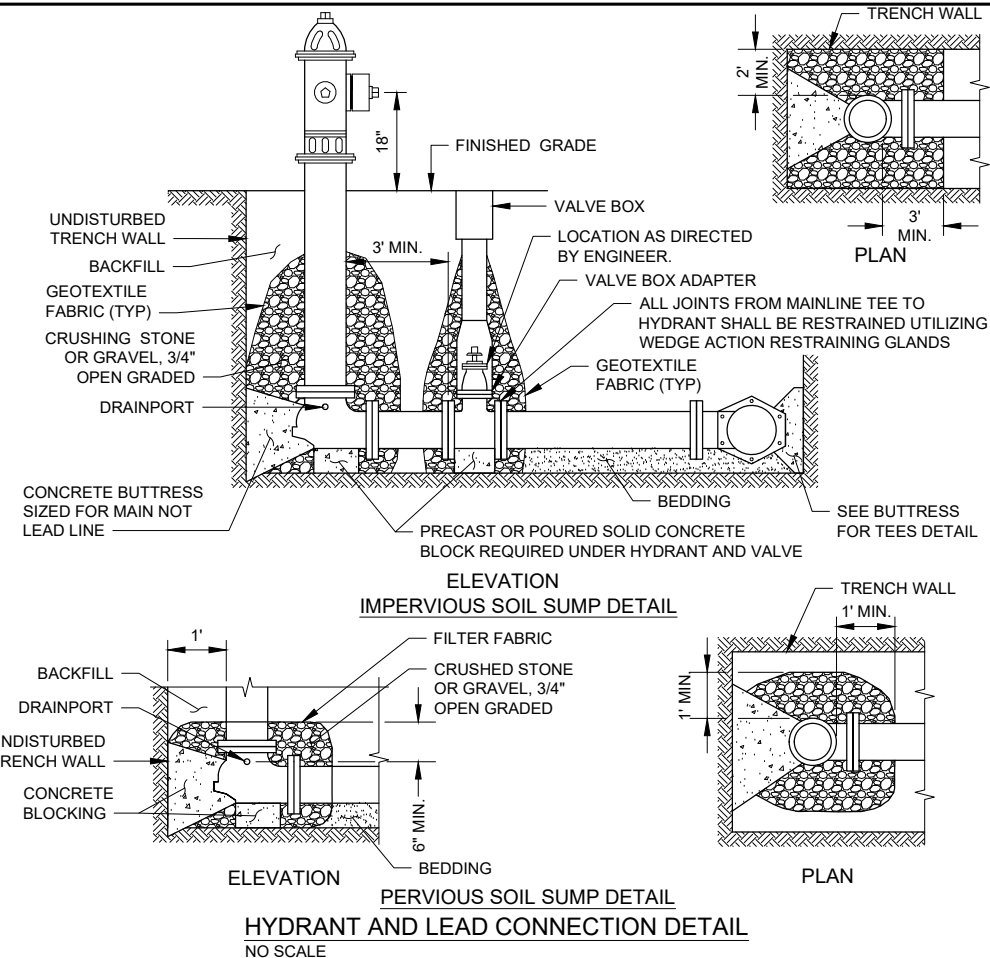
BUTTRESS FOR BENDS DETAIL
NO SCALE



NOTES:

- DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ EQUAL TO OR LARGER THAN 45°.
- DIMENSION 'D' EQUALS APPROX. I.D. OF PIPE LESS 2 INCHES. THE CONCRETE SHOULD NOT INTERFERE WITH THE MECHANICAL JOINTS.
- WHERE BUTTRESSES ARE NOT POSSIBLE BECAUSE OF POOR SOIL CONDITIONS OR LACK OF ROOM, WEDGE ACTION RESTRAINING GLANDS SHALL BE PERMITTED.
- BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI. INFORM THE ENGINEER IF ON-SITE SOIL DOES NOT MEET THIS CONDITION OR PRESSURES EXCEED 150 PSI.
- BUTTRESS TO BE POURED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
- CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
- ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
- NO WOOD BUTTRESS ALLOWED.

BUTTRESS FOR PLUGS DETAIL
NO SCALE



IMPERVIOUS SOIL SUMP DETAIL
NO SCALE

PERVIOUS SOIL SUMP DETAIL
HYDRANT AND LEAD CONNECTION DETAIL
NO SCALE

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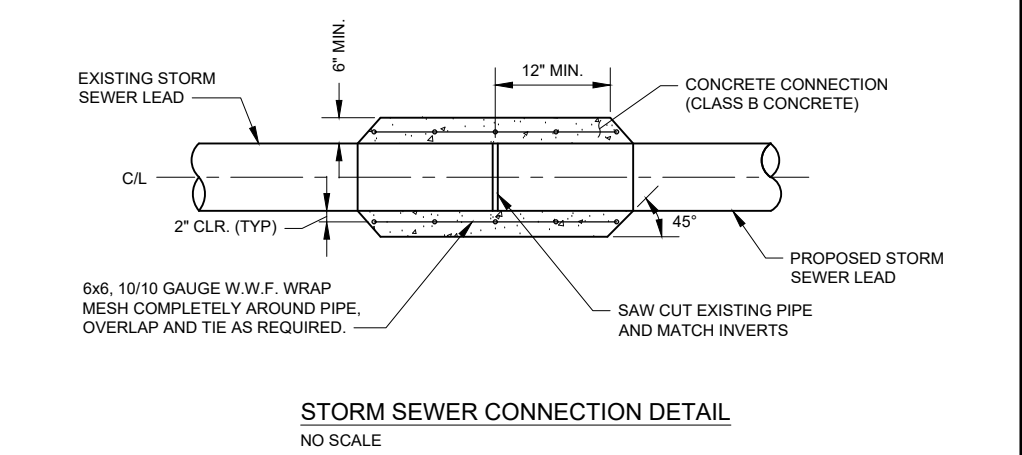
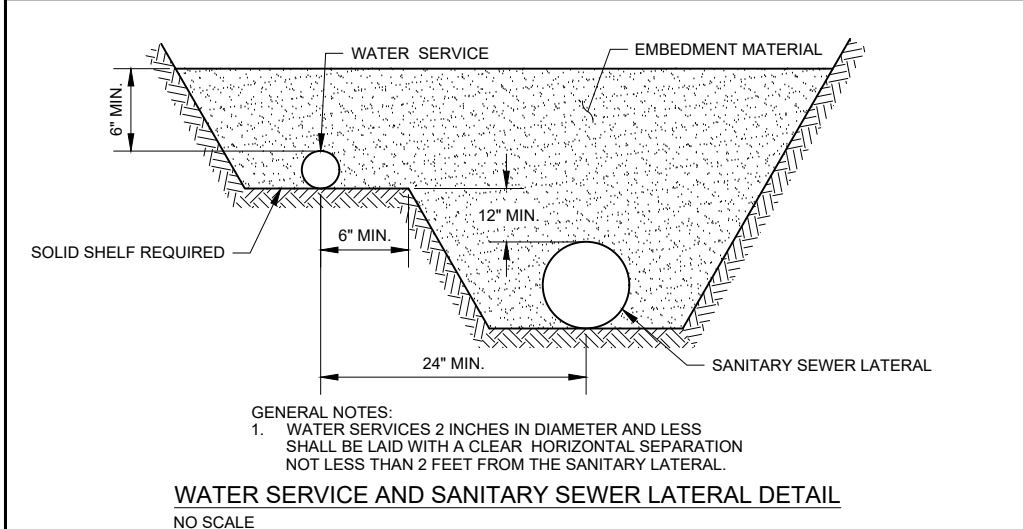
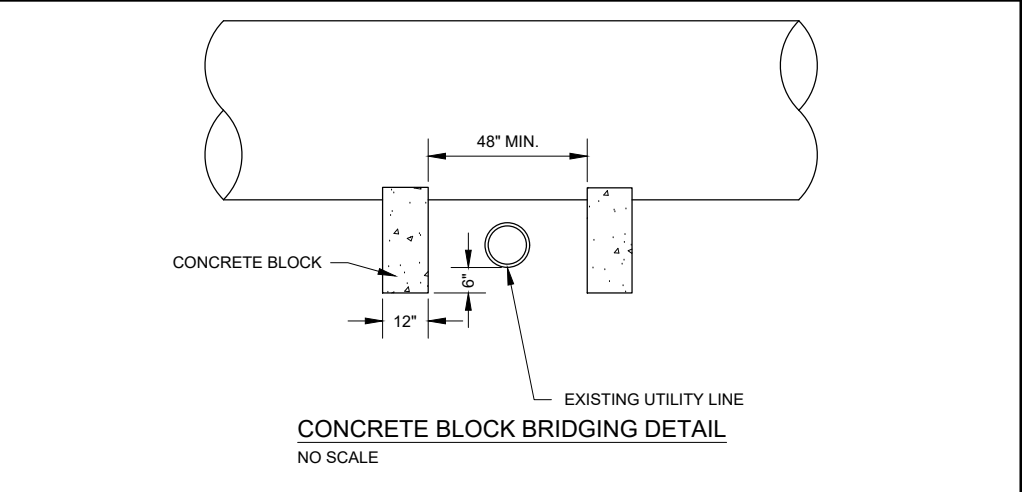
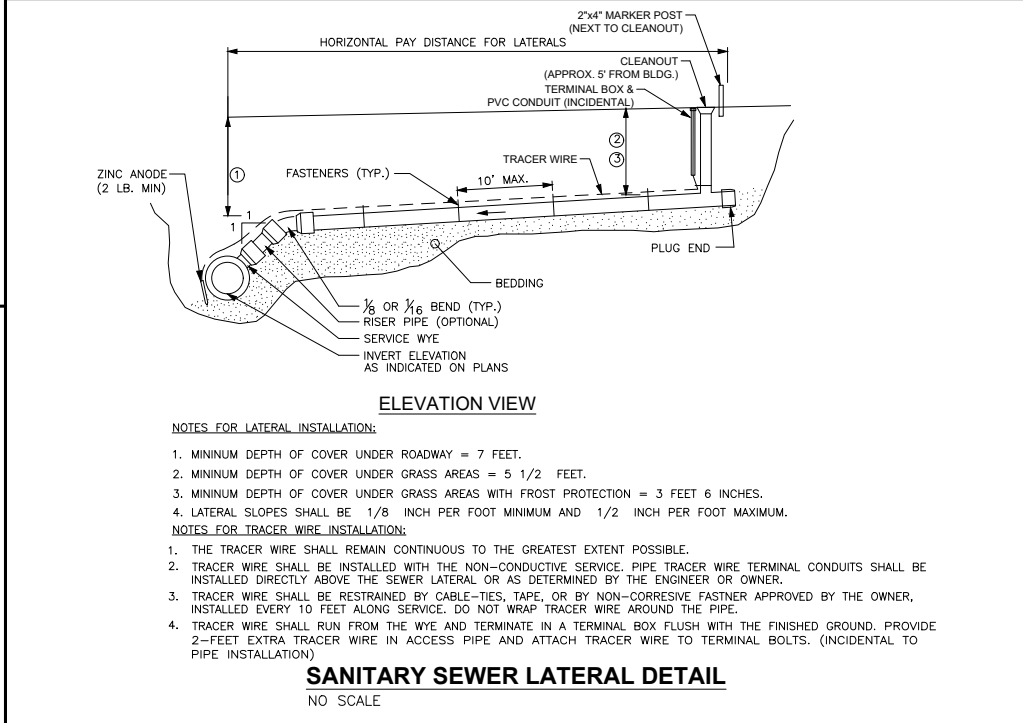
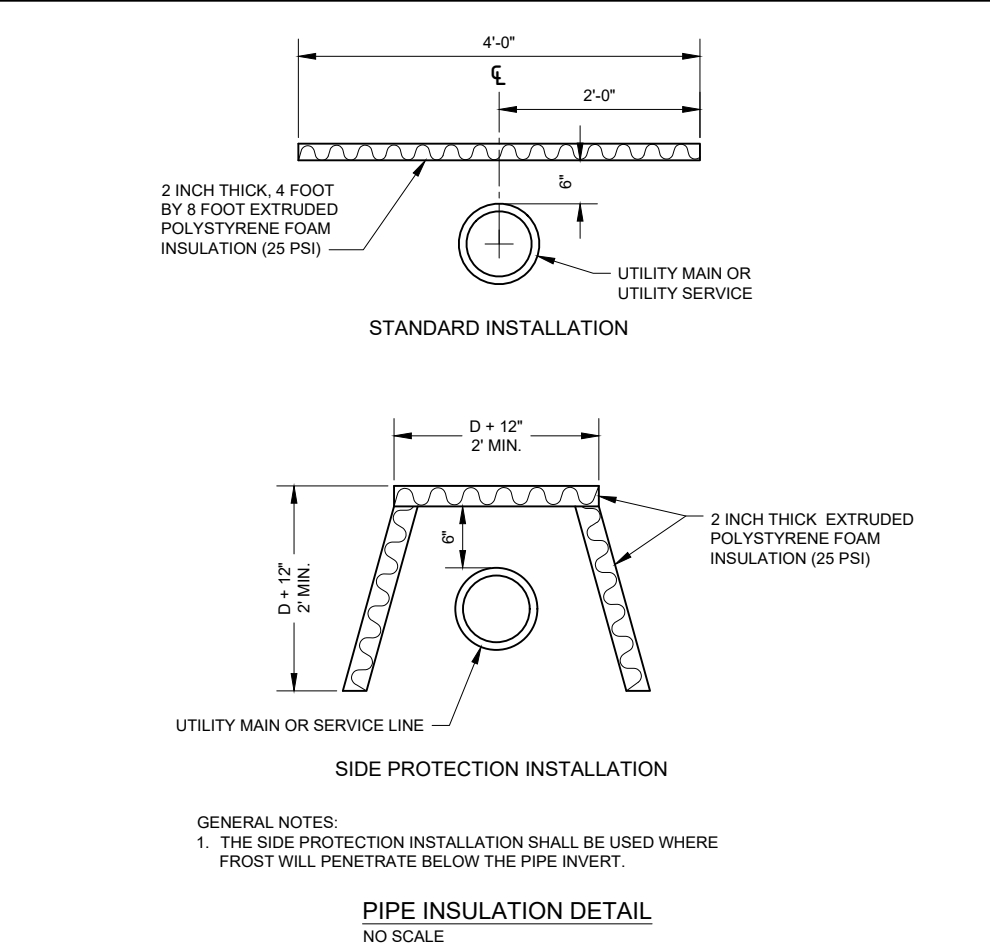
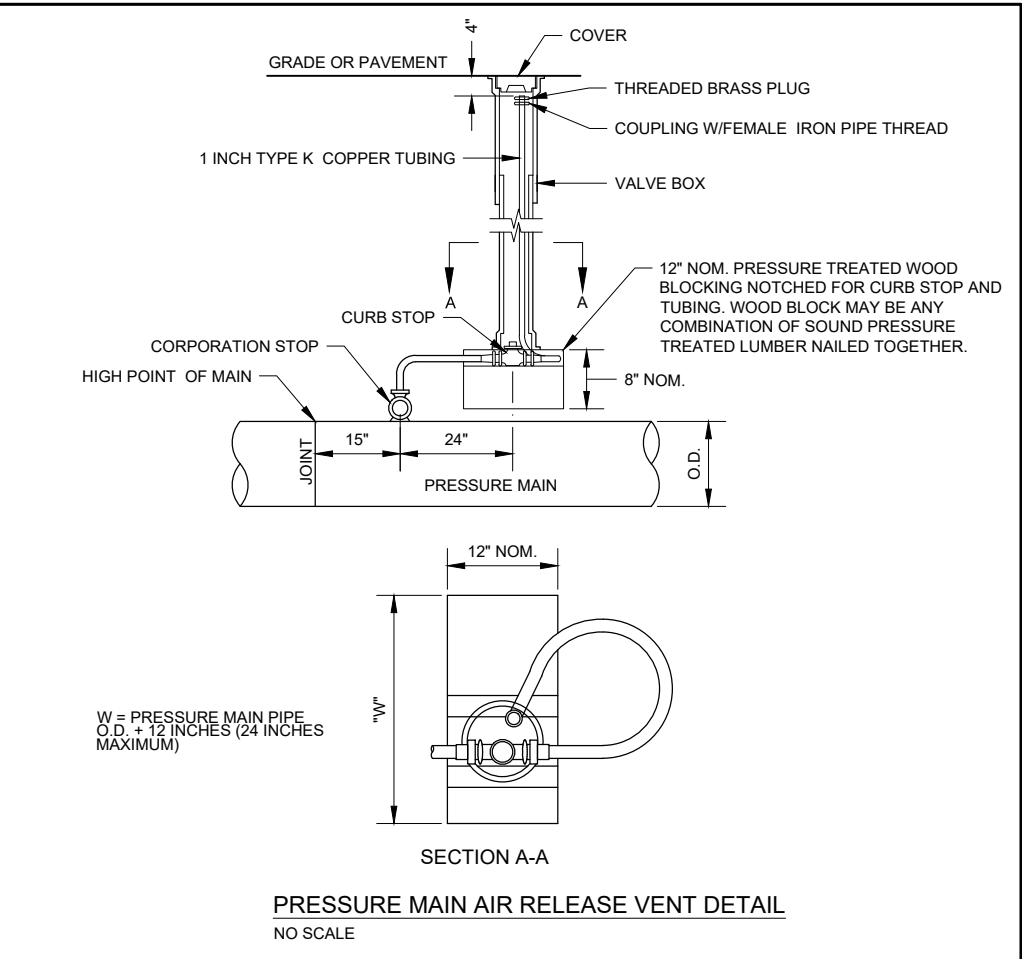
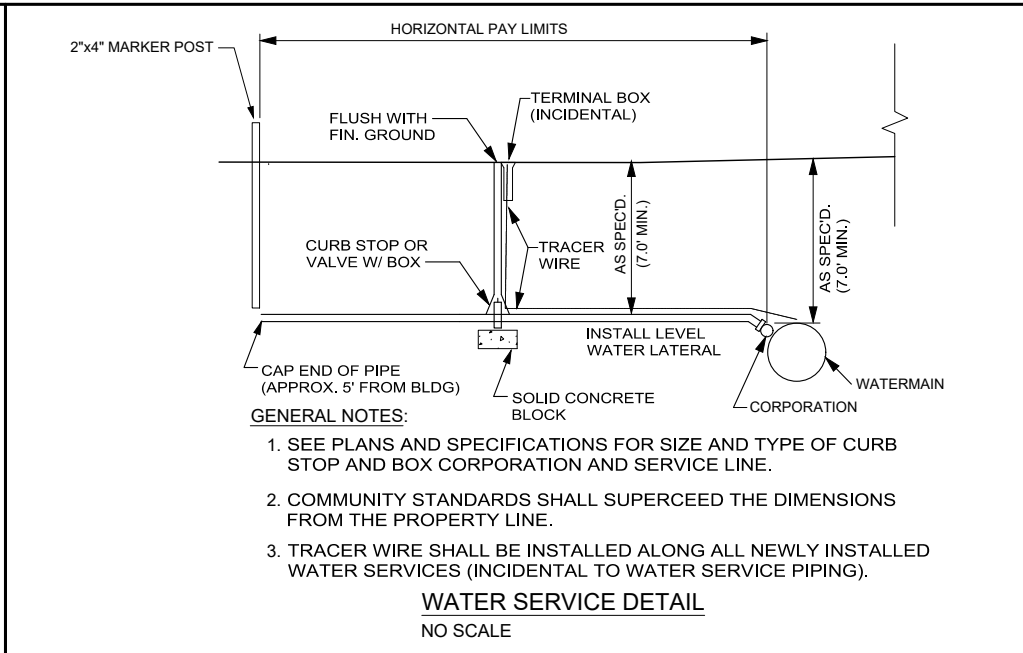
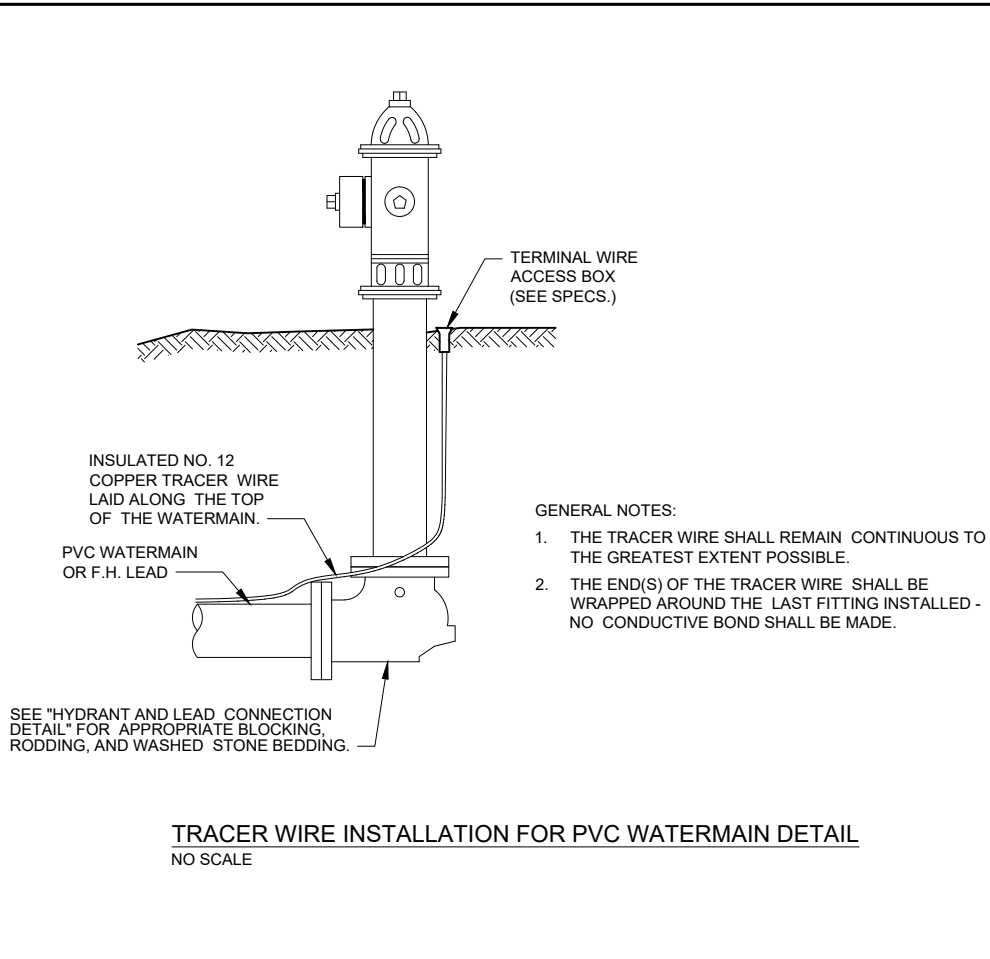


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CONSTRUCTION DETAILS

PROJECT NO.
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SHEET
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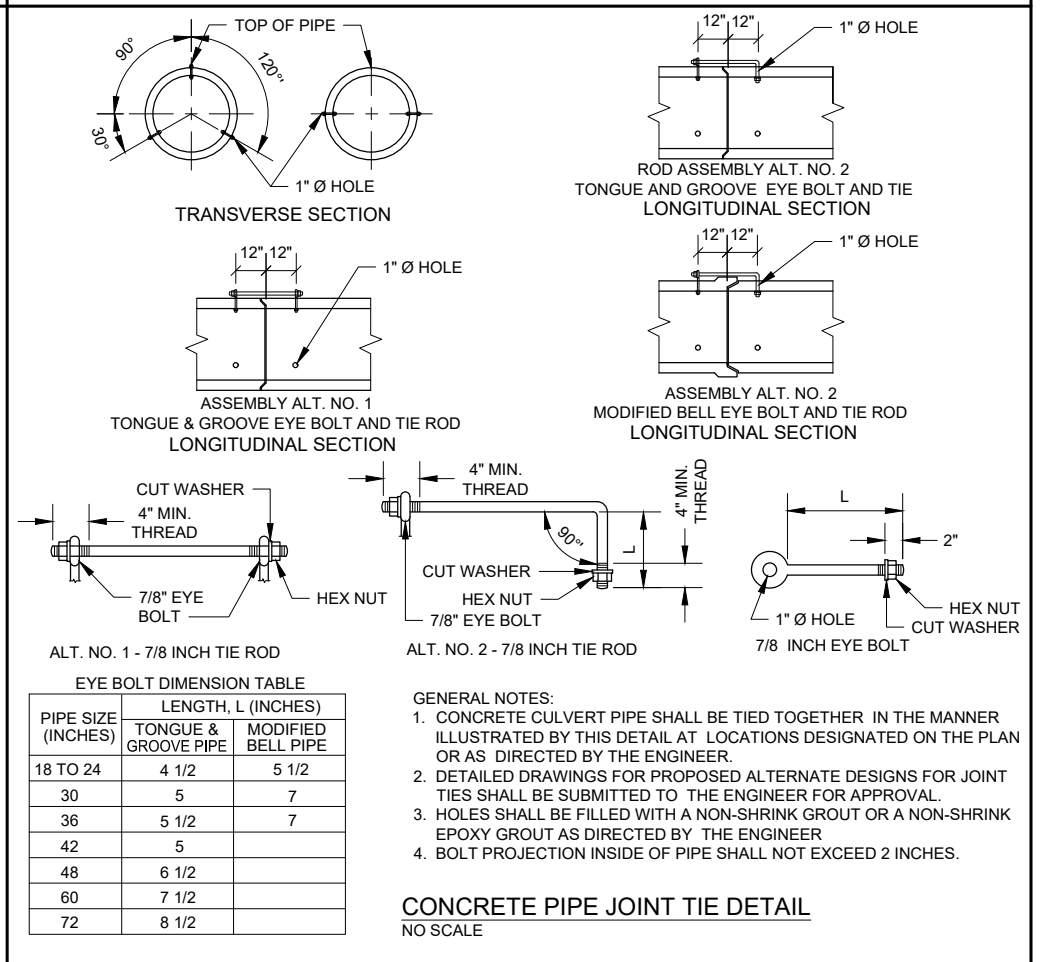
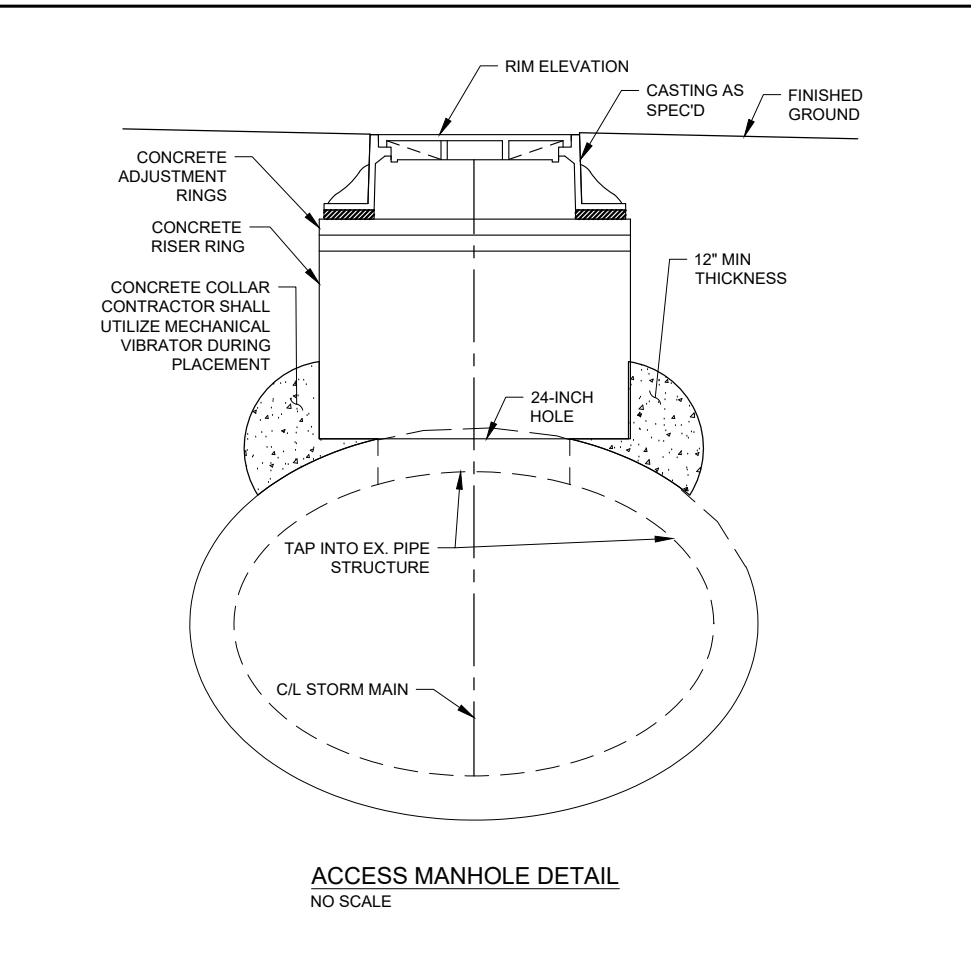
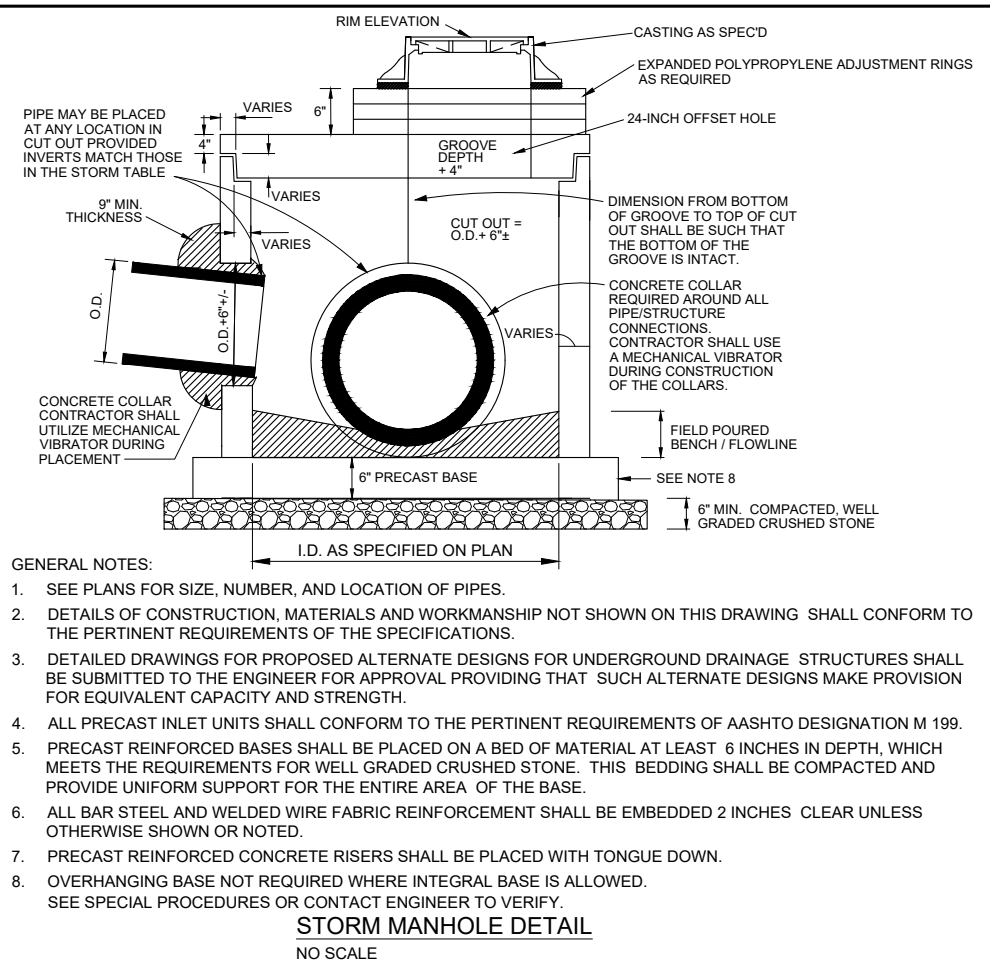
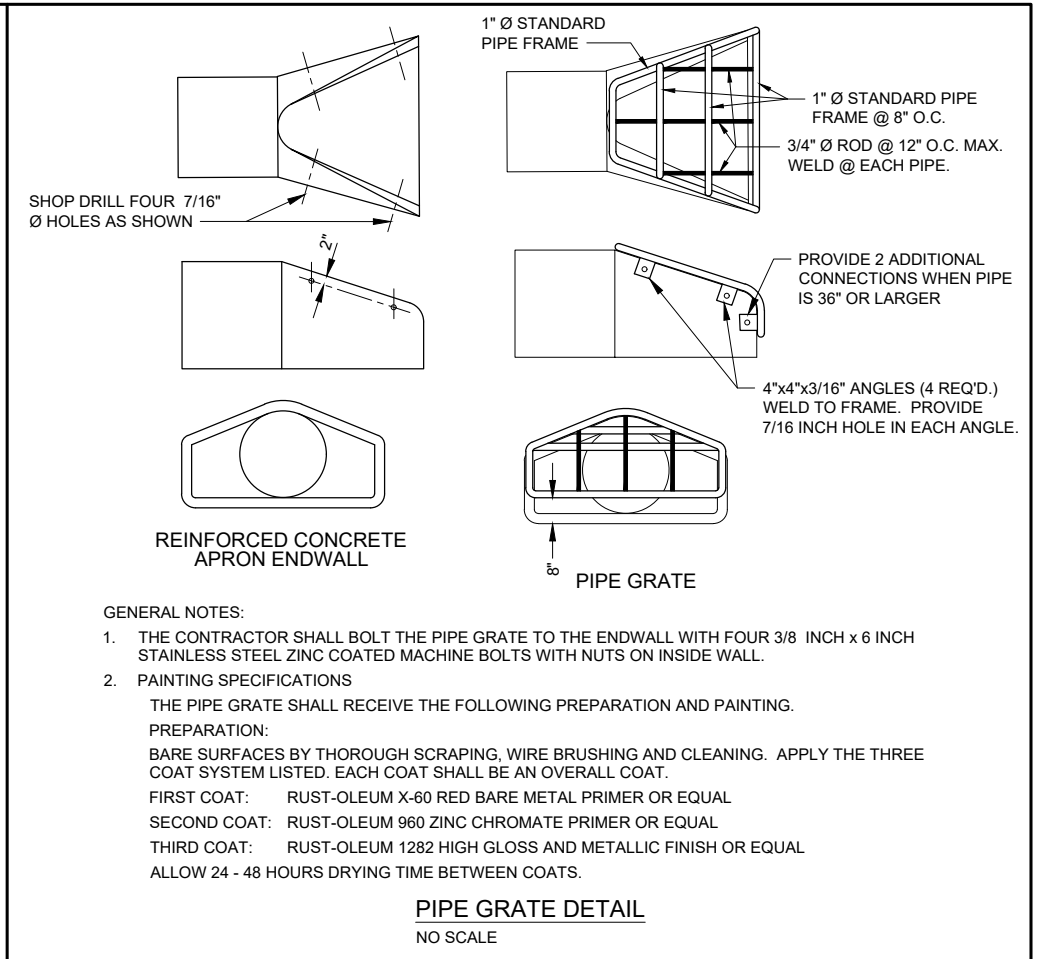
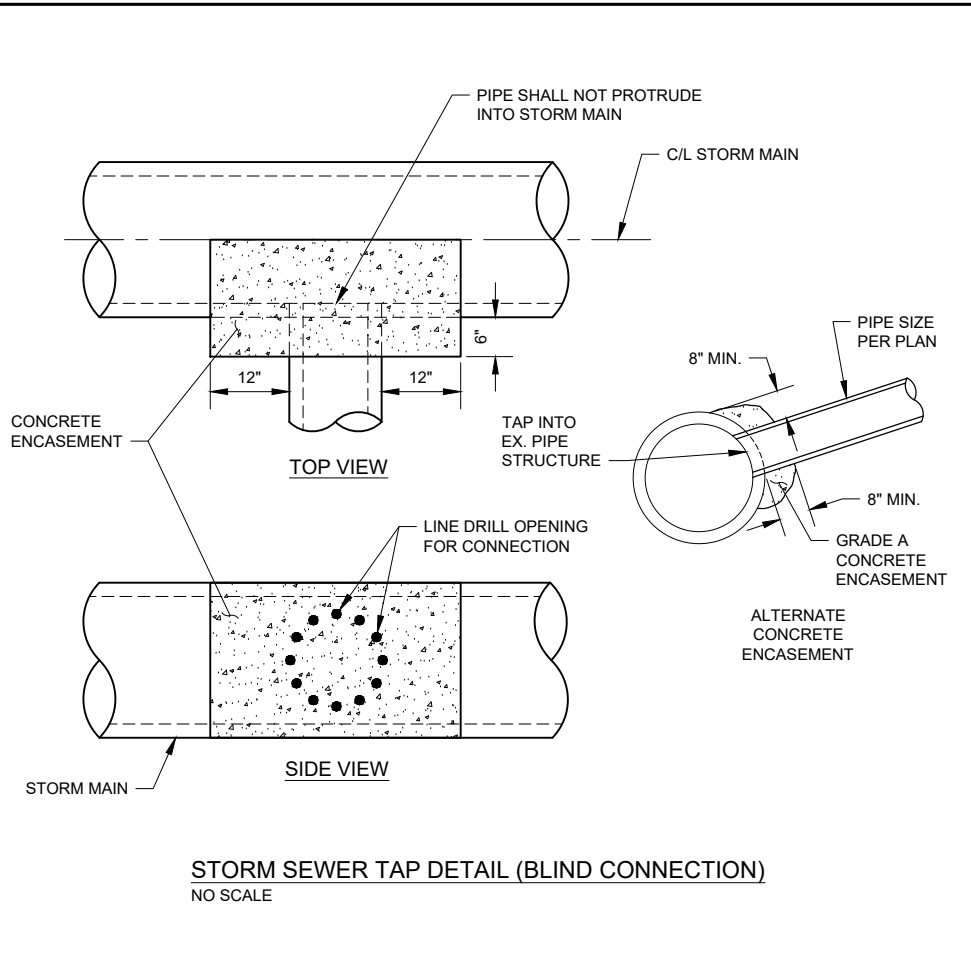
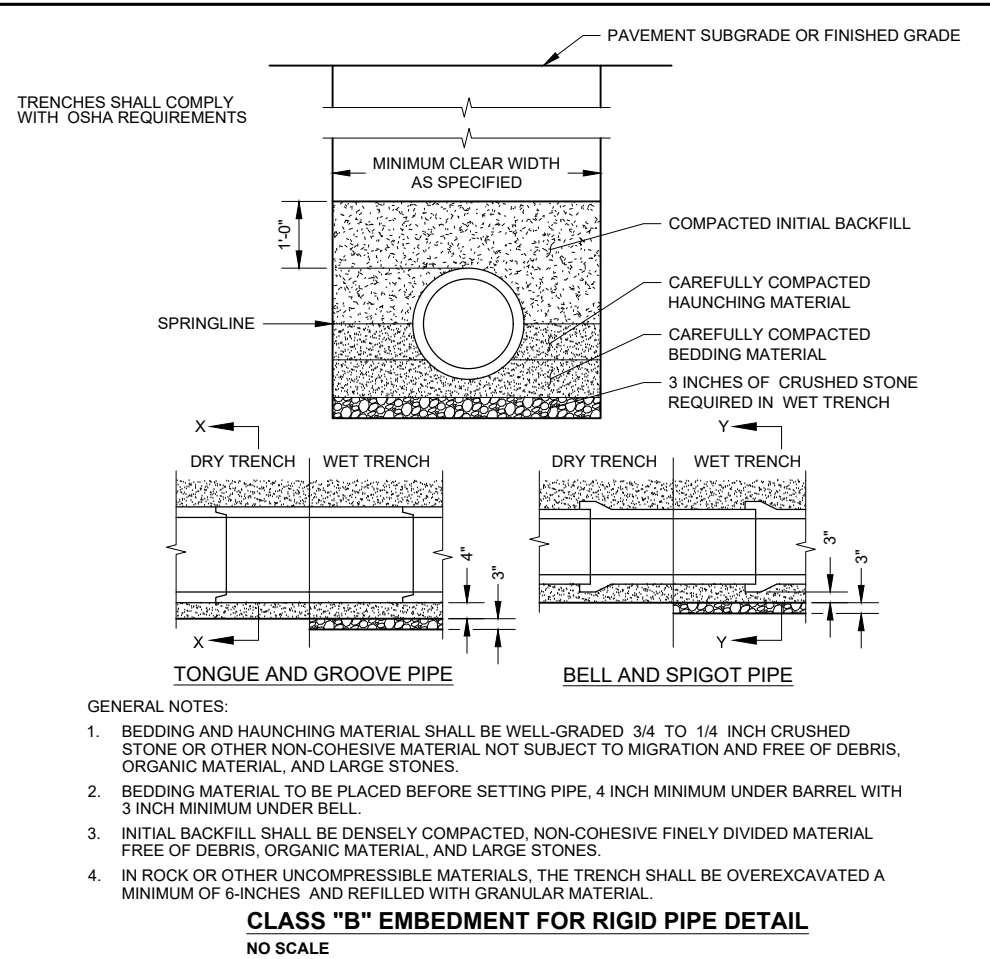
PROJECT DATE:	8/2022	NO.	DATE	REVISION	BY
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CONSTRUCTION DETAILS
PROJECT NO. 02678018
SHEET D5

GENERAL PROJECT NOTES:

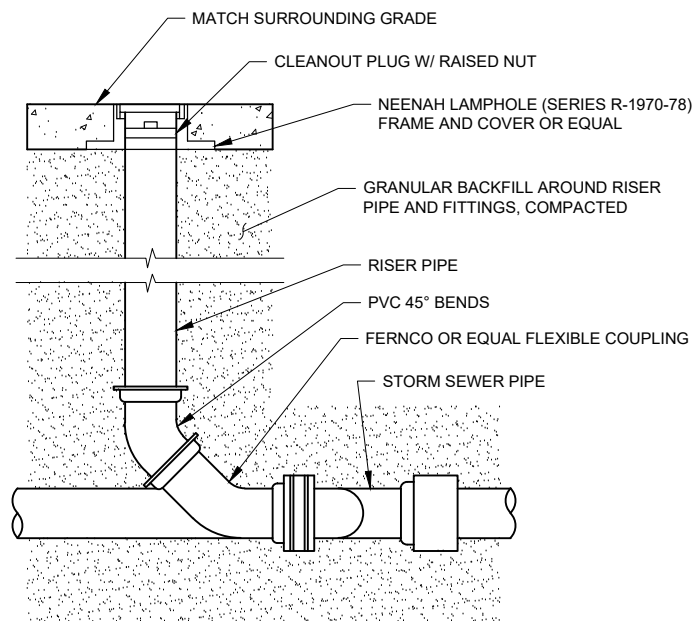
- ALL EXISTING UTILITIES WITHIN THIS PLAN ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND NO RESPONSIBILITY IS ASSUMED BY THE ENGINEER OR OWNER FOR THEIR ACCURACY OR DEGREE OF COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE, LOCATION, AND ELEVATION OF ALL UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGING ANY SUCH UTILITIES. THE CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE AT (800) 242-8511 PRIOR TO ANY CONSTRUCTION SO THAT THE SITE MAY BE MARKED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY UTILITIES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS ARE APPARENT, BRING TO THE ATTENTION OF THE PROJECT ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR RE-DESIGN MAY OCCUR.
- UNLESS SPECIFIED WITHIN THIS CONSTRUCTION PLAN, NO EXISTING TREES SHALL BE DISTURBED OR DAMAGED. THE OWNER, IN WRITING, MUST APPROVE THE REMOVAL OF ANY EXISTING TREES IF THE CONTRACTOR BELIEVES THAT AN EXISTING TREE IS IN CONFLICT WITH THE PROPOSED IMPROVEMENTS. NO TREES OR TREE STUMPS SHALL BE BURIED ONSITE.
- EXISTING KNOWN SURVEY MONUMENTS (SHOWN ON THE PLANS) ENCOUNTERED DURING CONSTRUCTION ARE TO BE PRESERVED AND LEFT UNDISTURBED. SHOULD THE CONTRACTOR ENCOUNTER UNKNOWN MONUMENTS, PROPERTY STAKES, ETC. (NOT SHOWN ON THE PLANS), THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO ANY DISTURBANCE. FAILURE TO PRESERVE SUCH MONUMENTS SHALL NOT BE ALLOWED AND REPLACEMENT BY A REGISTERED LAND SURVEYOR SHALL BE AT THE CONTRACTOR'S EXPENSE.
- ELEVATIONS SHOWN WITHIN THIS PLAN REFERENCE THE NORTH AMERICAN VERTICAL DATUM.
- REFER TO THE PROJECT ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DETAILS PERTAINING TO THE PROPOSED BUILDINGS, ASSOCIATED ARCHITECTURAL FEATURES, AND SITE WORK SURROUNDING THE BUILDING.
- THE CONTRACTOR SHALL COORDINATE WITH ALL PRIVATE UTILITIES (GAS, ELECTRIC, TELEPHONE, CABLE TV, ETC.) REGARDING THE LOCATION, SIZE, DEPTH, ETC. OF EXISTING AND PROPOSED SERVICE LINES WITHIN THE PROJECT SITE. THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF ANY PRIVATE UTILITIES THAT ARE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL CAREFULLY WORK AROUND EXISTING UTILITY LINES, UTILITY POLES, UTILITY STRUCTURES, GUY WIRES, ETC. THAT ARE TO REMAIN UNDISTURBED. THE CONTRACTOR SHALL PROVIDE ANY NECESSARY TEMPORARY SHORING OR OTHER MEASURES TO PROTECT THESE FEATURES DURING CONSTRUCTION ACTIVITIES. (ALL INCIDENTAL TO CONSTRUCTION)
- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CITY'S ADJACENT STREET/UTILITY EXTENSION PROJECT ALONG WILSON DRIVE (INCIDENTAL TO CONSTRUCTION).

