CITY OF DE PERE

PROJECT
25-01

SEWER AND WATER RELAY AND STREET RESURFACING

BID DATE:
FEBRUARY 20, 2025
@ 1:00 PM

Bid documents, including plans and specifications, are available for download at www.QuestCDN.com. The QuestCDN website can also be accessed through the City website at www.deperewi.gov/projects or by pressing the *Projects* icon at the bottom of any City website page. Download cost is $22 for each contract. Bidders will be charged an additional fee of $42 to submit a bid electronically. Bidding documents may be viewed on the QuestCDN website or at the Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115.

Bid Tabs must be verified by staff prior to posting and will be available for viewing on the website within 7 days following the bid opening. Award information will be pending until approved by the Common Council.

SECTION 00 01 10

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JANUARY 31, 2025 – FEBRUARY 7, 2025

CITY OF DE PERE

ADVERTISEMENT TO BID

PROJECT 25-01

SEWER AND WATER RELAY AND STREET RESURFACING

Online bids will be received and accepted for Project 25-01 Sewer and Water Relay and Street Resurfacing via the online electronic bidding service through QuestCDN.com, until 1:00 PM, Thursday, February 20, 2025, at which time they will be publicly accepted, displayed and read aloud.

Project 25-01 for which proposals are being sought includes the following approximate quantities:

- 145 LF provide 8-inch sanitary sewer and associated appurtenances.
- 1900 LF relay or pipe bursting sanitary laterals (4-inch and 6-inch) and associated appurtenances.
- 2450 LF new and relay storm sewer (8-inch to 43x68-inch) and associated appurtenances.
- 2550 LF relay or directional drill 8-inch water main and associated appurtenances.
- 1900 TONS asphaltic concrete pavement placement.
- 6715 SY asphaltic concrete pavement pulverizing.
- 3350 LF replace concrete curb and gutter.
- 535 SY replace concrete sidewalks, driveways, and pedestrian curb ramps (4-inch to 8-inch)

Complete digital project bidding documents are available for viewing and/or downloading at www.QuestCDN.com or may be examined at the office of the Director of Public Works. Digital plan documents may be downloaded for $22 by inputting Quest project #9404070 on Quest's Project Search page. Project documents must be downloaded from QuestCDN which will add your company to the Planholder List and allow access to vBid online bidding for the submittal of your bid. Bidders will be charged an additional fee of $42 to submit a bid electronically. The QuestCDN website can also be accessed through the City website at www.deperewi.gov/projects or by pressing the *Projects* icon at the bottom of any City website page. Contact QuestCDN Customer Support at 952-233-1632 or info@questcdn.com for assistance in membership registration, downloading digital project information and vBid online bid submittal questions.

Each proposal shall be accompanied by a bid bond in an amount equal to five percent (5%) of the bid, payable to the City of De Pere, as a guarantee that if the bid is accepted, the bidder will execute a contract and furnish a contract bond as set forth in the General Conditions of the City of De Pere. In case the bidder fails to file such contract and bond, the amount of the bid bond shall be forfeited to the City of De Pere as liquidated damages.

The letting of the contract is subject to the provisions of the following Wisconsin Statutes:

Section 62.15 regarding Public Works.

Section 66.0901(3) regarding Prequalification of Contractor.

Each bidder shall pre-qualify by submitting proof of responsibility on forms furnished by the Director of Public Works. Such forms shall be filed with the Director of Public Works no later than 4:00 PM, Monday, February 17, 2025. Prospective bidders who have previously submitted such forms subsequent to January 1, 2025 will not be required to separately submit such forms for this project.

The City of De Pere reserves the right to reject any or all bids, to waive any informalities in bidding and to accept any proposal which the Common Council deems most favorable to the interest of the City of De Pere.

Dated this 31st day of January, 2025.

Board of Public Works
City of De Pere
Eric Rakers, P.E.
City Engineer

Project 25-01

SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

1.1 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
None

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.1 Complete sets of the Bidding documents in the number and for the deposit sum, if any, stated in the Advertisement to Bid may be obtained as stated in the Advertisement for bids.

2.2 Complete sets of Bidding Documents shall be used in preparing Bids; Owner does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 Owner, in providing the Bidding Documents on the terms stated in the Advertisement for Bids, does so only for the purpose of obtaining Bids for the Work and does not confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.1 In accordance with Section 66.0901(3), each bidder shall pre-qualify by submitting proof of responsibility on forms furnished by the Director of Public Works. Such forms shall be filed with the Director of Public Works as stated in the Advertisement for Bids. Prospective bidders who have previously submitted such forms after January 1st of this year will not be required to separately submit such form for this project.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA AND SITE

4.1 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in the General Conditions.

4.2 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.3 Subsurface and Physical Conditions

A. The technical data includes:
   1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
   2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except underground Facilities).
   3. In preparation of the Plans and Specifications, Engineer relied upon the following reports of explorations and tests of subsurface conditions at the Site:
      a. City of De Pere – 2024 Soil Boring Geotechnical Engineering Report by ECS Midwest, LLC.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
   1. the completeness of such reports and drawings for Contractor's purposes, including but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
   2. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
   3. Any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.4 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.5 Reference is made to Section 01 10 00: Summary of Work, for work that will be completed and for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other portions thereof related to price) for such other work.

4.6 It is the responsibility of each Bidder before submitting a Bid to:

A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;

B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site

conditions that may affect cost, progress, and performance of the Work;

C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. Obtain and carefully study (or accept consequences of not doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

E. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

F. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

G. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies, that bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

I. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.7 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and, procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – SITE AND OTHER AREAS

5.1 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 6 – INTERPRETATIONS AND ADDENDA

6.1 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6.2 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner and Engineer.

ARTICLE 7 – BID SECURITY

7.1 A Bid shall be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price and in the form of a certified check or bank money order or Bid bond (on the form attached) issued by a surety meeting the requirements of the General Conditions. Submittal of a Bid Bond on a form other than the Bid Bond form included in the Bidding Documents may be cause for rejection of Bid. The fully executed bid bond must be uploaded into QuestCDN. If the bidder elects to furnish bid security other than a bid bond, the bid security must be submitted in a sealed envelope enclosed in a separate package plainly marked on the outside with the notation "BID SECURITY" along with the project number and name and addressed to the Board of Public Works of the City of De Pere, Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115 **prior to the deadline for submission of bids.**

7.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within fifteen (15) days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner per the General Conditions.