GENERAL EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL INSTALL ALL NECESSARY EROSION CONTROL MEASURES TO PREVENT EROSION ONTO THE ADJACENT PROPERTIES AND INTO THE ADJACENT EXISTING STREETS. ADDITIONAL EROSION CONTROL, NOT SHOWN ON THIS PLAN, MAY BE REQUIRED BY THE FIELD ENGINEER OR BY THE CITY DURING CONSTRUCTION (INCIDENTAL). EROSION CONTROL AND SITE STABILIZATION MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS CONSTRUCTION PLAN, THE PROJECT SPECIFICATIONS, THE LATEST EDITION OF THE WISCONSIN DNR EROSION CONTROL TECHNICAL STANDARDS, ANY LOCAL EROSION CONTROL & STORMWATER ORDINANCES, AND ANY CONDITIONS OF APPROVAL. INSTALL EROSION CONTROL MEASURES PRIOR TO INITIATION OF ANY SITE WORK. SEE THE "CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS" FOR FURTHER EROSION CONTROL REQUIREMENTS AND NOTES.
- CONTRACTOR SHALL PROTECT ALL EXISTING AND PROPOSED STREET INLETS, MANHOLES, DRAINAGE SWALES, CULVERTS, ETC. FROM SILTATION DURING CONSTRUCTION AND UNTIL FINAL STABILIZATION OCCURS.
- ALL EROSION CONTROL MEASURES AND STRUCTURES SHALL BE INSPECTED, MAINTAINED, AND DOCUMENTED BY THE CONTRACTOR WEEKLY AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT 0.5 INCHES OR GREATER. ALL NECESSARY REPAIR AND MAINTENANCE WILL BE DONE AT THIS INSPECTION TIME. THESE INSPECTIONS SHALL BE DOCUMENTED BY THE CONTRACTOR AND AVAILABLE TO THE ENGINEER AND/OR OWNER UPON REQUEST. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OR INCLUDED IN THE CORRESPONDING EROSION CONTROL PRICE BID (IF APPLICABLE).

GENERAL TRAFFIC CONTROL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE HIS/HER WORK TO MINIMIZE THE INCONVENIENCE TO THE RESIDENTS AND BUSINESSES LOCATED ADJACENT TO THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWO DAYS PRIOR TO CLOSING ANY SECTION OF STREET.
- ALL TRAFFIC CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE UNITED STATES DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD). THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL DURING THE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL INSPECT ALL TRAFFIC CONTROL MEASURES DAILY AND PERFORM ANY NECESSARY MAINTENANCE OR ADJUSTMENTS BASED ON THE ACTIVITIES PLANNED. ADDITIONAL TRAFFIC CONTROL MEASURES NOT SPECIFIED WITHIN THE CONTRACT DOCUMENTS MAY BE REQUIRED DURING CONSTRUCTION BY THE CITY AND ENGINEER (INCIDENTAL TO CONSTRUCTION). THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND CITY STAFF RELATIVE TO THE PLACEMENT AND MAINTENANCE OF ALL BARRICADES AND OTHER MEASURES USED.
- AFTER ALL CONSTRUCTION RELATED ACTIVITIES ARE COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL MEASURES. ANY DISTURBANCE OR DAMAGE RESULTING FROM THE REMOVAL OF THE TRAFFIC CONTROL MEASURES SHALL BE RESTORED OR REPAIRED TO THE SATISFACTION OF THE CITY.



STORM SEWER CLEANOUT
NO SCALE

GENERAL GRADING NOTES:

- ALL GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS CONSTRUCTION PLAN, THE PROJECT SPECIFICATIONS, AND ANY CONDITIONS OF APPROVAL.
- ALL PROPOSED GRADES SHOWN WITHIN THE PLANS ARE FINISHED GRADES. UNLESS SPECIFIED ON THE PLAN, THE CONTRACTOR SHALL CONSTRUCT/GRADE ALL CONCRETE, ASPHALT, AND GRASS AREAS TO A MINIMUM SLOPE OF 1.0%, 1.0%, AND 1.0%, RESPECTIVELY. THE MAXIMUM SURFACE SLOPE ACROSS HANDICAP PARKING STALLS AND WALKWAYS IN ANY DIRECTION SHALL BE 2.0% AND ACROSS HANDICAP ACCESSIBLE RAMPS SHALL BE 8.0%. THE MAXIMUM SURFACE SLOPE ACROSS THE PROPOSED PAVEMENT SHALL BE 6.0% UNLESS SPECIFIED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, PRIOR TO CONSTRUCTION, OF ANY AREAS WHICH DO NOT SATISFY THE ABOVE MENTIONED SLOPES.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE HIS/HER OWN COMPUTATIONS FOR DETERMINATION OF EARTHWORK AND TOPSOIL QUANTITIES PRIOR TO BIDDING. IT IS RECOMMENDED THAT EACH BIDDER VISIT THE SITE TO VERIFY THE EXISTING CONDITIONS. NO CHANGES WILL BE MADE IN THE BID QUANTITY AMOUNT OR UNIT PRICE UNLESS CHANGES ARE MADE TO THE CONTRACT DRAWINGS AFTER BIDDING OF THE CONTRACT.
- NO STOCKPILES (TOPSOIL OR EARTH MATERIAL) SHALL REMAIN AFTER ALL GRADING WORK IS COMPLETED UNLESS DIRECTED OTHERWISE BY THE OWNER. IF AFTER THE COMPLETION OF ALL SITE GRADING AND SUBGRADE PREPARATION WORK THERE IS EXCESS FILL MATERIAL, THE CONTRACTOR SHALL HAUL/STOCKPILE THE MATERIAL AT A LOCATION(S) AS DESIGNATED BY THE OWNER OR DISPOSE OF THE MATERIAL AS DIRECTED BY THE OWNER. IF THERE IS A SHORTAGE OF FILL MATERIAL, THE CONTRACTOR SHALL PURCHASE/IMPORT THE MATERIAL FROM OFFSITE. ALL GRADING AND SUBGRADE PREPARATION WORK AS WELL AS ANY DISPOSAL OF EXCESS MATERIAL AND/OR IMPORTING OF MATERIAL SHALL BE INCIDENTAL TO THE UNCLASSIFIED EXCAVATION BID ITEM.
- FILL PLACED WITHIN 10 FEET OR LESS FROM THE OUTSIDE EDGE OF A BUILDING SHALL BE SUITABLE EXCAVATED SOIL FREE OF ORGANIC DEBRIS, CLAY BALLS, AND AGGREGATE LARGER THAN 1.5-INCHES. THE FILL MATERIAL WITHIN THESE AREAS SHALL BE SPREAD AND COMPACTED UNIFORMLY IN 6-INCH TO 8-INCH MAXIMUM LIFTS TO AT LEAST 95 PERCENT MAXIMUM DRY DENSITY PER MODIFIED PROCTOR (ASTM D1557). ALL OTHER FILL AREAS WITHIN THE PROJECT SITE SHALL BE SPREAD AND COMPACTED IN 12-INCH MAXIMUM LIFTS TO AT LEAST 93 PERCENT DRY DENSITY PER MODIFIED PROCTOR (ASTM D1557).

GENERAL PAVING NOTES:

- ALL PROPOSED PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH THIS CONSTRUCTION PLAN, THE PROJECT SPECIFICATIONS, THE REQUIREMENTS OF THE OWNER, THE LATEST EDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, AND ANY CONDITIONS OF APPROVAL.
- ALL SAWCUTTING OF EXISTING ASPHALT AND CONCRETE SHALL BE INCIDENTAL TO PAVING.

GENERAL RESTORATION NOTES:

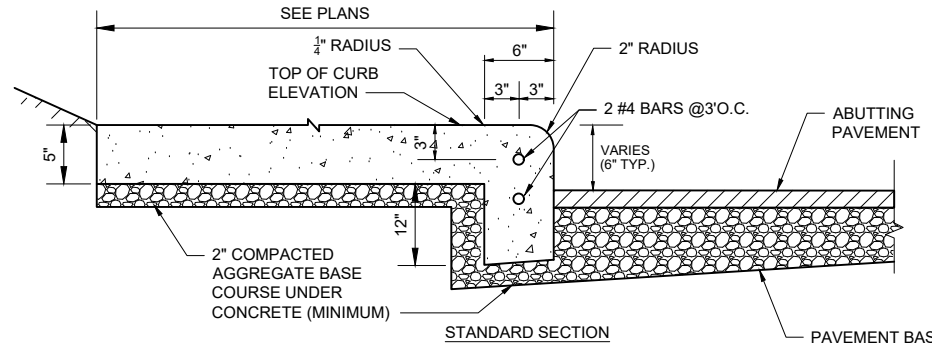
- ALL PROPOSED RESTORATION SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THIS CONSTRUCTION PLAN, THE PROJECT SPECIFICATIONS, THE REQUIREMENTS OF THE OWNER, AND ANY CONDITIONS OF APPROVAL.
- ALL DISTURBED OPEN SPACE AREAS SHALL BE TOPSOILED (MINIMUM 6" THICK), SEEDED, FERTILIZED, AND MULCHED IN ACCORDANCE WITH THE CONSTRUCTION PLANS, THE PROJECT SPECIFICATIONS, THE LATEST EDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY AND STREET CONSTRUCTION, AND THE WISCONSIN DNR CONSERVATION PRACTICE STANDARDS 1058 & 1059.

WORK OUTSIDE OF PROJECT PROPERTY NOTES:

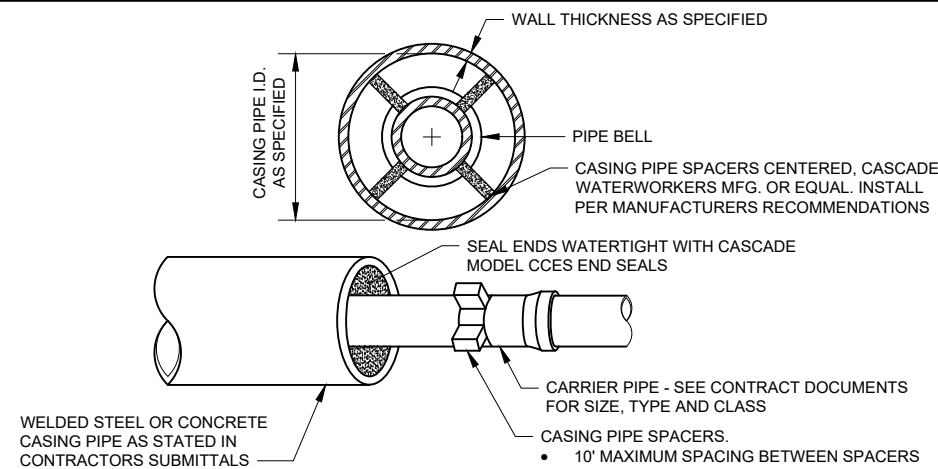
- ALL DISTURBANCE WITHIN THE EXISTING CITY RIGHT-OF-WAY SHALL BE KEPT TO A MINIMUM. ALL PAVEMENT, GRASS AREAS, ETC. DISTURBED WITHIN THESE AREAS DURING CONSTRUCTION SHALL BE RESTORED EQUAL TO OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AND TO THE SATISFACTION OF THE CITY. EXISTING GRAVEL BASE AND PAVEMENT DISTURBED WITHIN THE EXISTING STREET SHALL BE RESTORED WITH EQUAL THICKNESS AND WORKMANSHIP TO EXISTING CONDITIONS OR AS DIRECTED BY THE CITY. THE CONTRACTOR SHALL COORDINATE WITH THE CITY STAFF REGARDING BACKFILL AND COMPACTION REQUIREMENTS FOR ANY WORK PERFORMED WITHIN THESE AREAS.

GENERAL UTILITY NOTES:

- ALL PROPOSED UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THIS CONSTRUCTION PLAN, THE PROJECT SPECIFICATIONS, THE REQUIREMENTS OF THE OWNER, THE LATEST EDITION OF THE WISCONSIN STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION (FOR SANITARY & WATER), THE LATEST EDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION (STORM), AND ANY CONDITIONS OF APPROVAL.
- LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION AS MEASURED BY THE FIELD ENGINEER AND THE CONTRACTOR SHALL BE PAID ACCORDING TO THE ACTUAL LENGTH OF PIPING INSTALLED.
- A 7.0 FEET DEPTH OF COVER OVER ALL NEWLY INSTALLED WATER PIPING IS DESIRED AND SHALL BE MAINTAINED UNLESS FIELD CONDITIONS PROHIBIT. THE CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF COVER OF 5.0 FEET UNLESS DIRECTED OTHERWISE BY THE OWNER. ALL NEWLY INSTALLED WATER PIPING WITH COVER LESS THAN 7.0 FEET SHALL BE INSULATED ACCORDING TO THE SPECIFICATIONS AND INSULATION DETAIL. INSULATION SHALL ALSO BE INSTALLED AT ALL LOCATIONS WHERE STORM SEWER CROSSES THE WATER PIPING, WATER SERVICES, AND HYDRANT LEADS. MINIMUM VERTICAL SEPARATION DISTANCE WHERE WATER PIPING CROSSES OVER SEWERS IS 6 INCHES. MINIMUM VERTICAL SEPARATION DISTANCE WHERE WATER PIPING CROSSES UNDER SEWERS IS 18 INCHES.
- THE CONTRACTOR SHALL COORDINATE SANITARY AND WATER LATERAL LOCATIONS WITH THE OWNER AND THE BUILDING PLANS PRIOR TO CONSTRUCTION. UNLESS DIRECTED OTHERWISE BY THE OWNER, THE CONTRACTOR SHALL STUB THE SANITARY AND WATER LATERALS APPROXIMATELY 5 FEET FROM THE PROPOSED BUILDING LOCATION AND MARK ALL STUBS WITH A 2"x4" EXTENDING A MINIMUM OF 2 FEET ABOVE THE FINISHED GROUND SURFACE.
- TRACER WIRE SHALL BE INSTALLED ALONG ALL SANITARY, WATER, AND STORM SEWER (INCIDENTAL TO THE SPECIFIC PIPING). TRACER WIRE SHALL BE SURFACED AT ALL SANITARY MANHOLES, HYDRANTS, WATER SERVICE VALVES (TO BUILDINGS), SANITARY LATERAL TRACER WIRE TERMINAL BOXES, AND STORM INLETS AND MANHOLES.
- ALL SAWCUTTING, BENDS, FERROCEMENT CONNECTORS, FITTINGS, AND OTHER MATERIALS NOT SPECIFICALLY ITEMIZED ON THE BID BUT NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM AND TO MAKE A WATERTIGHT CONNECTION TO THE EXISTING SANITARY, WATER, OR STORM PIPING SHALL BE INCIDENTAL TO CONSTRUCTION. ALL PROPOSED SANITARY SEWER, WATER, AND STORM PIPING CONNECTIONS INTO EXISTING PIPING OR STRUCTURES SHALL BE INCIDENTAL TO CONSTRUCTION. ALL EXISTING SANITARY SEWER, WATER, AND STORM PIPE ABANDONMENT AS WELL AS THE REMOVAL OF EX. MANHOLES, HYDRANTS, VALVE MANHOLES, AND VALVE BOXES THAT ARE NO LONGER IN USE SHALL BE INCIDENTAL TO CONSTRUCTION. ALL EXISTING SANITARY, WATER OR STORM PIPING TO BE ABANDONED SHALL BE MADE BY COMPLETELY FILLING EACH END OF THE PIPE WITH POUR-IN-PLACE CONCRETE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (SHORING, BRACING, ETC.) AND SHALL CAREFULLY INSTALL THE NEW SANITARY SEWER, WATER, AND STORM SEWER IMPROVEMENTS SO AS NOT TO DISTURB ANY EXISTING PRIVATE UTILITY STRUCTURES OR PIPING AS WELL AS TO PREVENT ANY DISTURBANCE TO EXISTING SITE FEATURES THAT ARE TO REMAIN UNDISTURBED. ANY DISTURBANCE OR DAMAGE (AS DETERMINED BY THE OWNER) SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- JOINT TIES SHALL BE INSTALLED ON ALL APRON ENDWALL JOINTS AND THE ADJACENT TWO PIPE JOINTS (SEE DETAIL & SPECIFICATIONS).



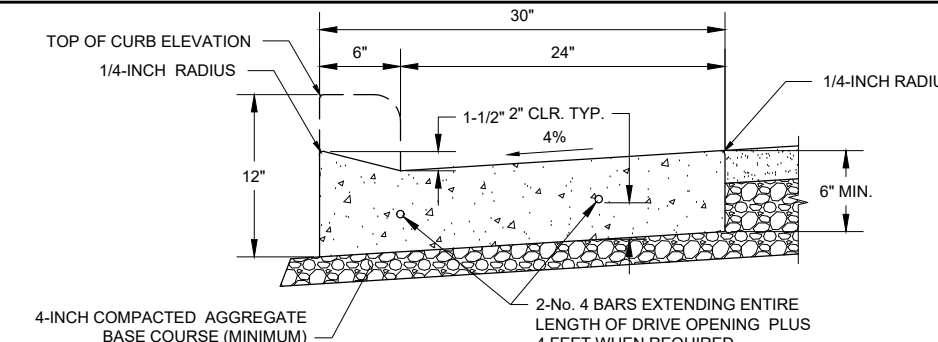
INTEGRAL SIDEWALK DETAIL
SCALE: NONE



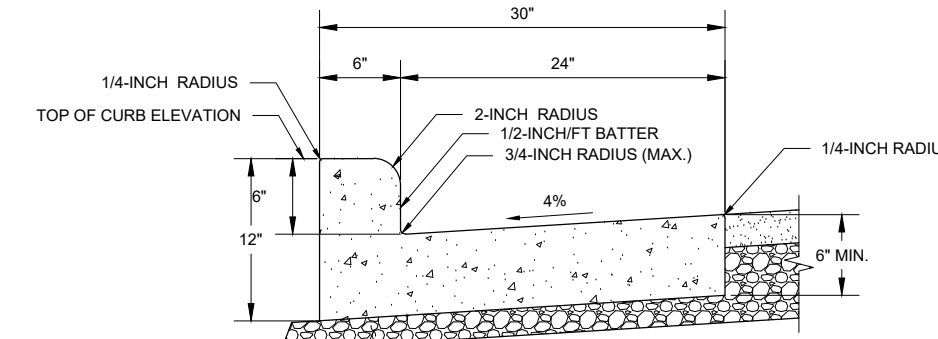
- NOTES:
- GRAVITY SEWER APPLICATIONS SHALL USE SPACERS TO CORRECT FOR GRADE IF CASING HAS SAGS.
 - PRESSURE APPLICATIONS SHALL USE THE RESTRAINED POSITION.

CASING SPACER AND CARRIER PIPE DETAIL

NO SCALE



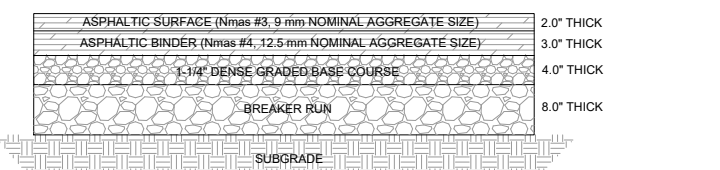
DRIVEWAY SECTION



STANDARD SECTION

TYPE D CURB AND GUTTER DETAIL

NO SCALE



NOTE: IF PAVING WITHIN CITY RIGHT OF WAY, EXISTING PAVEMENT AND GRAVEL BASE THICKNESSES SHALL SUPERCEDE THE THICKNESSES SHOWN IN THIS DETAIL IF EXISTING CONDITIONS ARE GREATER (DETERMINED BY CITY IN THE FIELD).

ASPHALT PAVING DETAIL

SCALE: NONE

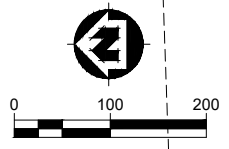
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CITY OF WAUPUN, DODGE COUNTY, WISCONSIN

CONSTRUCTION DETAILS

PROJECT NO:
02678018
SHEET
D6



GENERAL NOTE:

1. CONTRACTOR SHALL INSTALL INLET PROTECTION IN ALL PROPOSED STORM MANHOLES/INLETS ONCE INSTALLED (SEE DETAILS).
2. CONTRACTOR TO INSTALL EROSION MATTING ON ALL SLOPES GREATER THAN 4H:1V OR AS DIRECTED BY OWNER.
3. CONTRACTOR TO INSTALL EROSION BALES IN PROPOSED DITCHES AS NEEDED TO ESTABLISH TURF LAWN.

LEGEND

- SURFACE DRAINAGE DIRECTION ARROW
- EXISTING 5' ELEVATION CONTOUR
- EXISTING 1' ELEVATION CONTOUR
- SILT FENCE (SEE DETAIL)
- INLET PROTECTION (SEE DETAIL)
- APPROXIMATE DISTURBANCE LIMITS

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2
N 780806.87
E 876099.36
919.12

CONTROL POINT *CUT X
1
N 780038.91
E 876127.83
925.69

CONTROL POINT *3/4IN IR
5
N 778721.34
E 876013.39
930.38

CONTROL POINT *3/4IN IR
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E 875618.42
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CONTROL POINT *3/4IN IR
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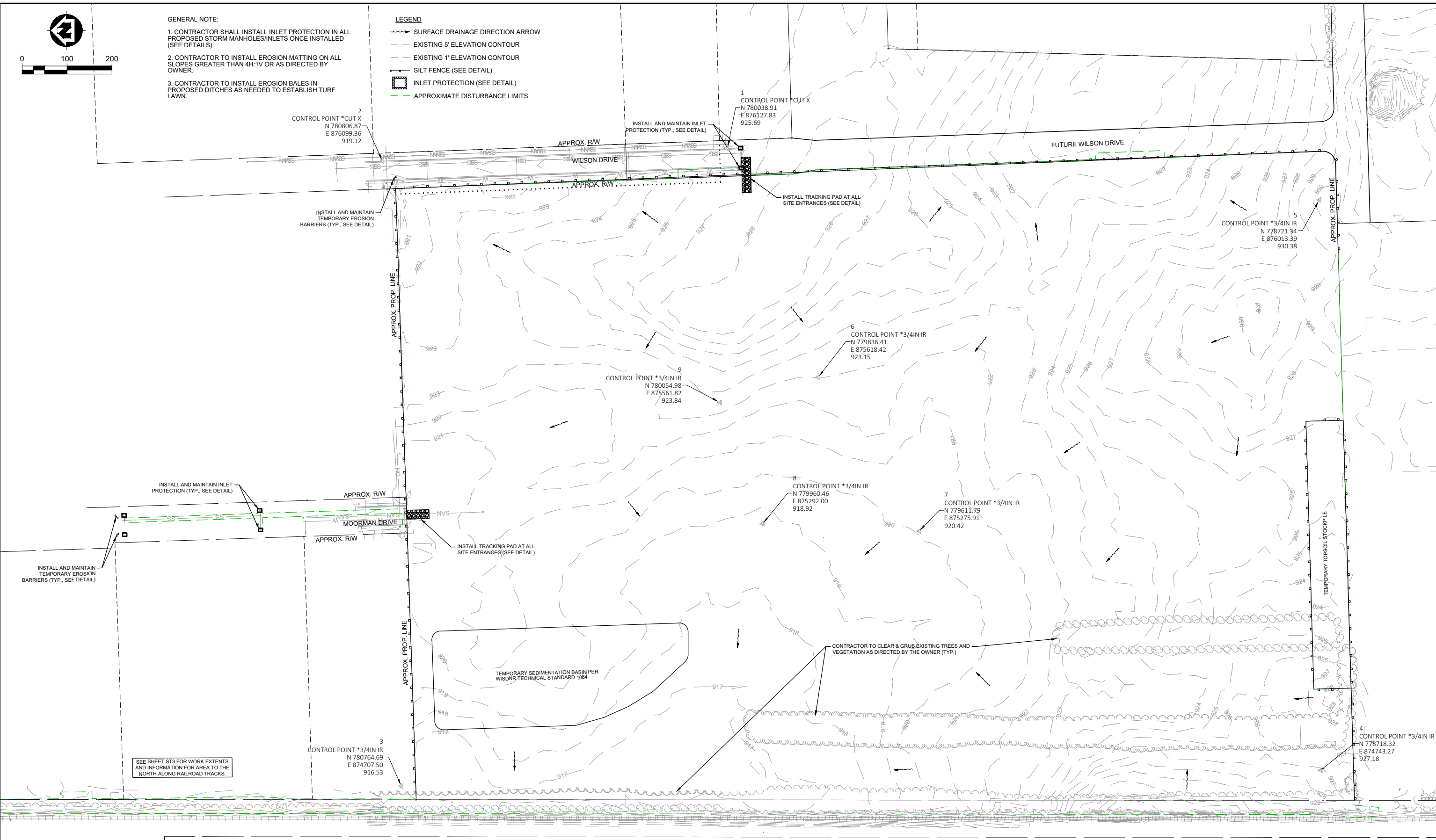
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E 875292.00
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CONTROL POINT *3/4IN IR
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E 874707.50
916.53

CONTROL POINT *3/4IN IR
4
N 778718.32
E 874743.27
927.18

SEE SHEET ST3 FOR WORK EXTENTS AND INFORMATION FOR AREA TO THE NORTH ALONG RAILROAD TRACKS.



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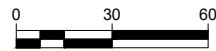
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EROSION CONTROL & REMOVAL PLAN

PROJECT NO.
02678018
 SHEET
ST1

PLOT DATE: 1/10/2023 4:24 PM, G:\02\02678018\CADD\Construction Documents\02678018 Erosion Control.dwg



GENERAL NOTES:

1. ALL PROPOSED CONTOURS WITHIN THE RAILROAD TRACK AREAS REFER TO THE BOTTOM OF SUBBALLAST OR TOP OF SUBGRADE ELEVATION. ALL PROPOSED CONTOURS OUTSIDE OF THE RAILROAD TRACK AREAS REFER TO THE PROPOSED TOP OF GROUND.
2. CONTRACTOR TO COORDINATE ALL WORK ALONG RAILROAD WITH VIA RAIL ENGINEERING (INCIDENTAL).

LEGEND	
	EXISTING 5' CONTOUR
	EXISTING 1' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED 5' CONTOUR
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	PROPOSED PAVEMENT
	PROPOSED RAIL
	PROPOSED DRAINAGE SWALE

PROP. DRAINAGE SWALE @ 0.5%
CONTRACTOR TO INSTALL SWALE
WITH 2H:1V SIDE SLOPES WITH
MEDIUM RANDOM RIPRAP

INSTALL & MAINTAIN SILT FENCE
ALONG EXISTING DRAINAGE
DITCH (SEE DETAIL)

CONTRACTOR TO FIELD VERIFY ELEVATION OF
EXISTING DITCH AT PROP. MATCH. CONTRACTOR TO
COORDINATE WITH OWNER IF ADDITIONAL
DISTURBANCE IS NECESSARY TO GRADE PROP. SWALE

INV. = 917.0

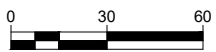
PROP. DRAINAGE SWALE @ 0.5%
CONTRACTOR TO INSTALL SWALE
WITH 2H:1V SIDE SLOPES WITH
MEDIUM RANDOM RIPRAP

SEE PLAN VIEW BELOW

APPROX. R/W LINE

EX. RAILROAD

APPROX. PROP. LINE



SEE PLAN VIEW ABOVE

CONTRACTOR SHALL COORDINATE MATCH
SLOPE RESTORATION WORK WITH THE
OWNER AS WELL AS CONSIDERATION OF
PROPOSED RETAINING WALL(S) TO MATCH
SITE WORK IN AT RIGHT-OF-WAY LINE. FIELD
VERIFY LOCATIONS AND ELEVATIONS.

COORDINATE WORK WITH OWNER AND
VIA RAIL ENGINEERING.
SEE STORM SEWER PLAN FOR DETAILS.

STORM WATER UPPER POND

STORM WATER
LOWER BASIN

APPROX. R/W LINE

EX. RAILROAD

APPROX. PROP. LINE

APPROX. R/W LINE

APPROX. R/W LINE

APPROX. R/W LINE

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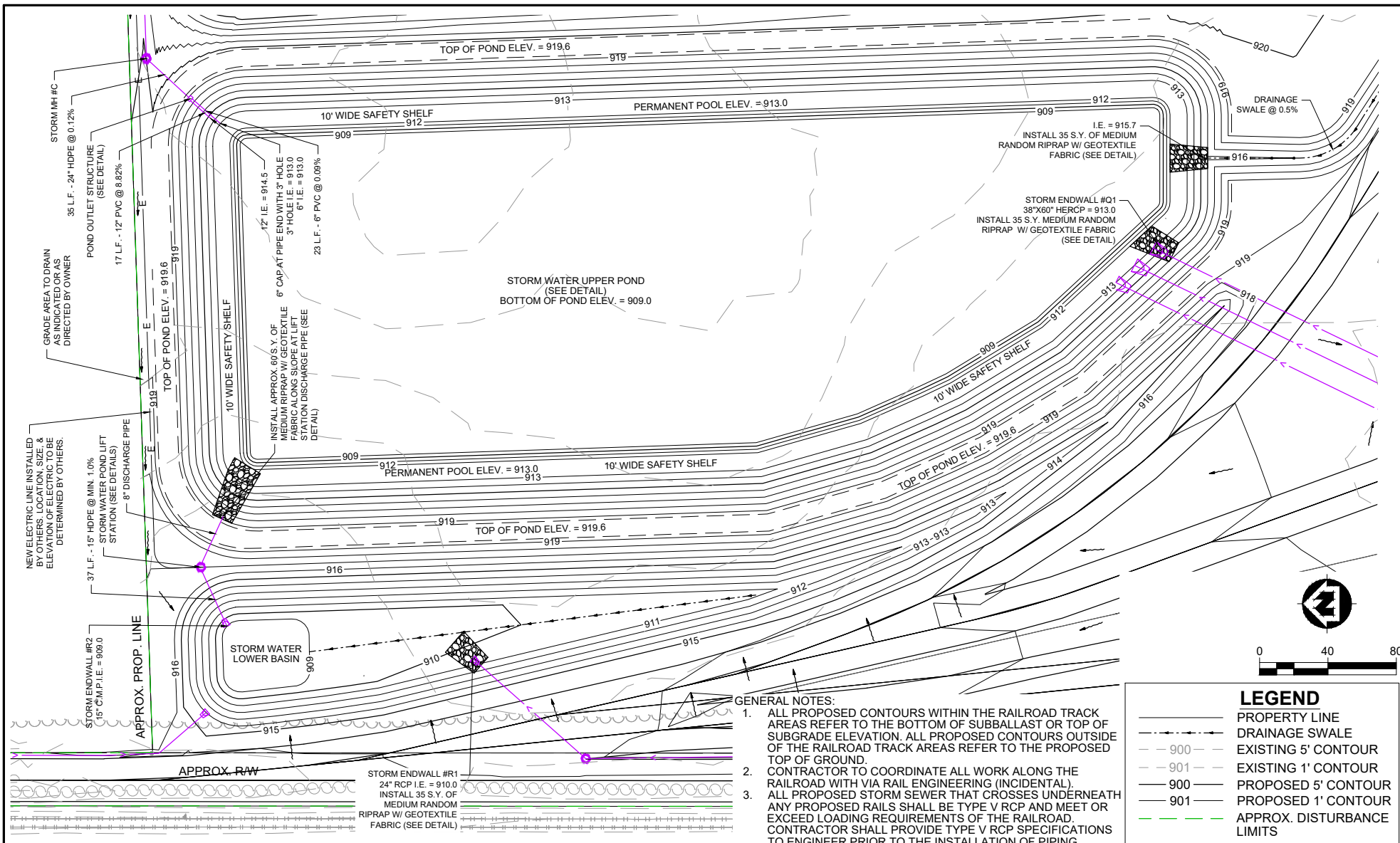


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GRADING PLAN

PROJECT NO.
02678018
SHEET
ST3

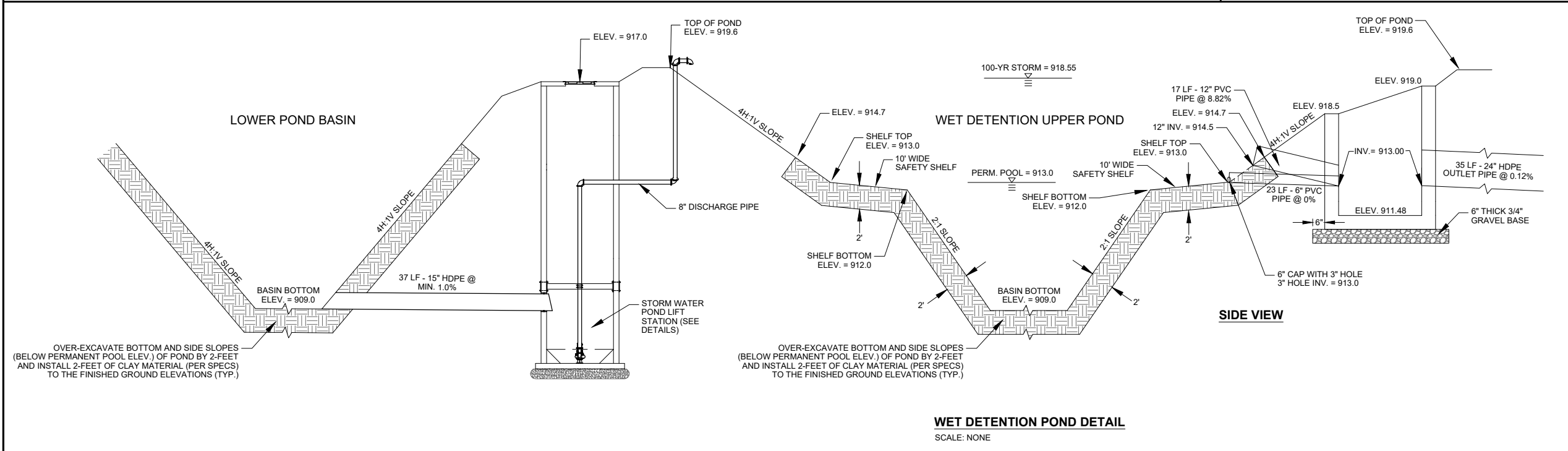
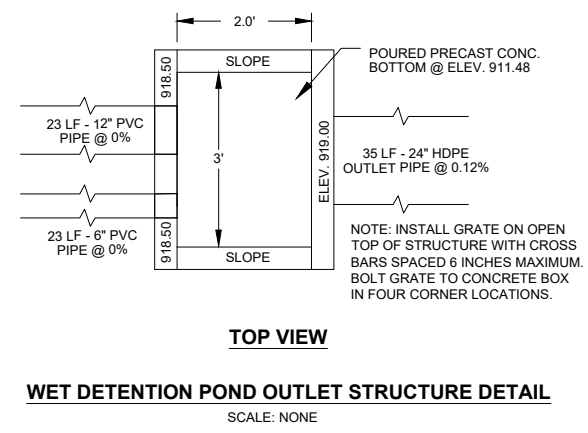
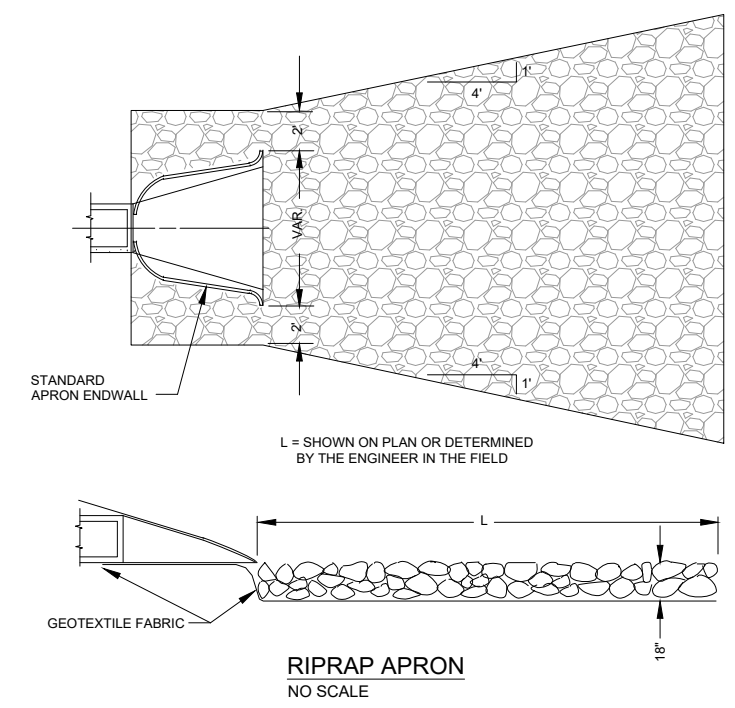


GENERAL NOTES:

- ALL PROPOSED CONTOURS WITHIN THE RAILROAD TRACK AREAS REFER TO THE BOTTOM OF SUBBALLAST OR TOP OF SUBGRADE ELEVATION. ALL PROPOSED CONTOURS OUTSIDE OF THE RAILROAD TRACK AREAS REFER TO THE PROPOSED TOP OF GROUND.
- CONTRACTOR TO COORDINATE ALL WORK ALONG THE RAILROAD WITH VIA RAIL ENGINEERING (INCIDENTAL).
- ALL PROPOSED STORM SEWER THAT CROSSES UNDERNEATH ANY PROPOSED RAILS SHALL BE TYPE V RCP AND MEET OR EXCEED LOADING REQUIREMENTS OF THE RAILROAD. CONTRACTOR SHALL PROVIDE TYPE V RCP SPECIFICATIONS TO ENGINEER PRIOR TO THE INSTALLATION OF PIPING.