7.3 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 8 – CONTRACT TIMES

8.1 The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Bid Form and Summary of Work.

ARTICLE 9 – LIQUIDATED DAMAGES

9.1 Provisions for liquidated damages are set forth in the General Conditions.

ARTICLE 10 – SUBSTITUTE AND "OR-EQUAL" ITEMS

10.1 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Bid Form and Summary of Work.

ARTICLE 11 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.1 The Bidder shall submit with the Bid to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, in which case apparent Successful Bidder shall submit an acceptable substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.2 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposed to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner subject to revocation of such acceptance after the Effective Date of the Agreement.

11.3 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 12 – PREPARATION OF BID

12.1 The Bid form is included with the Bidding documents.

12.2 All blanks on the Bid Form shall be completed by printing in ink or by typewrite and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each alternative, and unit price item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

12.3 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporations shall be shown below the seal.

12.4 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

12.5 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

12.6 A Bid by an individual shall show the Bidder's name and official address.

12.7 A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture shall be shown below the signature.

12.8 All names shall be typed or printed in ink below the signatures.

12.9 The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

12.10 The address and telephone number for communications regarding the Bid shall be shown.

12.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 13 – BASIS OF BID; COMPARISON OF BIDS

13.1 Unit Price

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accord with the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

ARTICLE 14 – SUBMITTAL OF BID

14.1 A Bid shall be submitted no later than date and time prescribed and at place indicated in Advertisement for Bids and shall be submitted electronically using the QuestCDN online bidding vBid platform. No paper bids will be accepted.

14.2 See Bid Form for a list of documents typically required to be submitted with the Bid.

ARTICLE 15 – MODIFICATION AND WITHDRAWAL OF BID

15.1 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

15.2 If within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 16 – OPENING BIDS

16.1 Bids will be opened as indicated in the Advertisement to Bid. The bid opening can be viewed live via the GoToMeeting information shown below. An abstract of the amounts of the base bids and major alternatives, if any, will be made available to bidders after opening the bids.

The bid opening can be viewed live via GoToMeeting as follows:
Please join my meeting from your computer, tablet or smartphone.
https://meet.goto.com/345634277

You can also dial in using your phone.
United States (Toll Free): 1 877 309 2073
Access Code: 345-634-277

New to GoToMeeting? Get the app now and be ready when your first meeting starts:
https://meet.goto.com/install

ARTICLE 17 – BIDS REMAIN SUBJECT TO ACCEPTANCE

17.1 All bids will remain subject to acceptance for the period of time stated in the General Conditions, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18 – EVALUATION OF BIDS AND AWARD OF CONTRACT

18.1 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

18.2 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

18.3 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

18.4 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Supplier, and other individuals or entities proposed for those portions of the Work for which the identify of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

18.5 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

18.6 Bidder agrees to waive any claim it has or may have against the Owner and the respective employees arising out of or in connection with the administration, evaluation or recommendation of any Bid.

18.7 If the Contract is to be awarded, Owner will award the Contract to the lowest responsible responsive Bidder whose Bid is in the best interests of the Project.

ARTICLE 19 – CONTRACT SECURITY AND INSURANCE

19.1 The General Conditions set forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds and a certificate of insurance.

ARTICLE 20 – SIGNING OF AGREEMENT

20.1 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within ten (10) days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten (10) days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of Drawings with appropriate identification.

END OF SECTION

SECTION 00 41 13

CITY OF DE PERE

BID FORM

PROJECT 25-01

This bid, submitted by the undersigned Bidder to the City of De Pere, in accordance with the Advertisement to Bid, which will be received until 1:00 PM, Thursday, February 20, 2025 is to furnish and deliver all materials, and to perform and do all work on the project designated per Section 01 10 00 Summary of Work.

Bidder has examined and carefully prepared the bid from the plans and specifications and has checked the same in detail before submitting said proposal or bid; and that said bidder or bidder's agents, officer or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal or bid.

Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____

BASIS OF BID:

Bidder will complete the Work in accordance with the Contract documents for the following price(s):

As stated in the attached Unit Price Bid Schedule.

Unit Prices have been computed in accordance with the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

TOTAL BID PRICE: $_____

ATTACHMENTS TO THIS BID

The following documents are submitted with and made a condition of this Bid:

A. Required Bid Security
B. Unit Price Bid Schedule (Section 00 41 43)
C. Proposed Products Form (Section 00 43 33)
D. Tabulation of Subcontractors (Section 00 43 36)

BID SUBMITTAL

This Bid is submitted by _____ of _____, _____

The Bidder, being duly sworn, does dispose that they are an authorized representative of

Bidder, if Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in Wisconsin is ___/___/___.

Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____

(Signature of first joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

(Signature of second joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. Manner of signing for each individual, partnership, and corporation that is a party to joint venture should be in manner indicated above.)

Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20____.

State Contractor License No. _____(if applicable)