LEGEND

- PROPERTY LINE
- - - DRAINAGE SWALE
- - - 900 - EXISTING 5' CONTOUR
- - - 901 - EXISTING 1' CONTOUR
- 900 - PROPOSED 5' CONTOUR
- 901 - PROPOSED 1' CONTOUR
- - - APPROX. DISTURBANCE LIMITS



- POND CONSTRUCTION GUIDELINES**
- THE WET DETENTION POND AREA SHALL BE BUILT AT THE BEGINNING OF THE PROJECT IN ORDER TO FUNCTION AS A SEDIMENTATION BASIN DURING CONSTRUCTION.
 - EXCAVATE THE WET DETENTION POND AREA ONLY DURING DRY WEATHER.
 - DEEP TILL AND RESTORE ALL UNPAVED DISTURBED AREAS (EXCEPT BELOW THE PERMANENT POOL ELEVATION WITHIN THE WET DETENTION POND AREA) AFTER GRADING IS COMPLETE.
 - REMOVE ACCUMULATED SEDIMENT FROM THE WET DETENTION POND AREA, DRAINAGE SWALES, AND STORM SEWER STRUCTURES AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED.

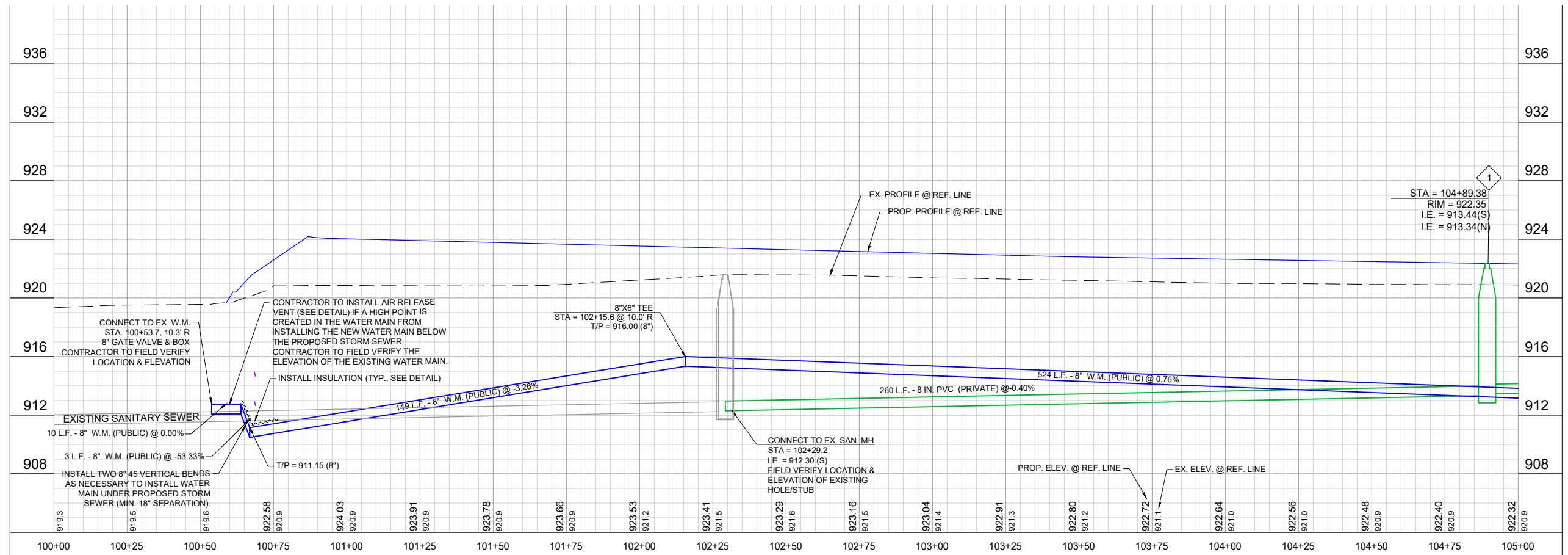
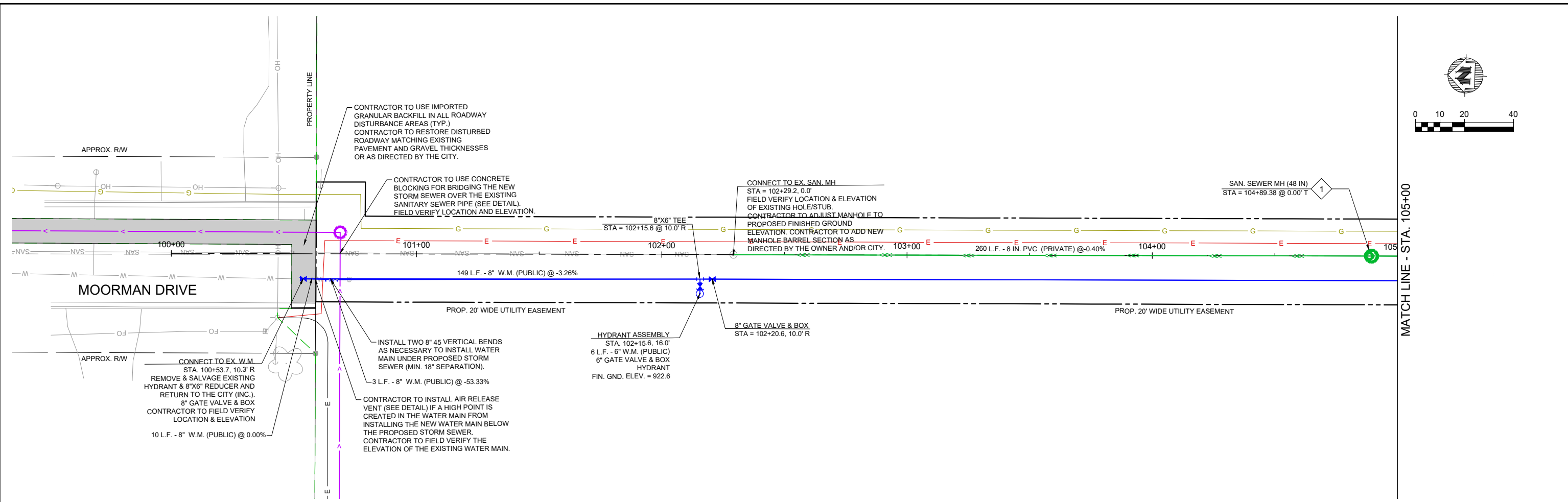
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POND GRADING DETAIL

PROJECT NO.
02678018
SHEET
ST4



NO.	DATE	REVISION	BY

PROJECT DATE: 8/2022

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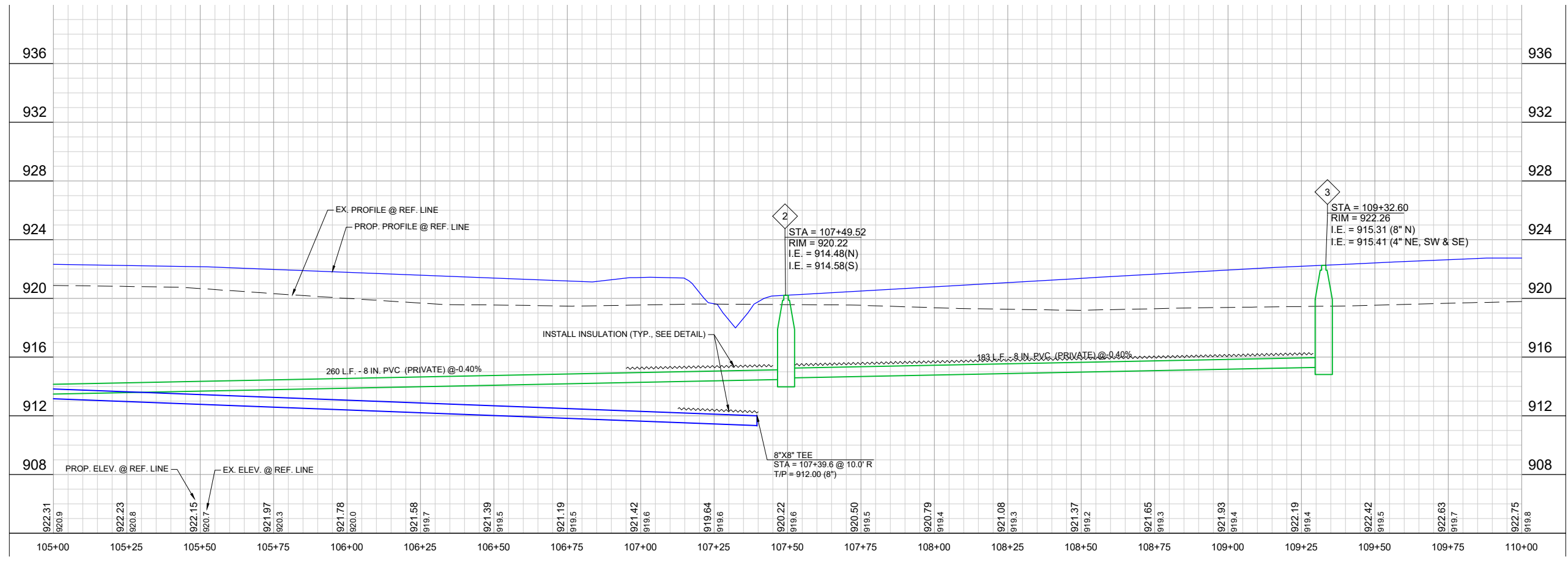
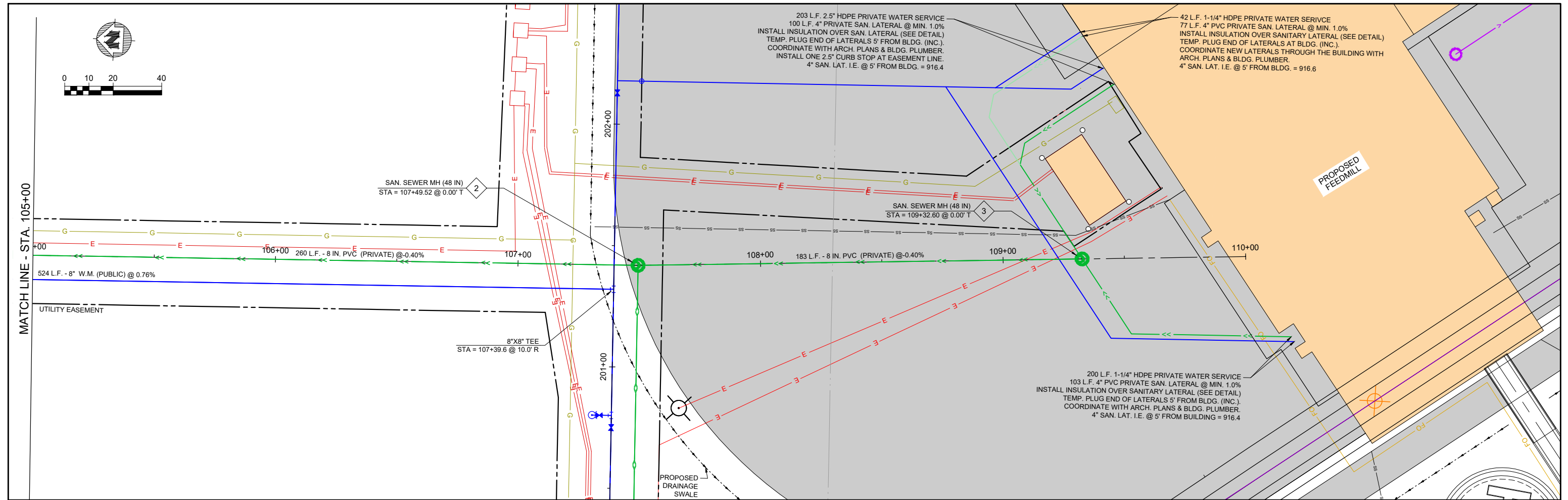
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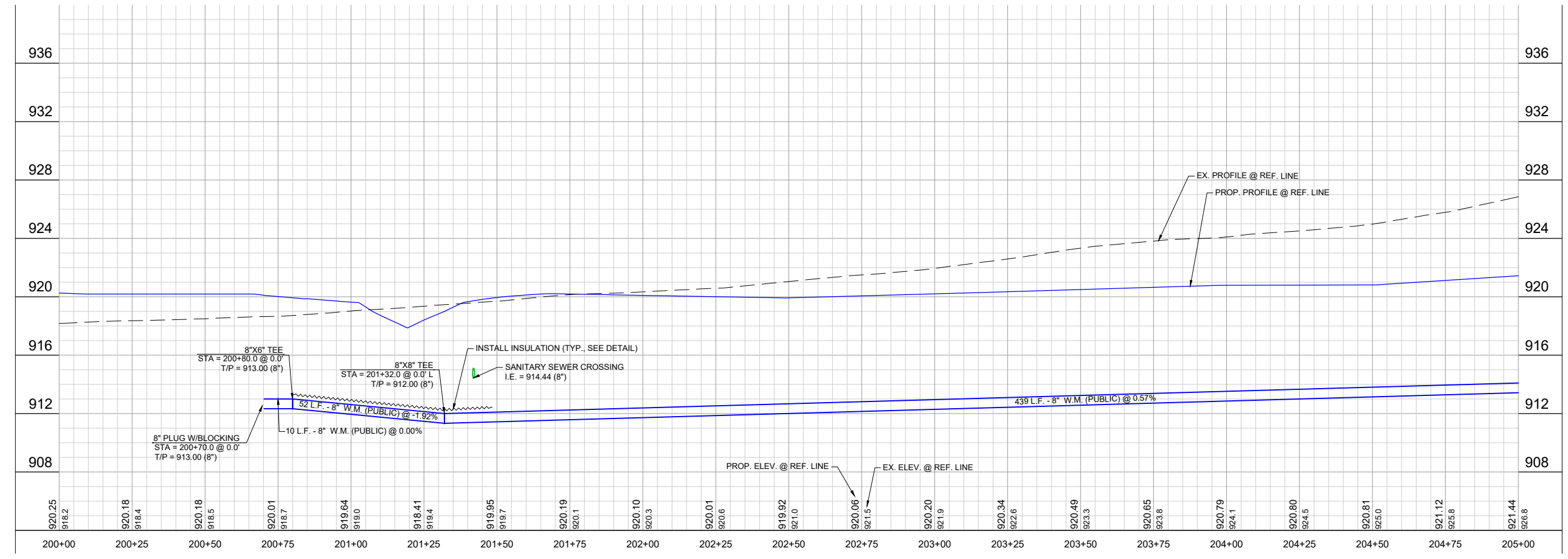
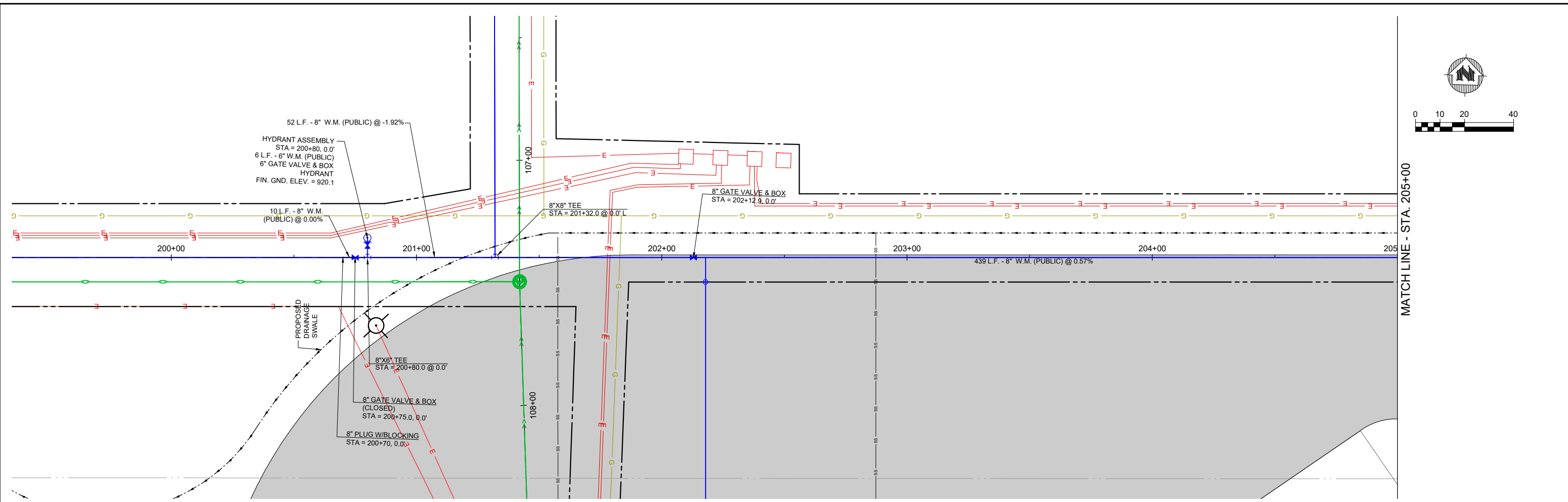
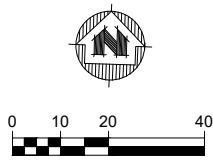
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PROJECT NO.
02678018

SHEET
PP1





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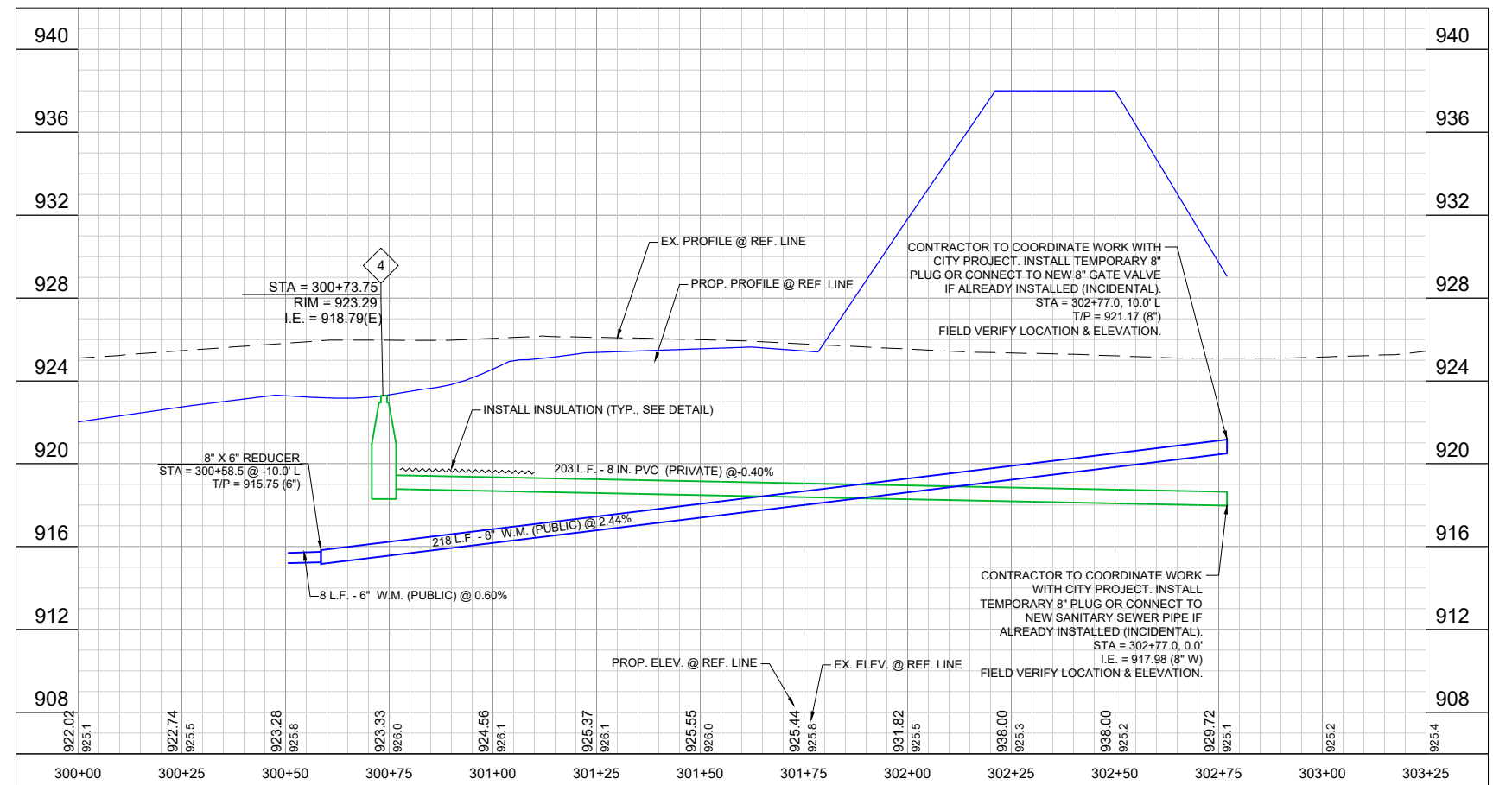
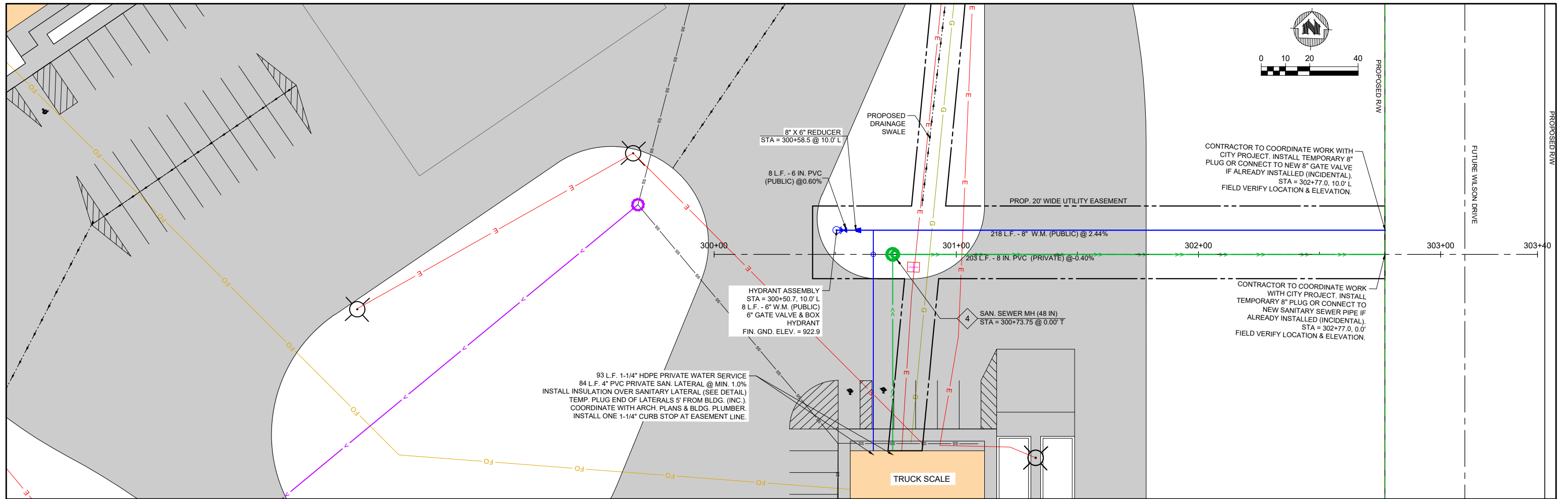
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02678018
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PP3

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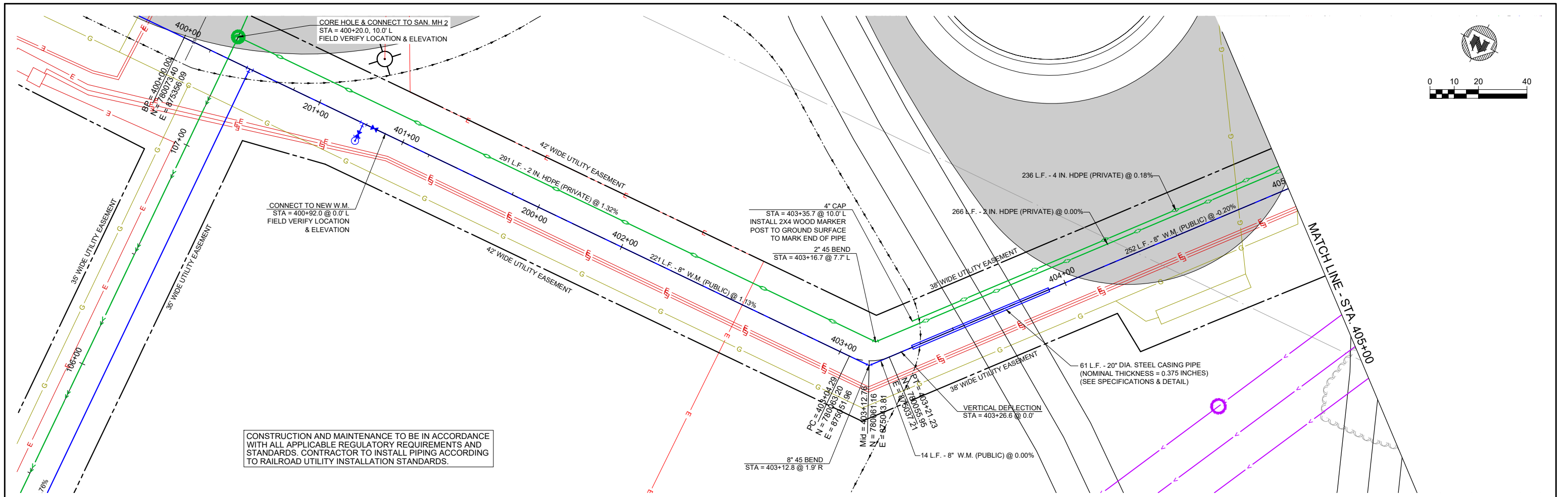
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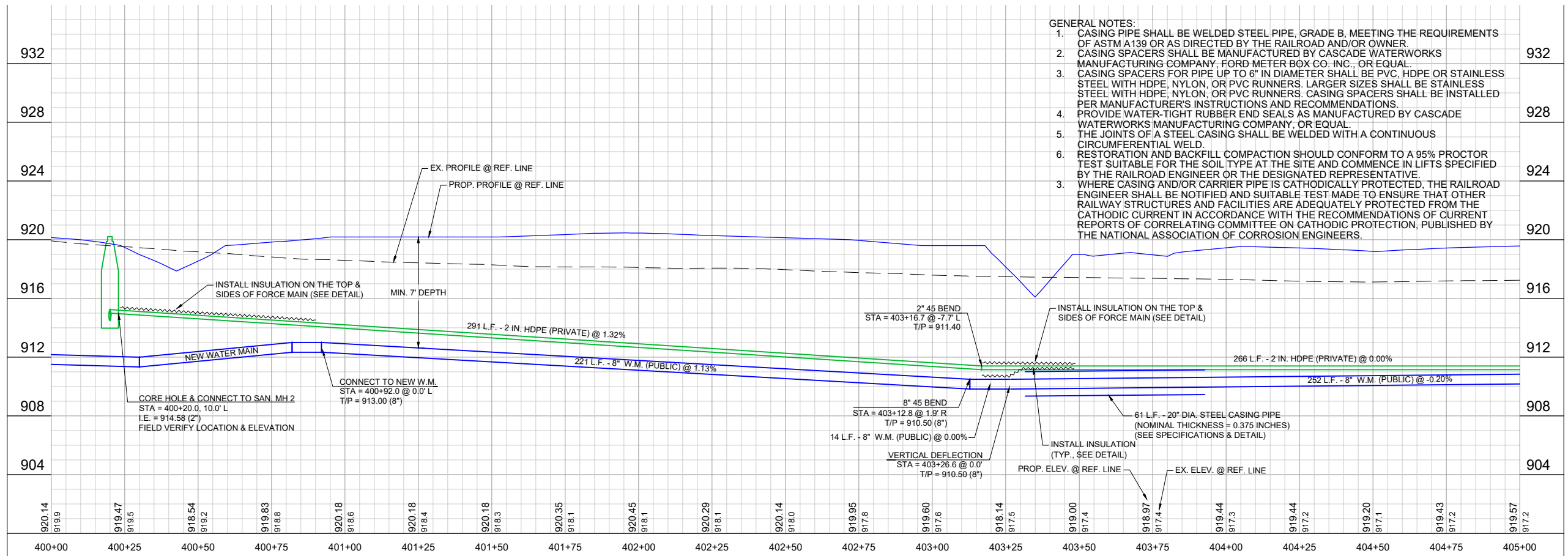
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SANITARY SEWER & WATER MAIN PLAN & PROFILE SHEET

PROJECT NO.
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PP5



CONSTRUCTION AND MAINTENANCE TO BE IN ACCORDANCE WITH ALL APPLICABLE REGULATORY REQUIREMENTS AND STANDARDS. CONTRACTOR TO INSTALL PIPING ACCORDING TO RAILROAD UTILITY INSTALLATION STANDARDS.



- GENERAL NOTES:
1. CASING PIPE SHALL BE WELDED STEEL PIPE, GRADE B, MEETING THE REQUIREMENTS OF ASTM A139 OR AS DIRECTED BY THE RAILROAD AND/OR OWNER.
 2. CASING SPACERS SHALL BE MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, FORD METER BOX CO. INC., OR EQUAL.
 3. CASING SPACERS FOR PIPE UP TO 6" IN DIAMETER SHALL BE PVC, HDPE OR STAINLESS STEEL WITH HDPE, NYLON, OR PVC RUNNERS. LARGER SIZES SHALL BE STAINLESS STEEL WITH HDPE, NYLON, OR PVC RUNNERS. CASING SPACERS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 4. PROVIDE WATER-TIGHT RUBBER END SEALS AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, OR EQUAL.
 5. THE JOINTS OF A STEEL CASING SHALL BE WELDED WITH A CONTINUOUS CIRCUMFERENTIAL WELD.
 6. RESTORATION AND BACKFILL COMPACTION SHOULD CONFORM TO A 95% PROCTOR TEST SUITABLE FOR THE SOIL TYPE AT THE SITE AND COMMENCE IN LIFTS SPECIFIED BY THE RAILROAD ENGINEER OR THE DESIGNATED REPRESENTATIVE.
 3. WHERE CASING AND/OR CARRIER PIPE IS CATHODICALLY PROTECTED, THE RAILROAD ENGINEER SHALL BE NOTIFIED AND SUITABLE TEST MADE TO ENSURE THAT OTHER RAILWAY STRUCTURES AND FACILITIES ARE ADEQUATELY PROTECTED FROM THE CATHODIC CURRENT IN ACCORDANCE WITH THE RECOMMENDATIONS OF CURRENT REPORTS OF CORRELATING COMMITTEE ON CATHODIC PROTECTION, PUBLISHED BY THE NATIONAL ASSOCIATION OF CORROSION ENGINEERS.

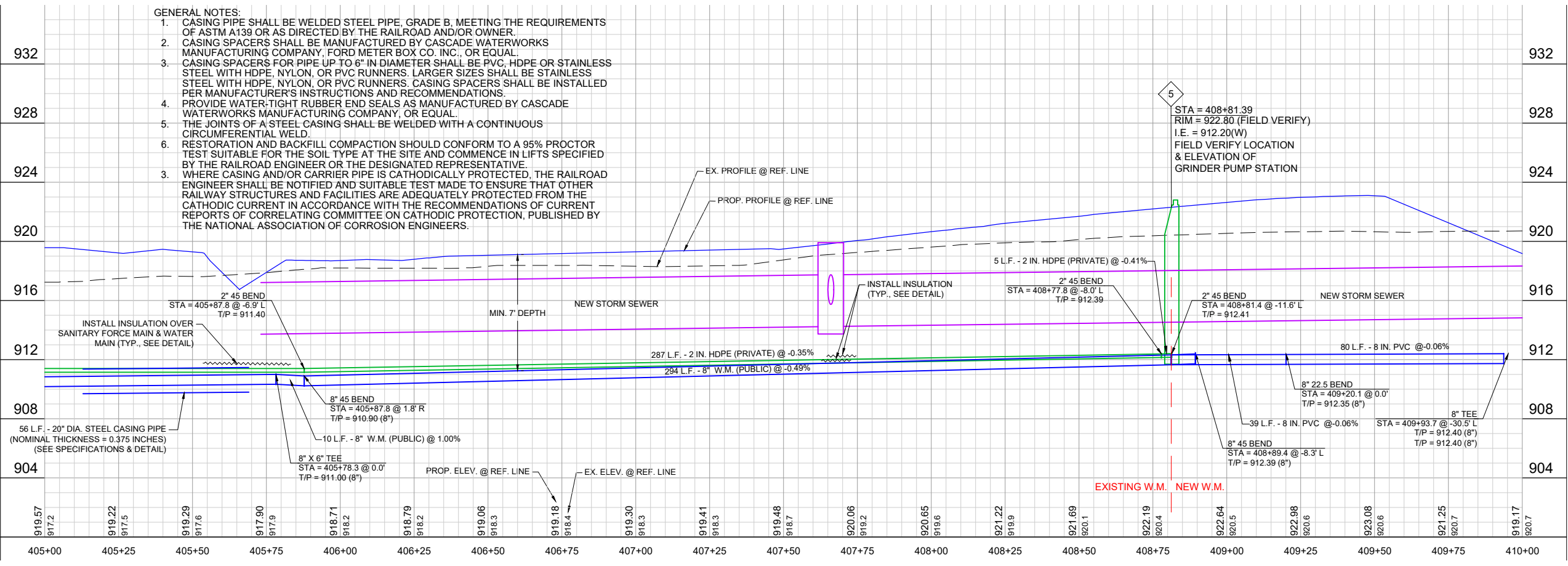
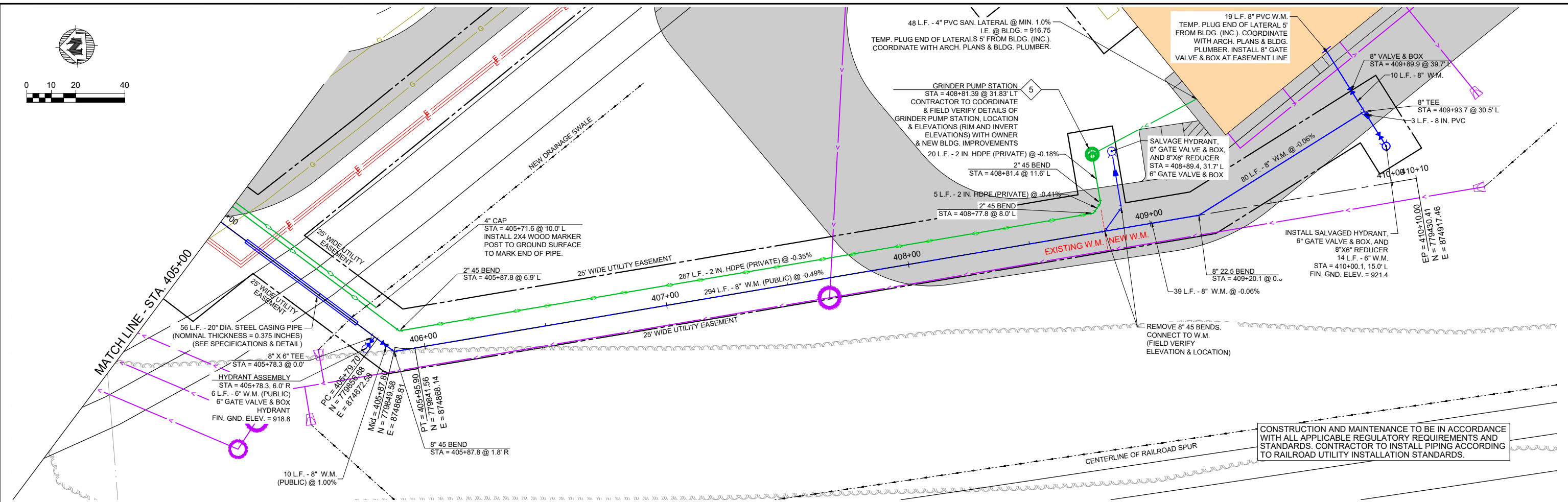
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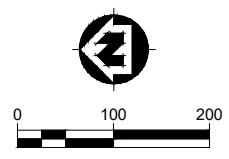
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SANITARY SEWER & WATER MAIN PLAN & PROFILE SHEET

PROJECT NO.
02678018
 SHEET
PP6





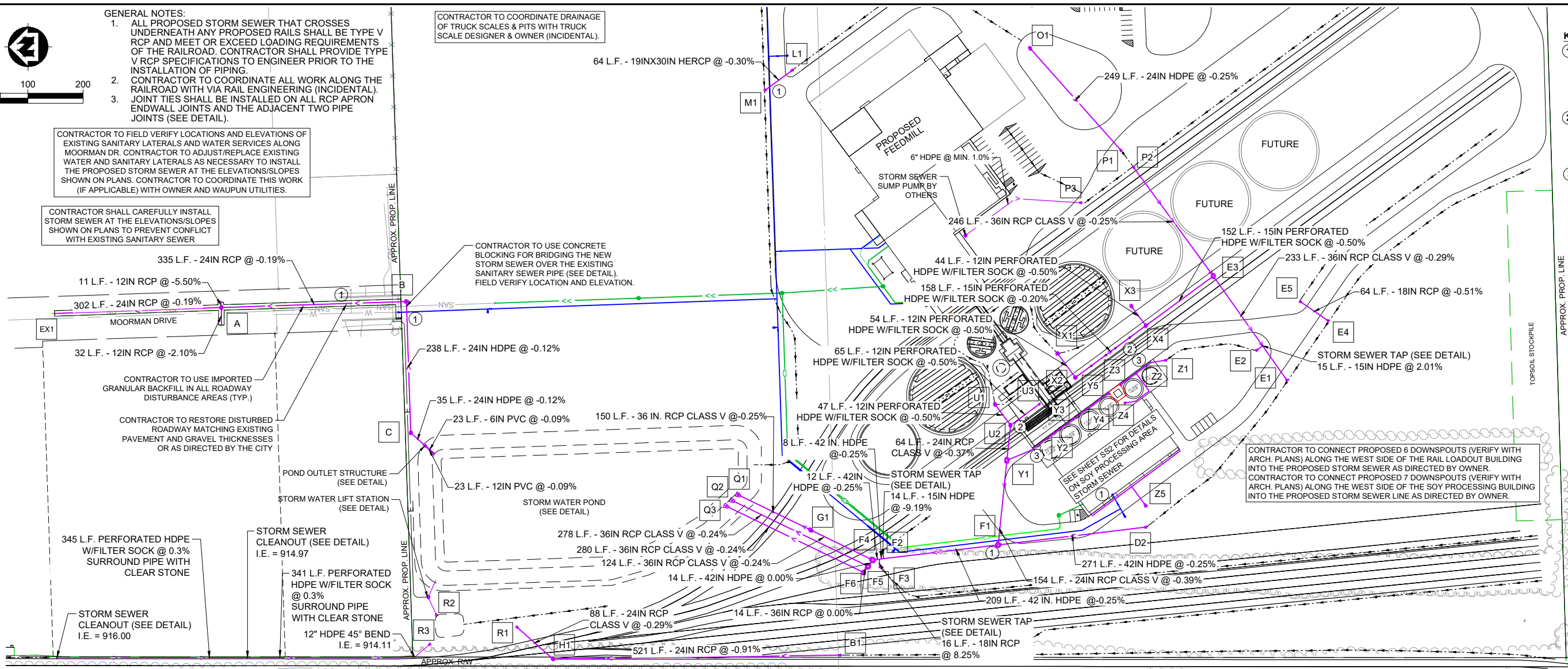
- GENERAL NOTES:**
- ALL PROPOSED STORM SEWER THAT CROSSES UNDERNEATH ANY PROPOSED RAILS SHALL BE TYPE V RCP AND MEET OR EXCEED LOADING REQUIREMENTS OF THE RAILROAD. CONTRACTOR SHALL PROVIDE TYPE V RCP SPECIFICATIONS TO ENGINEER PRIOR TO THE INSTALLATION OF PIPING.
 - CONTRACTOR TO COORDINATE ALL WORK ALONG THE RAILROAD WITH VIA RAIL ENGINEERING (INCIDENTAL).
 - JOINT TIES SHALL BE INSTALLED ON ALL RCP APRON ENDWALL JOINTS AND THE ADJACENT TWO PIPE JOINTS (SEE DETAIL).

CONTRACTOR TO FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING SANITARY LATERALS AND WATER SERVICES ALONG MOORMAN DR. CONTRACTOR TO ADJUST/REPLACE EXISTING WATER AND SANITARY LATERALS AS NECESSARY TO INSTALL THE PROPOSED STORM SEWER AT THE ELEVATIONS/SLOPES SHOWN ON PLANS. CONTRACTOR TO COORDINATE THIS WORK (IF APPLICABLE) WITH OWNER AND WAUPUN UTILITIES.

CONTRACTOR SHALL CAREFULLY INSTALL STORM SEWER AT THE ELEVATIONS/SLOPES SHOWN ON PLANS TO PREVENT CONFLICT WITH EXISTING SANITARY SEWER

CONTRACTOR TO COORDINATE DRAINAGE OF TRUCK SCALES & PITS WITH TRUCK SCALE DESIGNER & OWNER (INCIDENTAL).