SECTION 00 41 43

CITY OF DE PERE

PROJECT 25-01

BID SCHEDULE – UNIT PRICE

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
SANITARY SEWER					
SS-01	Provide 8" PVC Sanitary Sewer	LF	145	$	$
SS-02	Provide 6" PVC Sanitary Sewer Lateral	LF	110	$	$
SS-03	Remove and Relay 6" or 4" PVC Sanitary Sewer Lateral	LF	605	$	$
SS-04	Provide Sanitary Sewer Riser	VF	20	$	$
SS-05	Slip Line 6" Sanitary Sewer Lateral	LF	90	$	$
SS-06	Provide Factory Cut in PVC 8"X6" Wye	EA	2	$	$
SS-07	Provide 6" or 4" Saddle to Existing Sanitary Sewer	EA	7	$	$
SS-08	Provide 6" or 4" Watertight Connection to Existing Sanitary Manhole for Lateral Relay	EA	2	$	$
SS-09	Pipe Burst Sanitary Sewer Lateral	LF	1700	$	$
SS-10	Provide Pipe Burst Connections	EA	25	$	$
SS-11	Provide Extra Pipe Burst Excavation	EA	6	$	$
SS-12	Provide Additional Riser/Cleanout in Basement	VF	6	$	$
SS-13	Provide Pipe Burst Pre Televising	EA	25	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
SANITARY SEWER (Continued)					
SS-14	Provide Pipe Burst Post Televising	EA	25	$	$
SS-15	Provide Sump Pump Basin	EA	6	$	$
SS-16	Provide Sanitary Sewer Lateral Tracer Wire Box	EA	10	$	$
SS-17	Provide 4’ Diameter Sanitary Sewer Manhole	VF	15	$	$
SS-18	Remove and Replace 4' Diameter Sanitary Sewer Manhole	VF	15	$	$
SS-19	Core Drill Sanitary Manhole	EA	1	$	$
SS-20	Connect to Existing Sanitary Sewer Main	EA	1	$	$
SS-21	Connect to Existing Sanitary PVC Lateral at Main	EA	14	$	$
SS-22	Dig Down, Locate, and Raise Sanitary Manhole	EA	3	$	$
SS-23	Abandon Sanitary Lateral at Main	EA	2	$	$
STORM SEWER					
ST-01	Provide 12" PVC, RCP (Class III), or PP Storm Sewer (Granular Backfill)	LF	1235	$	$
ST-02	Remove and Replace 12" RCP Class IV) Storm Sewer (Granular Backfill)	LF	55	$	$
ST-03	Provide 8" PVC Storm Sewer (Granular Backfill)	LF	985	$	$
ST-04	Remove and Replace 43x68" RCP (Class V) Storm Sewer (Granular Backfill)	LF	25	$	$
ST-05	Remove and Replace 43x68" RCP (Class V) Storm Sewer (Natural Backfill)	LF	145	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STORM SEWER (Continued)					
ST-06	Provide 6” PVC Storm Sewer Lateral	LF	1500	$	$
ST-07	Provide 12"x6" Storm Branch or Inserta Tee	EA	20	$	$
ST-08	Provide 8"x6" Storm Branch	EA	18	$	$
ST-09	Provide Storm Sewer Lateral Tracer Wire Box	EA	55	$	$
ST-10	Provide 4' Diameter Storm Manhole	VF	50	$	$
ST-11	Provide 8' Diameter Storm Manhole	VF	10	$	$
ST-12	Provide 8'Diameter Storm Manhole (Doghouse Construction over Existing Sanitary Sewer)	VF	10	$	$
ST-13	Remove and Replace 4’ Diameter Storm Manhole	VF	10	$	$
ST-14	Provide Type B Catch Basin	EA	3	$	$
ST-15	Remove and Replace Type B Catch Basin	EA	3	$	$
ST-16	Provide Type B Inlet	EA	4	$	$
ST-17	Remove and Replace Type B Inlet	EA	3	$	$
ST-18	Connect to Existing Storm Sewer Structure	EA	4	$	$
ST-19	Connect to Existing Storm Sewer Pipe	EA	10	$	$
ST-20	Connect to Existing Storm Sewer Pipe (Concrete Collar)	EA	1	$	$
ST-21	Provide 43x68” RCP Endwall	EA	1	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STORM SEWER (Continued)					
ST-22	Storm Sewer Dig Down and Repair Lateral Connection	EA	1	$	$
ST-23	Dig Down and Verify Storm Sewer Pipe	EA	1	$	$
ST-24	Storm Sewer Outfall Repair	EA	5	$	$
ST-25	Abandon/Remove Existing Storm Sewer Appurtenances	LS	1	$	$
WATER MAIN					
W-01	Provide 12” PVC Water Main (Natural Backfill)	LF	10	$	$
W-02	Provide 8” PVC Water Main (Granular Backfill)	LF	1550	$	$
W-03	Directional Drill 8" PVC Water Main	LF	1030	$	$
W-04	Provide 6" PVC Water Main (Granular Backfill)	LF	130	$	$
W-05	Provide 4" PVC Water Main (Granular Backfill)	LF	50	$	$
W-06	Provide 1” HDPE Water Service	LF	1500	$	$
W-07	Provide 1” Corporation and Curb Stop	EA	50	$	$
W-08	Provide 2" Corporation with Plug/Saddle with 2" Galvanized Pipe	EA	5	$	$
W-09	Provide 2" Corporation with Plug/Saddle with 2" HDPE Pipe Temporary Connection	EA	1	$	$
W-10	Provide Valve Cover for Curb Stop in Concrete	EA	6	$	$
W-11	Provide 8" Gate Valve	EA	9	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
WATER MAIN (Continued)					
W-12	Provide 6" Gate Valve	EA	8	$	$
W-13	Provide 4" Gate Valve	EA	1	$	$
W-14	Provide Hydrant (8.5' Bury)	EA	1	$	$
W-15	Provide Hydrant (8.0' Bury)	EA	2	$	$
W-16	Provide Hydrant (6.5' Bury)	EA	5	$	$
W-17	Provide 6” PVC Hydrant Lead	LF	170	$	$
W-18	Provide Vertical Offset	EA	1	$	$
W-19	Provide 1/2 Vertical Offset	EA	4	$	$
W-20	Provide Connection to Existing Water Main	EA	17	$	$
W-21	Provide Connection to Existing Water Main 12”x 8” Tapping Tee and Valve	EA	2	$	$
W-22	Dig Down and Abandon Water Service at Main	EA	2	$	$
W-23	Abandon/Remove Water Main and Appurtenances	LS	1	$	$
STREET AND DRAINAGE					
SD-01	Provide Tree and Stump Removal	In Dia	135	$	$
SD-02	Garroman Drive Site Preparation	LS	1	$	$
SD-03	Unclassified Excavation	CY	730	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STREET AND DRAINAGE (Continued)					
SD-04	Pulverize Asphaltic Concrete Pavement and Aggregate (10" Depth)	SY	6800	$	$
SD-05	Provide 1 1/4" Crushed Aggregate and/or Pulverized Pavement Base Course	CY	640	$	$
SD-06	Provide 3/4" Crushed Aggregate Shouldering (2' Wide) and Sidewalk	CY	75	$	$
SD-07	Remove and Replace 9" Doweled Concrete Pavement with Integral Curb	SY	15	$	$
SD-08	Provide Asphaltic Concrete Pavement Type 4 LT 58-28 S, 1 3/4" Upper Layer	TON	850	$	$
SD-09	Provide Asphaltic Concrete Pavement Type 3 LT 58-28 S, 2 1/4" Lower Layer	TON	1100	$	$
SD-10	Provide Asphalt Patch-Driveway	SY	5	$	$
SD-11	Provide Asphalt Flume	SY	10	$	$
SD-12	Provide 24" Curb and Gutter (Slip Form)	LF	760	$	$
SD-13	Remove and Replace 24” Concrete Curb and Gutter	LF	410	$	$
SD-14	Remove and Replace 24” Concrete Curb and Gutter (Slip Form)	LF	1600	$	$
SD-15	Remove and Replace 24” Concrete Curb and Gutter (Slip Form 4-Inch Curb Head)	LF	630	$	$
SD-16	Remove and Replace 24" Concrete Curb and Gutter (Integral)	LF	25	$	$
SD-17	Provide 6" Concrete Sidewalk	SY	10	$	$
SD-18	Provide 4" Concrete Sidewalk	SY	35	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
STREET AND DRAINAGE (Continued)					
SD-19	Remove and Replace 6" Concrete Sidewalk, Ramp & Driveway	SY	325	$	$
SD-20	Remove and Replace 4" Concrete Sidewalk	SY	250	$	$
SD-21	Provide #4 Reinforcement Bars for Curb and Sidewalk	LF	3140	$	$
SD-22	Drilled Tie Bars (Existing Sidewalk, Driveway, and Curb and Gutter)	EA	430	$	$
SD-23	Drilled Tie Bars (Existing Concrete Pavement)	EA	10	$	$
SD-24	Drilled Dowel Bars	EA	20	$	$
SD-25	Provide Detectable Warning Field (5'-Natural Patina)	EA	8	$	$
SD-26	Temporary Asphalt Patch (Fox River Trail)	LS	30	$	$
SD-27	Landscaping – Topsoil, Seed, Fertilizer and Mulch	SY	2000	$	$
SD-28	Landscaping – Topsoil, Seed, Fertilizer and Revegetation Mat Class 1 Urban (807 N. Broadway Street & Outfall Repairs)	SY	1150	$	$
SPECIAL CONSTRUCTION					
SC-01	Pipe Foundation Stabilization	CY	100	$	$
SC-02	Provide Silt Fence	LF	70	$	$
SC-03	Provide Cofferdam	LS	1	$	$
SC-04	Provide Turbidity Barrier	LS	1	$	$
SC-05	Inlet Protection Type B	EA	10	$	$