- KEY NOTES:**
- INSTALL 4'x8' SHEET OF 2" THICK INSULATION UNDER STORM SEWER PIPE AT WATER MAIN OR WATER SERVICE CROSSINGS (INCIDENTAL)
 - INSTALL GRAVEL BETWEEN THE RAIL SUBGRADE AND THE PROPOSED PERFORATED STORM SEWER PIPING
 - INSTALL 4' GRAVEL TRENCH ALONG PROPOSED PERFORATED STORM SEWER ON NORTHEAST SIDE OF PROPOSED SILOS AS DIRECTED BY OWNER.



STORM STRUCTURE INFORMATION

I.D.	TYPE	GRATE TYPE	RIM ELEV.	INV. ELEV.	DIR	SIZE
EX1	CORE HOLE & CONNECT INTO EX. MH			911.47	S	24"
A	CONC. MH (60" I.D.)	NEENAH R-1050	917.49	913.03	E & W	12"
B	CONC. MH (60" I.D.)	NEENAH R-1050	922.98	912.03	N & S	24"
B1	R.C.P. ENDWALL (24" I.D.)	24" PIPE GRATE		912.65	N & W	24"
C	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	920.77	915.00	N	24"
D2	C.M.P. ENDWALL (42" I.D.)	42" PIPE GRATE		912.94	E & SW	24"
E1	R.C.P. ENDWALL (36" I.D.) & RIP-RAP APRON	36" PIPE GRATE		914.92	N	42"
E2	C.M.P. ENDWALL (15" I.D.)			915.77	NE	36"
E3	CONC. MH (60" I.D.)	NEENAH R-2560-D7 BEEHIVE GRATE	921.00	917.20	SE	15"
E4	R.C.P. ENDWALL (18" I.D.)	18" PIPE GRATE		916.44	NW	15"
E5	R.C.P. ENDWALL (18" I.D.)	18" PIPE GRATE		916.80	NE & SW	36"
F1	CONC. MH (84" I.D.)	NEENAH R-2560-D7 BEEHIVE GRATE	919.30	916.80	NE	18"
F2	R.C.P. ENDWALL (15" I.D.)			917.13	SW	18"
F3	R.C.P. ENDWALL (18" I.D.)			917.13	SW	18"
F4	CONC. MH (84" I.D.)	NEENAH R-2560-D7 BEEHIVE GRATE	918.80	914.24	N & S	42"
F5	CONC. MH (84" I.D.)	NEENAH R-2560-D7 BEEHIVE GRATE	918.80	914.24	E	24"
F6	CONC. MH (72" I.D.)	NEENAH R-2560-D7 BEEHIVE GRATE	918.80	913.67	NE	36"
G1	CONC. MH (60" I.D.)	NEENAH R-2560-D7 BEEHIVE GRATE	918.50	913.67	S & NW	42"
H1	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	915.90	913.67	NE & NW	36"
L1	H.E.R.C.P. ENDWALL (19"x30" I.D.) & RIP-RAP APRON	19"x30" PIPE GRATE		913.67	SE	42"
M1	H.E.R.C.P. ENDWALL (19"x30" I.D.)	19"x30" PIPE GRATE		919.29	NW	19"x30"
O1	A.D.S. NYLOPLAST CATCH BASIN (30" I.D.)	BEEHIVE GRATE (DOME)	920.10	919.10	SE	19"x30"
P1	C.M.P. ENDWALL (24" I.D.) & RIP-RAP APRON	24" PIPE GRATE		917.71	SW	24"
P2	R.C.P. ENDWALL (36" I.D.)	36" PIPE GRATE		917.09	NE	24"
P3	H.D.P.E. PIPE DISCHARGE (6" I.D.)					
Q1	R.C.P. ENDWALL (36" I.D.) & RIP-RAP APRON	36" PIPE GRATE				
Q2	R.C.P. ENDWALL (36" I.D.) & RIP-RAP APRON	36" PIPE GRATE				
Q3	R.C.P. ENDWALL (36" I.D.) & RIP-RAP APRON	36" PIPE GRATE				
R1	R.C.P. ENDWALL (24" I.D.) & RIP-RAP APRON	24" PIPE GRATE				
R2	C.M.P. ENDWALL (15" I.D.)					
R3	C.M.P. ENDWALL (12" I.D.) & RIP-RAP APRON					
U1	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	920.63	917.80	SW	12"
U2	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	920.55	916.57	NE & SE	12"
U3	STORM SEWER CLEAN OUT	NEENAH LAMPHOLE (TRAFFIC RATED)	922.15	916.57	NW	24"
X1	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	920.70	917.89	NW	12"
X2	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	921.75	917.76	NE	12"
X3	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	921.25	917.51	SE	15"
X4	CONC. MH (48" I.D.)	NEENAH R-2560-E BEEHIVE GRATE	921.75	917.66	SW	12"
Y1	CONC. MH (84" I.D.)	NEENAH R-1550, TYPE B COVER	921.90	917.44	NE	12"
Y2	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	922.25	917.19	NW & SE	15"
Y3	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	922.25	916.80	SE	12"
Y4	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	921.64	916.33	W & E	24"
Y5	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	921.82	918.25	NW & SE	12"
Z1	C.M.P. ENDWALL (12" I.D.)			918.86	NW	12"
Z2	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	921.59	918.50	N	12"
Z3	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	921.59	918.81	NW & SE	12"
Z4	A.D.S. NYLOPLAST CATCH BASIN (18" I.D.)	OPEN GRATE	922.75	918.98	SE	12"
Z5	C.M.P. ENDWALL (12" I.D.)			919.27	S	12"

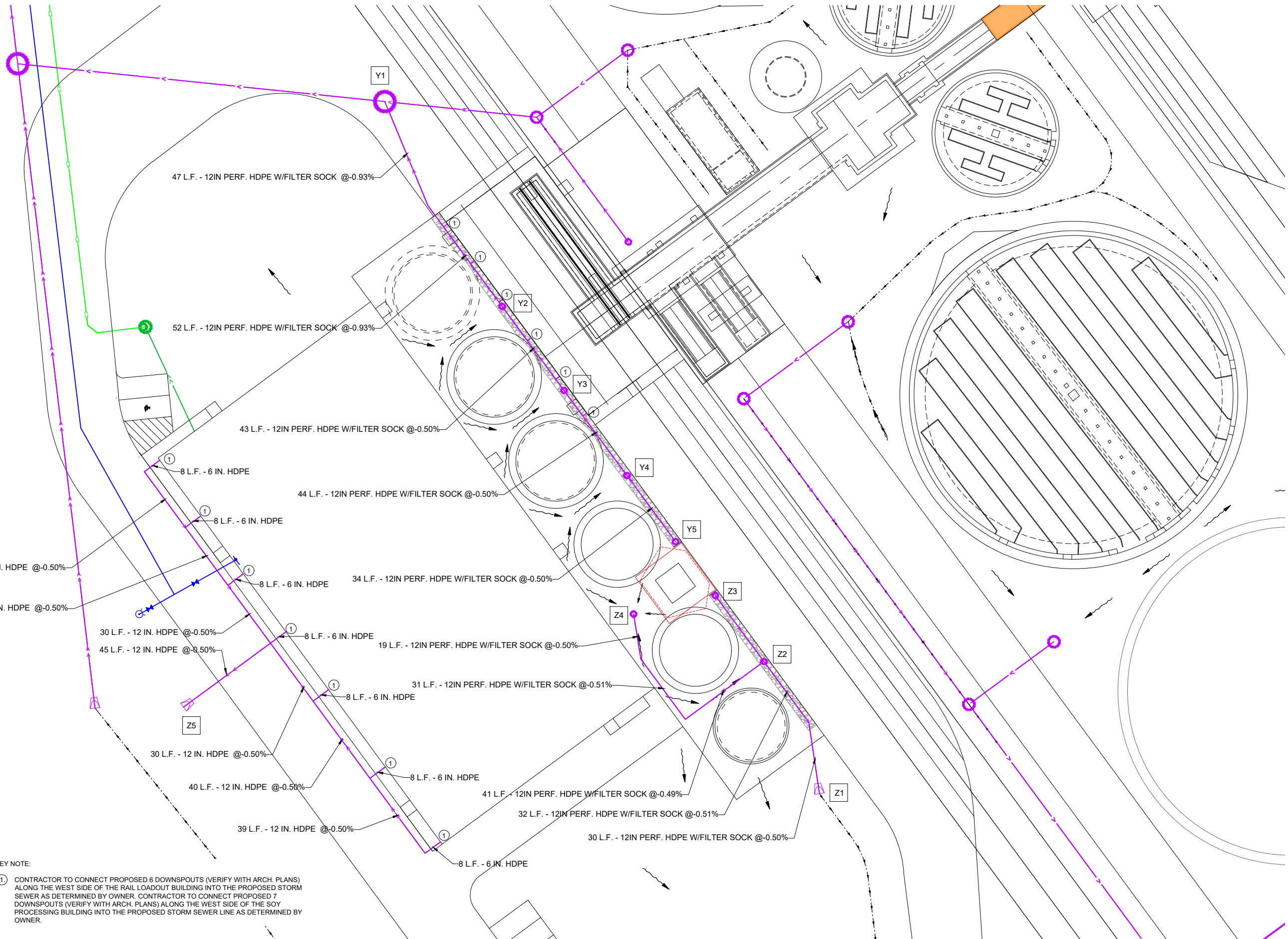
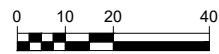
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STORM SEWER PLAN
 PROJECT NO. 02678018
 SHEET SS1

PLOT DATE: 7/25/2024 10:41 PM, G:\02\026780\02678018\CADD\Construction Documents\02678018 Storm Sewer Plan.dwg



KEY NOTE:

- ① CONTRACTOR TO CONNECT PROPOSED 6 DOWNSPOUTS (VERIFY WITH ARCH. PLANS) ALONG THE WEST SIDE OF THE RAIL LOADOUT BUILDING INTO THE PROPOSED STORM SEWER AS DETERMINED BY OWNER. CONTRACTOR TO CONNECT PROPOSED 7 DOWNSPOUTS (VERIFY WITH ARCH. PLANS) ALONG THE WEST SIDE OF THE SOY PROCESSING BUILDING INTO THE PROPOSED STORM SEWER LINE AS DETERMINED BY OWNER.

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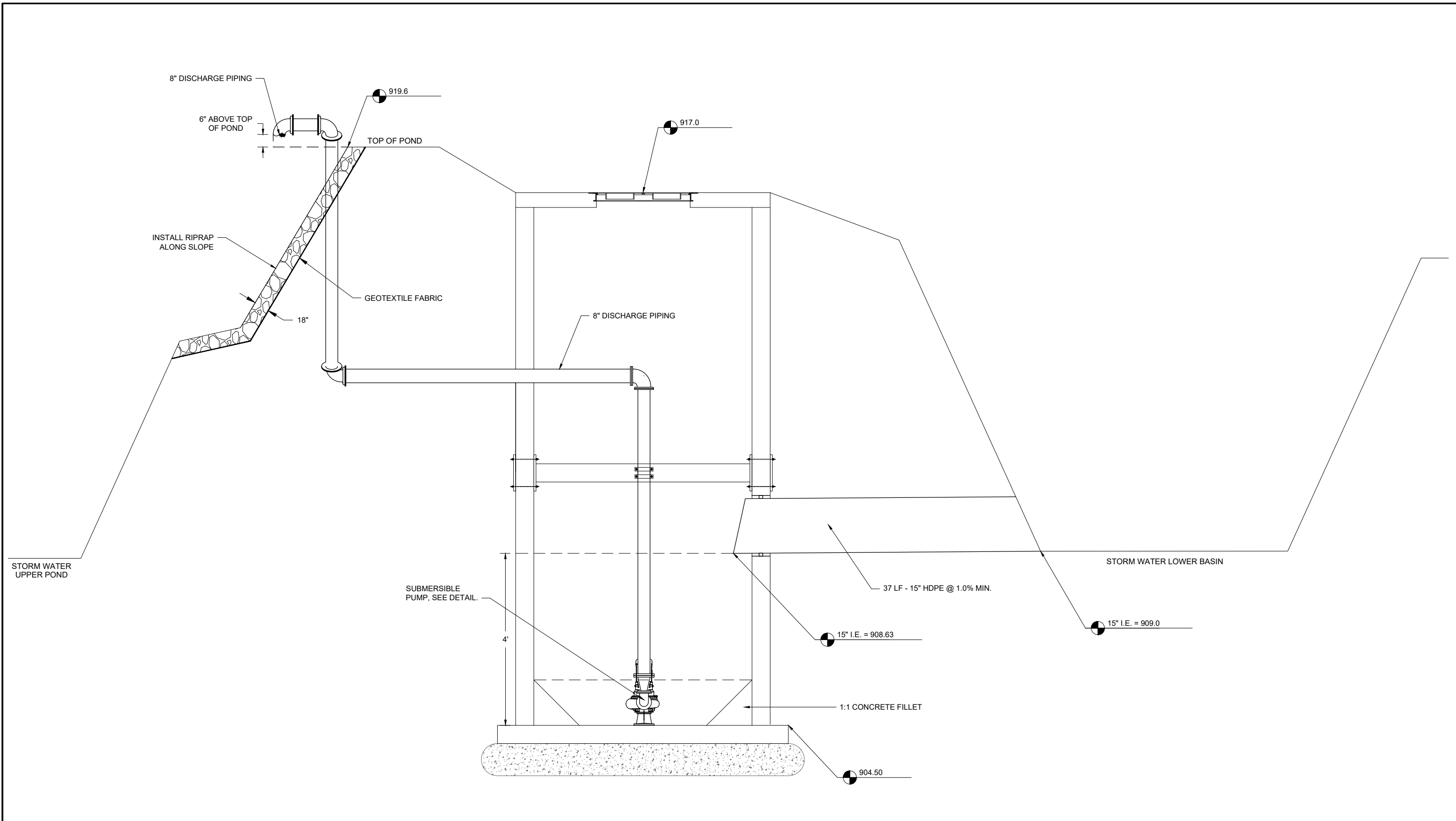


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STORM SEWER PLAN

PROJECT NO.
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SS2



A STORM WATER POND LIFT STATION SECTION
 PM1 NOT TO SCALE

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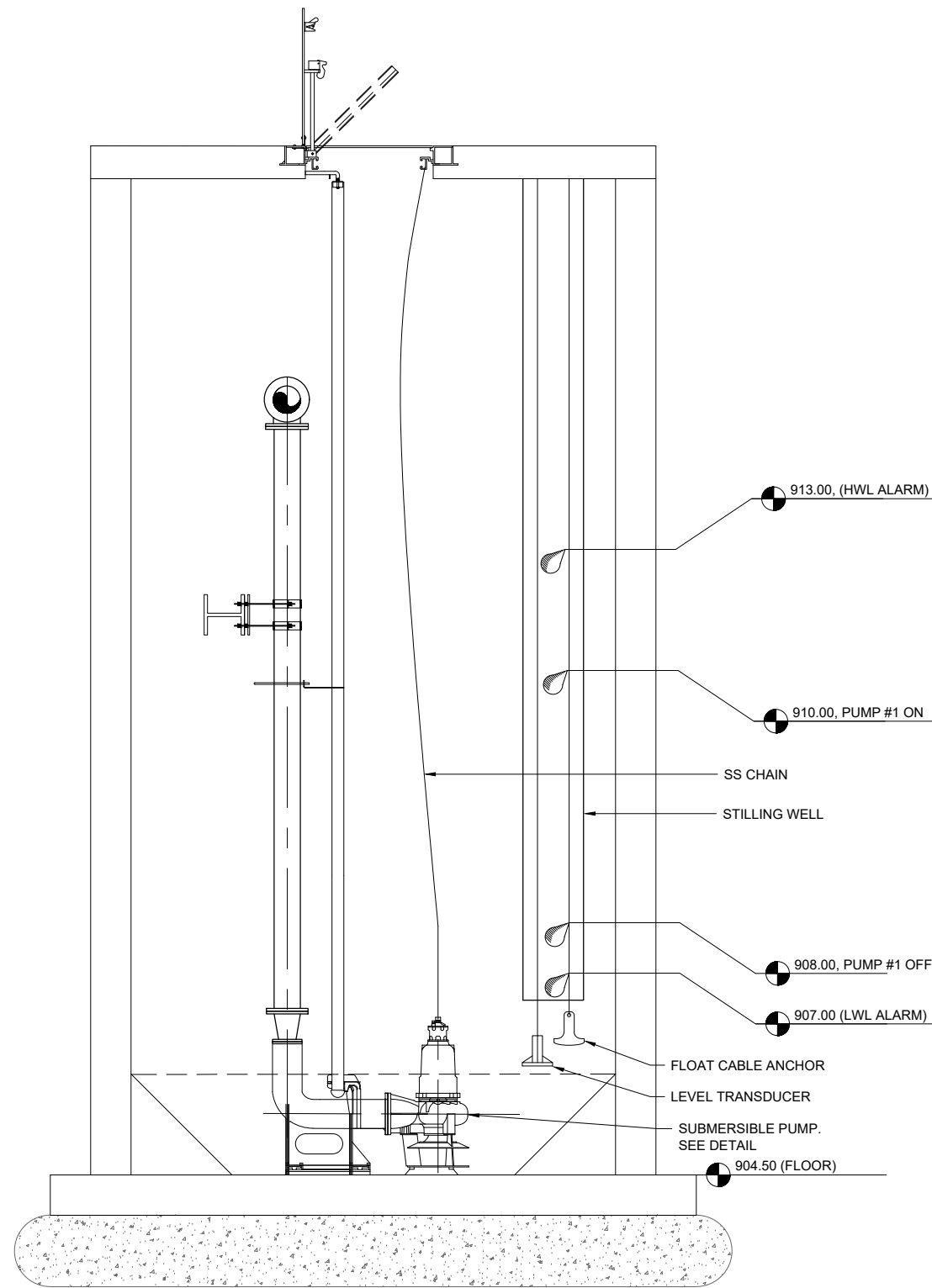
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STORM WATER POND LIFT STATION SECTIONS

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PM1

PLOT DATE: 12/28/2022 2:27 PM, G:\02\02678\02678018\CADD\Construction Documents\02678018 Storm Water Pump Station Details.dwg



B STORM WATER POND LIFT STATION WET WELL SECTION, 9" PUMP
 PM2 NOT TO SCALE

PROJECT DATE: 8/2022	DRAWN BY:	NO.	DATE	REVISION	BY:
	DESIGNED BY:	-	-	-	-
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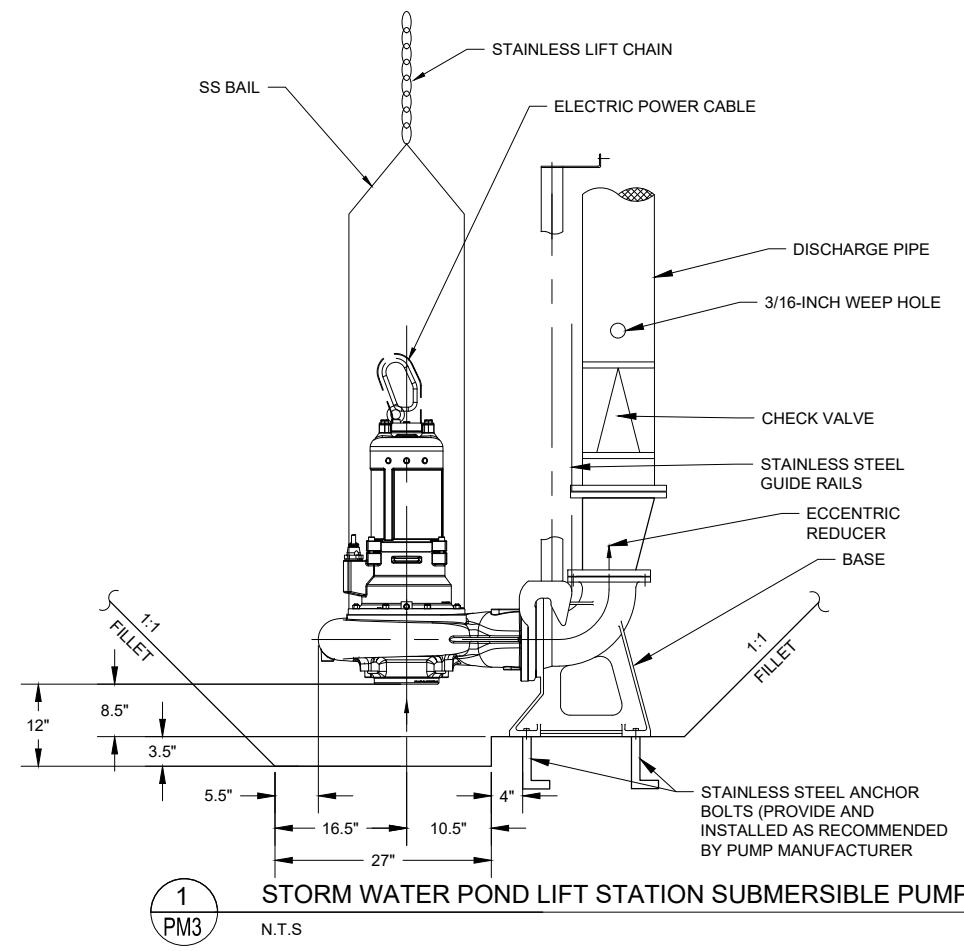
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 CITY OF WAUPUN, DODGE COUNTY, WISCONSIN

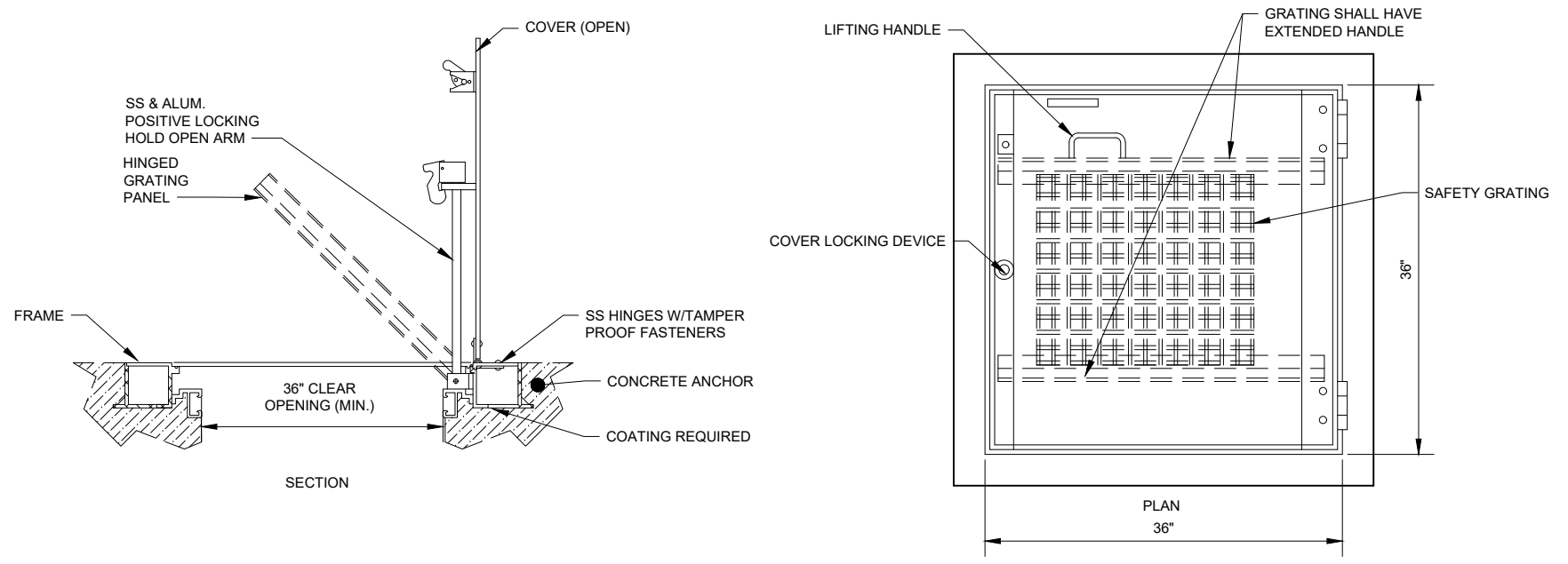
STORM WATER POND LIFT STATION SECTIONS

PROJECT NO.
02678018
 SHEET
PM2

PLOT DATE: 12/28/2022 2:27 PM, G:\02\02678\02678018\CADD\Construction Documents\02678018 Storm Water Pump Station Details.dwg



1 STORM WATER POND LIFT STATION SUBMERSIBLE PUMP
 PM3 N.T.S



2 STORM WATER POND LIFT STATION MANHOLE HATCH DETAIL
 PM-3 N.T.S

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STORM WATER POND LIFT STATION DETAILS

PROJECT NO.
 02678018
 SHEET
 PM3



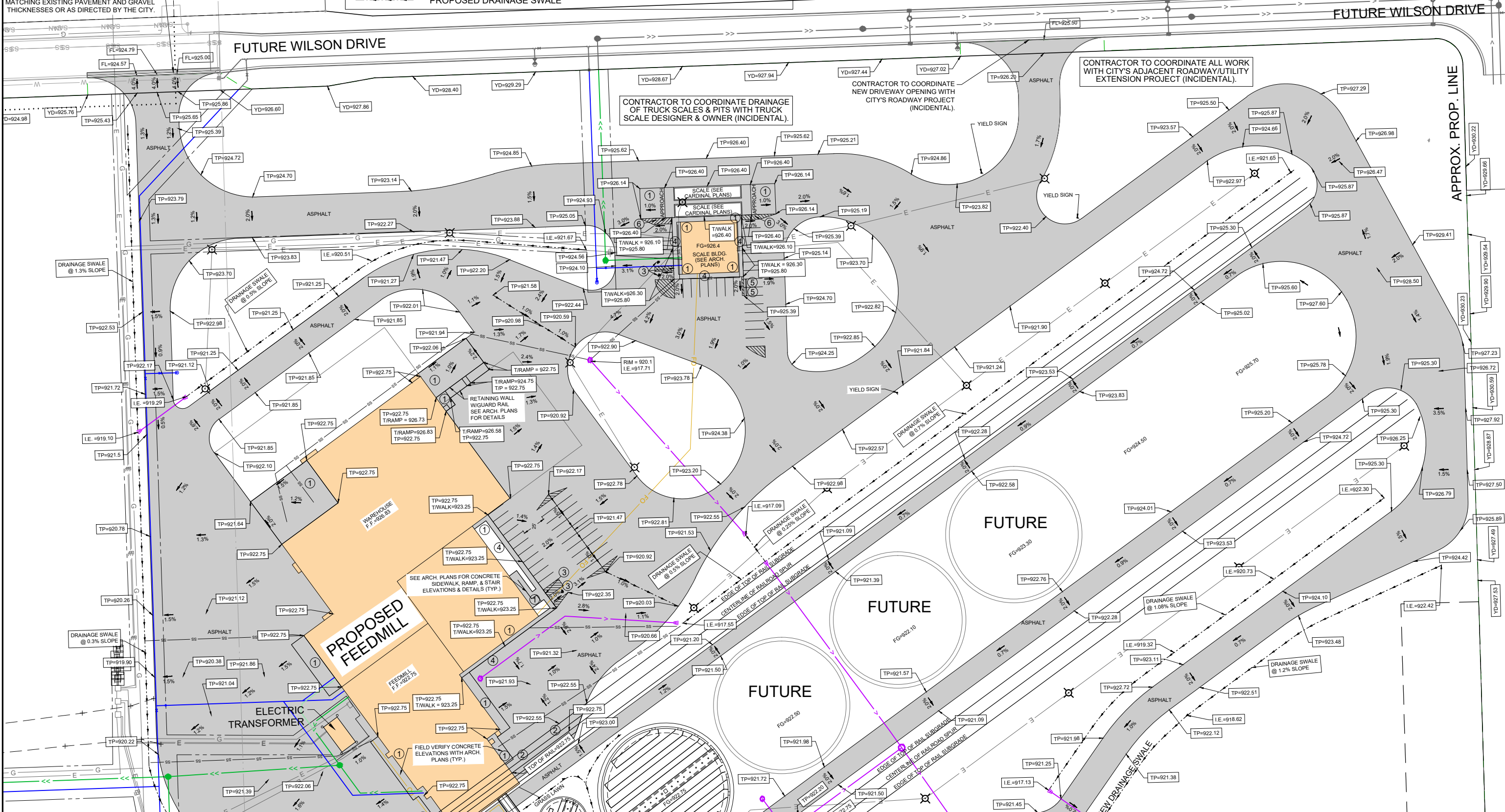
0 50 100

- GENERAL NOTES:**
- CONTRACTOR TO COORDINATE ALL WORK ALONG THE RAILROAD WITH VIA RAIL ENGINEERING (INCIDENTAL).
 - CONTRACTOR TO RESTORE ALL DISTURBED NON-PAVED AREAS WITH TOPSOIL, FERTILIZER, SEED, AND MULCH AS DIRECTED BY THE OWNER.

LEGEND

	EXISTING 5' CONTOUR		BACK OF CURB ELEVATION
	EXISTING 1' CONTOUR		YARD ELEVATION
	PROPERTY LINE		CENTERLINE PAVEMENT ELEVATION
	RIGHT-OF-WAY LINE		INVERT ELEVATION
	PROPOSED PAVEMENT		TOP OF PAVEMENT ELEVATION
	PROPOSED RAIL		DRAINAGE SLOPE & DIRECTION
	PROPOSED DRAINAGE SWALE		

- KEY NOTES:**
- SEE ARCHITECTURAL PLANS FOR DETAILS ON PROPOSED CONCRETE AREAS AND IMPROVEMENTS IMMEDIATELY ADJACENT TO BUILDING. CONTRACTOR TO COORDINATE BETWEEN ARCHITECTURAL AND CIVIL PLANS.
 - PROPOSED CONCRETE PAVEMENT ALONG RAILROAD. COORDINATE WITH VIA RAIL ENGINEERING PLANS FOR DETAILS AND INFORMATION.
 - CONTRACTOR TO COORDINATE LOCATIONS OF HANDICAP ACCESSIBLE PARKING STALLS WITH ARCHITECTURAL PLANS AND INSTALL HANDICAP RAMP(S) AS DIRECTED BY OWNER.
 - INSTALL INTEGRAL CONCRETE SIDEWALK (SEE DETAIL) AS DIRECTED BY OWNER. COORDINATE BETWEEN ARCHITECTURAL AND CIVIL PLANS.
 - INSTALL CONCRETE PARKING STOP BLOCK AS DIRECTED BY OWNER.
 - CONTRACTOR TO COORDINATE WITH OWNER ON THE TRANSITION AREA BETWEEN TRUCK SCALE PAVEMENT AND LOWER PARKING LOT PAVEMENT.

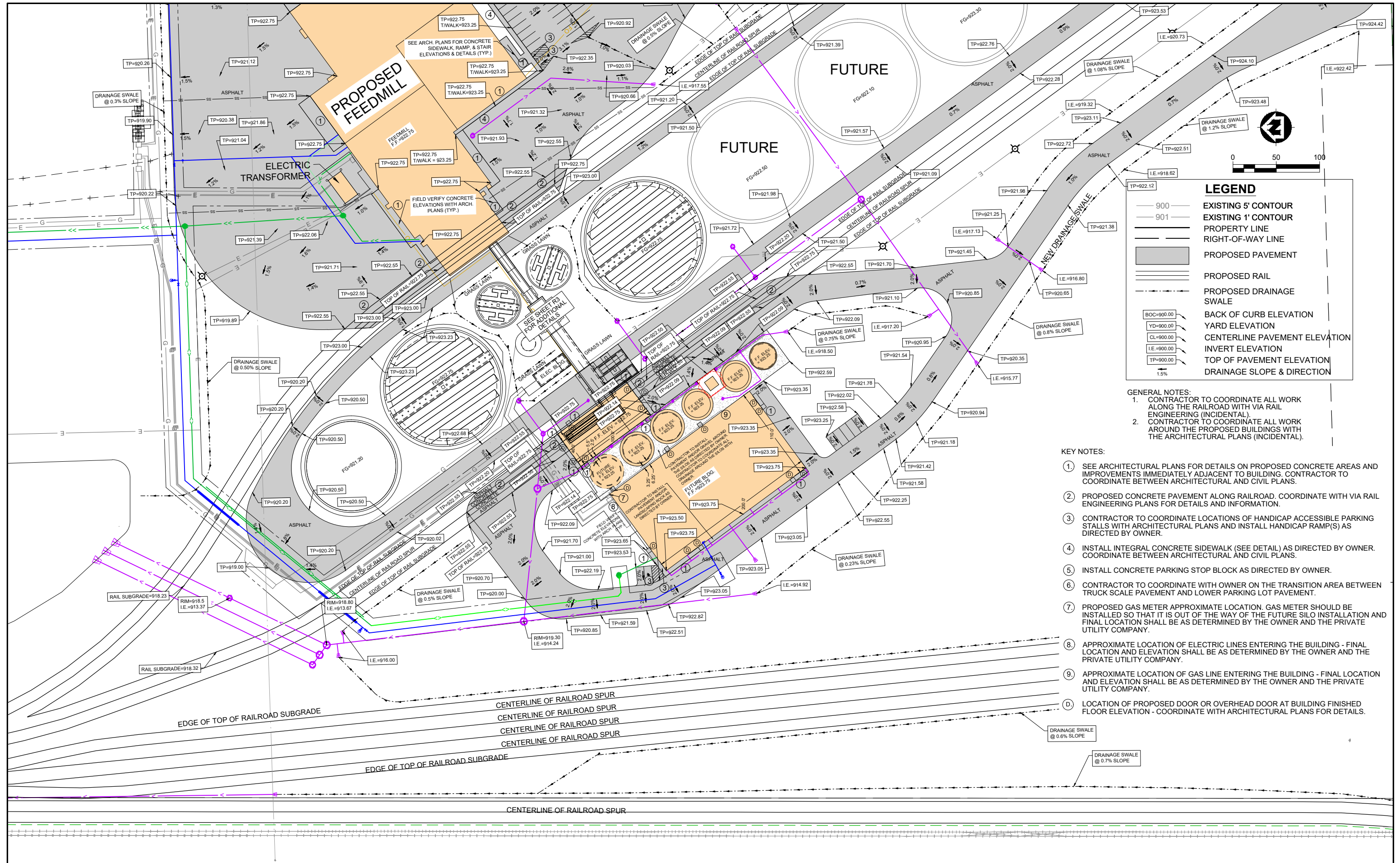


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PAVING PLAN
 PROJECT NO. 02678018
 SHEET R1



LEGEND

— 900 —	EXISTING 5' CONTOUR
— 901 —	EXISTING 1' CONTOUR
— — —	PROPERTY LINE
— — —	RIGHT-OF-WAY LINE
▨	PROPOSED PAVEMENT
▨	PROPOSED RAIL
— — —	PROPOSED DRAINAGE SWALE
BOC=900.00	BACK OF CURB ELEVATION
YD=900.00	YARD ELEVATION
CL=900.00	CENTERLINE PAVEMENT ELEVATION
I.E.=900.00	INVERT ELEVATION
TP=900.00	TOP OF PAVEMENT ELEVATION
1.5%	DRAINAGE SLOPE & DIRECTION

- GENERAL NOTES:**
- CONTRACTOR TO COORDINATE ALL WORK ALONG THE RAILROAD WITH VIA RAIL ENGINEERING (INCIDENTAL).
 - CONTRACTOR TO COORDINATE ALL WORK AROUND THE PROPOSED BUILDINGS WITH THE ARCHITECTURAL PLANS (INCIDENTAL).

- KEY NOTES:**
- SEE ARCHITECTURAL PLANS FOR DETAILS ON PROPOSED CONCRETE AREAS AND IMPROVEMENTS IMMEDIATELY ADJACENT TO BUILDING. CONTRACTOR TO COORDINATE BETWEEN ARCHITECTURAL AND CIVIL PLANS.
 - PROPOSED CONCRETE PAVEMENT ALONG RAILROAD. COORDINATE WITH VIA RAIL ENGINEERING PLANS FOR DETAILS AND INFORMATION.
 - CONTRACTOR TO COORDINATE LOCATIONS OF HANDICAP ACCESSIBLE PARKING STALLS WITH ARCHITECTURAL PLANS AND INSTALL HANDICAP RAMP(S) AS DIRECTED BY OWNER.
 - INSTALL INTEGRAL CONCRETE SIDEWALK (SEE DETAIL) AS DIRECTED BY OWNER. COORDINATE BETWEEN ARCHITECTURAL AND CIVIL PLANS.
 - INSTALL CONCRETE PARKING STOP BLOCK AS DIRECTED BY OWNER.
 - CONTRACTOR TO COORDINATE WITH OWNER ON THE TRANSITION AREA BETWEEN TRUCK SCALE PAVEMENT AND LOWER PARKING LOT PAVEMENT.
 - PROPOSED GAS METER APPROXIMATE LOCATION. GAS METER SHOULD BE INSTALLED SO THAT IT IS OUT OF THE WAY OF THE FUTURE SILO INSTALLATION AND FINAL LOCATION SHALL BE AS DETERMINED BY THE OWNER AND THE PRIVATE UTILITY COMPANY.
 - APPROXIMATE LOCATION OF ELECTRIC LINES ENTERING THE BUILDING - FINAL LOCATION AND ELEVATION SHALL BE AS DETERMINED BY THE OWNER AND THE PRIVATE UTILITY COMPANY.
 - APPROXIMATE LOCATION OF GAS LINE ENTERING THE BUILDING - FINAL LOCATION AND ELEVATION SHALL BE AS DETERMINED BY THE OWNER AND THE PRIVATE UTILITY COMPANY.
 - LOCATION OF PROPOSED DOOR OR OVERHEAD DOOR AT BUILDING FINISHED FLOOR ELEVATION - COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILS.

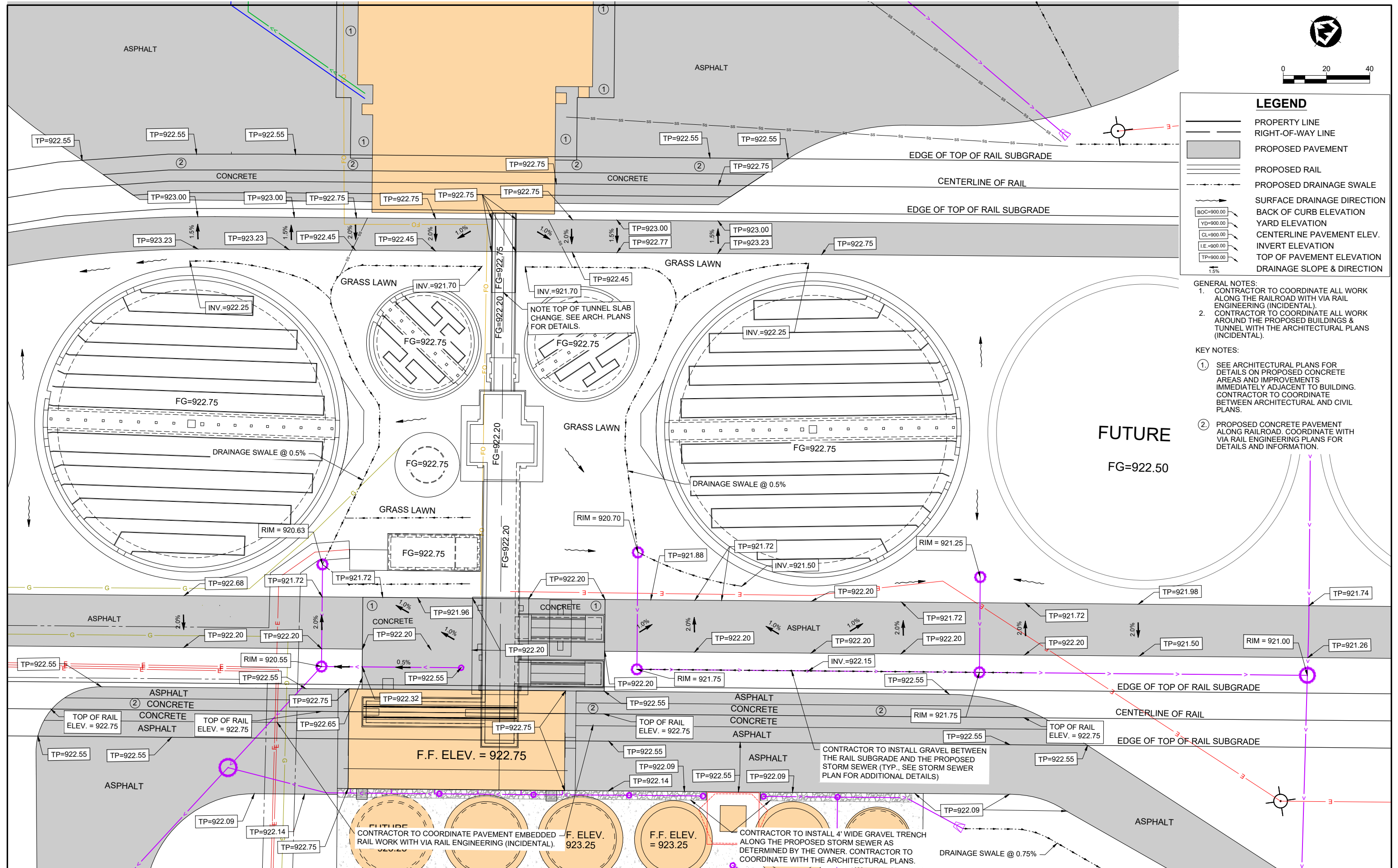
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PAVING PLAN
 PROJECT NO. 02678018
 SHEET R2

PLOT DATE: 7/25/2024 10:53 PM, G:\02\02678018\CADD\Construction Documents\02678018 Paving Plan.dwg



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ▭ PROPOSED PAVEMENT
- ▭ PROPOSED RAIL
- ▭ PROPOSED DRAINAGE SWALE
- SURFACE DRAINAGE DIRECTION
- BOC=900.00 BACK OF CURB ELEVATION
- YD=900.00 YARD ELEVATION
- CL=900.00 CENTERLINE PAVEMENT ELEV.
- I.E.=900.00 INVERT ELEVATION
- TP=900.00 TOP OF PAVEMENT ELEVATION
- 1.5% DRAINAGE SLOPE & DIRECTION

- GENERAL NOTES:**
- CONTRACTOR TO COORDINATE ALL WORK ALONG THE RAILROAD WITH VIA RAIL ENGINEERING (INCIDENTAL).
 - CONTRACTOR TO COORDINATE ALL WORK AROUND THE PROPOSED BUILDINGS & TUNNEL WITH THE ARCHITECTURAL PLANS (INCIDENTAL).

- KEY NOTES:**
- SEE ARCHITECTURAL PLANS FOR DETAILS ON PROPOSED CONCRETE AREAS AND IMPROVEMENTS IMMEDIATELY ADJACENT TO BUILDING. CONTRACTOR TO COORDINATE BETWEEN ARCHITECTURAL AND CIVIL PLANS.
 - PROPOSED CONCRETE PAVEMENT ALONG RAILROAD. COORDINATE WITH VIA RAIL ENGINEERING PLANS FOR DETAILS AND INFORMATION.

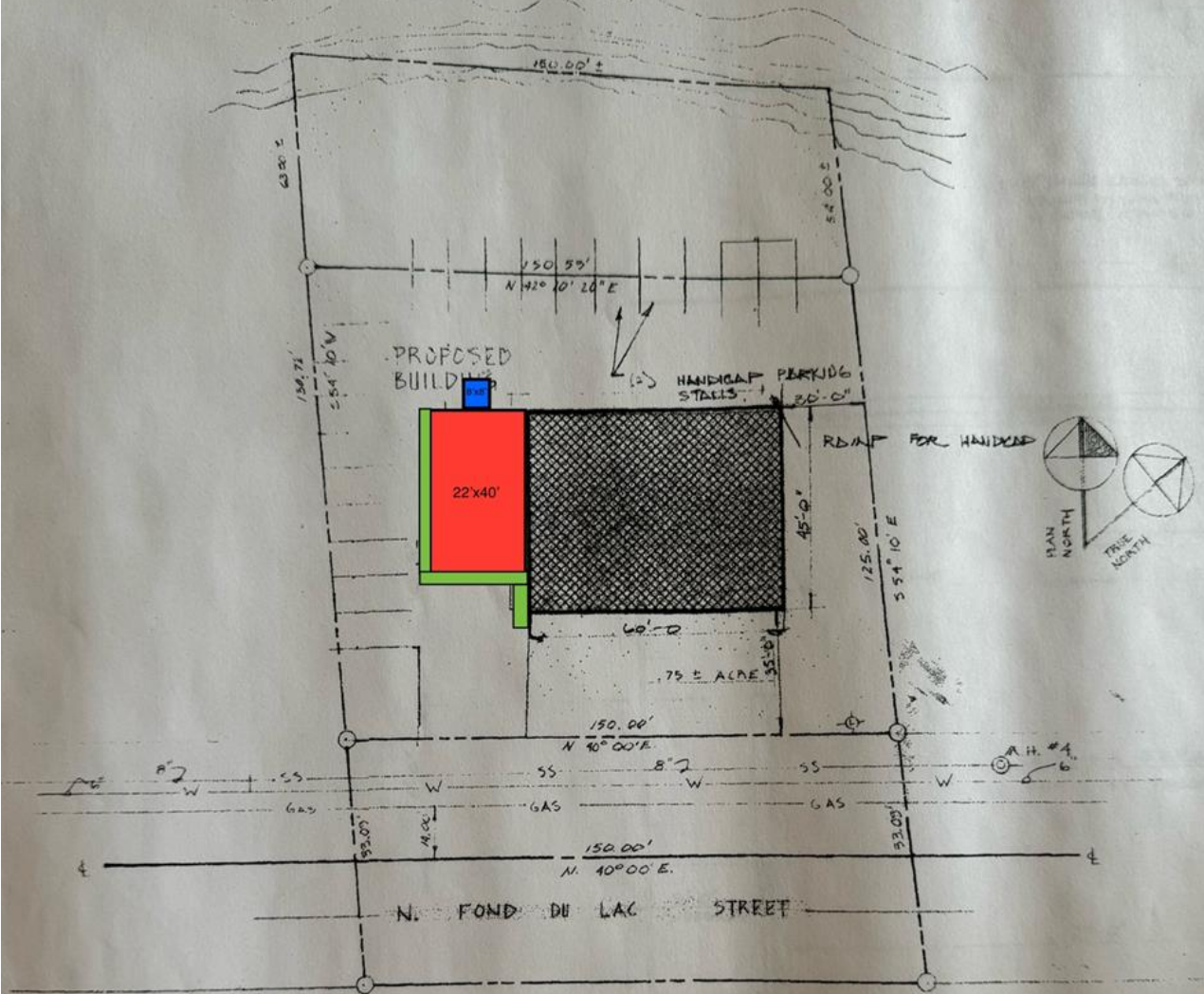
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UNITED COOPERATIVE DEVELOPMENT PROJECT
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PAVING PLAN
 PROJECT NO. 02678018
 SHEET R3

ROCK RIVER



S I T E P L A N
SCALE: 1" = 30'

Freezer
Apartment

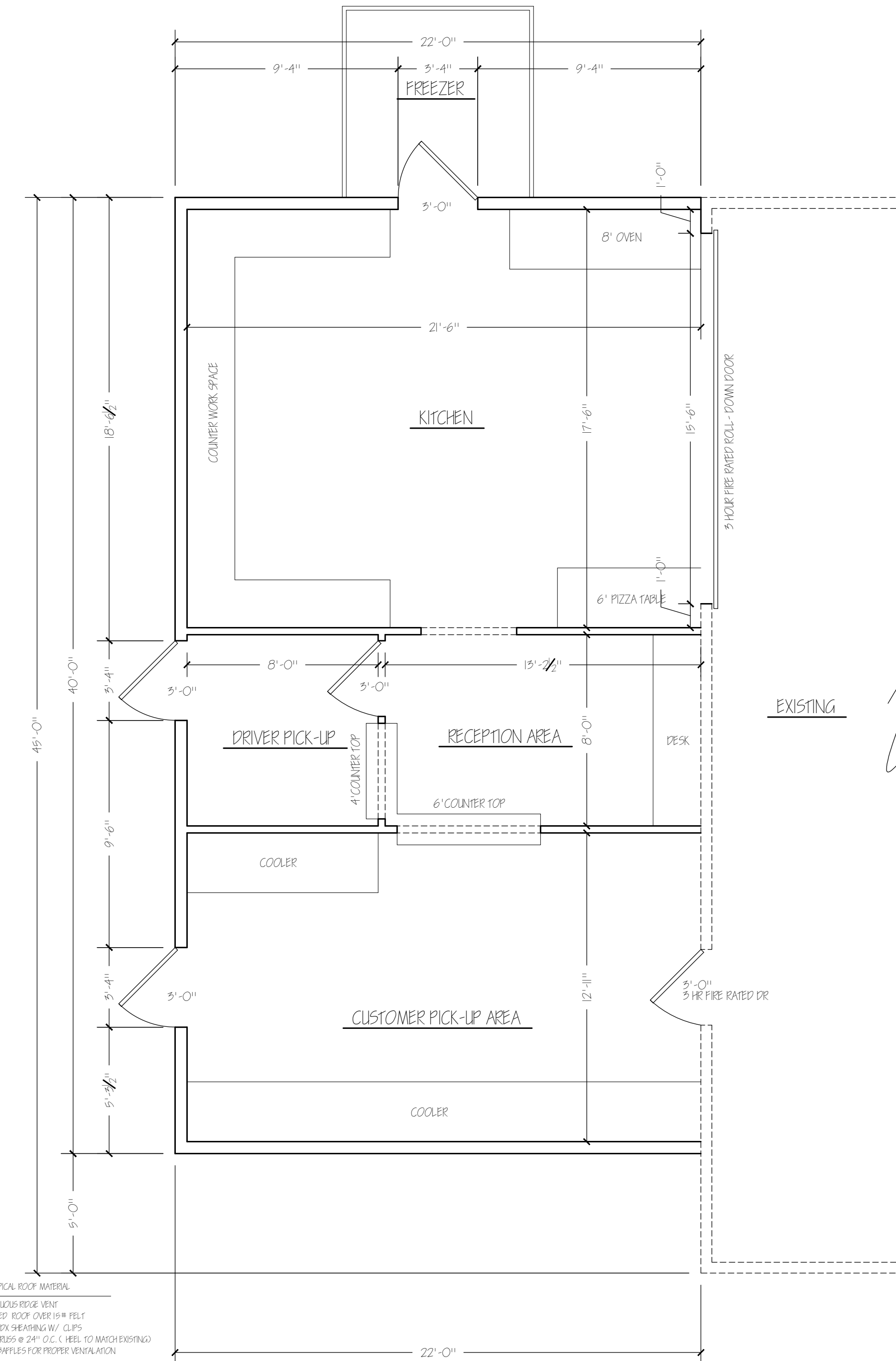
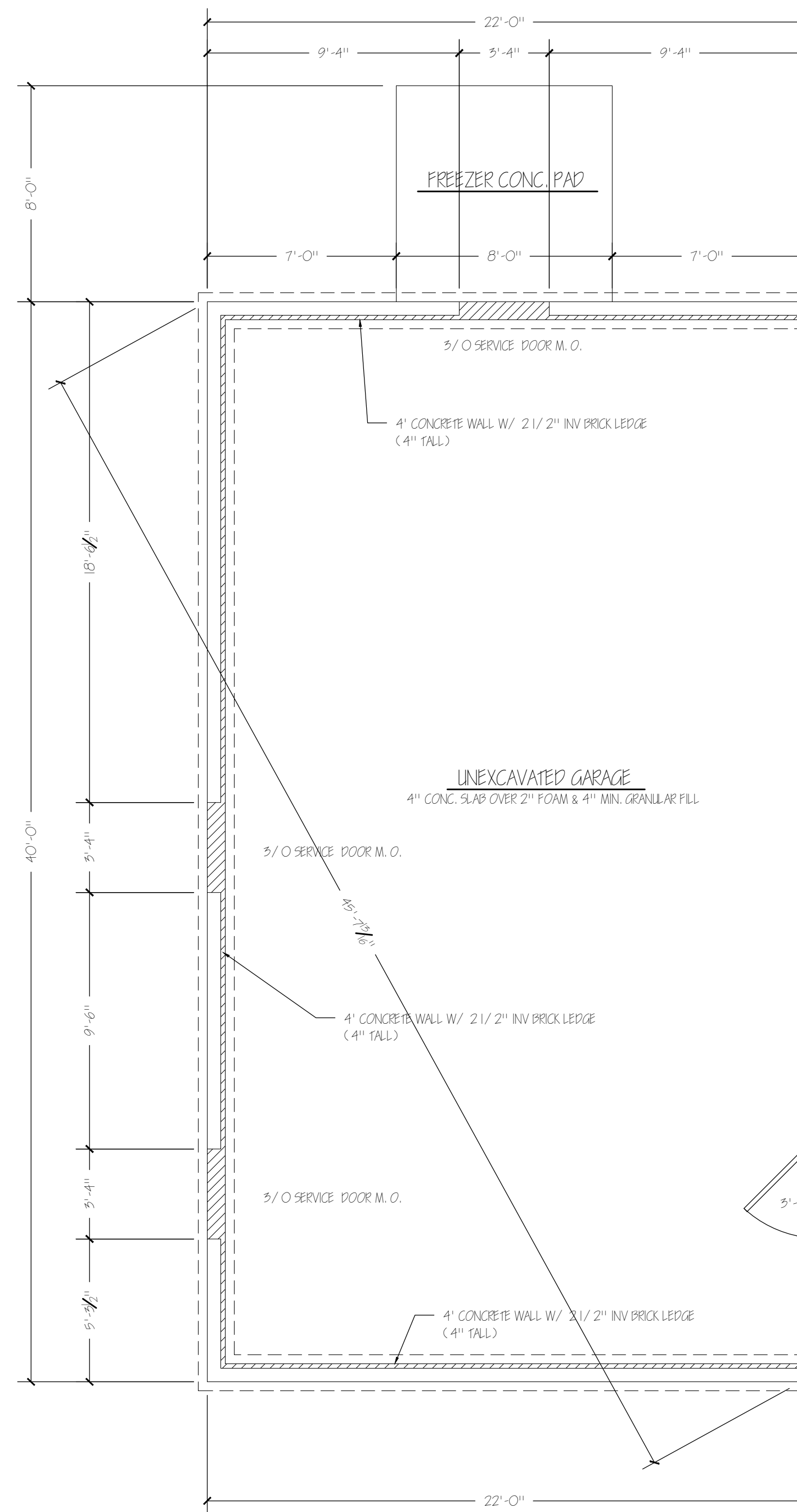
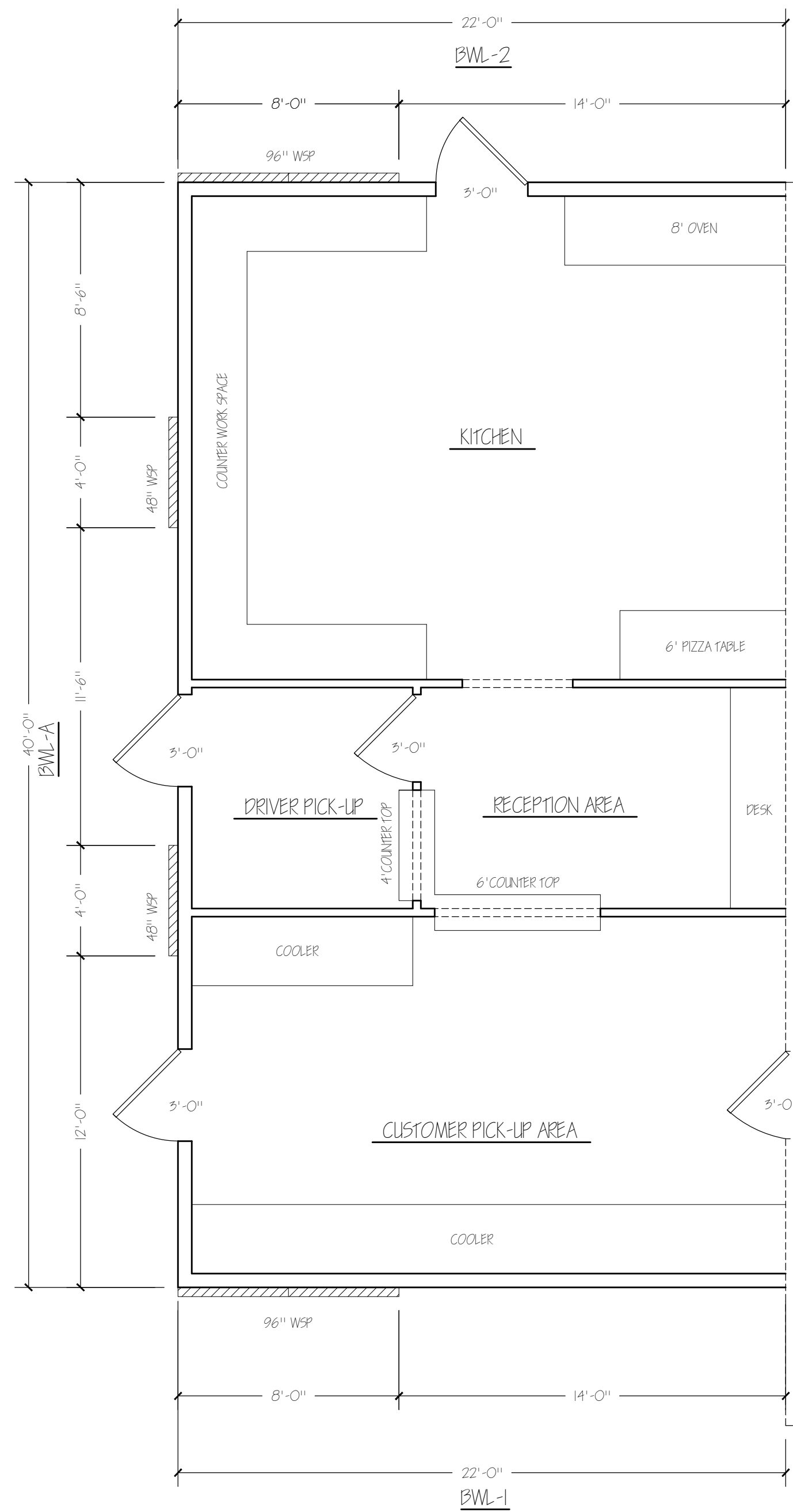


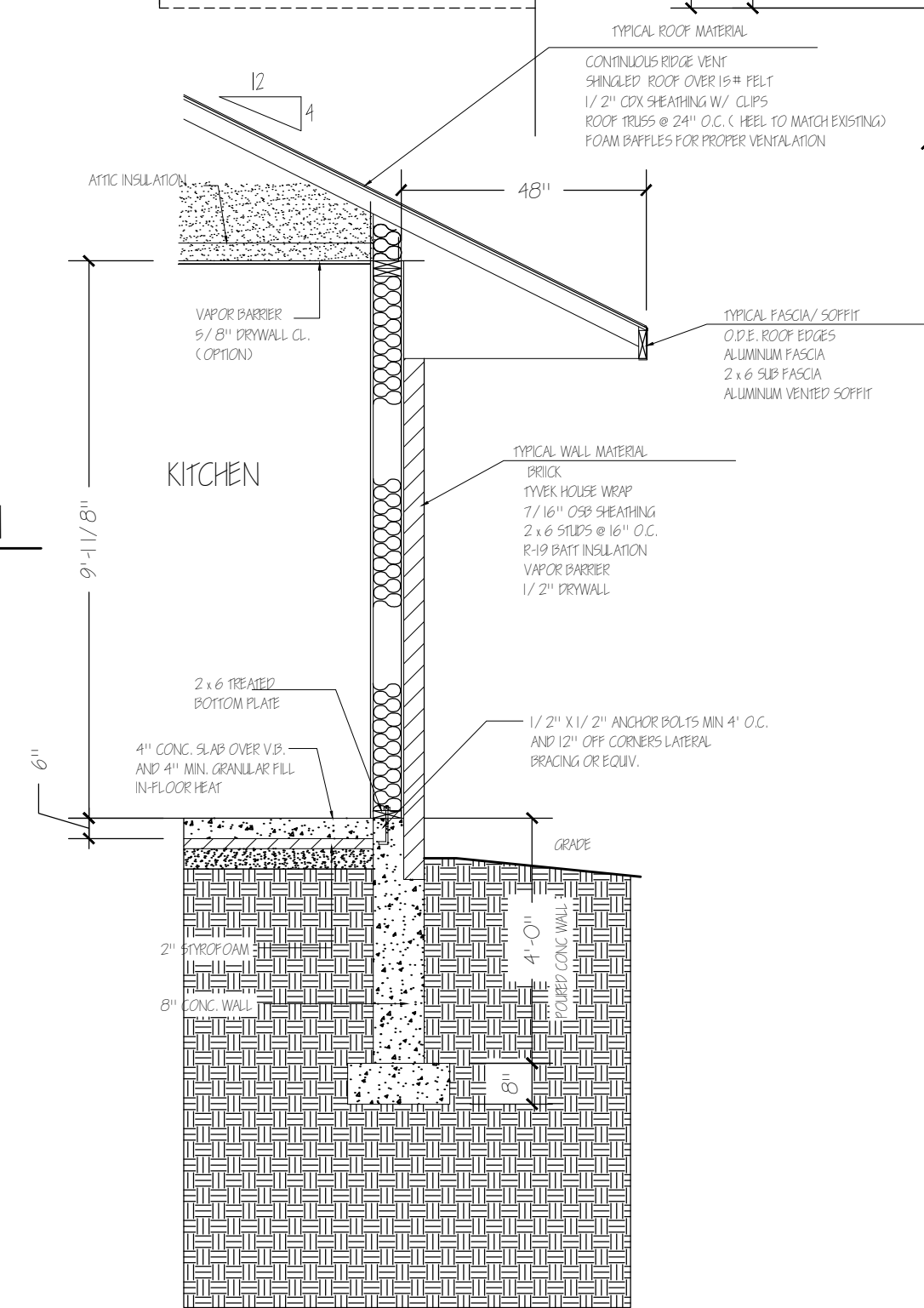
TABLE 502.25.4
MINIMUM WIDTH OF CS-WSP AND CS-SP BRACED WALL PANELS

WALL OPENING HEIGHT RELATIVE TO BRACED WALL PANEL	MINIMUM WIDTH OF FULL-HEIGHT BRACED WALL PANEL (INCHES)			
	8' TALL WALL	9' TALL WALL	10' TALL WALL	12' TALL WALL
5'-4"	24"	27"	30"	36"
6'-0"	32"	35"	38"	46"
6'-6"	40"	43"	46"	54"
7'-0"	48"	51"	54"	62"
7'-6"	56"	59"	62"	70"
8'-0"	64"	67"	70"	78"
8'-6"	72"	75"	78"	86"
9'-0"	80"	83"	86"	94"
9'-6"	88"	91"	94"	102"
10'-0"	96"	99"	102"	110"
10'-6"	104"	107"	110"	118"
11'-0"	112"	115"	118"	126"
11'-6"	120"	123"	126"	134"
12'-0"	128"	131"	134"	142"

FIRST FLOOR WALL BRACING CALCULATIONS

BRACED WALL DESCRIPTION	LEC BRACING METHOD	BRACED WALL LENGTH	PERPENDICULAR WALL LENGTH	REQUIRED LENGTH OF CS-WSP	PROVIDED LENGTH OF CS-WSP	TOP OF WALL TO BRACE HEIGHT	# OF FLOORS ABOVE WITH ROOF AND CEILING	PANEL WIDTH REQUIRED	PANEL WIDTH PROVIDED
PWL-1	CS-WSP	22'	≤ 40'	6'	8'-0"	≤ 10'	0	48" WSP	48" WSP
PWL-2	CS-WSP	22'	≤ 40'	6'	8'-0"	≤ 10'	0	48" WSP	48" WSP
PWL-A	CS-WSP	40'	≤ 50'	5'	8'-0"	≤ 10'	0	48" WSP	48" WSP
PWL-B	CS-WSP	40'	≤ 30'	5'	8'-0"	≤ 10'	0	48" WSP	EXISTING

WALL SECTION
3/8" = 1'-0"



PROJECT TITLE AND ADDRESS
TONY'S PIZZA ADDITION
Wayne Quade Construction

NOTICE TO CONTRACTOR
ALL INFORMATION CONTAINED HEREIN IS INTENDING TO BE USED BY THE CONTRACTOR AS BACKUP FOR HIS OWN RECORDS AND NOT TO BE USED FOR THE CONSTRUCTION OF THE PROJECT WITHOUT THE WRITTEN CONSENT OF THE PROJECT ARCHITECT AND THE PLANS.

DATE: 5/30/24
BY: [Signature]
CHECKED BY: [Signature]

DALTON LUMBER & SUPPLY INC.
QUALITY PERSON BUILT

CHAPTER 19 FLOODPLAIN ZONING ORDINANCE¹

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¹

Waupun, Wisconsin, Code of Ordinances
CHAPTER 19 FLOODPLAIN ZONING ORDINANCE

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1.0 STATUTORY AUTHORIZATION, FINDING OF FACT, STATEMENT OF PURPOSE, TITLE AND GENERAL PROVISIONS.

- 1.1 STATUTORY AUTHORIZATION. This ordinance is adopted pursuant to the authorization in §§ 61.35 and 62.23, for villages and cities; 59.69, 59.692, and 59.694 for counties; and the requirements in § 87.30, Stats.
- 1.2 FINDING OF FACT. Uncontrolled development and use of the floodplains and rivers of this municipality would impair the public health, safety, convenience, general welfare and tax base.
- 1.3 STATEMENT OF PURPOSE. This ordinance is intended to regulate floodplain development to:
- (1) Protect life, health and property;
 - (2) Minimize expenditures of public funds for flood control projects;
 - (3) Minimize rescue and relief efforts undertaken at the expense of the taxpayers;
 - (4) Minimize business interruptions and other economic disruptions;
 - (5) Minimize damage to public facilities in the floodplain;
 - (6) Minimize the occurrence of future flood blight areas in the floodplain;
 - (7) Discourage the victimization of unwary land and homebuyers;
 - (8) Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners; and
 - (9) Discourage development in a floodplain if there is any practicable alternative to locate the activity, use or structure outside of the floodplain.
- 1.4 TITLE. This ordinance shall be known as the Floodplain Zoning Ordinance for the City of Waupun, Wisconsin.

1.5 GENERAL PROVISIONS.

- (1) Areas to be Regulated. This ordinance regulates all areas that would be covered by the regional flood or base flood as shown on the Flood Insurance Rate Map (FIRM) or other maps approved by DNR. Base flood elevations are derived from the flood profiles in the Flood Insurance Study (FIS) and are shown as AE, A1-30, and AH Zones on the FIRM. Other regulatory zones are displayed as A and AO zones. Regional Flood Elevations (RFE) may be derived from other studies. If more than one map or revision is referenced, the most restrictive information shall apply.
- (2) Official Maps and Revisions. The boundaries of all floodplain districts are designated as A, AE, AH, AO or A1-30 on the maps based on the Flood Insurance Study (FIS) listed below. Any change to the base flood elevations (BFE) or any changes to the boundaries of the floodplain or floodway in the FIS or on the Flood Insurance Rate Map (FIRM) must be reviewed and approved by the DNR and FEMA through the Letter of Map Change process (see § 8.0 Amendments) before it is effective. No changes to RFE's on non-FEMA maps shall be effective until approved by the DNR. These maps and revisions are on file in the office of the zoning administrator for the City of Waupun. If more than one map or revision is referenced, the most restrictive information shall apply.
 - (a) Official Maps Based on the FIS:
 - a. *For Dodge County:* Flood Insurance Rate Map (FIRM), panel number 55027C0070F, 55027C0100F, 55027C0210F, 55027C0227F, 55027C0230F dated April 19, 2010; and Flood Insurance Rate Map (FIRM), panel number 55027C0069G and 55027C0207G effective May 19, 2014, with corresponding profiles that are based on the Flood Insurance Study (FIS) 55027CV000C, effective May 19, 2014.
 - b. *For Fond du Lac County:* Flood Insurance Rate Map (FIRM), panel numbers 55029C0394F, 55039C0413F and 55039C0414F dated November 4, 2009, with corresponding profiles that are based on the Flood Insurance Study (FIS) dated November 4, 2009, Volume number 55039CV00A.
 - (b) Official Maps Based on Other Studies:
 - a. *Floodplain Study Appendix:* All DNR-approved and FEMA-approved floodplain maps, flood profiles, floodway data tables, regional or base flood elevations and other information located in the appendix at the end of this chapter. The community shall provide the most up-to-date appendix to the DNR and FEMA regional offices.
- (3) Establishment of Floodplain Zoning Districts. The regional floodplain areas are divided into 3 districts as follows:
 - (a) The Floodway District (FW), is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters and are contained within AE Zones as shown on the FIRM.
 - (b) The Floodfringe District (FF) is that portion between the regional flood limits and the floodway and displayed as AE Zones on the FIRM.
 - (c) The General Floodplain District (GFP) is those areas that may be covered by floodwater during the regional flood and does not have a BFE or floodway boundary determined, including A, AH and AO zones on the FIRM.
- (4) Locating Floodplain Boundaries. Discrepancies between boundaries on the official floodplain zoning map and actual field conditions shall be resolved using the criteria in subd (a) or (b) below. If a significant difference exists, the map shall be amended according to § 8.0 Amendments. The zoning administrator can rely on a boundary derived from a profile elevation to grant or deny a land use permit, whether or not a map amendment is required. The zoning administrator shall be responsible

for documenting actual pre-development field conditions and the basis upon which the district boundary was determined and for initiating any map amendments required under this section. Disputes between the zoning administrator and an applicant over the district boundary line shall be settled according to § 7.3(3) and the criteria in (a) and (b) below. Where the flood profiles are based on established base flood elevations from a FIRM, FEMA must approve any map amendment or revision pursuant to § 8.0 Amendments.

- (a) If flood profiles exist, the map scale and the profile elevations shall determine the district boundary. The regional or base flood elevations shall govern if there are any discrepancies.
 - (b) Where flood profiles do not exist for projects, the location of the boundary shall be determined by the map scale.
- (5) Removal of Lands From Floodplain. Compliance with the provisions of this ordinance shall not be grounds for removing land from the floodplain unless it is filled at least 2 feet above the regional or base flood elevation, the fill is contiguous to land outside the floodplain, and the map is amended pursuant to § 8.0 Amendments.
- (6) Compliance. Any development or use within the areas regulated by this ordinance shall be in compliance with the terms of this ordinance, and other applicable local, state, and federal regulations.
- (7) Municipalities and State Agencies Regulated. Unless specifically exempted by law, all cities, villages, towns, and counties are required to comply with this ordinance and obtain all necessary permits. State agencies are required to comply if § 13.48(13), Stats., applies. The construction, reconstruction, maintenance and repair of state highways and bridges by the Wisconsin Department of Transportation is exempt when § 30.2022, Stats., applies.
- (8) Abrogation and Greater Restrictions.
- (a) This ordinance supersedes all the provisions of any municipal zoning ordinance enacted under §§ 59.69, 59.692 or 59.694 for counties; § 62.23 for cities; § 61.35 for villages; or § 87.30, Stats., which relate to floodplains. A more restrictive ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.
 - (b) This ordinance is not intended to repeal, abrogate or impair any existing deed restrictions, covenants or easements. If this ordinance imposes greater restrictions, the provisions of this ordinance shall prevail.
- (9) Interpretation. In their interpretation and application, the provisions of this ordinance are the minimum requirements liberally construed in favor of the governing body and are not a limitation on or repeal of any other powers granted by the Wisconsin Statutes. If a provision of this ordinance, required by ch. NR 116, Wis. Adm. Code, is unclear, the provision shall be interpreted in light of the standards in effect on the date of the adoption of this ordinance or in effect on the date of the most recent text amendment to this ordinance.
- (10) Warning and Disclaimer of Liability. The flood protection standards in this ordinance are based on engineering experience and research. Larger floods may occur or the flood height may be increased by man-made or natural causes. This ordinance does not imply or guarantee that non-floodplain areas or permitted floodplain uses will be free from flooding and flood damages. This ordinance does not create liability on the part of, or a cause of action against, the municipality or any officer or employee thereof for any flood damage that may result from reliance on this ordinance.
- (11) Severability. Should any portion of this ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected.
- (12) Annexed Areas for Cities and Villages. The Fond du Lac and Dodge County floodplain zoning provisions in effect on the date of annexation shall remain in effect and shall be enforced by the municipality for

all annexed areas until the municipality adopts and enforces an ordinance which meets the requirements of ch. NR 116, Wis. Adm. Code and 44 CFR 59-72, National Flood Insurance Program (NFIP). These annexed lands are described on the municipality's official zoning map. County floodplain zoning provisions are incorporated by reference for the purpose of administering this section and are on file in the office of the municipal zoning administrator. All plats or maps of annexation shall show the regional flood elevation and the floodway location.

(Ord. No. 14-03, § 1, 5-13-2014)

2.0 GENERAL STANDARDS APPLICABLE TO ALL FLOODPLAIN DISTRICTS.

The community shall review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall be designed and anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads; be constructed with flood-resistant materials; be constructed to minimize flood damages and to ensure that utility and mechanical equipment is designed and/or located so as to prevent water from entering or accumulating within the equipment during conditions of flooding.

Subdivisions shall be reviewed for compliance with the above standards. All subdivision proposals (including manufactured home parks) shall include regional flood elevation and floodway data for any development that meets the subdivision definition of this ordinance and all other requirements in § 7.1(2). Adequate drainage shall be provided to reduce exposure to flood hazards and all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damages.

2.1 HYDRAULIC AND HYDROLOGIC ANALYSES.

- (1) No floodplain development shall:
 - (a) Obstruct flow, defined as development which blocks the conveyance of floodwaters by itself or with other development, causing any increase in the regional flood height; or
 - (b) Cause any increase in the regional flood height due to floodplain storage area lost.
- (2) The zoning administrator shall deny permits if it is determined the proposed development will obstruct flow or cause any increase in the regional flood height, based on the officially adopted FIRM or other adopted map, unless the provisions of § 8.0 Amendments are met.

2.2 WATERCOURSE ALTERATIONS. No land use permit to alter or relocate a watercourse in a mapped floodplain shall be issued until the local official has notified in writing all adjacent municipalities, the Department and FEMA regional offices, and required the applicant to secure all necessary state and federal permits. The standards of § 2.1 must be met and the flood carrying capacity of any altered or relocated watercourse shall be maintained.

As soon as is practicable, but not later than 6 months after the date of the watercourse alteration or relocation and pursuant to § 8.0 Amendments, the community shall apply for a Letter of Map Revision (LOMR) from FEMA. Any such alterations must be reviewed and approved by FEMA and the DNR through the LOMC process.

2.3 CHAPTERS 30, 31, WIS. STATS., DEVELOPMENT. Development which requires a permit from the Department, under chs. 30 and 31, Stats., such as docks, piers, wharves, bridges, culverts, dams and navigational aids, may be allowed if the necessary permits are obtained and amendments to the floodplain zoning ordinance are made according to § 8.0 Amendments.

2.4 PUBLIC OR PRIVATE CAMPGROUNDS. Public or private campgrounds shall have a low flood damage potential and shall meet the following provisions:

-
- (1) The campground is approved by the Department of Health Services;
 - (2) A land use permit for the campground is issued by the zoning administrator;
 - (3) The character of the river system and the campground elevation are such that a 72-hour warning of an impending flood can be given to all campground occupants;
 - (4) There is an adequate flood warning procedure for the campground that offers the minimum notice required under this section to all persons in the campground. This procedure shall include a written agreement between the campground owner, the municipal emergency government coordinator and the chief law enforcement official which specifies the flood elevation at which evacuation shall occur, personnel responsible for monitoring flood elevations, types of warning systems to be used and the procedures for notifying at-risk parties, and the methods and personnel responsible for conducting the evacuation;
 - (5) This agreement shall be for no more than one calendar year, at which time the agreement shall be reviewed and updated by the officials identified in sub. (4) to remain in compliance with all applicable regulations, including those of the state Department of Health Services and all other applicable regulations;
 - (6) Only camping units that are fully licensed, if required, and ready for highway use are allowed;
 - (7) The camping units shall not occupy any site in the campground for more than 180 consecutive days, at which time the camping unit must be removed from the floodplain for a minimum of 24 hours;
 - (8) All camping units that remain on site for more than 30 days shall be issued a limited authorization by the campground operator, a written copy of which is kept on file at the campground. Such authorization shall allow placement of a camping unit for a period not to exceed 180 days and shall ensure compliance with all the provisions of this section;
 - (9) The municipality shall monitor the limited authorizations issued by the campground operator to assure compliance with the terms of this section;
 - (10) All camping units that remain in place for more than 180 consecutive days must meet the applicable requirements in either §§ 3.0, 4.0 or 5.0 for the floodplain district in which the structure is located;
 - (11) The campground shall have signs clearly posted at all entrances warning of the flood hazard and the procedures for evacuation when a flood warning is issued; and
 - (12) All service facilities, including but not limited to refuse collection, electrical service, gas lines, propane tanks, sewage systems and wells shall be properly anchored and placed at or floodproofed to the flood protection elevation.

(Ord. No. 14-03, § 1, 5-13-2014)

3.0 FLOODWAY DISTRICT (FW).

- 3.1 APPLICABILITY. This section applies to all floodway areas on the floodplain zoning maps and those identified pursuant to § 5.4.
- 3.2 PERMITTED USES. The following open space uses are allowed in the Floodway District and the floodway areas of the General Floodplain District, if:
 - they are not prohibited by any other ordinance;
 - they meet the standards in §§ 3.3 and 3.4; and
 - all permits or certificates have been issued according to § 7.1.

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- (1) Agricultural uses, such as: farming, outdoor plant nurseries, horticulture, viticulture and wild crop harvesting.
 - (2) Nonstructural industrial and commercial uses, such as loading areas, parking areas and airport landing strips.
 - (3) Nonstructural recreational uses, such as golf courses, tennis courts, archery ranges, picnic grounds, boat ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting, trap and skeet activities, hunting and fishing areas and hiking and horseback riding trails, subject to the fill limitations of § 3.3(4).
 - (4) Uses or structures accessory to open space uses, or classified as historic structures that comply with §§ 3.3 and 3.4.
 - (5) Extraction of sand, gravel or other materials that comply with § 3.3(4).
 - (6) Functionally water-dependent uses, such as docks, piers or wharves, dams, flowage areas, culverts, navigational aids and river crossings of transmission lines, and pipelines that comply with chs. 30 and 31, Stats.
 - (7) Public utilities, streets and bridges that comply with § 3.3(3).

3.3 STANDARDS FOR DEVELOPMENTS IN THE FLOODWAY.

- (1) General.
 - (a) Any development in the floodway shall comply with § 2.0 and have a low flood damage potential.
 - (b) Applicants shall provide the following data to determine the effects of the proposal according to §§ 2.1 and 7.1(2)(c):
 1. A cross-section elevation view of the proposal, perpendicular to the watercourse, showing if the proposed development will obstruct flow; or
 2. An analysis calculating the effects of this proposal on regional flood height.
 - (c) The zoning administrator shall deny the permit application if the project will cause any increase in the flood elevations upstream or downstream, based on the data submitted for subd. (b) above.
- (2) Structures. Structures accessory to permanent open space uses or functionally dependent on a waterfront location may be allowed by permit if the structures comply with the following criteria:
 - (a) Not designed for human habitation, does not have a high flood damage potential and is constructed to minimize flood damage;
 - (b) Shall have a minimum of 2 openings on different walls having a total net area not less than one square inch for every square foot of enclosed area, and the bottom of all such openings being no higher than one foot above grade. The openings shall be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters;
 - (c) Must be anchored to resist flotation, collapse, and lateral movement;
 - (d) Mechanical and utility equipment must be elevated or flood proofed to or above the flood protection elevation; and
 - (e) It must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.
- (3) Public Utilities, Streets and Bridges. Public utilities, streets and bridges may be allowed by permit, if:

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- (a) Adequate floodproofing measures are provided to the flood protection elevation; and
 - (b) Construction meets the development standards of § 2.1.
- (4) Fills or Deposition of Materials. Fills or deposition of materials may be allowed by permit, if:
- (a) The requirements of § 2.1 are met;
 - (b) No material is deposited in navigable waters unless a permit is issued by the Department pursuant to ch. 30, Stats., and a permit pursuant to § 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344 has been issued, if applicable, and all other requirements have been met;
 - (c) The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading; and
 - (d) The fill is not classified as a solid or hazardous material.

3.4 PROHIBITED USES. All uses not listed as permitted uses in § 3.2 are prohibited, including the following uses:

- (1) Habitable structures, structures with high flood damage potential, or those not associated with permanent open-space uses;
- (2) Storing materials that are buoyant, flammable, explosive, injurious to property, water quality, or human, animal, plant, fish or other aquatic life;
- (3) Uses not in harmony with or detrimental to uses permitted in the adjoining districts;
- (4) Any private or public sewage systems, except portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and ch. SPS 383, Wis. Adm. Code;
- (5) Any public or private wells which are used to obtain potable water, except those for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code;
- (6) Any solid or hazardous waste disposal sites;
- (7) Any wastewater treatment ponds or facilities, except those permitted under § NR 110.15(3)(b), Wis. Adm. Code; and
- (8) Any sanitary sewer or water supply lines, except those to service existing or proposed development located outside the floodway which complies with the regulations for the floodplain area occupied.

(Ord. No. 14-03, § 1, 5-13-2014)

4.0 FLOODFRINGE DISTRICT (FF).

- 4.1 APPLICABILITY. This section applies to all floodfringe areas shown on the floodplain zoning maps and those identified pursuant to § 5.4.
- 4.2 PERMITTED USES. Any structure, land use, or development is allowed in the Floodfringe District if the standards in § 4.3 are met, the use is not prohibited by this or any other ordinance or regulation and all permits or certificates specified in § 7.1 have been issued.
- 4.3 STANDARDS FOR DEVELOPMENT IN THE FLOODFRINGE. § 2.1 shall apply in addition to the following requirements according to the use requested. Any existing structure in the floodfringe must meet the requirements of § 6.0 Nonconforming Uses.