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
SPECIAL CONSTRUCTION (Continued)					
SC-06	Inlet Protection Type D	EA	20	$	$
SC-07	Provide Heavy Rip Rap With Geotextile Fabric Type HR (24" Depth)	SY	10	$	$
SC-08	Provide Medium Rip Rap With Geotextile Fabric Type HR (18" Depth)	SY	95	$	$
SC-09	Adjust Manhole	EA	1	$	$
SC-10	Adjust Manhole and Provide New Casting	EA	6	$	$
SC-11	Adjust Manhole and Provide New Casting (Hand Dig)	EA	1	$	$
SC-12	Reconstruct Manhole	VF	5	$	$
SC-13	Reconstruct Manhole and Provide New Casting	VF	8	$	$
SC-14	Remove, Salvage and Reinstall Chain Link Fence	LS	2	$	$
SC-15	Repair Sprinkler System - 823 N. Broadway (if Required)	EA	1	$	$
				TOTAL AMOUNT BID	$

SECTION 00 43 13

CITY OF DE PERE

BID BOND

KNOW ALL MEN BY THESE PRESENTS: That _____,

as Principal, hereinafter called Principal, and _____,

as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called City, in the amount of _____ dollars ($_____) for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presence.

WHEREAS, Principal has made a proposal to the City for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work of Project 25-01 in accordance with drawings and specifications prepared by the Director of Public Works of said City, which proposal is by reference made a part hereof, and is hereinafter referred to as the BID.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall be awarded the contract for said project and Principal shall enter into a contract in accordance with the BID, then this obligation shall be null and void; otherwise it shall remain in full force and effect, provided that:

1. The liability of Surety shall in no event exceed the penalty of this bond.

2. Any suits at law or proceedings, in equity brought or to be brought against Surety to recover any claim hereunder shall be executed within six (6) months from the date of this instrument.

Signed and sealed this _____ day of _____, 20____.

In the presence of:

_____ _____
WITNESS PRINCIPAL (SEAL)

_____ _____
WITNESS SURETY (SEAL)

SECTION 00 43 33

PROPOSED PRODUCTS FORM

The following is a list of material, type or model numbers and manufacturers used in the preparation of this proposal and to be used on this project:

ITEM	MATERIAL	SUPPLIER
Valves		
Hydrants		
Manholes	CONCRETE	
Inlets	CONCRETE	
Storm Sewer (PVC) *List Proposed Sizes*	PVC	
Storm Sewer (RCP) *List Proposed Sizes*	REINFORCED CONCRETE	
Storm Sewer (PP) *List Proposed Sizes*	POLYPROPYLENE	

SECTION 00 43 36

TABULATION OF SUBCONTRACTORS

The following information is submitted which gives the name, business address, and portion of work for each subcontractor that will be used in the work if the bidder is awarded the contract, and no subcontractor doing work in excess of one-half of one percent of the total amount of the bid and who is not listed will be used without the written approval of the Engineer. Additional numbered pages outlining this portion of the proposal may be attached to this page.

PORTION OF WORK	BUSINESS NAME	BUSINESS ADDRESS
Concrete Driveways, Ramps & Sidewalks		
Road Excavation		
Pulverizing		
Concrete Curb and Gutter		
Asphaltic Concrete Paving		
Directional Drilling		
Pipe Bursting		

SECTION 00 51 00

NOTICE OF AWARD

(Contractor)
(Contractor Name)
(Address)
(Address)

Project Description: 25-01 Sewer and Water Relay and Street Resurfacing

The City has considered the proposal submitted by you dated (BID DATE) for the above-described project in response to its Advertisement for Bids dated January 31, 2025 and February 7, 2025.

You are hereby notified that the Common Council of the City of De Pere has accepted your bid of (Contract Amount $_____.00).

You are required to execute the Contract and furnish the required Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days from the date of this notice to you.

If you fail to execute said Agreement and to furnish said bonds within ten (10) days from the date of this notice, said City will be entitled to consider all your rights arising out of the City's acceptance of your bid as abandoned and as a forfeiture of your Bid Bond. The City will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the City.

Dated this _____ day of _____2025.

_____
DEPARTMENT OF PUBLIC WORKS

BY: Eric P. Rakers, P.E.
City Engineer

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by:

_____, this the _____ day of _____, 20___

By:_____

Title: _____

SECTION 00 52 13

CONTRACT

This Contract, made and entered into this day _____ (date to be affixed by City), by and between (Contractor Name), hereinafter called Contractor, and the City of De Pere, a municipal corporation of the State of Wisconsin, hereinafter called City.

WITNESSETH: That, in consideration of the covenants and agreements herein contained, to be performed by the parties hereto, and of the payments hereinafter agreed to be made, it is mutually agreed as follows:

ARTICLE I - SCOPE OF WORK

The Contractor shall furnish all materials and all equipment and labor necessary, and perform all work shown on the drawings and described in the specifications for the project entitled Project 25-01 Sewer and Water Relay and Street Resurfacing, all in accordance with the requirements and provisions of the following documents, which are hereby made a part of this Contract:

(a) Advertisement for Bids, dated January 31, 2025 and February 7, 2025.

(b) Drawings designated for Project 25-01 Sewer and Water Relay and Street Resurfacing dated January 31, 2025.

(c) City of De Pere 2025 Construction Specifications.

(d) Special Provisions dated January 31, 2025.

(e) Proposal submitted by (Contractor Name) dated Bid Date.

(f) Addenda No. dated

ARTICLE II - TIME OF COMPLETION

(a) The work to be performed under the Contract shall be commenced within (number spelled out) (__) calendar days after receipt of written notice to proceed. The work shall be completed within (Number spelled out) (__) calendar days) or (specific calendar dates) after receipt of Notice to Proceed.

(b) Time is of the essence with respect to the date of completion herein above stated. Failure to complete the work within the number of calendar days stated in this Article, or interim dates included in the work sequence in Section 01 10 00, Summary of Work, including any extensions granted thereto, shall entitle the City to deduct from the monies due the Contractor an amount equal to Update based on 00 70 00 - General Conditions (Page 26)($) per day for each calendar day of delay in the completion of the work. Such amount shall be considered and treated not as a penalty but as liquidated damages, which the City will sustain, by failure of the Contractor to complete the work within the time stated.

ARTICLE III - PAYMENT

(a) The Contract Sum. The City shall pay to the Contractor for the performance of the Contract the amounts determined for the total number of each of the following units of work completed at the unit price stated thereafter. The number of units contained in this schedule is approximate only, and the final payment shall be made for the actual number of units that are incorporated in or made necessary by the work covered by the Contract.

(b) Progress Payments. The City shall make payments on account of the Contract as follows:

1. On not later than the fourth Friday of every month the Contractor shall present to the City an invoice covering an estimate of the amount and proportionate value of the work done as verified by the City under each item of work that has been completed from the start of the job up to and including the fourth Friday of the preceding month, and the value of the work so completed determined in accordance with the schedule of unit prices for such items, together with such supporting evidence as may be required. This invoice shall also include an allowance for the cost of such materials and equipment required in the permanent work as have been delivered to the site but not as yet incorporated in the work.

2. On not later than the third week of the following month, the City shall, after deducting previous payments made, pay to the Contractor 95% of the amount of the approved invoice, retaining 5% of the estimate of work done until 50% of the work has been completed. At 50% completion of the work, the previous retainage shall not yet be paid, but further partial payments shall be made in full to the contractor without additional retainage being taken unless the engineer certifies that the work is not proceeding satisfactorily. If the work is not proceeding satisfactorily, additional amounts may be retained. After substantial completion, an amount retained may be paid to the contractor, keeping retained only such amount as is needed for the remaining work.

3. The Contractor shall notify the City in writing when all work under this Contract has been completed. Upon receipt of such notice the City shall, within a reasonable time, make the final inspection and issue a final certificate stating that the work provided for in this Contract has been completed and is accepted under the terms and conditions thereof, and that the entire balance due the Contractor as noted in said final certificate is due and payable. Before issuance of the final certificate the Contractor shall submit evidence satisfactory to the City that payrolls, material bills, and other indebtedness connected with the work under this Contract have been paid. The City shall make final payment as soon after issuance of the final certificate as practicable.

ARTICLE IV – CONTRACT DOCUMENTS

(a) Contents

1. The Contract documents consist of the following:
   a. This Contract (pages 00 52 13-1 to 0052-13-3, inclusive).
   b. Payment bond (pages 00 61 13-1 to 00 61 13-2, inclusive).
   c. Performance bond (page 00 61 16-1).
   d. General Conditions (pages 00 70 00-1 to 00 70 00-27, inclusive).

e. Specifications as listed in the table of contents of the Project Manual.
f. Drawings consisting of ___ sheets with each sheet bearing the following general title: ___[or] the Drawings listed on attached sheet index.
g. Addenda (numbers ___ to ___ inclusive), dated_____.
h. Exhibits to this Agreement (enumerated as follows):
   1) Contractor's Bid (pages 00 41 13-1 to 00 41 13-3, inclusive).
   2) Bid Schedule – Unit Prices (Pages 00 41 43-1 to 00 41 43- , inclusive).
   3) Proposed Products Form (Page 00 43 33-1).
   4) Tabulation of Subcontractors (page 00 43 36-1).
   5) Documentation submitted by Contractor prior to Notice of Award (00 51 00-1).
i. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
   1) Notice to Proceed (Page 00 55 00-1).
   2) Change Orders.

2. The documents listed in Paragraph (a) Contents, are attached to this Agreement (except as expressly noted otherwise above).

3. There are no Contract Documents other than those listed above in this Article IV.

IN WITNESS WHEREOF, the parties hereto have executed this Contract, the day and year first written above.

_____ _____
(WITNESS) (CONTRACTOR) (SEAL)

_____ BY: _____
(WITNESS)

_____
(TITLE)

BY: _____

_____
(TITLE)

CITY OF DE PERE (SEAL)

Approved as to Form By: _____ (CITY ATTORNEY)

Sufficient funds are available to provide for the payment of this obligation.

_____
(COMPTROLLER)

BY:_____ BY:_____
(CITY MANAGER) (CITY CLERK)

SECTION 00 55 00

NOTICE TO PROCEED

Date: _____

(CONTRACTOR NAME)
(ADDRESS)
(ADDRESS)

Project Description: 25-01 Sewer and Water Relay and Street Resurfacing

You are hereby notified to commence work in accordance with the CONTRACT dated _____, within ten (10) days of this Notice. All work under this contract shall be completed within _____(NUMBER IN WORDS) (__#) consecutive days from the start of construction or _____(DATE) whichever comes first.

_____
Department of Public Works

By: Eric P. Rakers, P.E.
Title: City Engineer

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____, this _____ day of _____, 20___.
Company Name

_____
Signature

BY: _____
Printed Name

TITLE: _____

SECTION 00 61 13

CITY OF DE PERE

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That (CONTRACTOR NAME), as Principal, hereinafter called Contractor, and _____, as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called the City, for the use and benefit of claimants as herein below defined in the amount of _____ _____(CONTRACT AMT. SPELLED OUT) ($_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ (date to be affixed by City) entered into a contract with City for Project 25-01, in accordance with drawings and specifications prepared by the Director of Public Works of said City, which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly make payments to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the CONTRACT, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with Contractor or with a subcontractor of Contractor for labor, material, or both, used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, lights, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the contract.