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- (1) Residential Uses. Any structure, including a manufactured home, which is to be newly constructed or moved into the floodfringe, shall meet or exceed the following standards. Any existing structure in the floodfringe must meet the requirements of § 6.0 Nonconforming Uses:
 - (a) The elevation of the lowest floor shall be at or above the flood protection elevation on fill unless the requirements of § 4.3 (1)(b) can be met. The fill shall be one foot or more above the regional flood elevation extending at least 15 feet beyond the limits of the structure.
 - (b) The basement or crawlway floor may be placed at the regional flood elevation if it is dry floodproofed to the flood protection elevation. No basement or crawlway floor is allowed below the regional flood elevation.
 - (c) Contiguous dryland access shall be provided from a structure to land outside of the floodplain, except as provided in subd. (d).
 - (d) In developments where existing street or sewer line elevations make compliance with subd. (c) impractical, the municipality may permit new development and substantial improvements where roads are below the regional flood elevation, if:
 1. The municipality has written assurance from police, fire and emergency services that rescue and relief will be provided to the structure(s) by wheeled vehicles during a regional flood event; or
 2. The municipality has a DNR-approved emergency evacuation plan.
 - (2) Accessory Structures or Uses. Accessory structures shall be constructed on fill with the lowest floor at or above the regional flood elevation.
 - (3) Commercial Uses. Any commercial structure which is erected, altered or moved into the floodfringe shall meet the requirements of § 4.3(1). Subject to the requirements of § 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.
 - (4) Manufacturing and Industrial Uses. Any manufacturing or industrial structure which is erected, altered or moved into the floodfringe shall have the lowest floor elevated to or above the flood protection elevation or meet the floodproofing standards in § 7.5. Subject to the requirements of § 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.
 - (5) Storage of Materials. Materials that are buoyant, flammable, explosive, or injurious to property, water quality or human, animal, plant, fish or aquatic life shall be stored at or above the flood protection elevation or floodproofed in compliance with § 7.5. Adequate measures shall be taken to ensure that such materials will not enter the water body during flooding.
 - (6) Public Utilities, Streets and Bridges. All utilities, streets and bridges shall be designed to be compatible with comprehensive floodplain development plans; and
 - (a) When failure of public utilities, streets and bridges would endanger public health or safety, or where such facilities are deemed essential, construction or repair of such facilities shall only be permitted if they are designed to comply with § 7.5.
 - (b) Minor roads or non-essential utilities may be constructed at lower elevations if they are designed to withstand flood forces to the regional flood elevation.
 - (7) Sewage Systems. All sewage disposal systems shall be designed to minimize or eliminate infiltration of flood water into the system, pursuant to § 7.5(3), to the flood protection elevation and meet the provisions of all local ordinances and ch. SPS 383, Wis. Adm. Code.

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- (8) Wells. All wells shall be designed to minimize or eliminate infiltration of flood waters into the system, pursuant to § 7.5(3), to the flood protection elevation and shall meet the provisions of chs. NR 811 and NR 812, Wis. Adm. Code.
 - (9) Solid Waste Disposal Sites. Disposal of solid or hazardous waste is prohibited in floodfringe areas.
 - (10) Deposition of Materials. Any deposited material must meet all the provisions of this ordinance.
 - (11) Manufactured Homes.
 - (a) Owners or operators of all manufactured home parks and subdivisions shall provide adequate surface drainage to minimize flood damage, and prepare, secure approval and file an evacuation plan, indicating vehicular access and escape routes, with local emergency management authorities.
 - (b) In existing manufactured home parks, all new homes, replacement homes on existing pads, and substantially improved homes shall:
 - 1. have the lowest floor elevated to the flood protection elevation; and
 - 2. be anchored so they do not float, collapse or move laterally during a flood.
 - (c) Outside of existing manufactured home parks, including new manufactured home parks and all single units outside of existing parks, all new, replacement and substantially improved manufactured homes shall meet the residential development standards for the floodfringe in § 4.3(1).
 - (12) Mobile Recreational Vehicles. All mobile recreational vehicles that are on site for 180 consecutive days or more or are not fully licensed and ready for highway use shall meet the elevation and anchoring requirements in § 4.3 (11)(b) and (c). A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.

(Ord. No. 14-03, § 1, 5-13-2014)

5.0 GENERAL FLOODPLAIN DISTRICT (GFP).

5.1 APPLICABILITY. The provisions for this district shall apply to all floodplains mapped as A, AO or AH zones.

5.2 PERMITTED USES. Pursuant to § 5.4, it shall be determined whether the proposed use is located within the floodway or floodfringe.

Those uses permitted in the Floodway (§ 3.2) and Floodfringe (§ 4.2) Districts are allowed within the General Floodplain District, according to the standards of § 5.3, provided that all permits or certificates required under § 7.1 have been issued.

5.3 STANDARDS FOR DEVELOPMENT IN THE GENERAL FLOODPLAIN DISTRICT. § 3.0 applies to floodway areas, § 4.0 applies to floodfringe areas. The rest of this ordinance applies to either district.

- (1) In AO/AH Zones the structure's lowest floor must meet one of the conditions listed below whichever is higher:
 - (a) At or above the flood protection elevation; or
 - (b) Two feet above the highest adjacent grade around the structure; or
 - (c) The depth as shown on the FIRM.

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- (2) In AO/AH zones, provide plans showing adequate drainage paths to guide floodwaters around structures.

5.4 DETERMINING FLOODWAY AND FLOODFRINGE LIMITS. Upon receiving an application for development within the general floodplain district, the zoning administrator shall:

- (1) Require the applicant to submit 2 copies of an aerial photograph or a plan which shows the proposed development with respect to the general floodplain district limits, stream channel, and existing floodplain developments, along with a legal description of the property, fill limits and elevations, building floor elevations and flood proofing measures; and the flood zone as shown on the FIRM.
- (2) Require the applicant to furnish any of the following information deemed necessary by the Department to evaluate the effects of the proposal upon flood height and flood flows, regional flood elevation and to determine floodway boundaries.
 - (a) A Hydrologic and Hydraulic Study as specified in § 7.1(2)(c).
 - (b) Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location and layout of all proposed and existing structures on the site; location and elevations of streets, water supply, and sanitary facilities; soil types and other pertinent information;
 - (c) Specifications for building construction and materials, floodproofing, filling, dredging, channel improvement, storage, water supply and sanitary facilities.

(Ord. No. 14-03, § 1, 5-13-2014)

6.0 NONCONFORMING USES.

6.1 GENERAL.

- (1) Applicability. If these standards conform with § 59.69(10), Stats., for counties or § 62.23(7)(h), Stats., for cities and villages, they shall apply to all modifications or additions to any nonconforming use or structure and to the use of any structure or premises which was lawful before the passage of this ordinance or any amendment thereto.
- (2) The existing lawful use of a structure or its accessory use which is not in conformity with the provisions of this ordinance may continue subject to the following conditions:
 - (a) No modifications or additions to a nonconforming use or structure shall be permitted unless they comply with this ordinance. The words "modification" and "addition" include, but are not limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Maintenance is not considered a modification; this includes painting, decorating, paneling and other nonstructural components and the maintenance, repair or replacement of existing private sewage or water supply systems or connections to public utilities. Any costs associated with the repair of a damaged structure are not considered maintenance.

The construction of a deck that does not exceed 200 square feet and that is adjacent to the exterior wall of a principal structure is not an extension, modification or addition. The roof of the structure may extend over a portion of the deck in order to provide safe ingress and egress to the principal structure.
 - (b) If a nonconforming use or the use of a nonconforming structure is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall conform to the applicable requirements of this ordinance.

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- (c) The municipality shall keep a record which lists all nonconforming uses and nonconforming structures, their present equalized assessed value, the cost of all modifications or additions which have been permitted, and the percentage of the structure's total current value those modifications represent.
 - (d) No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with § 4.3(1). The costs of elevating the lowest floor of a nonconforming building or a building with a nonconforming use to the flood protection elevation are excluded from the 50% provisions of this paragraph.
 - (e) No maintenance to any nonconforming structure or any structure with a nonconforming use, the cost of which would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with § 4.3(1).
 - (f) If on a per event basis the total value of the work being done under subsections (d) and (e) equals or exceeds 50% of the present equalized assessed value the work shall not be permitted unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with § 4.3(1).
 - (g) Except as provided in subd. (h), if any nonconforming structure or any structure with a nonconforming use is destroyed or is substantially damaged, it cannot be replaced, reconstructed or rebuilt unless the use and the structure meet the current ordinance requirements. A structure is considered substantially damaged if the total cost to restore the structure to its pre-damaged condition equals or exceeds 50% of the structure's present equalized assessed value.
 - (h) For nonconforming buildings that are substantially damaged or destroyed by a nonflood disaster, the repair or reconstruction of any such nonconforming building shall be permitted in order to restore it to the size and use in effect prior to the damage event, provided that the minimum federal code requirements below are met and all required permits have been granted prior to the start of construction.

1. Residential Structures.

- a. Shall have the lowest floor, including basement, elevated to or above the base flood elevation using fill, pilings, columns, posts or perimeter walls. Perimeter walls must meet the requirements of § 7.5(2).
- b. Shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy and shall be constructed with methods and materials resistant to flood damage.
- c. Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.
- d. In A Zones, obtain, review and utilize any flood data available from a federal, state or other source.

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- e. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in § 5.3(1).
 - f. In AO Zones, shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.
2. Nonresidential Structures.
- a. Shall meet the requirements of § 6.1(2)(h)1a—f.
 - b. Shall either have the lowest floor, including basement, elevated to or above the regional flood elevation; or, together with attendant utility and sanitary facilities, shall meet the standards in § 7.5(1) or (2).
 - c. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in § 5.3(1).
- (3) A nonconforming historic structure may be altered if the alteration will not preclude the structure's continued designation as a historic structure, the alteration will comply with § 3.3(1), flood resistant materials are used, and construction practices and floodproofing methods that comply with § 7.5 are used. Repair or rehabilitation of historic structures shall be exempt from the development standards of § 6.1(2)(h)1 if it is determined that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure.

6.2 FLOODWAY DISTRICT.

- (1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in the Floodway District, unless such modification or addition:
- (a) Has been granted a permit or variance which meets all ordinance requirements;
 - (b) Meets the requirements of § 6.1;
 - (c) Shall not increase the obstruction to flood flows or regional flood height;
 - (d) Any addition to the existing structure shall be floodproofed, pursuant to § 7.5, by means other than the use of fill, to the flood protection elevation; and
 - (e) If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:
 - 1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of 2 openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;
 - 2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;
 - 3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and
 - 4. The use must be limited to parking, building access or limited storage.
- (2) No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing

on-site sewage disposal system in a floodway area shall meet the applicable requirements of all municipal ordinances, § 7.5(3) and ch. SPS 383, Wis. Adm. Code.

- (3) No new well or modification to an existing well used to obtain potable water shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing well in the Floodway District shall meet the applicable requirements of all municipal ordinances, § 7.5(3) and chs. NR 811 and NR 812, Wis. Adm. Code.

6.3 FLOODFRINGE DISTRICT.

- (1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use unless such modification or addition has been granted a permit or variance by the municipality, and meets the requirements of § 4.3 except where § 6.3(2) is applicable.
- (2) Where compliance with the provisions of subd. (1) would result in unnecessary hardship and only where the structure will not be used for human habitation or be associated with a high flood damage potential, the Board of Adjustment/Appeals, using the procedures established in § 7.3, may grant a variance from those provisions of subd. (1) for modifications or additions using the criteria listed below. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if:
 - (a) No floor is allowed below the regional flood elevation for residential or commercial structures;
 - (b) Human lives are not endangered;
 - (c) Public facilities, such as water or sewer, shall not be installed;
 - (d) Flood depths shall not exceed 2 feet;
 - (e) Flood velocities shall not exceed 2 feet per second; and
 - (f) The structure shall not be used for storage of materials as described in § 4.3(5).
- (3) All new private sewage disposal systems, or addition to, replacement, repair or maintenance of a private sewage disposal system shall meet all the applicable provisions of all local ordinances, § 7.5(3) and ch. SPS 383, Wis. Adm. Code.
- (4) All new wells, or addition to, replacement, repair or maintenance of a well shall meet the applicable provisions of this ordinance, § 7.5(3) and chs. NR 811 and NR 812, Wis. Adm. Code.

(Ord. No. 14-03, § 1, 5-13-2014)

7.0 ADMINISTRATION.

Where a zoning administrator, planning agency or a board of adjustment/appeals has already been appointed to administer a zoning ordinance adopted under §§ 59.69, 59.692 or 62.23(7), stats., these officials shall also administer this ordinance.

7.1 ZONING ADMINISTRATOR.

- (1) Duties and Powers. The zoning administrator is authorized to administer this ordinance and shall have the following duties and powers:
 - (a) Advise applicants of the ordinance provisions, assist in preparing permit applications and appeals, and assure that the regional flood elevation for the proposed development is shown on all permit applications.
 - (b) Issue permits and inspect properties for compliance with provisions of this ordinance and issue certificates of compliance where appropriate.

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- (c) Inspect and assess all damaged floodplain structures to determine if substantial damage to the structures has occurred.
 - (d) Keep records of all official actions such as:
 - 1. All permits issued, inspections made, and work approved;
 - 2. Documentation of certified lowest floor and regional flood elevations;
 - 3. Floodproofing certificates;
 - 4. Water surface profiles, floodplain zoning maps and ordinances, nonconforming uses and structures including changes, appeals, variances and amendments;
 - 5. All substantial damage assessment reports for floodplain structures;
 - 6. List of nonconforming structures and uses.
 - (e) Submit copies of the following items to the Department Regional office:
 - 1. Within 10 days of the decision, a copy of any decisions on variances, appeals for map or text interpretations, and map or text amendments;
 - 2. Copies of case-by-case analyses and other required information including an annual summary of floodplain zoning actions taken;
 - 3. Copies of substantial damage assessments performed and all related correspondence concerning the assessments.
 - (f) Investigate, prepare reports, and report violations of this ordinance to the municipal zoning agency and attorney for prosecution. Copies of the reports shall also be sent to the Department Regional office.
 - (g) Submit copies of amendments to the FEMA Regional office.
- (2) Land Use Permit. A land use permit shall be obtained before any new development; repair, modification or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated. Application to the zoning administrator shall include:
- (a) *General Information*.
 - 1. Name and address of the applicant, property owner and contractor;
 - 2. Legal description, proposed use, and whether it is new construction or a modification.
 - (b) *Site Development Plan*. A site plan drawn to scale shall be submitted with the permit application form and shall contain:
 - 1. Location, dimensions, area and elevation of the lot;
 - 2. Location of the ordinary highwater mark of any abutting navigable waterways;
 - 3. Location of any structures with distances measured from the lot lines and street center lines;
 - 4. Location of any existing or proposed on-site sewage systems or private water supply systems;
 - 5. Location and elevation of existing or future access roads;
 - 6. Location of floodplain and floodway limits as determined from the official floodplain zoning maps;

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7. The elevation of the lowest floor of proposed buildings and any fill using the vertical datum from the adopted study—either National Geodetic Vertical Datum (NGVD) or North American Vertical Datum (NAVD);
 8. Data sufficient to determine the regional flood elevation in NGVD or NAVD at the location of the development and to determine whether or not the requirements of § 3.0 or 4.0 are met; and
 9. Data to determine if the proposed development will cause an obstruction to flow or an increase in regional flood height or discharge according to § 2.1. This may include any of the information noted in § 3.3(1).
- (c) *Hydraulic and Hydrologic Studies to Analyze Development.* All hydraulic and hydrologic studies shall be completed under the direct supervision of a professional engineer registered in the State. The study contractor shall be responsible for the technical adequacy of the study. All studies shall be reviewed and approved by the department.
1. Zone A floodplains:
 - a. Hydrology.
 - i. The appropriate method shall be based on the standards in ch. NR 116.07(3), Wis. Admin. Code, Hydrologic Analysis: Determination of Regional Flood Discharge.
 - b. Hydraulic modeling. The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, Hydraulic Analysis: Determination of Regional Flood Elevation and the following:
 - i. Determination of the required limits of the hydraulic model shall be based on detailed study information for downstream structures (dam, bridge, culvert) to determine adequate starting WSEL for the study.
 - ii. Channel sections must be surveyed.
 - iii. Minimum 4 foot contour data in the overbanks shall be used for the development of cross section overbank and floodplain mapping.
 - iv. A maximum distance of 500 feet between cross sections is allowed in developed areas with additional intermediate cross sections required at transitions in channel bottom slope including a survey of the channel at each location.
 - v. The most current version of HEC_RAS shall be used.
 - vi. A survey of bridge and culvert openings and the top of road is required at each structure.
 - vii. Additional cross sections are required at the downstream and upstream limits of the proposed development and any necessary intermediate locations based on the length of the reach if greater than 500 feet.
 - viii. Standard accepted engineering practices shall be used when assigning parameters for the base model such as flow, Manning's N values, expansion and contraction coefficients or effective flow limits. The base model shall be calibrated to past flooding data such as high water marks to determine the reasonableness of the model results. If no historical

data is available, adequate justification shall be provided for any parameters outside standard accepted engineering practices.

ix. The model must extend past the upstream limit of the difference in the existing and proposed flood profiles in order to provide a tie-in to existing studies. The height difference between the proposed flood profile and the existing study profiles shall be no more than 0.00 feet.

c. Mapping. A work map of the reach studied shall be provided, showing all cross section locations, floodway/floodplain limits based on best available topographic data, geographic limits of the proposed development and whether the proposed development is located in the floodway.

i. If the proposed development is located outside of the floodway, then it is determined to have no impact on the regional flood elevation.

ii. If any part of the proposed development is in the floodway, it must be added to the base model to show the difference between existing and proposed conditions. The study must ensure that all coefficients remain the same as in the existing model, unless adequate justification based on standard accepted engineering practices is provided.

2. Zone AE Floodplains:

a. Hydrology. If the proposed hydrology will change the existing study, the appropriate method to be used shall be based on ch. NR 116.07(3), Wis. Admin. Code, Hydrologic Analysis: Determination of Regional Flood Discharge.

b. Hydraulic model. The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, Hydraulic Analysis: Determination of Regional Flood Elevation and the following:

i. Duplicate Effective Model. The effective model shall be reproduced to ensure correct transference of the model data and to allow integration of the revised data to provide a continuous FIS model upstream and downstream of the revised reach. If data from the effective model is available, models shall be generated that duplicate the FIS profiles and the elevations shown in the floodway data table in the FIS report to within 0.1 foot.

ii. Corrected Effective Model. The corrected effective model shall not include any man-made physical changes since the effective model date, but shall import the model into the most current version of HEC-RAS for department review.

iii. Existing (Pre-Project Conditions) Model. The existing model shall be required to support conclusions about the actual impacts of the project associated with the revised (post-project) model or to establish more up-to-date models on which to base the revised (post-project) model.

iv. Revised (Post-Project Conditions) Model. The revised (post-project conditions) model shall incorporate the existing model and any proposed changes to the topography caused by the proposed development. This model shall reflect proposed conditions.

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- v. All changes to the duplicate effective model and subsequent models must be supported by certified topographic information, bridge plans, construction plans and survey notes.
 - vi. Changes to the hydraulic models shall be limited to the stream reach for which the revision is being requested. Cross sections upstream and downstream of the revised reach shall be identical to those in the effective model and result in water surface elevations and top widths computed by the revised models matching those in the effective models upstream and downstream of the revised reach as required. The effective model shall not be truncated.
- c. Mapping. Maps and associated engineering data shall be submitted to the Department for review which meet the following conditions:
- i. Consistency between the revised hydraulic models, the revised floodplain and floodway delineations, the revised flood profiles, topographic work map, annotated FIRMs and/or Flood Boundary Floodway Maps (FBFMs), construction plans, bridge plans.
 - ii. Certified topographic map of suitable scale, contour interval, and a planimetric map showing the applicable items. If a digital version of the map is available, it may be submitted in order that the FIRM may be more easily revised.
 - iii. Annotated FIRM panel showing the revised 1% and 0.2% annual chance floodplains and floodway boundaries.
 - iv. If an annotated FIRM and/or FBFM and digital mapping data (GIS or CADD) are used then all supporting documentation or metadata must be included with the data submission along with the Universal Transverse Mercator (UTM) projection and State Plane Coordinate System in accordance with FEMA mapping specifications.
 - v. The revised floodplain boundaries shall tie into the effective floodplain boundaries.
 - vi. All cross sections from the effective model shall be labeled in accordance with the effective map and a cross section lookup table shall be included to relate to the model input numbering scheme.
 - vii. Both the current and proposed floodways shall be shown on the map.
 - viii. The stream centerline, or profile baseline used to measure stream distances in the model shall be visible on the map.
- (d) *Expiration.* All permits issued under the authority of this ordinance shall expire no more than 180 days after issuance. The permit may be extended for a maximum of 180 days for good and sufficient cause.
- (3) Certificate of Compliance. No land shall be occupied or used, and no building which is hereafter constructed, altered, added to, modified, repaired, rebuilt or replaced shall be occupied until a certificate of compliance is issued by the zoning administrator, except where no permit is required, subject to the following provisions:
- (a) The certificate of compliance shall show that the building or premises or part thereof, and the proposed use, conform to the provisions of this ordinance;

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- (b) Application for such certificate shall be concurrent with the application for a permit;
 - (c) If all ordinance provisions are met, the certificate of compliance shall be issued within 10 days after written notification that the permitted work is completed;
 - (d) The applicant shall submit a certification signed by a registered professional engineer, architect or land surveyor that the fill, lowest floor and floodproofing elevations are in compliance with the permit issued. Floodproofing measures also require certification by a registered professional engineer or architect that the requirements of § 7.5 are met.
- (4) Other Permits. Prior to obtaining a floodplain development permit the applicant must secure all necessary permits from federal, state, and local agencies, including but not limited to those required by the U.S. Army Corps of Engineers under § 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344.

7.2 ZONING AGENCY.

- (1) The Plan Commission shall:
 - (a) Oversee the functions of the office of the zoning administrator; and
 - (b) Review and advise the governing body on all proposed amendments to this ordinance, maps and text.
- (2) The Plan Commission shall not:
 - (a) Grant variances to the terms of the ordinance in place of action by the Board of Adjustment/Appeals; or
 - (b) Amend the text or zoning maps in place of official action by the governing body.

7.3 BOARD OF ADJUSTMENT/APPEALS. The Board of Adjustment/Appeals, created under § 59.694, Stats., for counties or § 62.23(7)(e), Stats., for cities or villages, is hereby authorized or shall be appointed to act for the purposes of this ordinance. The Board shall exercise the powers conferred by Wisconsin Statutes and adopt rules for the conduct of business. The zoning administrator shall not be the secretary of the Board.

- (1) Powers and Duties. The Board of Adjustment/Appeals shall:
 - (a) *Appeals.* Hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by an administrative official in the enforcement or administration of this ordinance;
 - (b) *Boundary Disputes.* Hear and decide disputes concerning the district boundaries shown on the official floodplain zoning map; and
 - (c) *Variances.* Hear and decide, upon appeal, variances from the ordinance standards.
- (2) Appeals to the Board.
 - (a) Appeals to the Board may be taken by any person aggrieved, or by any officer or department of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within 30 days unless otherwise provided by the rules of the Board, by filing with the official whose decision is in question, and with the Board, a notice of appeal specifying the reasons for the appeal. The official whose decision is in question shall transmit to the Board all records regarding the matter appealed.
 - (b) *Notice and Hearing for Appeals Including Variances.*
 - 1. Notice—The Board shall:
 - a. Fix a reasonable time for the hearing;

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- b. Publish adequate notice pursuant to Wisconsin Statutes, specifying the date, time, place and subject of the hearing; and
 - c. Assure that notice shall be mailed to the parties in interest and the Department Regional office at least 10 days in advance of the hearing.
 2. Hearing—Any party may appear in person or by agent. The board shall:
 - a. Resolve boundary disputes according to § 7.3(3);
 - b. Decide variance applications according to § 7.3(4); and
 - c. Decide appeals of permit denials according to § 7.4.
 - (c) *Decision.* The final decision regarding the appeal or variance application shall:
 1. Be made within a reasonable time;
 2. Be sent to the Department Regional office within 10 days of the decision;
 3. Be a written determination signed by the chairman or secretary of the Board;
 4. State the specific facts which are the basis for the Board's decision;
 5. Either affirm, reverse, vary or modify the order, requirement, decision or determination appealed, in whole or in part, dismiss the appeal for lack of jurisdiction or grant or deny the variance application; and
 6. Include the reasons for granting an appeal, describing the hardship demonstrated by the applicant in the case of a variance, clearly stated in the recorded minutes of the Board proceedings.
 - (3) Boundary Disputes. The following procedure shall be used by the Board in hearing disputes concerning floodplain district boundaries:
 - (a) If a floodplain district boundary is established by approximate or detailed floodplain studies, the flood elevations or profiles shall prevail in locating the boundary. If none exist, other evidence may be examined;
 - (b) The person contesting the boundary location shall be given a reasonable opportunity to present arguments and technical evidence to the Board; and
 - (c) If the boundary is incorrectly mapped, the Board should inform the zoning committee or the person contesting the boundary location to petition the governing body for a map amendment according to § 8.0 Amendments.
 - (4) Variance.
 - (a) The Board may, upon appeal, grant a variance from the standards of this ordinance if an applicant convincingly demonstrates that:
 1. Literal enforcement of the ordinance will cause unnecessary hardship;
 2. The hardship is due to adoption of the floodplain ordinance and unique property conditions, not common to adjacent lots or premises. In such case the ordinance or map must be amended;
 3. The variance is not contrary to the public interest; and
 4. The variance is consistent with the purpose of this ordinance in § 1.3.

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- (b) In addition to the criteria in subd. (a), to qualify for a variance under FEMA regulations, the following criteria must be met:
 - 1. The variance shall not cause any increase in the regional flood elevation;
 - 2. Variances can only be granted for lots that are less than one-half acre and are contiguous to existing structures constructed below the RFE; and
 - 3. Variances shall only be granted upon a showing of good and sufficient cause, shall be the minimum relief necessary, shall not cause increased risks to public safety or nuisances, shall not increase costs for rescue and relief efforts and shall not be contrary to the purpose of the ordinance.
 - (c) A variance shall not:
 - 1. Grant, extend or increase any use prohibited in the zoning district;
 - 2. Be granted for a hardship based solely on an economic gain or loss;
 - 3. Be granted for a hardship which is self-created;
 - 4. Damage the rights or property values of other persons in the area;
 - 5. Allow actions without the amendments to this ordinance or map(s) required in § 8.0 Amendments; and
 - 6. Allow any alteration of an historic structure, including its use, which would preclude its continued designation as an historic structure.
 - (d) When a floodplain variance is granted the Board shall notify the applicant in writing that it may increase risks to life and property and flood insurance premiums could increase up to \$25.00 per \$100.00 of coverage. A copy shall be maintained with the variance record.

7.4 TO REVIEW APPEALS OF PERMIT DENIALS.

- (1) The Zoning Agency (§ 7.2) or Board shall review all data related to the appeal. This may include:
 - (a) Permit application data listed in § 7.1(2);
 - (b) Floodway/floodfringe determination data in § 5.4;
 - (c) Data listed in § 3.3(1)(b) where the applicant has not submitted this information to the zoning administrator; and
 - (d) Other data submitted with the application, or submitted to the Board with the appeal.
- (2) For appeals of all denied permits the Board shall:
 - (a) Follow the procedures of § 7.3;
 - (b) Consider zoning agency recommendations; and
 - (c) Either uphold the denial or grant the appeal.
- (3) For appeals concerning increases in regional flood elevation the Board shall:
 - (a) Uphold the denial where the Board agrees with the data showing an increase in flood elevation. Increases may only be allowed after amending the flood profile and map and all appropriate legal arrangements are made with all adversely affected property owners as per the requirements of § 8.0 Amendments; and
 - (b) Grant the appeal where the Board agrees that the data properly demonstrates that the project does not cause an increase provided no other reasons for denial exist.

7.5 FLOODPROOFING STANDARDS FOR NONCONFORMING STRUCTURES OR USES.

- (1) No permit or variance shall be issued for a non-residential structure designed to be watertight below the regional flood elevation until the applicant submits a plan certified by a registered professional engineer or architect that the floodproofing measures will protect the structure or development to the flood protection elevation and submits a FEMA Floodproofing Certificate.
- (2) For a structure designed to allow the entry of floodwaters, no permit or variance shall be issued until the applicant submits a plan either:
 - (a) Certified by a registered professional engineer or architect; or
 - (b) Meets or exceeds the following standards:
 1. A minimum of 2 openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 2. The bottom of all openings shall be no higher than one foot above grade; and
 3. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (3) Floodproofing measures shall be designed, as appropriate, to:
 - (a) Withstand flood pressures, depths, velocities, uplift and impact forces and other regional flood factors;
 - (b) Protect structures to the flood protection elevation;
 - (c) Anchor structures to foundations to resist flotation and lateral movement;
 - (d) Minimize or eliminate infiltration of flood waters; and
 - (e) Minimize or eliminate discharges into flood waters.

7.6 PUBLIC INFORMATION.

- (1) Place marks on structures to show the depth of inundation during the regional flood.
- (2) All maps, engineering data and regulations shall be available and widely distributed.
- (3) Real estate transfers should show what floodplain district any real property is in.

(Ord. No. 14-03, § 1, 5-13-2014)

8.0 AMENDMENTS.

Obstructions or increases may only be permitted if amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with § 8.1.

- (1) In AE Zones with a mapped floodway, no obstructions or increases shall be permitted unless the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with § 8.1. Any such alterations must be reviewed and approved by FEMA and the DNR.
- (2) In A Zones increases equal to or greater than 1.0 foot may only be permitted if the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain maps, floodway lines, and water surface profiles, in accordance with § 8.1.

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- 8.1 GENERAL. The governing body shall change or supplement the floodplain zoning district boundaries and this ordinance in the manner outlined in § 8.2 below. Actions which require an amendment to the ordinance and/ or submittal of a Letter of Map Change (LOMC) include, but are not limited to, the following:
- (1) Any fill or floodway encroachment that obstructs flow causing any increase in the regional flood height;
 - (2) Any change to the floodplain boundaries and/or watercourse alterations on the FIRM;
 - (3) Any changes to any other officially adopted floodplain maps listed in 1.5 (2)(b);
 - (4) Any floodplain fill which raises the elevation of the filled area to a height at or above the flood protection elevation and is contiguous to land lying outside the floodplain;
 - (5) Correction of discrepancies between the water surface profiles and floodplain maps;
 - (6) Any upgrade to a floodplain zoning ordinance text required by § NR 116.05, Wis. Adm. Code, or otherwise required by law, or for changes by the municipality; and
 - (7) All channel relocations and changes to the maps to alter floodway lines or to remove an area from the floodway or the floodfringe that is based on a base flood elevation from a FIRM requires prior approval by FEMA.
- 8.2 PROCEDURES. Ordinance amendments may be made upon petition of any party according to the provisions of § 62.23, Stats., for cities and villages, or § 59.69, Stats., for counties. The petitions shall include all data required by §§ 5.4 and 7.1(2). The Land Use Permit shall not be issued until a Letter of Map Revision is issued by FEMA for the proposed changes.
- (1) The proposed amendment shall be referred to the zoning agency for a public hearing and recommendation to the governing body. The amendment and notice of public hearing shall be submitted to the Department Regional office for review prior to the hearing. The amendment procedure shall comply with the provisions of § 62.23, Stats., for cities and villages or § 59.69, Stats., for counties.
 - (2) No amendments shall become effective until reviewed and approved by the Department.
 - (3) All persons petitioning for a map amendment that obstructs flow causing any increase in the regional flood height, shall obtain flooding easements or other appropriate legal arrangements from all adversely affected property owners and notify local units of government before the amendment can be approved by the governing body.

(Ord. No. 14-03, § 1, 5-13-2014)

9.0 ENFORCEMENT AND PENALTIES.

Any violation of the provisions of this ordinance by any person shall be unlawful and shall be referred to the municipal attorney who shall expeditiously prosecute all such violators. A violator shall, upon conviction, forfeit to the municipality a penalty of not less than \$25.00 and not more than \$50.00, together with a taxable cost of such action. Each day of continued violation shall constitute a separate offense. Every violation of this ordinance is a public nuisance and the creation may be enjoined and the maintenance may be abated by action at suit of the municipality, the state, or any citizen thereof pursuant to § 87.30, Stats.

(Ord. No. 14-03, § 1, 5-13-2014)

10.0 DEFINITIONS.

Unless specifically defined, words and phrases in this ordinance shall have their common law meaning and shall be applied in accordance with their common usage. Words used in the present tense include the future, the singular number includes the plural and the plural number includes the singular. The word "may" is permissive, "shall" is mandatory and is not discretionary.

- (1) A ZONES. Those areas shown on the Official Floodplain Zoning Map which would be inundated by the regional flood. These areas may be numbered or unnumbered A Zones. The A Zones may or may not be reflective of flood profiles, depending on the availability of data for a given area.
- (2) AH ZONE. See AREA OF SHALLOW FLOODING.
- (3) AO ZONE. See AREA OF SHALLOW FLOODING.
- (4) ACCESSORY STRUCTURE OR USE. A facility, structure, building or use which is accessory or incidental to the principal use of a property, structure or building.
- (5) ALTERATION. An enhancement, upgrading or substantial change or modifications other than an addition or repair to a dwelling or to electrical, plumbing, heating, ventilating, air conditioning and other systems within a structure.
- (6) AREA OF SHALLOW FLOODING. A designated AO, AH, AR/AO, AR/AH, or VO Zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flood may be evident. Such flooding is characterized by ponding or sheet flow.
- (7) BASE FLOOD. Means the flood having a one percent chance of being equaled or exceeded in any given year, as published by FEMA as part of a FIS and depicted on a FIRM.
- (8) BASEMENT. Any enclosed area of a building having its floor sub-grade, i.e., below ground level, on all sides.
- (9) BUILDING. See STRUCTURE.
- (10) BULKHEAD LINE. A geographic line along a reach of navigable water that has been adopted by a municipal ordinance and approved by the department pursuant to § 30.11, Stats., and which allows limited filling between this bulkhead line and the original ordinary highwater mark, except where such filling is prohibited by the floodway provisions of this ordinance.
- (11) CAMPGROUND. Any parcel of land which is designed, maintained, intended or used for the purpose of providing sites for nonpermanent overnight use by 4 or more camping units, or which is advertised or represented as a camping area.
- (12) CAMPING UNIT. Any portable device, no more than 400 square feet in area, used as a temporary shelter, including but not limited to a camping trailer, motor home, bus, van, pick-up truck, or tent that is fully licensed, if required, and ready for highway use.
- (13) CERTIFICATE OF COMPLIANCE. A certification that the construction and the use of land or a building, the elevation of fill or the lowest floor of a structure is in compliance with all of the provisions of this ordinance.
- (14) CHANNEL. A natural or artificial watercourse with definite bed and banks to confine and conduct normal flow of water.
- (15) CRAWLWAYS or CRAWL SPACE. An enclosed area below the first usable floor of a building, generally less than 5 feet in height, used for access to plumbing and electrical utilities.

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- (16) DECK. An unenclosed exterior structure that has no roof or sides, but has a permeable floor which allows the infiltration of precipitation.
- (17) DEPARTMENT. The Wisconsin Department of Natural Resources.
- (18) DEVELOPMENT. Any artificial change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures; the construction of additions or alterations to buildings, structures or accessory structures; the repair of any damaged structure or the improvement or renovation of any structure, regardless of percentage of damage or improvement; the placement of buildings or structures; subdivision layout and site preparation; mining, dredging, filling, grading, paving, excavation or drilling operations; the storage, deposition or extraction of materials or equipment; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.
- (19) DRYLAND ACCESS. A vehicular access route which is above the regional flood elevation and which connects land located in the floodplain to land outside the floodplain, such as a road with its surface above regional flood elevation and wide enough for wheeled rescue and relief vehicles.
- (20) ENCROACHMENT. Any fill, structure, equipment, use or development in the floodway.
- (21) FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). The federal agency that administers the National Flood Insurance Program.
- (22) FLOOD INSURANCE RATE MAP (FIRM). A map of a community on which the Federal Insurance Administration has delineated both the floodplain and the risk premium zones applicable to the community. This map can only be amended by the Federal Emergency Management Agency.
- (23) FLOOD or FLOODING. A general and temporary condition of partial or complete inundation of normally dry land areas caused by one of the following conditions:
- The overflow or rise of inland waters;
 - The rapid accumulation or runoff of surface waters from any source;
 - The inundation caused by waves or currents of water exceeding anticipated cyclical levels along the shore of Lake Michigan or Lake Superior; or
 - The sudden increase caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a seiche, or by some similarly unusual event.
- (24) FLOOD FREQUENCY. The probability of a flood occurrence which is determined from statistical analyses. The frequency of a particular flood event is usually expressed as occurring, on the average once in a specified number of years or as a percent (%) chance of occurring in any given year.
- (25) FLOODFRINGE. That portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood and associated with standing water rather than flowing water.
- (26) FLOOD HAZARD BOUNDARY MAP. A map designating approximate flood hazard areas. Flood hazard areas are designated as unnumbered A Zones and do not contain floodway lines or regional flood elevations. This map forms the basis for both the regulatory and insurance aspects of the National Flood Insurance Program (NFIP) until superseded by a Flood Insurance Study and a Flood Insurance Rate Map.
- (27) FLOOD INSURANCE STUDY. A technical engineering examination, evaluation, and determination of the local flood hazard areas. It provides maps designating those areas affected by the regional flood and provides both flood insurance rate zones and base flood elevations and may provide floodway lines. The flood hazard areas are designated as numbered and unnumbered A Zones. Flood Insurance Rate

Maps, that accompany the Flood Insurance Study, form the basis for both the regulatory and the insurance aspects of the National Flood Insurance Program.

- (28) FLOODPLAIN. Land which has been or may be covered by flood water during the regional flood. It includes the floodway and the floodfringe, and may include other designated floodplain areas for regulatory purposes.
- (29) FLOODPLAIN ISLAND. A natural geologic land formation within the floodplain that is surrounded, but not covered, by floodwater during the regional flood.
- (30) FLOODPLAIN MANAGEMENT. Policy and procedures to insure wise use of floodplains, including mapping and engineering, mitigation, education, and administration and enforcement of floodplain regulations.
- (31) FLOOD PROFILE. A graph or a longitudinal profile line showing the relationship of the water surface elevation of a flood event to locations of land surface elevations along a stream or river.
- (32) FLOODPROOFING. Any combination of structural provisions, changes or adjustments to properties and structures, water and sanitary facilities and contents of buildings subject to flooding, for the purpose of reducing or eliminating flood damage.
- (33) FLOOD PROTECTION ELEVATION. An elevation of 2 feet of freeboard above the water surface profile elevation designated for the regional flood. (Also see: FREEBOARD.)
- (34) FLOOD STORAGE. Those floodplain areas where storage of floodwaters has been taken into account during analysis in reducing the regional flood discharge.
- (35) FLOODWAY. The channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.
- (36) FREEBOARD. A safety factor expressed in terms of a specified number of feet above a calculated flood level. Freeboard compensates for any factors that cause flood heights greater than those calculated, including ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of watershed urbanization, loss of flood storage areas due to development and aggregation of the river or stream bed.
- (37) HABITABLE STRUCTURE. Any structure or portion thereof used or designed for human habitation.
- (38) HEARING NOTICE. Publication or posting meeting the requirements of Ch. 985, Stats. For appeals, a Class 1 notice, published once at least one week (7 days) before the hearing, is required. For all zoning ordinances and amendments, a Class 2 notice, published twice, once each week consecutively, the last at least a week (7 days) before the hearing. Local ordinances or bylaws may require additional notice, exceeding these minimums.
- (39) HIGH FLOOD DAMAGE POTENTIAL. Damage that could result from flooding that includes any danger to life or health or any significant economic loss to a structure or building and its contents.
- (40) HIGHEST ADJACENT GRADE. The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- (41) HISTORIC STRUCTURE. Any structure that is either:
 - Listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

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- Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
 - Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program, as determined by the Secretary of the Interior; or by the Secretary of the Interior in states without approved programs.
- (42) INCREASE IN REGIONAL FLOOD HEIGHT. A calculated upward rise in the regional flood elevation greater than 0.00 foot, based on a comparison of existing conditions and proposed conditions which is directly attributable to development in the floodplain but not attributable to manipulation of mathematical variables such as roughness factors, expansion and contraction coefficients and discharge.
- (43) LAND USE. Any nonstructural use made of unimproved or improved real estate. (Also see DEVELOPMENT.)
- (44) LOWEST ADJACENT GRADE. Elevation of the lowest ground surface that touches any of the exterior walls of a building.
- (45) LOWEST FLOOR. The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of 44 CFR 60.3.
- (46) MAINTENANCE. The act or process of restoring to original soundness, including redecorating, refinishing, non structural repairs, or the replacement of existing fixtures, systems or equipment with equivalent fixtures, systems or structures.
- (47) MANUFACTURED HOME. A structure transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities. The term "manufactured home" includes a mobile home but does not include a "mobile recreational vehicle."
- (48) MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION. A parcel (or contiguous parcels) of land, divided into 2 or more manufactured home lots for rent or sale.
- (49) MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION, EXISTING. A parcel of land, divided into 2 or more manufactured home lots for rent or sale, on which the construction of facilities for servicing the lots is completed before the effective date of this ordinance. At a minimum, this would include the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.
- (50) MOBILE/MANUFACTURED HOME PARK, EXPANSION TO EXISTING. The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed. This includes installation of utilities, construction of streets and either final site grading, or the pouring if concrete pads.
- (51) MOBILE RECREATIONAL VEHICLE. A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled, carried or permanently towable by a licensed, light-duty vehicle, is licensed for highway use if registration is required and is designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel or seasonal use. Manufactured homes that are towed or carried onto a parcel of land, but do not remain capable of being towed or carried, including park model homes, do not fall within the definition of "mobile recreational vehicles."

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- (52) MODEL, CORRECTED EFFECTIVE. A hydraulic engineering model that corrects any errors that occur in the duplicate effective model, adds any additional cross sections to the duplicate effective model, or incorporates more detailed topographic information than that used in the current effective model.
 - (53) MODEL, DUPLICATE EFFECTIVE. A copy of the hydraulic analysis used in the effective FIS and referred to as the effective model.
 - (54) MODEL, EFFECTIVE. The hydraulic engineering model that was used to produce the current effective flood insurance study.
 - (55) MODEL, EXISTING (PRE-PROJECT). A modification of the duplicate effective model or corrected effective model to reflect any man made modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the corrected effective model or duplicate effective model.
 - (56) MODEL, REVISED (POST-PROJECT). A modification of the existing or pre-project conditions model, duplicate effective model or corrected effective model to reflect revised or post-project conditions.
 - (57) MUNICIPALITY or MUNICIPAL. The county, city or village governmental units enacting, administering and enforcing this zoning ordinance.
 - (58) NAVD or NORTH AMERICAN VERTICAL DATUM. Elevations referenced to mean sea level datum, 1988 adjustment.
 - (59) NGVD or NATIONAL GEODETIC VERTICAL DATUM. Elevations referenced to mean sea level datum, 1929 adjustment.
 - (60) NEW CONSTRUCTION. For floodplain management purposes, "new construction" means structures for which the start of construction commenced on or after the effective date of floodplain zoning regulations adopted by this community and includes any subsequent improvements to such structures. For the purpose of determining flood insurance rates, it includes any structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures.
 - (61) NONCONFORMING STRUCTURE. An existing lawful structure or building which is not in conformity with the dimensional or structural requirements of this ordinance for the area of the floodplain which it occupies. (For example, an existing residential structure in the floodfringe district is a conforming use. However, if the lowest floor is lower than the flood protection elevation, the structure is nonconforming.)
 - (62) NONCONFORMING USE. An existing lawful use or accessory use of a structure or building which is not in conformity with the provisions of this ordinance for the area of the floodplain which it occupies. (Such as a residence in the floodway.)
 - (63) OBSTRUCTION TO FLOW. Any development which blocks the conveyance of floodwaters such that this development alone or together with any future development will cause an increase in regional flood height.
 - (64) OFFICIAL FLOODPLAIN ZONING MAP. That map, adopted and made part of this ordinance, as described in § 1.5(2), which has been approved by the Department and FEMA.
 - (65) OPEN SPACE USE. Those uses having a relatively low flood damage potential and not involving structures.
 - (66) ORDINARY HIGHWATER MARK. The point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or

-
- prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.
- (67) PERSON. An individual, or group of individuals, corporation, partnership, association, municipality or state agency.
- (68) PRIVATE SEWAGE SYSTEM. A sewage treatment and disposal system serving one structure with a septic tank and soil absorption field located on the same parcel as the structure. It also means an alternative sewage system approved by the Department of Safety and Professional Services, including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel than the structure.
- (69) PUBLIC UTILITIES. Those utilities using underground or overhead transmission lines such as electric, telephone and telegraph, and distribution and collection systems such as water, sanitary sewer and storm sewer.
- (70) REASONABLY SAFE FROM FLOODING. Means base flood waters will not inundate the land or damage structures to be removed from the floodplain and that any subsurface waters related to the base flood will not damage existing or proposed buildings.
- (71) REGIONAL FLOOD. A flood determined to be representative of large floods known to have occurred in Wisconsin. A regional flood is a flood with a one percent chance of being equaled or exceeded in any given year, and if depicted on the FIRM, the RFE is equivalent to the BFE.
- (72) START OF CONSTRUCTION. The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond initial excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For an alteration, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
- (73) STRUCTURE. Any manmade object with form, shape and utility, either permanently or temporarily attached to, placed upon or set into the ground, stream bed or lake bed, including, but not limited to, roofed and walled buildings, gas or liquid storage tanks, bridges, dams and culverts.
- (74) SUBDIVISION. Has the meaning given in § 236.02(12), Wis. Stats.
- (75) SUBSTANTIAL DAMAGE. Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50% of the equalized assessed value of the structure before the damage occurred.
- (76) SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50% of the equalized assessed value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the work performed. The term does not, however, include either any project for the improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions; or any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

-
- (77) UNNECESSARY HARDSHIP. Where special conditions affecting a particular property, which were not self-created, have made strict conformity with restrictions governing areas, setbacks, frontage, height or density unnecessarily burdensome or unreasonable in light of the purposes of the ordinance.
 - (78) VARIANCE. An authorization by the board of adjustment or appeals for the construction or maintenance of a building or structure in a manner which is inconsistent with dimensional standards (not uses) contained in the floodplain zoning ordinance.
 - (79) VIOLATION. The failure of a structure or other development to be fully compliant with the floodplain zoning ordinance. A structure or other development without required permits, lowest floor elevation documentation, floodproofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.
 - (80) WATERSHED. The entire region contributing runoff or surface water to a watercourse or body of water.
 - (81) WATER SURFACE PROFILE. A graphical representation showing the elevation of the water surface of a watercourse for each position along a reach of river or stream at a certain flood flow. A water surface profile of the regional flood is used in regulating floodplain areas.
 - (82) WELL. Means an excavation opening in the ground made by digging, boring, drilling, driving or other methods, to obtain groundwater regardless of its intended use.

(Ord. No. 14-03, § 1, 5-13-2014)

FLOODPLAIN ORDINANCE FOR CITY OF WAUPUN, FOND DU LAC COUNTY AND DODGE COUNTY, WISCONSIN

Effective Insert date ordinance was adopted by the community

Key for editing:

- Blue highlights are instructional for the ordinance writer and can be deleted once the item is completed
- Yellow highlights are places where the ordinance needs to be filled in with community specific information
- Grey highlights are ordinance additions for communities that choose to implement optional language for Act 175

Adoption schedule tracking

1. **Date of Public Hearing:** _____
 - a. (Requires a Class 2 Hearing Notice of Publication or Posting)
2. **Date of Adoption:** _____
3. **Dates of Publication or Posting:** _____
 - a. (Second/last date must be at least 7 days before hearing, see definition, Ch 985 Stats)
4. **Date of Publication or Posting of Notice of Enacted Ordinance:**
 - a. _____

!! Instructional Information Only !!

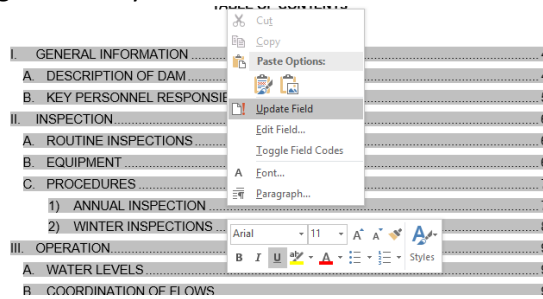
[Please delete THIS ENTIRE PAGE when ordinance update is complete.]

After all updates are done, you will need to update the table of contents. Because this is a linked function within document, the page references will update automatically when you tell it to do so:

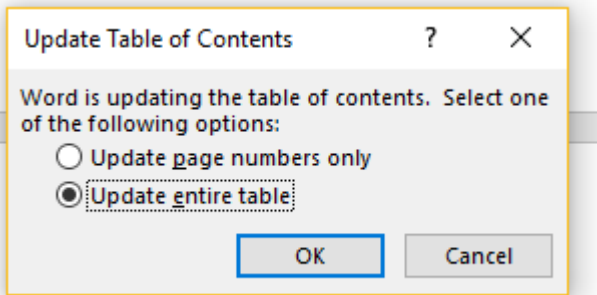
1. Click anywhere in the table of contents so that gray shows up behind the words.

I.	GENERAL INFORMATION	
A.	DESCRIPTION OF DAM	
B.	KEY PERSONNEL RESPONSIBILITIES	
II.	INSPECTION	
A.	ROUTINE INSPECTIONS	
B.	EQUIPMENT	

2. Right click anywhere in the table of contents so that a window pops up. Select “Update Field”



3. Select “Update entire table” so that both the headings and page numbers update. If you changed heading names you may notice that some of the headings will not be capitalized correctly – you will need to find them in the document for formatting and then repeat steps 1-3.



If you make further changes (like deleting this page) and just need to update the page numbers, repeat steps 1-3...this time, you can select “Update page numbers only”.

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1.0 STATUTORY AUTHORIZATION, FINDING OF FACT, STATEMENT OF PURPOSE, TITLE, AND GENERAL PROVISIONS

1.1 STATUTORY AUTHORIZATION

This ordinance is adopted pursuant to the authorization in s. 61.35 and 62.23, for villages and cities; and the requirements in s. 87.30, Stats.

1.2 FINDING OF FACT

Uncontrolled development and use of the floodplains and rivers of this municipality would impair the public health, safety, convenience, general welfare, and tax base.

1.3 STATEMENT OF PURPOSE

This ordinance is intended to regulate floodplain development to:

- (1) Protect life, health and property;
- (2) Minimize expenditures of public funds for flood control projects;
- (3) Minimize rescue and relief efforts undertaken at the expense of the taxpayers;
- (4) Minimize business interruptions and other economic disruptions;
- (5) Minimize damage to public facilities in the floodplain;
- (6) Minimize the occurrence of future flood blight areas in the floodplain;
- (7) Discourage the victimization of unwary land and homebuyers;
- (8) Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners; and
- (9) Discourage development in a floodplain if there is any practicable alternative to locate the activity, use or structure outside of the floodplain.

1.4 TITLE

This ordinance shall be known as the Floodplain Zoning Ordinance for City of Waupun, Fond du Lac County and Dodge County, Wisconsin.

1.5 GENERAL PROVISIONS

(1) AREAS TO BE REGULATED

This ordinance regulates all areas of special flood hazard identified as zones A, AO, AH, A1-30, AE on the Flood Insurance Rate Map. Additional areas identified on maps approved by the Department of Natural Resources (DNR) and local community may also be regulated under the provisions of this ordinance, where applicable.

(2) OFFICIAL MAPS & REVISIONS

Special Flood Hazard Areas (SFHA) are designated as zones A, A1-30, AE, AH, AO on the Flood Insurance Rate Maps (FIRMs) based on flood hazard analyses summarized in the Flood Insurance Study (FIS) listed in subd. (a) below. Additional flood hazard areas subject to regulation under this ordinance are identified on maps based on studies approved by the DNR and listed in subd. (b) below. These maps and revisions are on file in the office of the City Clerk, City of Waupun

(a) OFFICIAL MAPS: Based on the Flood Insurance Study (FIS):

1. Fond du Lac County Flood Insurance Rate Map (FIRM), panel number 55039C0394F, 55039C0413F, 55039C0414F, dated 11/04/2009
2. Flood Insurance Study (FIS) for Fond du Lac County volumes 55039CV001B, 55039CV002B dated 12/20/2024

3. Dodge County Flood Insurance Rate Map (FIRM), panel numbers 55027C0069G and 55027C0207G, dated 05/19/2014.
4. Dodge County Flood Insurance Rate Map (FIRM), panel numbers 55027C0100F, 55027C0227F, and 55027C0230F. dated 04/19/2010.
5. Flood Insurance Study (FIS) for Dodge County volume 55027CV000C dated 05/19/2014
6. Letter of Map Revision: LOMR 13-05-8521P effective 04/02/2014

Approved by: The DNR and FEMA

(3) ESTABLISHMENT OF FLOODPLAIN ZONING DISTRICTS

The flood hazard areas regulated by this ordinance are divided into districts as follows:

- a) The Floodway District (FW), is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters, within AE Zones as shown on the FIRM, or within A Zones shown on the FIRM when determined according to s. 5.1(5).
- b) The Floodfringe District (FF) is that portion of a riverine special flood hazard area outside the floodway within AE Zones on the FIRM, or, when floodway limits have been determined according to s. 5.1(5), within A Zones shown on the FIRM.
- c) The General Floodplain District (GFP) is those riverine areas that may be covered by floodwater during the regional flood in which a floodway boundary has not been delineated on the FIRM and also includes shallow flooding areas identified as AH and AO zones on the FIRM.

(4) LOCATING FLOODPLAIN BOUNDARIES

Discrepancies between the exterior boundaries of zones A1-30, AE, AH, or A on the official floodplain zoning map and actual field conditions may be resolved using the criteria in subd (a) or (b) below. If a significant difference exists, the map shall be amended according to s. 8.0 *Amendments*. The zoning administrator can rely on a boundary derived from a profile elevation to grant or deny a land use permit, whether or not a map amendment is required. The zoning administrator shall be responsible for documenting actual pre-development field conditions and the basis upon which the district boundary was determined. Disputes between the zoning administrator and an applicant over the district boundary line shall be settled according to s. 7.3(3) and the criteria in (a) and (b) below. Where the flood profiles are based on established base flood elevations from a FIRM, FEMA must approve any map amendment or revision pursuant to s. 8.0 *Amendments*.

- a) If flood profiles exist, the map scale and the profile elevations shall determine the district boundary. The regional or base flood elevations shall govern if there are any discrepancies.
- b) Where flood profiles do not exist for projects, including any boundary of zone A, AO, the location of the boundary shall be determined by the map scale.

(5) REMOVAL OF LANDS FROM FLOODPLAIN

- a) Compliance with the provisions of this ordinance shall not be grounds for removing land from the floodplain unless it is filled at least two feet above the regional or base flood elevation, the

fill is contiguous to land outside the floodplain, and the map is amended pursuant to s. 8.0 *Amendments*.

- b) The delineation of any of the Floodplain Districts may be revised by the community where natural or man-made changes have occurred and/or where more detailed studies have been conducted. However, prior to any such change, approval must be obtained from the Wisconsin Department of Natural Resources and Federal Emergency Management Agency. A completed Letter of Map Revision is a record of this approval. The floodplain administrator shall not sign a community acknowledgement form unless all criteria set forth in the following paragraphs are met:
 - 1. The land and/or land around the structure must be filled at least two feet above the regional or base flood elevation;
 - 2. The fill must be contiguous to land outside the floodplain; Applicant shall obtain floodplain development permit before applying for a LOMR or LOMR-F;
- c) Removal of lands from the floodplain may also occur by operation of §87.30(1)(e), Wis. Stat. if a property owner has obtained a letter of map amendment from the federal emergency management agency under 44 C.F.R. 70.

(6) COMPLIANCE

- a) No structure or use within areas regulated by this ordinance shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged, or altered without full compliance with the terms of these regulations and all other applicable regulations that apply to uses within the jurisdiction of these regulations.
- b) Failure to obtain a floodplain development permit shall be a violation of these regulations and shall be punishable in accordance with s. 9.0.
- c) Floodplain development permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the use, and arrangement, set forth in such approved plans and applications, or amendments thereto if approved by the Floodplain Administrator. Use, arrangement, or construction contrary to that authorized shall be deemed a violation of these regulations and punishable in accordance with s. 9.0.

(7) MUNICIPALITIES AND STATE AGENCIES REGULATED

Unless specifically exempted by law, all cities, villages, towns, and counties are required to comply with this ordinance and obtain all necessary permits. State agencies are required to comply if s. 13.48(13), Stats., applies. The construction, reconstruction, maintenance and repair of state highways and bridges by the Wisconsin Department of Transportation is exempt when s. 30.2022, Stats., applies. Although exempt from a local zoning permit and permit fees, DOT must provide sufficient project documentation and analysis to ensure that the community is in compliance with Federal, State, and local floodplain standards. If a local transportation project is located within a Zone A floodplain and is not a WisDOT project under s. 30.2022, then the road project design documents (including appropriate detailed plans and profiles) may be sufficient to meet the requirements for issuance of a local floodplain permit if the following apply: The applicant provides documentation to the Floodplain Administrator that the proposed project is a culvert replacement or bridge replacement under 20' span at the same location, the project is exempt from a DNR permit under s. 30.123(6)(d), the capacity is not decreased, the top road grade is not raised, and no floodway data is available from a federal, state, or other source. If floodway data is available in the impacted area from a federal, state, or other source that existing data must be utilized by the applicant in the analysis of the project site.

(8) ABROGATION AND GREATER RESTRICTIONS

- a) This ordinance supersedes all the provisions of any municipal zoning ordinance enacted under s. 62.23 for cities; or s. 87.30, Stats., which relate to floodplains. A more restrictive ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.
- b) This ordinance is not intended to repeal, abrogate, or impair any existing deed restrictions, covenants, or easements. If this ordinance imposes greater restrictions, the provisions of this ordinance shall prevail.

(9) INTERPRETATION

In their interpretation and application, the provisions of this ordinance are the minimum requirements liberally construed in favor of the governing body and are not a limitation on or repeal of any other powers granted by the Wisconsin Statutes. If a provision of this ordinance, required by ch. NR 116, Wis. Adm. Code, is unclear, the provision shall be interpreted in light of the standards in effect on the date of the adoption of this ordinance or in effect on the date of the most recent text amendment to this ordinance.

(10) WARNING AND DISCLAIMER OF LIABILITY

The flood protection standards in this ordinance are based on engineering experience and research. Larger floods may occur, or the flood height may be increased by man-made or natural causes. This ordinance does not imply or guarantee that non-floodplain areas or permitted floodplain uses will be free from flooding and flood damages. This ordinance does not create liability on the part of, or a cause of action against, the municipality or any officer or employee thereof for any flood damage that may result from reliance on this ordinance.

(11) SEVERABILITY

Should any portion of this ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected.

(12) ANNEXED AREAS FOR CITIES AND VILLAGES

The Fond du Lac and Dodge County floodplain zoning provisions in effect on the date of annexation shall remain in effect and shall be enforced by the municipality for all annexed areas until the municipality adopts and enforces an ordinance which meets the requirements of ch. NR 116, Wis. Adm. Code and 44 CFR 59-72, *National Flood Insurance Program* (NFIP). These annexed lands are described on the municipality's official zoning map. County floodplain zoning provisions are incorporated by reference for the purpose of administering this section and are on file in the office of the municipal zoning administrator. All plats or maps of annexation shall show the regional flood elevation and the floodway location.

2.0 GENERAL STANDARDS APPLICABLE TO ALL FLOODPLAIN DISTRICTS

The community shall review all permit applications to determine whether proposed building sites will be reasonably safe from flooding and assure that all necessary permits have been received from those governmental agencies whose approval is required by federal or state law.

- 1) If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall:
 - a. be designed and anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - b. be constructed with flood-resistant materials;
 - c. be constructed by methods and practices that minimize flood damages; and

- d. Mechanical and utility equipment must be elevated to or above the flood protection elevation.
- 2) If a subdivision or other proposed new development is in a flood-prone area, the community shall assure that:
- a. such proposed subdivision or other proposed new development is consistent with the need to minimize flood damage within the flood-prone area;
 - b. public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
 - c. adequate drainage is provided to reduce exposure to flood hazards.

All subdivision proposals (including manufactured home parks) shall include regional flood elevation and floodway data for any development that meets the subdivision definition of this ordinance and all other requirements in s. 7.1(2).

2.1 HYDRAULIC AND HYDROLOGIC ANALYSES

- 1) No floodplain development shall:
- a. Obstruct flow, defined as development which blocks the conveyance of floodwaters by itself or with other development, causing any increase in the regional flood height; or
 - b. Cause any increase in the regional flood height due to floodplain storage area lost.
- 2) The zoning administrator shall deny permits if it is determined the proposed development will obstruct flow or cause any increase in the regional flood height, based on the officially adopted FIRM or other adopted map, unless the provisions of s. 8.0 *Amendments* are met.

2.2 WATERCOURSE ALTERATIONS

No land use permit to alter or relocate a watercourse in a mapped floodplain shall be issued until the local official has notified in writing all adjacent municipalities, the Department and FEMA regional offices, and required the applicant to secure all necessary state and federal permits. The standards of s. 2.1 must be met and the flood carrying capacity of any altered or relocated watercourse shall be maintained.

As soon as is practicable, but not later than six months after the date of the watercourse alteration or relocation and pursuant to s. 8.0 *Amendments*, the community shall apply for a Letter of Map Revision (LOMR) from FEMA. Any such alterations must be reviewed and approved by FEMA and the DNR through the LOMC process.

2.3 CHAPTER 30, 31, WIS. STATS., DEVELOPMENT

Development which requires a permit from the Department, under chs. 30 and 31, Stats., such as docks, piers, wharves, bridges, culverts, dams, and navigational aids, may be allowed if the necessary permits are obtained and amendments to the floodplain zoning ordinance are made according to s. 8.0 *Amendments*.

2.4 PUBLIC OR PRIVATE CAMPGROUNDS

Public or private campgrounds shall have a low flood damage potential and shall meet the following provisions:

- 1) The campground is approved by the Department of Agriculture, Trade and Consumer Protection;
- 2) A land use permit for the campground is issued by the zoning administrator;
- 3) The character of the river system and the campground elevation are such that a 72-hour warning of an impending flood can be given to all campground occupants;
- 4) There is an adequate flood warning procedure for the campground that offers the minimum notice required under this section to all persons in the campground. This procedure shall include a written agreement between the campground owner, the floodplain zoning agency or zoning administrator, the municipal emergency government coordinator and the chief law enforcement official which specifies the flood elevation at which evacuation shall occur, personnel responsible for monitoring flood elevations, types of warning systems to be used and the procedures for notifying at-risk parties, and the methods and personnel responsible for conducting the evacuation;
- 5) This agreement shall be for no more than one calendar year, at which time the agreement shall be reviewed and updated - by the officials identified in sub. (4) - to remain in compliance with all applicable regulations, including those of the state Department of Agriculture, Trade and Consumer Protection and all other applicable regulations;
- 6) All mobile recreational vehicles placed on site must meet one of the following:
 - a. Be fully licensed, if required, and ready for highway use; or
 - b. Not occupy any site in the campground for more than 180 consecutive days, at which time the recreational vehicle must be removed from the floodplain for a minimum of 24 hours; or
 - c. Meet the requirements in either s. 3.0, 4.0, or 5.1 for the floodplain district in which the structure is located;

A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.
- 7) All camping units that remain on site for more than 30 days shall be issued a limited authorization by the campground operator, a written copy of which is kept on file at the campground. Such authorization shall allow placement of a camping unit consistent with 2.4(6) and shall ensure compliance with all the provisions of this section;
- 8) The municipality shall monitor the limited authorizations issued by the campground operator to assure compliance with the terms of this section;
- 9) The campground shall have signs clearly posted at all entrances warning of the flood hazard and the procedures for evacuation when a flood warning is issued; and
- 10) All service facilities, including but not limited to refuse collection, electrical service, gas lines, propane tanks, sewage systems and wells shall be properly anchored and placed at or floodproofed to the flood protection elevation; and
- 11) Standards for structures in a campground:
 - a. All structures must comply with section 2.4 or meet the applicable requirements in ss. 3.0, 4.0, or 5.1 for the floodplain district in which the structure is located;

- b. Deck/landing-a portable landing may be allowed for a camping unit for each entry provided that the landing is not permanently attached to the ground or camping unit, is no more than 200 square feet in size, shall be portable, contain no walls or roof, and can be removed from the campground by a truck and/or trailer. Sections of such portable landings may be placed together to form a single deck not greater than 200 square feet at one entry point. Provisions for the removal of these temporary landings during flood events must be addressed within the written agreement with the municipality compliant with section 2.4(4). Any such deck/landing structure may be constructed at elevations lower than the flood protection elevation but must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.
 - c. Decks/patios that are constructed completely at grade may be allowed but must also comply with applicable shoreland zoning standards.
 - d. Camping equipment and appurtenant equipment in the campground may be allowed provided that the equipment is not permanently attached to the ground or camping unit, is not used as a habitable structure, and must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood. Provisions for the removal of this equipment during flooding events shall be addressed within the written agreement with the municipality compliant with section 2.4(4).
 - e. Once a flood warning in the written agreement has been issued for the campground, the campground owner or the designated operator shall ensure that all persons, camping units, decks, camping equipment and appurtenant equipment in the campground shall be evacuated within the timelines specified within the written agreement with the municipality compliant with section 2.4(4).
- 12) A land use permit shall be obtained as provided under 7.1(2) before any development; repair, modification, or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated.

3.0 FLOODWAY DISTRICT (FW)

3.1 APPLICABILITY

This section applies to all floodway areas on the floodplain zoning maps and those identified pursuant to s. 5.1(5).

3.2 PERMITTED USES

The following open space uses are allowed in the Floodway District and the floodway areas of the General Floodplain District, if:

- they are not prohibited by any other ordinance;
 - they meet the standards in s. 3.3 and 3.4; and
 - all permits or certificates have been issued according to s. 7.1.
- 1) Agricultural uses, such as: farming, outdoor plant nurseries, horticulture, viticulture, and wild crop harvesting.
 - 2) Nonstructural industrial and commercial uses, such as loading areas, parking areas and airport landing strips.

- 3) Nonstructural recreational uses, such as golf courses, tennis courts, archery ranges, picnic grounds, boat ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting, trap, and skeet activities, hunting and fishing areas and hiking and horseback riding trails, subject to the fill limitations of s. 3.3(4).
- 4) Uses or structures accessory to open space uses or classified as historic structures that comply with s. 3.3 and 3.4.
- 5) Extraction of sand, gravel or other materials that comply with s. 3.3(4).
- 6) Functionally water-dependent uses, such as docks, piers or wharves, dams, flowage areas, culverts, navigational aids and river crossings of transmission lines, and pipelines that comply with chs. 30 and 31, Stats.
- 7) Public utilities, streets and bridges that comply with s. 3.3(3).
- 8) Portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and Ch. SPS 383, Wis. Adm. Code.
- 9) Public or private wells used to obtain potable water for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code.
- 10) Wastewater treatment ponds or facilities permitted under s. NR 110.15(3)(b), Wis. Adm. Code.
- 11) Sanitary sewer or water supply lines to service existing or proposed development located outside the floodway that complies with the regulations for the floodplain area occupied.

3.3 STANDARDS FOR DEVELOPMENT IN THE FLOODWAY

1) GENERAL

- a. Any development in the floodway shall comply with s. 2.0 and have a low flood damage potential.
- b. Applicants shall provide an analysis calculating the effects of this proposal on the regional flood height to determine the effects of the proposal according to s. 2.1 and 7.1(2)(c). The analysis must be completed by a registered professional engineer in the state of Wisconsin.
- c. Any encroachment in the regulatory floodway is prohibited unless the data submitted for subd. 3.3(1)(b) above demonstrates that the encroachment will cause no increase in flood elevations in flood events up to the base flood at any location or removes the encroached area from the regulatory floodway as provided in s. 1.5(5).

2) STRUCTURES

Structures accessory to permanent open space uses, including utility and sanitary facilities, or functionally dependent on a waterfront location may be allowed by permit if the structures comply with the following criteria:

- a. Not designed for human habitation, does not have a high flood damage potential and is constructed to minimize flood damage;
- b. Shall either have the lowest floor elevated to or above the flood protection elevation or shall meet all the following standards:

1. Have the lowest floor elevated to or above the regional flood elevation and be dry floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and completely dry to the flood protection elevation without human intervention during flooding;
 2. Have structural components capable of meeting all provisions of Section 3.3(2)(g) and;
 3. Be certified by a registered professional engineer or architect, through the use of a Federal Emergency Management Agency Floodproofing Certificate, that the design and methods of construction are in accordance with Section 3.3(2)(g).
- c. Must be anchored to resist flotation, collapse, and lateral movement;
- d. Mechanical and utility equipment must be elevated to or above the flood protection elevation; and
- e. Must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.
- f. For a structure designed to allow the automatic entry of floodwaters below the Regional Flood Elevation, the applicant shall submit a plan that meets s. 3.3(2)(a) through 3.3(2)(e) and meets or exceeds the following standards:
1. The lowest floor must be elevated to or above the regional flood elevation;
 2. a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 3. the bottom of all openings shall be no higher than one foot above the lowest adjacent grade; openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters, otherwise must remain open.
 4. The use must be limited to parking, building access or limited storage.
- g. Certification: Whenever floodproofing measures are required, a registered professional engineer or architect shall certify that the following floodproofing measures will be utilized, where appropriate, and are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the regional flood:
1. Reinforcement of floors and walls to resist rupture, collapse, or lateral movement caused by water pressures or debris buildup;
 2. Construction of wells, water supply systems and waste treatment systems so as to prevent the entrance of flood waters in such systems and must be in accordance with provisions in Sections 3.4(4) and 3.4(5);
 3. Subsurface drainage systems to relieve external pressures on foundation walls and basement floors;
 4. Cutoff valves on sewer lines or the elimination of gravity flow basement drains; and
 5. Placement of utilities to or above the flood protection elevation.

3) **PUBLIC UTILITIES, STREETS AND BRIDGES**

Public utilities, streets and bridges may be allowed by permit, if:

- a. Adequate floodproofing measures are provided to the flood protection elevation; and
- b. Construction meets the development standards of s. 2.1.

4) **FILLS OR DEPOSITION OF MATERIALS**

Fills or deposition of materials may be allowed by permit, if:

- a. The requirements of s. 2.1 are met;
- b. No material is deposited in navigable waters unless a permit is issued by the Department pursuant to ch. 30, Stats., and a permit pursuant to s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344 has been issued, if applicable, and all other requirements have been met;
- c. The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading; and
- d. The fill is not classified as a solid or hazardous material.

3.4 PROHIBITED USES

All uses not listed as permitted uses in s. 3.2 are prohibited, including the following uses:

- 1) Habitable structures, structures with high flood damage potential, or those not associated with permanent open-space uses;
- 2) Storing materials that are buoyant, flammable, explosive, injurious to property, water quality, or human, animal, plant, fish or other aquatic life;
- 3) Uses not in harmony with or detrimental to uses permitted in the adjoining districts;
- 4) Any private or public sewage systems, except portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and ch. SPS 383, Wis. Adm. Code;
- 5) Any public or private wells which are used to obtain potable water, except those for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code;
- 6) Any solid or hazardous waste disposal sites;
- 7) Any wastewater treatment ponds or facilities, except those permitted under s. NR 110.15(3)(b), Wis. Adm. Code; and
- 8) Any sanitary sewer or water supply lines, except those to service existing or proposed development located outside the floodway which complies with the regulations for the floodplain area occupied.

4.0 FLOODFRINGE DISTRICT (FF)

4.1 APPLICABILITY

This section applies to all floodfringe areas shown on the floodplain zoning maps and those identified

pursuant to s. 5.1(5).

4.2 PERMITTED USES

Any structure, land use, or development is allowed in the Floodfringe District if the standards in s. 4.3 are met, the use is not prohibited by this, or any other ordinance or regulation and all permits or certificates specified in s. 7.1 have been issued.

4.3 STANDARDS FOR DEVELOPMENT IN THE FLOODFRINGE

Section 2.0 shall apply in addition to the following requirements according to the use requested. Any existing structure in the floodfringe must meet the requirements of s. 6.0 *Nonconforming Uses*;

(1) RESIDENTIAL USES

Any structure, including a manufactured home, which is to be newly constructed or moved into the floodfringe, shall meet or exceed the following standards;

- a) All new construction, including placement of manufactured homes, and substantial improvement of residential structures, shall have the lowest floor elevated to or above the flood protection elevation on fill. The fill around the structure shall be one foot or more above the regional flood elevation extending at least 15 feet beyond the limits of the structure. No area may be removed from the floodfringe district unless it can be shown to meet s. 1.5(5).
- b) Notwithstanding s. 4.3 (1)(a), a basement or crawlspace floor may be placed one foot above the regional flood elevation if the basement or crawlspace is designed to make all portions of the structure below the flood protection elevation watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. No floor of any kind is allowed below the regional flood elevation;
- c) Contiguous dryland access shall be provided from a structure to land outside of the floodplain, except as provided in subd. (d).
- d) In developments where existing street or sewer line elevations make compliance with subd. (c) impractical, the municipality may permit new development and substantial improvements where roads are below the regional flood elevation, if:
 1. The municipality has written assurance from police, fire and emergency services that rescue, and relief will be provided to the structure(s) by wheeled vehicles during a regional flood event; or
 2. The municipality has a DNR-approved emergency evacuation plan that follows acceptable hazard mitigation planning guidelines.

(2) ACCESSORY STRUCTURES OR USES

In addition to s. 2.0, new construction and substantial improvements of Accessory structures shall be constructed on fill with the lowest floor at or above the regional flood elevation.

(3) COMMERCIAL USES

In addition to s. 2.0, any commercial structure which is erected, altered, or moved into the floodfringe shall meet the requirements of s. 4.3(1). Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

(4) MANUFACTURING AND INDUSTRIAL USES

In addition to s. 2.0, any manufacturing or industrial structure which is erected, altered, or moved into the floodfringe shall have the lowest floor elevated to or above the flood protection elevation or meet the floodproofing standards in s 7.5. Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

(5) STORAGE OF MATERIALS

Materials that are buoyant, flammable, explosive, or injurious to property, water quality or human, animal, plant, fish, or aquatic life shall be stored at or above the flood protection elevation or floodproofed in compliance with s. 7.5. Adequate measures shall be taken to ensure that such materials will not enter the water body during flooding.

(6) PUBLIC UTILITIES, STREETS AND BRIDGES

All utilities, streets and bridges shall be designed to be compatible with comprehensive floodplain development plans; and

- a) When failure of public utilities, streets and bridges would endanger public health or safety, or where such facilities are deemed essential, construction or repair of such facilities shall only be permitted if they are designed to comply with s. 7.5.
- b) Minor roads or non-essential utilities may be constructed at lower elevations if they are designed to withstand flood forces to the regional flood elevation.

(7) SEWAGE SYSTEMS

All sewage disposal systems shall be designed to minimize or eliminate infiltration of flood water into the system, pursuant to s. 7.5(3), to the flood protection elevation and meet the provisions of all local ordinances and ch. SPS 383, Wis. Adm. Code.

(8) WELLS

All wells shall be designed to minimize or eliminate infiltration of flood waters into the system, pursuant to s. 7.5(3), to the flood protection elevation and shall meet the provisions of chs. NR 811 and NR 812, Wis. Adm. Code.

(9) SOLID WASTE DISPOSAL SITES

Disposal of solid or hazardous waste is prohibited in floodfringe areas.

(10) DEPOSITION OF MATERIALS

Any deposited material must meet all the provisions of this ordinance.

(11) MANUFACTURED HOMES

- a) Owners or operators of all manufactured home parks and subdivisions shall provide adequate surface drainage to minimize flood damage, and prepare, secure approval, and file an evacuation plan, indicating vehicular access and escape routes, with local emergency management authorities.
- b) In existing manufactured home parks, all new homes, replacement homes on existing pads, and substantially improved homes shall:
 - 1. have the lowest floor elevated to the flood protection elevation; and
 - 2. be anchored so they do not float, collapse, or move laterally during a flood;
- c) Outside of existing manufactured home parks, including new manufactured home parks and all single units outside of existing parks, all new, replacement and substantially improved manufactured homes shall meet the residential development standards for the floodfringe in s. 4.3(1).

(12) MOBILE RECREATIONAL VEHICLES

All mobile recreational vehicles must be on site for less than 180 consecutive days and be either:

- a) fully licensed and ready for highway use; or
- b) shall meet the elevation and anchoring requirements in s. 4.3 (11)(b) and (c).

A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.

5.0 OTHER FLOODPLAIN DISTRICTS

5.1 GENERAL FLOODPLAIN DISTRICT (GFP)

1) APPLICABILITY

The provisions for the General Floodplain District shall apply to development in all floodplains mapped as A, AO, AH, and in AE zones within which a floodway is not delineated on the Flood Insurance Rate Maps identified in s. 1.5(2)(a).

2) FLOODWAY BOUNDARIES

For proposed development in zone A, or in zone AE within which a floodway is not delineated on the Flood Insurance Rate Map identified in s. 1.5(2)(a), the boundaries of the regulatory floodway shall be determined pursuant to s. 5.1(5). If the development is proposed to encroach upon the regulatory floodway, the development is subject to the standards of s 3.0. If the development is located entirely within the floodfringe, the development is subject to the standards of s. 4.0.

3) PERMITTED USES

Pursuant to s. 5.1(5) it shall be determined whether the proposed use is located within the floodway or floodfringe. Those uses permitted in the Floodway (s. 3.2) and Floodfringe (s. 4.2)

Districts are allowed within the General Floodplain District, according to the standards of s. 5.1(4) provided that all permits or certificates required under s. 7.1 have been issued.

4) **STANDARDS FOR DEVELOPMENT IN THE GENERAL FLOODPLAIN DISTRICT**

Section 3.0 applies to floodway areas, determined to pursuant to 5.1(5); Section 4.0 applies to floodfringe areas, determined to pursuant to 5.1(5).

- a) New construction and substantial improvement of structures in zone AO shall have the lowest floor, including basement, elevated:
 - 1. To or above the depth, in feet, as shown on the FIRM above the highest adjacent natural grade plus one additional foot of freeboard or
 - 2. If the depth is not specified on the FIRM, three (3) feet above the highest adjacent natural grade or higher.
- b) New Construction and substantial improvement of structures in zone AH shall have the lowest floor, including basement, elevated to or above the flood protection elevation.
- c) In AO/AH zones, provide adequate drainage paths to guide floodwaters around structures.
- d) All development in zones AO and zone AH shall meet the requirements of s. 4.0 applicable to flood fringe areas.

5) **DETERMINING FLOODWAY AND FLOODFRINGE LIMITS**

Upon receiving an application for development within zone A, or within zone AE where a floodway has not been delineated on the Flood Insurance Rate Maps, the zoning administrator shall:

- a) Require the applicant to submit two copies of an aerial photograph or a plan which shows the proposed development with respect to the general floodplain district limits, stream channel, and existing floodplain developments, along with a legal description of the property, fill limits and elevations, building floor elevations and flood proofing measures and the flood zone as shown on the FIRM.
- b) Require the applicant to furnish any of the following information deemed necessary by the Department to evaluate the effects of the proposal upon flood height and flood flows, regional flood elevation and to determine floodway boundaries.
 - 1. A Hydrologic and Hydraulic Study as specified in s. 7.1(2)(c).
 - 2. Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location, and layout of all proposed and existing structures on the site; location and elevations of streets, water supply, and sanitary facilities; soil types and other pertinent information.
 - 3. Specifications for building construction and materials, floodproofing, filling, dredging, channel improvement, storage, water supply and sanitary facilities.

6.0 NONCONFORMING USES

6.1 GENERAL

- 1) Applicability

- a) The standards in this section shall apply to all uses and buildings that do not conform to the provisions contained within a floodplain zoning ordinance or with s. 87.30, Stats. and §§ NR 116.12-14, Wis. Adm. Code and 44 CFR 59-72., these standards shall apply to all modifications or additions to any nonconforming use or structure and to the use of any structure or premises which was lawful before the passage of this ordinance or any amendment thereto. A party asserting existence of a lawfully established nonconforming use or structure has the burden of proving that the use or structure was compliant with the floodplain zoning ordinance in effect at the time the use or structure was created.
 - b) As permit applications are received for additions, modifications, or substantial improvements to nonconforming buildings in the floodplain, municipalities shall develop a list of those nonconforming buildings, their present equalized assessed value, and a list of the costs of those activities associated with changes to those buildings.
- 2) The existing lawful use of a structure or its accessory use which is not in conformity with the provisions of this ordinance may continue subject to the following conditions:

- a) No modifications or additions to a nonconforming use or structure shall be permitted unless they comply with this ordinance. The words "modification" and "addition" include, but are not limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Maintenance is not considered a modification; this includes painting, decorating, paneling and other nonstructural components and the maintenance, repair or replacement of existing private sewage or water supply systems or connections to public utilities. Any costs associated with the repair of a damaged structure are not considered maintenance.

The construction of a deck that does not exceed 200 square feet and that is adjacent to the exterior wall of a principal structure is not an extension, modification, or addition. The roof of the structure may extend over a portion of the deck in order to provide safe ingress and egress to the principal structure.

- b) If a nonconforming use or the use of a nonconforming structure is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall conform to the applicable requirements of this ordinance;
- c) The municipality shall keep a record which lists all nonconforming uses and nonconforming structures, their present equalized assessed value, the cost of all modifications or additions which have been permitted, and the percentage of the structure's total current value those modifications represent;
- d) No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). The costs of elevating the lowest floor of a nonconforming building or a building with a nonconforming use to the flood protection elevation are excluded from the 50% provisions of this paragraph;
- e) No maintenance on a per event basis to any nonconforming structure or any structure with a nonconforming use, the cost of which would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). Maintenance to any nonconforming structure, which does

not exceed 50% of its present equalized assessed value on a per event basis, does not count against the cumulative calculations over the life of the structure for substantial improvement calculations.

- f) If on a per event basis the total value of the work being done under (d) and (e) equals or exceeds 50% of the present equalized assessed value, the work shall not be permitted unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1).
- g) Except as provided in subd. (h), if any nonconforming structure or any structure with a nonconforming use is destroyed or is substantially damaged, it cannot be replaced, reconstructed, or rebuilt unless the use and the structure meet the current ordinance requirements. A structure is considered substantially damaged if the total cost to restore the structure to its pre-damaged condition equals or exceeds 50% of the structure's present equalized assessed value.
- h) For nonconforming buildings that are substantially damaged or destroyed by a nonflood disaster, the repair or reconstruction of any such nonconforming building shall be permitted in order to restore it to the size and use in effect prior to the damage event, provided that the following minimum requirements are met, and all required permits have been granted prior to the start of construction:

1. Residential Structures

- a. Shall have the lowest floor, including basement, elevated to one foot above the base flood elevation using fill, pilings, columns, posts, or perimeter walls. Perimeter walls must meet the requirements of s. 7.5(2).
- b. Shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, and shall be constructed with methods and materials resistant to flood damage.
- c. Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.
- d. In A Zones, obtain, review, and utilize any flood data available from a federal, state or other source.
- e. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.1(4).
- f. in AO Zones, shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

2. Nonresidential Structures

- a. Shall meet the requirements of s. 6.1(2)(h)1a-f.
- b. Shall either have the lowest floor, including basement, elevated to or above the regional flood elevation; or, together with attendant utility and sanitary facilities, shall meet the standards in s. 7.5 (1) or (2).