2. The above named Contractor and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant may sue on this bond for the use of such claimant in the name of the City, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon, provided, however, that the City shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

   a. Unless claimant shall have given written notice to any two of the following: The Contractor, the City, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Contractor, City, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of Wisconsin, save that such service need not be made by a public officer.

   b. After the expiration of one (1) year following the date on which Contractor ceased work on said CONTRACT.

c. Other than in a state court of competent jurisdiction in and for the County or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens, which may be filed or recorded against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

SIGNED AND SEALED THIS _____ DAY OF _____, 20___.

In Presence of:

_____ _____
(WITNESS) (CONTRACTOR) (SEAL)

_____ _____
(WITNESS) (SURETY) (SEAL)

SECTION 00 61 16

CITY OF DE PERE

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That (CONTRACTOR'S NAME), as Principal, hereinafter called Contractor, and _____, as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called City, in the amount of _____(AMOUNT WRITTEN OUT) ($_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assign, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ (date to be affixed by City), entered into a contract with the City for Project 25-01, in accordance with drawings and specifications prepared by the Director of Public Works of said City, which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Contractor shall promptly and faithfully perform said CONTRACT, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever Contractor shall be, and declared by the City to be in default under the CONTRACT, the City having performed City's obligations there under, the Surety may promptly remedy the default, or shall promptly

1. Complete the CONTRACT in accordance with its terms and conditions or

2. Obtain a bid or bids for submission to City for completing the CONTRACT in accordance with its terms and conditions, and upon determination by the City and Surety of the lowest responsible bidder, arrange for a contract between such bidder and City make available as work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable by City to Contractor under the CONTRACT and any amendments thereto, less the amount properly paid by City to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the CONTRACT falls due. No right of action shall accrue on this bond to or for the use of any person or corporation other than the owner named herein or the heirs, executors, administrators or successors of City.

SIGNED AND SEALED THIS _____ DAY OF _____, 20_____.

In the Presence of:

_____ _____
(WITNESS) (CONTRACTOR) (SEAL)

_____ _____
(WITNESS) (SURETY) (SEAL)

SECTION 00 62 76

APPLICATION FOR PAYMENT

Contractor's Application for Payment No.

Application Period:	Application Date:
Owner: City of De Pere	Contractor:
	Contractor's Project No.:

APPLICATION FOR PAYMENT

Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
Total	$0.00	$0.00

NET CHANGE BY CHANGE ORDERS:	$0.00

1.	ORIGINAL CONTRACT PRICE:.....	
2.	Net change by Change Orders and Written Amendments (+ or -):.....	$0.00
3.	CURRENT CONTRACT PRICE (Line 1 plus Line 2):.....	$0.00
4.	Total completed and stored to date Column H on Progress Estimate:.....	$0.00
5.	Retainage (per Agreement):	
a.	Work Completed - Column H (95% up to 50% of Contract or 2.5% of 100% of Contract)	$0.00
6.	AMOUNT ELIGIBLE TO DATE (Line 4 minus 5).....	$0.00
7.	LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	$0.00
8.	AMOUNT DUE THIS APPLICATION (Line 6 minus Line 7).....	$0.00

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that:(1) all previous progress payments received from Owner on account of Work done under Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by the Application for Payment is in accordance with the Contract Documents and is not defective.

By:	Date:

Payment of: $ _____
(Line 8 or other - attach explanation of other amount)

is recommended by: _____ _____
(Contractor) (Date)

Payment of: $ _____
(Line 8 or other - attach explanation of other amount)

is recommended by: _____ _____
(Owner) (Date)

SECTION 00 65 16

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:	
Owner:	Owner's Contract No.:
Contractor:	

This [tentative] [definitive] Certificate of Substantial Completion applies to:
☐All Work under the Contract Documents: ☐The following specified portions of the Work:

_____
Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Contractor and Engineer, and found to be substantially complete. The Date of Substantial completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [definitive] list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

☐Amended Responsibilities ☐ Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

_____

_____

_____

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

_____ _____

Executed by Engineer Date

_____ _____

Accepted by Contractor Date

SECTION 01 10 00

SUMMARY OF WORK

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes
   1. References
   2. Work Covered by the Contract Documents
   3. Work Sequence/Schedule
   4. Use of Premises
   5. Warranty
   6. Work by Others
   7. Project Utility Sources
   8. Miscellaneous Provisions

1.2 REFERENCES

A. General Specifications. The work under this contract shall be in accordance with the City of De Pere, 2025 Construction Specifications and these Special Provisions and plans, and the latest edition of the Wisconsin Department of Transportation Standards Specifications for Highway and Structure Construction, where referenced in the City Specifications.

B. Definitions. Any reference to the "state" or the "department" in said Standard Specifications shall mean the "City of De Pere" for the purposes of this contract.

C. Industry Standards
   1. Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
   2. Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
   3. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
   4. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.

5. Each section of the specifications generally includes a list of reference standards normally referred to in that respective section. The purpose of this list is to furnish the Contractor with a list of standards normally used for outlining the quality control desired on the project. The lists are not intended to be complete or all inclusive, but only a general reference of standards that are regularly referred to.
6. Each entity engaged in construction on the Project shall be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

1.3 WORK COVERED BY THE CONTRACT DOCUMENTS

A. Project Identification
   1. Project Location
      a. N Adams Street from Irwin Street to Ridgeway Boulevard.
      b. N Washington Street from Braisher Park (630 Winnebago Street) to Ridgeway Boulevard.
      c. Martin Street from Butler Street to the southern terminus.
      d. Pleasant Place from Third Street to the eastern terminus.
      e. Profit Place from 300 feet northeast of Destiny Drive to 900 feet northeast of Destiny Drive.
      f. Garroman Drive from Lawrence Drive to 600 feet southeast of Lawrence Drive.
      g. 807 N Broadway Street
      h. 823 N Broadway Street
      i. 2186 Lost Dauphin Road (CTH D)
      j. Miscellaneous repairs around the City per the plan sheets.
   2. Work will be performed under the following prime contract:
      a. Project 25-01 Sewer and Water Relay and Street Resurfacing.

B. The Work includes:
   1. Sanitary sewer lateral relay and/or pipe bursting.
   2. Storm sewer and associated appurtenances relay and new.
   3. Water main and associated appurtenances relay and new.
   4. Concrete curb and gutter removal and replacement.
   5. Concrete driveway aprons, pedestrian ramps, and sidewalk removal and replacement.
   6. Milling/pulverizing existing asphaltic concrete pavement.
   7. Manhole, inlet and catch basin adjustment and repair.
   8. Asphaltic concrete paving and patching.
   9. Terrace Restoration.
   10. Erosion Control.
   11. Traffic Control.