- c. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.1(4).
- 3) A nonconforming historic structure may be altered if the alteration will not preclude the structure's continued designation as a historic structure, the alteration will comply with s. 3.3 (1), flood resistant materials are used, and construction practices and floodproofing methods that comply with s. 7.5 are used. Repair or rehabilitation of historic structures shall be exempt from the development standards of s. 6.1 (2)(h)1 if it is determined that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure.
- 4) Notwithstanding anything in this chapter to the contrary, modifications, additions, maintenance, and repairs to a nonconforming building shall not be prohibited based on cost and the building's nonconforming use shall be permitted to continue if:
- a) Any living quarters in the nonconforming building are elevated to be at or above the flood protection elevation;
 - b) The lowest floor of the nonconforming building, including the basement, is elevated to one foot above the regional flood elevation;
 - c) The nonconforming building is permanently changed to conform to the applicable requirements of 2.0;
 - d) If the nonconforming building is in the floodway, the building is permanently changed to conform to the applicable requirements of 3.3(1), 3.3(2)(b) through (e), 3.3(3), 3.3(4), and 6.2. Any development that adds additional fill or creates an encroachment in the floodplain from beyond the original nonconforming structure's 3-D building envelope must determine the floodway in accordance with section 5.1(5). If the encroachment is in the floodway, it must meet the standards in section 3.3(4);
 - e) If the nonconforming building is in the floodfringe, the building is permanently changed to conform to the applicable requirements of 4.3 and 6.3;
 - f) Repair or reconstruction of nonconforming structures and substantial improvements of residential buildings in zones A1-30, AE, and AH must have the lowest floor (including basement) elevated to one foot above the base flood elevation;
 - g) Repair or reconstruction of nonconforming structures and substantial improvements of non-residential buildings in zones A1-30, AE, and AH must have the lowest floor (including basement) elevated to or above the base flood elevation, or (together with attendant utility and sanitary facilities) be designed so that below the base flood elevation the building is watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy:
 - i. Where a non-residential structure is intended to be made watertight below the base flood elevation, a registered professional engineer or architect must develop and/or review structural design, specifications, and plans for the construction, and must certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of s. 6.1(4)(g) above.
 - ii. The community must maintain a record of such certification including the specific elevation to which each such structure is floodproofed;

- h) Fully enclosed areas below the lowest floor of repair or reconstruction of nonconforming structures and substantial improvements in zones A1-30, AE, and AH that are usable solely for parking of vehicles, building access, or storage, must be designed to adequately equalize hydrostatic forces on exterior walls by allowing for the entry and exit of floodwaters. Subsequent improvements to repaired or reconstructed nonconforming structures must not increase the degree of their nonconformity. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet the following criteria:
- i. A minimum of two openings into each enclosed area must be located below the base flood elevation and provide a total net area of not less than one square inch for every square foot of enclosed area.
 - ii. The bottom of all openings must be no higher than one foot above the adjacent grade.
 - iii. Openings may be equipped with screens, louvers, valves, or other coverings if they permit the automatic entry and exit of floodwaters;
- i) Manufactured homes that are placed or substantially improved within zones A1-30, AE, and AH outside of a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as a result of flood, must be elevated on a permanent foundation such that the lowest floor of the manufactured home is at one foot above the base flood elevation, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement;
- j) Manufactured homes that are placed or substantially improved within zones A1-30, AE, and AH on existing sites in an existing manufactured home park that is not undergoing expansion and on which a manufactured home has not incurred substantial damage as a result of flood must be elevated so that either the lowest floor of the manufactured home is at one foot above the base flood elevation, or the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement;
- k) Recreational vehicles placed on sites within zones A1-30, AH, and AE must either:
- i. Be on site for fewer than 180 consecutive days; or
 - ii. Be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions); or
 - iii. Meet the elevation and anchoring requirements for manufactured homes in s. 6.1(4)(i) above;
- l) In a regulatory floodway that has been delineated on the FIRM in zone A1-30 or AE, encroachments, including repair or reconstruction of nonconforming structures, substantial improvement, or other development (including fill) must be prohibited unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment will not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity;

- m) In zone A, the community must obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source as criteria for requiring repair or reconstruction of nonconforming structures, substantial improvement, and other development to meet ss. 6.1(4)(f) through (l) (inclusive) above. Any development that adds additional fill or creates an encroachment in the floodplain from beyond the original nonconforming structure's 3-D building envelope must determine the floodway in accordance with section 5.1(5). If the encroachment is in the floodway, it must meet the standards in section 3.3(4). Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity;
- n) In zones A1-30 or AE where a regulatory floodway has not been delineated on the FIRM, repair or reconstruction of nonconforming structures, substantial improvement, or any development that adds additional fill or creates an encroachment in the floodplain from beyond the original nonconforming structure's 3-D building envelope must determine the floodway in accordance with section 5.1(5). If the encroachment is in the floodway, it must meet the standards in section 3.3(4). Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity;
- o) In zone AO, repair or reconstruction of nonconforming structures and substantial improvements of residential structures must have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as one foot more than the depth number specified in feet on the FIRM (at least three feet if no depth number is specified). Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity; or
- p) In zone AO, repair or reconstruction of nonconforming structures and substantial improvements of nonresidential structures must have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified), or (together with attendant utility and sanitary facilities) be structurally dry-floodproofed to that level according to the standard specified in s. 6.1(4)(g) above. Subsequent improvements to repair or reconstructed nonconforming structures must not increase the degree of their nonconformity.

6.2 FLOODWAY DISTRICT

- 1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in the Floodway District, unless such modification or addition:
 - a) Has been granted a permit or variance which meets all ordinance requirements;
 - b) Meets the requirements of s. 6.1;
 - c) Shall not increase the obstruction to flood flows or regional flood height;
 - d) Any addition to the existing structure shall be floodproofed, pursuant to s. 7.5, by means other than the use of fill, to the flood protection elevation; and,
 - e) If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:
 - 1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two

openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;

2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;
3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and
4. The use must be limited to parking, building access or limited storage.

- 2) No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing on-site sewage disposal system in a floodway area shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and Ch. SPS 383, Wis. Adm. Code.
- 3) No new well or modification to an existing well used to obtain potable water shall be allowed in the Floodway District. Any replacement, repair, or maintenance of an existing well in the Floodway District shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and chs. NR 811 and NR 812, Wis. Adm. Code.

6.3 FLOODFRINGE DISTRICT

- 1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use unless such modification or addition has been granted a permit or variance by the municipality and meets the requirements of s. 4.3 except where s. 6.3(2) is applicable.
- 2) Where compliance with the provisions of subd. (1) would result in unnecessary hardship and only where the structure will not be used for human habitation or be associated with a high flood damage potential, the Board of Appeals, using the procedures established in s. 7.3, may grant a variance from those provisions of subd. (1) for modifications or additions using the criteria listed below. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if:
 - a) No floor is allowed below the regional flood elevation for residential or commercial structures;
 - b) Human lives are not endangered;
 - c) Public facilities, such as water or sewer, shall not be installed;
 - d) Flood depths shall not exceed two feet;
 - e) Flood velocities shall not exceed two feet per second; and
 - f) The structure shall not be used for storage of materials as described in s. 4.3(5).
- 3) All new private sewage disposal systems, or addition to, replacement, repair or maintenance of a private sewage disposal system shall meet all the applicable provisions of all local ordinances, s. 7.5 (3) and ch. SPS 383, Wis. Adm. Code.
- 4) All new wells, or addition to, replacement, repair, or maintenance of a well shall meet the applicable provisions of this ordinance, s. 7.5 (3) and ch. NR 811 and NR 812, Wis. Adm. Code.

7.0 ADMINISTRATION

Where a zoning administrator, planning agency or a board of appeals has already been appointed to administer a zoning ordinance adopted under ss. 59.69, 59.692 or 62.23(7), Stats., these officials shall also administer this ordinance.

7.1 ZONING ADMINISTRATOR

1) DUTIES AND POWERS

The zoning administrator is authorized to administer this ordinance and shall have the following duties and powers:

- a) Advise applicants of the ordinance provisions, assist in preparing permit applications and appeals, and assure that the regional flood elevation for the proposed development is shown on all permit applications.
- b) Issue permits and inspect properties for compliance with provisions of this ordinance and issue certificates of compliance where appropriate
- c) Inspect and assess all damaged floodplain structures to determine if substantial damage to the structures has occurred.
- d) Keep records of all official actions such as:
 1. All permits issued, inspections made, and work approved;
 2. Documentation of certified lowest floor and regional flood elevations;
 3. Floodproofing certificates.
 4. Water surface profiles, floodplain zoning maps and ordinances, nonconforming uses and structures including changes, appeals, variances and amendments.
 5. All substantial damage assessment reports for floodplain structures.
 6. List of nonconforming structures and uses.
- e) Submit copies of the following items to the Department Regional office:
 1. Within 10 days of the decision, a copy of any decisions on variances, appeals for map or text interpretations, and map or text amendments;
 2. Copies of case-by-case analyses and other required information.
 3. Copies of substantial damage assessments performed and all related correspondence concerning the assessments.
- f) Investigate, prepare reports, and report violations of this ordinance to the municipal zoning agency and attorney for prosecution. Copies of the reports shall also be sent to the Department Regional office.
- g) Submit copies of amendments to the FEMA Regional office.

2) LAND USE PERMIT

A land use permit shall be obtained before any development; repair, modification, or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated. Application to the zoning administrator shall include:

a) GENERAL INFORMATION

1. Name and address of the applicant, property owner and contractor;

2. Legal description, proposed use, and whether it is new construction or a modification;

b) SITE DEVELOPMENT PLAN

A site plan drawn to scale shall be submitted with the permit application form and shall contain:

1. Location, dimensions, area and elevation of the lot;
2. Location of the ordinary highwater mark of any abutting navigable waterways;
3. Location of any structures with distances measured from the lot lines and street center lines;
4. Location of any existing or proposed on-site sewage systems or private water supply systems;
5. Location and elevation of existing or future access roads;
6. Location of floodplain and floodway limits as determined from the official floodplain zoning maps;
7. The elevation of the lowest floor of proposed buildings and any fill using the vertical datum from the adopted study – either National Geodetic Vertical Datum (NGVD) or North American Vertical Datum (NAVD);
8. Data sufficient to determine the regional flood elevation in NGVD or NAVD at the location of the development and to determine whether or not the requirements of s. 3.0 or 4.0 are met; and
9. Data to determine if the proposed development will cause an obstruction to flow or an increase in regional flood height or discharge according to s. 2.1. This may include any of the information noted in s. 3.3(1).

c) HYDRAULIC AND HYDROLOGIC STUDIES TO ANALYZE DEVELOPMENT

All hydraulic and hydrologic studies shall be completed under the direct supervision of a professional engineer registered in the State. The study contractor shall be responsible for the technical adequacy of the study. All studies shall be reviewed and approved by the Department.

1. Zone A floodplains and in AE zones within which a floodway is not delineated:

a. Hydrology

- i. The appropriate method shall be based on the standards in ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge*.

b. Hydraulic modeling

The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

- i. determination of the required limits of the hydraulic model shall be based on detailed study information for downstream structures (dam, bridge, culvert) to determine adequate starting WSEL for the study.

- ii. channel sections must be surveyed.
 - iii. minimum four-foot contour data in the overbanks shall be used for the development of cross section overbank and floodplain mapping.
 - iv. a maximum distance of 500 feet between cross sections is allowed in developed areas with additional intermediate cross sections required at transitions in channel bottom slope including a survey of the channel at each location.
 - v. the most current version of HEC-RAS shall be used.
 - vi. a survey of bridge and culvert openings and the top of road is required at each structure.
 - vii. additional cross sections are required at the downstream and upstream limits of the proposed development and any necessary intermediate locations based on the length of the reach if greater than 500 feet.
 - viii. standard accepted engineering practices shall be used when assigning parameters for the base model such as flow, Manning's N values, expansion and contraction coefficients or effective flow limits. The base model shall be calibrated to past flooding data such as high-water marks to determine the reasonableness of the model results. If no historical data is available, adequate justification shall be provided for any parameters outside standard accepted engineering practices.
 - ix. the model must extend past the upstream limit of the difference in the existing and proposed flood profiles in order to provide a tie-in to existing studies. The height difference between the proposed flood profile and the existing study profiles shall be no more than 0.00 feet.
- c. Mapping
- A work map of the reach studied shall be provided, showing all cross-section locations, floodway/floodplain limits based on best available topographic data, geographic limits of the proposed development and whether the proposed development is located in the floodway.
- i. If the proposed development is located outside of the floodway, then it is determined to have no impact on the regional flood elevation.
 - ii. If any part of the proposed development is in the floodway, it must be added to the base model to show the difference between existing and proposed conditions. The study must ensure that all coefficients remain the same as in the existing model, unless adequate justification based on standard accepted engineering practices is provided.

2. Zone AE Floodplains

a. Hydrology

If the proposed hydrology will change the existing study, the appropriate method to be used shall be based on ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge*.

b. Hydraulic model

The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

- i. Duplicate Effective Model
The effective model shall be reproduced to ensure correct transference of the model data and to allow integration of the revised data to provide a continuous FIS model upstream and downstream of the revised reach. If data from the effective model is available, models shall be generated that duplicate the FIS profiles and the elevations shown in the Floodway Data Table in the FIS report to within 0.1 foot.
 - ii. Corrected Effective Model.
The Corrected Effective Model shall not include any man-made physical changes since the effective model date but shall import the model into the most current version of HEC-RAS for Department review.
 - iii. Existing (Pre-Project Conditions) Model.
The Existing Model shall be required to support conclusions about the actual impacts of the project associated with the Revised (Post-Project) Model or to establish more up-to-date models on which to base the Revised (Post-Project) Model.
 - iv. Revised (Post-Project Conditions) Model.
The Revised (Post-Project Conditions) Model shall incorporate the Existing Model and any proposed changes to the topography caused by the proposed development. This model shall reflect proposed conditions.
 - v. All changes to the Duplicate Effective Model and subsequent models must be supported by certified topographic information, bridge plans, construction plans and survey notes.
 - vi. Changes to the hydraulic models shall be limited to the stream reach for which the revision is being requested. Cross sections upstream and downstream of the revised reach shall be identical to those in the effective model and result in water surface elevations and top widths computed by the revised models matching those in the effective models upstream and downstream of the revised reach as required. The Effective Model shall not be truncated.
- c. Mapping
Maps and associated engineering data shall be submitted to the Department for review which meet the following conditions:
- i. Consistency between the revised hydraulic models, the revised floodplain and floodway delineations, the revised flood profiles, topographic work map, annotated FIRMs and/or Flood Boundary Floodway Maps (FBFMs), construction plans, bridge plans.
 - ii. Certified topographic map of suitable scale, contour interval, and a planimetric map showing the applicable items. If a digital version of the map is available, it may be submitted in order that the FIRM may be more easily revised.
 - iii. Annotated FIRM panel showing the revised 1% and 0.2% annual chance floodplains and floodway boundaries.

- iv. If an annotated FIRM and/or FBFM and digital mapping data (GIS or CADD) are used, then all supporting documentation or metadata must be included with the data submission along with the Universal Transverse Mercator (UTM) projection and State Plane Coordinate System in accordance with FEMA mapping specifications.
- v. The revised floodplain boundaries shall tie into the effective floodplain boundaries.
- vi. All cross sections from the effective model shall be labeled in accordance with the effective map and a cross section lookup table shall be included to relate to the model input numbering scheme.
- vii. Both the current and proposed floodways shall be shown on the map.
- viii. The stream centerline, or profile baseline used to measure stream distances in the model shall be visible on the map.

d) EXPIRATION

All permits issued under the authority of this ordinance shall expire no more than 180 days after issuance. The permit may be extended for a maximum of 180 days for good and sufficient cause. If the permitted work has not started within 180 days of the permit date, the development must comply with any regulation, including any revision to the FIRM or FIS, that took effect after the permit date.

3) CERTIFICATE OF COMPLIANCE

No land shall be occupied or used, and no building which is hereafter constructed, altered, added to, modified, repaired, rebuilt, or replaced shall be occupied until a certificate of compliance is issued by the zoning administrator, except where no permit is required, subject to the following provisions:

- a) The certificate of compliance shall show that the building or premises or part thereof, and the proposed use, conform to the provisions of this ordinance;
- b) Application for such certificate shall be concurrent with the application for a permit;
- c) If all ordinance provisions are met, the certificate of compliance shall be issued within 10 days after written notification that the permitted work is completed;
- d) The applicant shall submit a certification signed by a registered professional engineer, architect, or land surveyor that the fill, lowest floor and floodproofing elevations are in compliance with the permit issued. Floodproofing measures also require certification by a registered professional engineer or architect that the requirements of s. 7.5 are met.
- e) Where applicable pursuant to s. 5.1(4), the applicant must submit a certification by a registered professional engineer or surveyor of the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor (excluding pilings or columns), and an indication of whether the structure contains a basement.
- f) Where applicable pursuant to s. 5.1(4), the applicant must submit certifications by a registered professional engineer or architect that the structural design and methods of construction meet accepted standards of practice as required by s. 5.1(4).

4) OTHER PERMITS

Prior to obtaining a floodplain development permit the applicant must secure all necessary permits from federal, state, and local agencies, including but not limited to those required by the U.S. Army Corps of Engineers under s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344.

7.2 ZONING AGENCY

- 1) The City Administrator shall:
 - a) oversee the functions of the office of the zoning administrator; and
 - b) review and advise the governing body on all proposed amendments to this ordinance, maps, and text.
 - c) publish adequate notice pursuant to Ch. 985, Stats., specifying the date, time, place, and subject of the public hearing.
- 2) The City Administrator shall not:
 - a) grant variances to the terms of the ordinance in place of action by the Board of Appeals; or
 - b) amend the text or zoning maps in place of official action by the governing body.

7.3 BOARD OF APPEALS

The Board of Appeals, created under s. 62.23(7)(e), Stats., for cities or villages, is hereby authorized or shall be appointed to act for the purposes of this ordinance. The Board shall exercise the powers conferred by Wisconsin Statutes and adopt rules for the conduct of business. The zoning administrator shall not be the secretary of the Board.

1) POWERS AND DUTIES

The Board of Appeals shall:

- a) Appeals - Hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by an administrative official in the enforcement or administration of this ordinance;
- b) Boundary Disputes - Hear and decide disputes concerning the district boundaries shown on the official floodplain zoning map; and
- c) Variances - Hear and decide, upon appeal, variances from the ordinance standards.

2) APPEALS TO THE BOARD

- a) Appeals to the board may be taken by any person aggrieved, or by any officer or department of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within 30 days unless otherwise provided by the rules of the board, by filing with the official whose decision is in question, and with the board, a notice of appeal specifying the reasons for the appeal. The official whose decision is in question shall transmit to the board all records regarding the matter appealed.

b) NOTICE AND HEARING FOR APPEALS INCLUDING VARIANCES

1. Notice - The board shall:

- a. Fix a reasonable time for the hearing;
- b. Publish adequate notice pursuant to Wisconsin Statutes, specifying the date, time, place, and subject of the hearing; and

- c. Assure that notice shall be mailed to the parties in interest and the Department Regional office at least 10 days in advance of the hearing.

2. Hearing - Any party may appear in person or by agent. The board shall:

- a. Resolve boundary disputes according to s. 7.3(3);
- b. Decide variance applications according to s. 7.3(4); and
- c. Decide appeals of permit denials according to s. 7.4.

c) **DECISION:** The final decision regarding the appeal or variance application shall:

- 1. Be made within a reasonable time;
- 2. Be sent to the Department Regional office within 10 days of the decision;
- 3. Be a written determination signed by the chairman or secretary of the Board;
- 4. State the specific facts which are the basis for the Board's decision;
- 5. Either affirm, reverse, vary or modify the order, requirement, decision, or determination appealed, in whole or in part, dismiss the appeal for lack of jurisdiction or grant or deny the variance application; and
- 6. Include the reasons for granting an appeal, describing the hardship demonstrated by the applicant in the case of a variance, clearly stated in the recorded minutes of the Board proceedings.

3) **BOUNDARY DISPUTES**

The following procedure shall be used by the Board in hearing disputes concerning floodplain district boundaries:

- a) If a floodplain district boundary is established by approximate or detailed floodplain studies, the flood elevations or profiles shall prevail in locating the boundary.
- b) The person contesting the boundary location shall be given a reasonable opportunity to present arguments and technical evidence to the Board; and
- c) If the boundary is incorrectly mapped, the Board should inform the zoning committee or the person contesting the boundary location to petition the governing body for a map amendment according to s. 8.0 *Amendments*.

4) **VARIANCE**

a) The Board may, upon appeal, grant a variance from the standards of this ordinance if an applicant convincingly demonstrates that:

- 1. Literal enforcement of the ordinance will cause unnecessary hardship;
- 2. The hardship is due to adoption of the floodplain ordinance and unique property conditions, not common to adjacent lots or premises. In such case the ordinance or map must be amended;
- 3. The variance is not contrary to the public interest; and
- 4. The variance is consistent with the purpose of this ordinance in s. 1.3.

- b) In addition to the criteria in subd. (a), to qualify for a variance under FEMA regulations, the Board must find that the following criteria have been met:
 - 1. The variance shall not cause any increase in the regional flood elevation;
 - 2. The applicant has shown good and sufficient cause for issuance of the variance;
 - 3. Failure to grant the variance would result in exceptional hardship;
 - 4. Granting the variance will not result in additional threats to public safety, extraordinary expense, create a nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;
 - 5. The variance granted is the minimum necessary, considering the flood hazard, to afford relief.

- c) A variance shall not:
 - 1. Grant, extend or increase any use prohibited in the zoning district;
 - 2. Be granted for a hardship based solely on an economic gain or loss;
 - 3. Be granted for a hardship which is self-created.
 - 4. Damage the rights or property values of other persons in the area;
 - 5. Allow actions without the amendments to this ordinance or map(s) required in s. 8.0 *Amendments*; and
 - 6. Allow any alteration of an historic structure, including its use, which would preclude its continued designation as an historic structure.

- d) When a floodplain variance is granted, the Board shall notify the applicant in writing that it may increase risks to life and property and flood insurance premiums could increase up to \$25.00 per \$100.00 of coverage. A copy shall be maintained with the variance record.

7.4 TO REVIEW APPEALS OF PERMIT DENIALS

- (1) The Zoning Agency (s. 7.2) or Board shall review all data related to the appeal. This may include:
 - a. Permit application data listed in s. 7.1(2);
 - b. Floodway/floodfringe determination data in s. 5.1(5);
 - c. Data listed in s. 3.3(1)(b) where the applicant has not submitted this information to the zoning administrator; and
 - d. Other data submitted with the application or submitted to the Board with the appeal.

- (2) For appeals of all denied permits the Board shall:
 - a. Follow the procedures of s. 7.3;
 - b. Consider zoning agency recommendations; and

- c. Either uphold the denial or grant the appeal.
- (3) For appeals concerning increases in regional flood elevation the Board shall:
- a. Uphold the denial where the Board agrees with the data showing an increase in flood elevation. Increases may only be allowed after amending the flood profile and map and all appropriate legal arrangements are made with all adversely affected property owners as per the requirements of s. 8.0 *Amendments*; and
 - b. Grant the appeal where the Board agrees that the data properly demonstrates that the project does not cause an increase provided no other reasons for denial exist.

7.5 FLOODPROOFING STANDARDS

- (1) No permit or variance shall be issued for a non-residential structure designed to be watertight below the regional flood elevation until the applicant submits a plan certified by a registered professional engineer or architect that the floodproofing measures will protect the structure or development to or above the flood protection elevation and submits a FEMA Floodproofing Certificate. Floodproofing is not an alternative to the development standards in ss. 2.0, 3.0, 4.0, or 5.1.
- (2) For a structure designed to allow the entry of floodwaters, no permit or variance shall be issued until the applicant submits a plan either:
- a. certified by a registered professional engineer or architect; or
 - b. meeting or exceeding the following standards:
 - 1. a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - 2. the bottom of all openings shall be no higher than one foot above grade; and
 - 3. openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (3) Floodproofing measures shall be designed, as appropriate, to:
- a. Withstand flood pressures, depths, velocities, uplift and impact forces and other regional flood factors;
 - b. Protect structures to the flood protection elevation;
 - c. Anchor structures to foundations to resist flotation and lateral movement;
 - d. Minimize or eliminate infiltration of flood waters;
 - e. Minimize or eliminate discharges into flood waters;
 - f. Placement of essential utilities to or above the flood protection elevation; and
 - g. If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:
 - 1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;

2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;
3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and
4. The use must be limited to parking, building access or limited storage.

7.6 PUBLIC INFORMATION

- (1) Place marks on structures to show the depth of inundation during the regional flood.
- (2) All maps, engineering data and regulations shall be available and widely distributed.
- (3) Real estate transfers should show what floodplain district any real property is in.

8.0 AMENDMENTS

Obstructions or increases may only be permitted if amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 8.1.

- (1) In AE Zones with a mapped floodway, no obstructions or increases shall be permitted unless the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 8.1. Any such alterations must be reviewed and approved by FEMA and the DNR.
- (2) In A Zones increases equal to or greater than 1.0 foot may only be permitted if the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain maps, floodway lines, and water surface profiles, in accordance with s. 8.1.

8.1 GENERAL

The governing body shall change or supplement the floodplain zoning district boundaries and this ordinance in the manner outlined in s. 8.2 below. Actions which require an amendment to the ordinance and/or submittal of a Letter of Map Change (LOMC) include, but are not limited to, the following:

- (1) Any fill or floodway encroachment that obstructs flow causing any increase in the regional flood height;
- (2) Any change to the floodplain boundaries and/or watercourse alterations on the FIRM;
- (3) Any changes to any other officially adopted floodplain maps listed in s. 1.5 (2)(b);
- (4) Any floodplain fill which raises the elevation of the filled area to a height at or above the flood protection elevation and is contiguous to land lying outside the floodplain;
- (5) Correction of discrepancies between the water surface profiles and floodplain maps;
- (6) Any upgrade to a floodplain zoning ordinance text required by s. NR 116.05, Wis. Adm. Code, or otherwise required by law, or for changes by the municipality; and

- (7) All channel relocations and changes to the maps to alter floodway lines or to remove an area from the floodway or the floodfringe that is based on a base flood elevation from a FIRM requires prior approval by FEMA.

8.2 PROCEDURES

Ordinance amendments may be made upon petition of any party according to the provisions of s. 62.23, Stats., for cities and villages. The petitions shall include all data required by s. 5.1(5) and 7.1(2). The Land Use Permit shall not be issued until a Letter of Map Revision is issued by FEMA for the proposed changes.

- (1) The proposed amendment shall be referred to the zoning agency for a public hearing and recommendation to the governing body. The amendment and notice of public hearing shall be submitted to the Department Regional office for review prior to the hearing. The amendment procedure shall comply with the provisions of s. 62.23, Stats., for cities and villages.
- (2) No amendments shall become effective until reviewed and approved by the Department.
- (3) All persons petitioning for a map amendment that obstructs flow causing any increase in the regional flood height, shall obtain flooding easements or other appropriate legal arrangements from all adversely affected property owners and notify local units of government before the amendment can be approved by the governing body.

9.0 ENFORCEMENT AND PENALTIES

Any violation of the provisions of this ordinance by any person shall be unlawful and shall be referred to the municipal attorney who shall expeditiously prosecute all such violators. A violator shall, upon conviction, forfeit to the municipality a penalty of not more than \$50.00 (fifty dollars), together with a taxable cost of such action. Each day of continued violation shall constitute a separate offense. Every violation of this ordinance is a public nuisance, and the creation may be enjoined, and the maintenance may be abated by action at suit of the municipality, the state, or any citizen thereof pursuant to s. 87.30, Stats.

10.0 DEFINITIONS

Unless specifically defined, words and phrases in this ordinance shall have their common law meaning and shall be applied in accordance with their common usage. Words used in the present tense include the future, the singular number includes the plural and the plural number includes the singular. The word "may" is permissive, "shall" is mandatory and is not discretionary.

1. A ZONES – Those areas shown on the Official Floodplain Zoning Map which would be inundated by the regional flood. These areas may be numbered or unnumbered A Zones. The A Zones may or may not be reflective of flood profiles, depending on the availability of data for a given area.
2. AH ZONE – See “AREA OF SHALLOW FLOODING”.
3. AO ZONE – See “AREA OF SHALLOW FLOODING”.
4. ACCESSORY STRUCTURE OR USE – A facility, structure, building or use which is accessory or incidental to the principal use of a property, structure or building. An accessory structure shall not be used for human habitation.
5. ALTERATION – An enhancement, upgrade or substantial change or modification other than an addition or repair to a dwelling or to electrical, plumbing, heating, ventilating, air conditioning and

other systems within a structure.

6. AREA OF SHALLOW FLOODING – A designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flood may be evident. Such flooding is characterized by ponding or sheet flow.
7. BASE FLOOD – Means the flood having a one percent chance of being equaled or exceeded in any given year, as published by FEMA as part of a FIS and depicted on a FIRM.
8. BASEMENT – Any enclosed area of a building having its floor sub-grade on all sides.
9. BUILDING – See STRUCTURE.
10. BULKHEAD LINE – A geographic line along a reach of navigable water that has been adopted by a municipal ordinance and approved by the Department pursuant to s. 30.11, Stats., and which allows limited filling between this bulkhead line and the original ordinary highwater mark, except where such filling is prohibited by the floodway provisions of this ordinance.
11. CAMPGROUND – Any parcel of land which is designed, maintained, intended, or used for the purpose of providing sites for nonpermanent overnight use by 4 or more camping units, or which is advertised or represented as a camping area.
12. CAMPING UNIT – Any portable device, no more than 400 square feet in area, used as a temporary shelter, including but not limited to a camping trailer, motor home, bus, van, pick-up truck, or tent that is fully licensed, if required, and ready for highway use.
13. CERTIFICATE OF COMPLIANCE – A certification that the construction and the use of land or a building, the elevation of fill or the lowest floor of a structure is in compliance with all of the provisions of this ordinance.
14. CHANNEL – A natural or artificial watercourse with definite bed and banks to confine and conduct normal flow of water.
15. CRAWLWAYS or CRAWL SPACE – An enclosed area below the first usable floor of a building, generally less than five feet in height, used for access to plumbing and electrical utilities.
16. DECK – An unenclosed exterior structure that has no roof or sides and has a permeable floor which allows the infiltration of precipitation.
17. DEPARTMENT – The Wisconsin Department of Natural Resources.
18. DEVELOPMENT – Any artificial change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures; the construction of additions or alterations to buildings, structures or accessory structures; the repair of any damaged structure or the improvement or renovation of any structure, regardless of percentage of damage or improvement; the placement of buildings or structures; subdivision layout and site preparation; mining, dredging, filling, grading, paving, excavation or drilling operations; the storage, deposition or extraction of materials or equipment; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.
19. DRYLAND ACCESS – A vehicular access route which is above the regional flood elevation, and which connects land located in the floodplain to land outside the floodplain, such as a road with its surface above regional flood elevation and wide enough for wheeled rescue and relief vehicles.

20. ENCROACHMENT – Any fill, structure, equipment, use or development in the floodway.
21. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) – The federal agency that administers the National Flood Insurance Program.
22. FLOOD INSURANCE RATE MAP (FIRM) – A map of a community on which the Federal Insurance Administration has delineated both the floodplain and the risk premium zones applicable to the community. This map can only be amended by the Federal Emergency Management Agency.
23. FLOOD or FLOODING – A general and temporary condition of partial or complete inundation of normally dry land areas caused by one of the following conditions:
 - The overflow or rise of inland waters;
 - The rapid accumulation or runoff of surface waters from any source;
 - The inundation caused by waves or currents of water exceeding anticipated cyclical levels along the shore of Lake Michigan or Lake Superior; or
 - The sudden increase caused by an unusually high-water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a seiche, or by some similarly unusual event.
24. FLOOD FREQUENCY – The probability of a flood occurrence which is determined from statistical analyses. The frequency of a particular flood event is usually expressed as occurring, on the average once in a specified number of years or as a percent (%) chance of occurring in any given year.
25. FLOODFRINGE – That portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood and associated with standing water rather than flowing water.
26. FLOOD HAZARD BOUNDARY MAP – A map designating approximate flood hazard areas. Flood hazard areas are designated as unnumbered A-Zones and do not contain floodway lines or regional flood elevations. This map forms the basis for both the regulatory and insurance aspects of the National Flood Insurance Program (NFIP) until superseded by a Flood Insurance Study and a Flood Insurance Rate Map.
27. FLOOD INSURANCE STUDY – A technical engineering examination, evaluation, and determination of the local flood hazard areas. It provides maps designating those areas affected by the regional flood and provides both flood insurance rate zones and base flood elevations and may provide floodway lines. The flood hazard areas are designated as numbered and unnumbered A-Zones. Flood Insurance Rate Maps, that accompany the Flood Insurance Study, form the basis for both the regulatory and the insurance aspects of the National Flood Insurance Program.
28. FLOODPLAIN – Land which has been or may be covered by flood water during the regional flood. It includes the floodway and the floodfringe and may include other designated floodplain areas for regulatory purposes.
29. FLOODPLAIN ISLAND – A natural geologic land formation within the floodplain that is surrounded, but not covered, by floodwater during the regional flood.
30. FLOODPLAIN MANAGEMENT – Policy and procedures to ensure wise use of floodplains, including mapping and engineering, mitigation, education, and administration and enforcement of floodplain regulations.
31. FLOOD PROFILE – A graph or a longitudinal profile line showing the relationship of the water surface elevation of a flood event to locations of land surface elevations along a stream or river.

32. FLOODPROOFING – Any combination of structural provisions, changes or adjustments to properties and structures, water and sanitary facilities and contents of buildings subject to flooding, for the purpose of reducing or eliminating flood damage.
33. FLOOD PROTECTION ELEVATION – An elevation of two feet of freeboard above the Regional Flood Elevation. (Also see: FREEBOARD.)
34. FLOOD STORAGE – Those floodplain areas where storage of floodwaters has been taken into account during analysis in reducing the regional flood discharge.
35. FLOODWAY – The channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.
36. FREEBOARD – A safety factor expressed in terms of a specified number of feet above a calculated flood level. Freeboard compensates for any factors that cause flood heights greater than those calculated, including ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of watershed urbanization, loss of flood storage areas due to development and aggregation of the river or stream bed.
37. HABITABLE STRUCTURE – Any structure or portion thereof used or designed for human habitation.
38. HEARING NOTICE – Publication or posting meeting the requirements of Ch. 985, Stats. For appeals, a Class 1 notice, published once at least one week (7 days) before the hearing, is required. For all zoning ordinances and amendments, a Class 2 notice, published twice, once each week consecutively, the last at least a week (7 days) before the hearing. Local ordinances or bylaws may require additional notice, exceeding these minimums.
39. HIGH FLOOD DAMAGE POTENTIAL – Damage that could result from flooding that includes any danger to life or health or any significant economic loss to a structure or building and its contents.
40. HIGHEST ADJACENT GRADE – The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
41. HISTORIC STRUCTURE – Any structure that is either:
 - Listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
 - Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program, as determined by the Secretary of the Interior; or by the Secretary of the Interior in states without approved programs.
42. INCREASE IN REGIONAL FLOOD HEIGHT – A calculated upward rise in the regional flood elevation greater than 0.00 foot, based on a comparison of existing conditions and proposed conditions which is directly attributable to development in the floodplain but not attributable to manipulation of mathematical variables such as roughness factors, expansion and contraction coefficients and discharge.
43. LAND USE – Any nonstructural use made of unimproved or improved real estate. (Also see

DEVELOPMENT.)

44. LOWEST ADJACENT GRADE – Elevation of the lowest ground surface that touches any of the exterior walls of a building.
45. LOWEST FLOOR – The lowest floor of the lowest enclosed area (including basement).
46. MAINTENANCE – The act or process of ordinary upkeep and repairs, including redecorating, refinishing, nonstructural repairs, or the replacement of existing fixtures, systems or equipment with equivalent fixtures, systems, or structures.
47. MANUFACTURED HOME – A structure transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities. The term "manufactured home" includes a mobile home but does not include a "mobile recreational vehicle."
48. MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION – A parcel (or contiguous parcels) of land, divided into two or more manufactured home lots for rent or sale.
49. MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION, EXISTING – A parcel of land, divided into two or more manufactured home lots for rent or sale, on which the construction of facilities for servicing the lots is completed before the effective date of this ordinance. At a minimum, this would include the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.
50. MOBILE/MANUFACTURED HOME PARK, EXPANSION TO EXISTING – The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed. This includes installation of utilities, construction of streets and either final site grading, or the pouring of concrete pads.
51. MOBILE RECREATIONAL VEHICLE – A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled, carried or permanently towable by a licensed, light-duty vehicle, is licensed for highway use if registration is required and is designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel or seasonal use. Manufactured homes that are towed or carried onto a parcel of land, but do not remain capable of being towed or carried, including park model homes, do not fall within the definition of "mobile recreational vehicles."
52. MODEL, CORRECTED EFFECTIVE – A hydraulic engineering model that corrects any errors that occur in the Duplicate Effective Model, adds any additional cross sections to the Duplicate Effective Model, or incorporates more detailed topographic information than that used in the current effective model.
53. MODEL, DUPLICATE EFFECTIVE – A copy of the hydraulic analysis used in the effective FIS and referred to as the effective model.
54. MODEL, EFFECTIVE – The hydraulic engineering model that was used to produce the current effective Flood Insurance Study.
55. MODEL, EXISTING (PRE-PROJECT) – A modification of the Duplicate Effective Model or Corrected Effective Model to reflect any man-made modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the Corrected Effective Model or Duplicate Effective Model.

56. MODEL, REVISED (POST-PROJECT) – A modification of the Existing or Pre-Project Conditions Model, Duplicate Effective Model or Corrected Effective Model to reflect revised or post-project conditions.
57. MUNICIPALITY or MUNICIPAL – The county, city or village governmental units enacting, administering, and enforcing this zoning ordinance.
58. NAVD or NORTH AMERICAN VERTICAL DATUM – Elevations referenced to mean sea level datum, 1988 adjustment.
59. NGVD or NATIONAL GEODETIC VERTICAL DATUM – Elevations referenced to mean sea level datum, 1929 adjustment.
60. NEW CONSTRUCTION – Structures for which the start of construction commenced on or after the effective date of a floodplain zoning regulation adopted by this community and includes any subsequent improvements to such structures.
61. NON-FLOOD DISASTER – A fire or an ice storm, tornado, windstorm, mudslide, or other destructive act of nature, but excludes a flood.
62. NONCONFORMING STRUCTURE – An existing lawful structure or building which is not in conformity with the dimensional or structural requirements of this ordinance for the area of the floodplain which it occupies. (For example, an existing residential structure in the floodfringe district is a conforming use. However, if the lowest floor is lower than the flood protection elevation, the structure is nonconforming.)
63. NONCONFORMING USE – An existing lawful use or accessory use of a structure or building which is not in conformity with the provisions of this ordinance for the area of the floodplain which it occupies. (Such as a residence in the floodway.)
64. OBSTRUCTION TO FLOW – Any development which blocks the conveyance of floodwaters such that this development alone or together with any future development will cause an increase in regional flood height.
65. OFFICIAL FLOODPLAIN ZONING MAP – That map, adopted and made part of this ordinance, as described in s. 1.5(2), which has been approved by the Department and FEMA.
66. OPEN SPACE USE – Those uses having a relatively low flood damage potential and not involving structures.
67. ORDINARY HIGHWATER MARK – The point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.
68. PERSON – An individual, or group of individuals, corporation, partnership, association, municipality, or state agency.
69. PRIVATE SEWAGE SYSTEM – A sewage treatment and disposal system serving one structure with a septic tank and soil absorption field located on the same parcel as the structure. It also means an alternative sewage system approved by the Department of Safety and Professional Services, including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure, or a system located on a different parcel than the structure.

70. PUBLIC UTILITIES – Those utilities using underground or overhead transmission lines such as electric, telephone and telegraph, and distribution and collection systems such as water, sanitary sewer, and storm sewer.
71. REASONABLY SAFE FROM FLOODING – Means base flood waters will not inundate the land or damage structures to be removed from the floodplain and that any subsurface waters related to the base flood will not damage existing or proposed buildings.
72. REGIONAL FLOOD – A flood determined to be representative of large floods known to have occurred in Wisconsin. A regional flood is a flood with a one percent chance of being equaled or exceeded in any given year, and if depicted on the FIRM, the RFE is equivalent to the BFE.
73. START OF CONSTRUCTION – The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond initial excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For an alteration, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
74. STRUCTURE – Any manmade object with form, shape and utility, either permanently or temporarily attached to, placed upon or set into the ground, stream bed or lakebed, including, but not limited to, roofed and walled buildings, gas or liquid storage tanks, bridges, dams and culverts.
75. SUBDIVISION – Has the meaning given in s. 236.02(12), Wis. Stats.
76. SUBSTANTIAL DAMAGE – Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the equalized assessed value of the structure before the damage occurred.
77. SUBSTANTIAL IMPROVEMENT – Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the equalized assessed value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the work performed. The term does not include either any project for the improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions; or any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.
78. UNNECESSARY HARDSHIP – Where special conditions affecting a particular property, which were not self-created, have made strict conformity with restrictions governing areas, setbacks, frontage, height, or density unnecessarily burdensome or unreasonable in light of the purposes of the ordinance.
79. VARIANCE – An authorization by the board of adjustment or appeals for the construction or maintenance of a building or structure in a manner which is inconsistent with dimensional standards (not uses) contained in the floodplain zoning ordinance.

80. VIOLATION – The failure of a structure or other development to be fully compliant with the floodplain zoning ordinance. A structure or other development without required permits, lowest floor elevation documentation, floodproofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.
81. WATERSHED – The entire region contributing runoff or surface water to a watercourse or body of water.
82. WATER SURFACE PROFILE – A graphical representation showing the elevation of the water surface of a watercourse for each position along a reach of river or stream at a certain flood flow. A water surface profile of the regional flood is used in regulating floodplain areas.
83. WELL – means an excavation opening in the ground made by digging, boring, drilling, driving or other methods, to obtain groundwater regardless of its intended use.