1.4 WORK SEQUENCE/SCHEDULE

A. Project shall be completed by October 31, 2025.

B. This project includes multiple interim dates that are critical to the project.

1. Work on the storm sewer at 807 N. Broadway shall be completed between May 1, 2025 and May 19, 2025 due to the proximity to the Fox River.
2. Manhole adjustments at 807 N. Broadway and 823 N. Broadway are to be completed by May 19, 2025.
3. The Southbridge and Lawrence Drive Spot Utility Repairs are to be completed by April 27th.
4. Garroman Drive work shall be completed in two phases. The City is acquiring right of way for the south half of Garroman Drive. The time frame for this is not known. Garroman Drive will be the primary access point for residential properties on Lawrence Drive to get into the City once the Southbridge and Lawrence Drive intersection is closed by the County (see discussion under 1.7 below). There will be significant traffic on Garroman Drive during this time. Opening Garroman Drive up with gravel is important for the City. Phasing will be as follows:
   a. Complete excavation and base course placement within two weeks of notification by the City. After completion, Garroman Drive will be open to traffic. The City will maintain the gravel section of Garroman Drive once opened to traffic.
   b. Complete utility installation, concrete curb, and asphaltic concrete pavement after the Southbridge and Lawrence Drive intersection is open.
5. Profit Place utility work shall be completed by June 1, 2025.

C. Conduct construction activities to maintain access to businesses and residences throughout construction.

D. Topsoil, seed, and mulch shall be completed prior to asphaltic concrete pavement placement.

E. Install applicable erosion control practices prior to the start of construction.

F. Maintain mail delivery and garbage pickup access throughout construction.

G. No work shall occur on the following national holidays:
1. Monday, May 26, 2025 – Memorial Day
2. Wednesday, July 4, 2025 – Independence Day
3. Monday September 1, 2025 – Labor Day

H. Work Sequence and Schedule Requirements by location. The calendar days listed below are the allowed durations for each location from the beginning of construction of the street or site to the substantial completion of the area. Work in each area shall be continuous without crews

and equipment mobilizing and demobilizing to complete work outside of this project scope unless designated or approved by the Engineer.

Location	Calendar Days
Adams Street	60
Washington Street	40
Martin Street	50
Pleasant Place	40
807 N. Broadway Street	20
Garroman Drive Phase I	5
Garroman Drive Phase II	20
Southbridge/Lawrence	7

1.5 USE OF PREMISES

A. Contractor shall have full use of the premises for construction operations, including use of the Project Site, as allowed by law, ordinances, permits, easement agreements and the Contract documents.

B. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of the Project.

C. The Project Site is limited to property boundaries, rights-of-way, easements, and other areas designated in the Contract Documents.

D. Provide protection and safekeeping of material and products stored on or off the premises.

E. Move any stored material or products which interfere with operations of Owner or other Contractors.

1.6 WARRANTY

A. The Contractor warrants and guarantees to the City that all work shall be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects will be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this proposal.

B. If within one (1) year after the date of contract work completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents or by a special provision of the Contract Documents, any work is found to be defective, the Contractor shall comply in accordance with the City's written instructions. These written instructions will include either correcting such defective work or, if it has been rejected by the City, removing it from the site and replacing it with non-defective work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk or loss or damage, the City may have the defective work

corrected or the rejected work removed and replaced. All direct and indirect costs of correction or removal and replacement of defective work, including compensation for additional professional services, shall be paid by the Contractor.

1.7 WORK BY OTHERS

A. The City of De Pere Park Department will trim trees in conflict with construction if the City receives advanced notification. Questions regarding trees or landscaping that is bid as part of this contract can be directed to the Engineer.

B. Owner has awarded a separate contract for performance of certain construction operations which will be conducted at the Project Site simultaneously with work under this Contract. These Contracts include the following:
   1. Project 25-03 Sewer Lining. The storm sewer at 807 N. Broadway, and sanitary sewers at 807 N. Broadway and 823 N. Broadway are being lined immediately after completion of work under this contract.
   2. Project 25-06 Concrete Street Repairs. This project will coordinate the removal of the existing concrete pavement ahead of the utility extension at the end of Profit Place. Once the utility extension work is completed, the cul-de-sac will be constructed with concrete under project 25-06. Final restoration at Profit Place will be completed under this contract.

C. The Brown County Highway Department will be completing GV-14 – Southbridge Reconstruction in De Pere. Michels Construction has been awarded the work to reconstruct Southbridge Road from I41 on/off ramps through the Lawrence Drive Intersection. The Southbridge and Lawrence Drive intersection will be closed from April 27th through mid-September.

D. The Brown County Parks Department will be resurfacing the Fox River Trail in 2025.

E. Cooperate fully with separate contractors and/or Owner so work by others may be carried out smoothly, without interfering with or delaying work under this Contract.

1.8 PROJECT UTILITY SOURCES

A. Green Bay Metropolitan Sewer District (NEW Water), Lisa Sarau, (lsarau@newwater.us) (920-438-1039)

B. AT&T, Kyle Weber, (kw715w@att.com) (920-221-5969)

C. Wisconsin Public Service, Bob Laskowski, (rtlaskowski@wisconsinpublicservice.com) (920-617-2775)

D. Charter, Vince Albin, (vince.albin@charter.com) (920-378-0444)

E. Nsight, Rick Vincent, (rick.vincent@nsight.com) (920-617-7316)

F. TDS Metrocom, Steve Jakubiec, (steve.jakubiec@tdstelecom.com) (920-882-4166)

G. Net-Lec (Mi-Tech Services), Dennis Lafave, (dlafave@mi-tech.us) (920-619-9774)

H. CenturyLink, Relocation Team, (relocations@lumen.com) (800-871-9244)

I. Central Brown County Water Authority, Rob Michaelson, (rmichaelson@mpu.org) (920-686-4354)

1.9 MISCELLANEOUS PROVISIONS

A. Notification to Residents –notify individually all residents and businesses 2-weeks prior to the start of operations, giving an estimated time that vehicle movement will be limited or prohibited. Property owners shall be notified 24-hours prior to closing a drive.

B. Maintain one lane of traffic at all times on Southbridge Road when completing work. This is the only access to Foth and UHG located on Innovation Court.

C. Maintain a route for pedestrian traffic when constructing across the Fox River Trail.

D. Tracer wire access boxes shall be installed for sanitary laterals and storm laterals where directed by the Engineer.
   1. Tracer wire boxes shall conform to the Tracer Wire Access Box specification for water main.
   2. The top of the lid is to be permanently engraved with “SANITARY” by the manufacturer for sanitary laterals.
   3. The top of the lid is to be permanently engraved with “STORM” by the manufacturer for storm laterals.

E. Provide pulverized aggregate or millings for the surface of Garroman Drive for Phase I construction. Pulverized aggregate from the project can be stockpiled at Southwest Park off Lawrence Drive if required based on the construction schedule.

F. Ingress and egress to the site of work for delivery of materials, hauling of excavation, daily construction activities and all vehicular traffic shall be as follows:
   1. Loaded trucks shall access Adams Street from Ridgeway Boulevard. Empty trucks will be allowed to exit Adams Street to George Street.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 22 01

MEASUREMENT AND PAYMENT SANITARY SEWER

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

	Bid Item No.
1. Sanitary Sewer Mains (Granular Backfill)	SS-01
2. Sanitary Sewer Laterals	SS-02, SS-03
3. Sanitary Sewer Risers	SS-04
4. Slipline Sanitary Laterals	SS-05
5. Sanitary Sewer Service Branches	SS-06, SS-07
6. Pipe Burst Sanitary Laterals	SS-09
7. Provide Pipe Burst Connections	SS-10
8. Provide Extra Pipe Burst Excavation	SS-11
9. Provide Additional Basement Riser/Cleanout	SS-12
10. Provide Pipe Burst Televising	SS-13, SS-14
11. Provide Sump Pump Basin	SS-15
12. Provide Sanitary Lateral Tracer Wire Box	SS-16
13. Sanitary Sewer Manholes	SS-17, SS-18
14. Core Drilling to Existing Sanitary Manhole	SS-19
15. Connect to Existing Sanitary Sewer Main/Lateral	SS-20, SS-21
16. Dig Down, Locate, and Raise Sanitary Manhole	SS-22
17. Abandon Sanitary Lateral at Main	SS-23
18. Provide Watertight Connect to Manhole for Lateral	SS-08

B. Unit Prices include:
   1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
   2. The method of measurement for payment.
   3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for sanitary sewer systems.

B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.

1. Traffic Control.
2. Sawcutting asphalt and/or concrete.
3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
4. Dewatering.
5. Bypass pumping.
6. Excavation.
7. Open Trench installation method (unless bid item specifies other method).
8. Pipe Bedding.
9. Backfilling and compacting native obtained from the excavation.
10. Supplying, hauling, backfilling and compacting granular material.
11. Loading, hauling and disposing of surplus excavated material.
12. Landscaping – turf establishment surface restoration and trees and bushes damaged during construction.
13. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
14. Site access requirements including temporary aggregate material as required for local traffic access.
15. Bulkhead and abandoned existing sanitary sewer with flowable fill as shown on Drawings.
16. If crossing or undermining of existing public or private utility, then include:
    a. Maintaining the utility in service.
    b. Replacing of existing utilities, if damaged.
    c. Providing support and bedding material.
17. Dust control.
18. Remove and replace existing mailboxes and traffic signs.
19. Restroom facilities.
20. Easement and right-of-way requirements.
21. Construction staking and other survey work not provided by the Engineer.
22. Regulatory requirements.
23. Preconstruction videotaping and video equipment.
24. Quality assurance and quality control testing and inspections.
25. Shop drawings and other submittals.

1.3 SANITARY SEWER MAINS (GRANULAR BACKFILL)

A. The unit price for Sanitary Sewer Main (Granular Backfill) work includes:
    1. General Work Items of Article 1.2.
    2. Sanitary sewer pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
    3. Excavation, breakdown and removal of abandoned piping inside the trench area, including plugging of existing connections.
    4. Excavation, breakdown and removal of abandoned pipeline structures inside the trench area, including plugging of existing connections.

5. Clay anti-seepage collar around pipe.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer from centerline of the manhole to centerline of manhole with no deductions for manholes, sewer services branches and other fittings.

C. The unit of measurement for payment is linear feet.

1.4 SANITARY SEWER LATERALS

A. The unit price for Sanitary Sewer Laterals work includes:
   1. General Work Items of Article 1.2.
   2. Sanitary sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the open trench method.
   3. Watertight plug in the end of the sewer service lateral or connection including transition coupling to the existing building sewer lateral.
   4. Tracer wire.
   5. Install an 8’ – 4” X 4” board at the end of the lateral.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer service lateral pipe (excluding risers) from centerline of the service branch to the end of the pipe at the right of way, easement or existing sewer service lateral with no deductions for fittings.

C. The unit of measurement for payment is linear feet.

1.5 SANITARY SEWER RISERS

A. The unit price for Sanitary Sewer Risers work includes:
   1. General Work Items of Article 1.2.
   2. Sanitary sewer riser pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
   3. Risers to be installed at the main.
   4. Tracer wire.

B. Measurement for payment will be the actual height of the riser installed from the bottom of the lateral at the wye to the bottom of the lateral at the 45 degree bend.

C. The unit of measurement for payment is vertical feet.

1.6 SLIPLINE SANITARY SEWER LATERALS

A. The unit price for Slipline Sanitary Sewer Laterals work includes:
   1. General Work Items of Article 1.2.

2. Sanitary sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using sliplining.
3. Watertight plug in the end of the sewer service lateral or connection including transition coupling to the existing building sewer lateral.
4. Connection to existing sewer at building.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer service lateral pipe from centerline of the service branch/manhole to the end of the pipe in existing sewer service lateral with no deductions for fittings.

C. The unit of measurement for payment is linear feet.

1.7 SANITARY SEWER SERVICE BRANCHES

A. The unit price for Sanitary Sewer Service Branches work includes:
1. General Work Items of Article 1.2.
2. Sanitary sewer service branches of same material strength or better than sanitary sewer main pipe.
3. Installation along with the sanitary sewer main pipe installation.
4. Plug (where required).

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.8 PIPE BURST SANITARY SEWER LATERALS

A. The unit price for Pipe Burst Sanitary Sewer Laterals work includes:
1. General work Items of Article 1.2.
2. Sanitary sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the pipe bursting method.
3. Tracer wire.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer service lateral pipe from centerline of the service branch to the connection point within the home of which the lateral is servicing.

C. The unit of measurement for payment is linear feet.

1.9 PROVIDE PIPE BURST CONNECTIONS

A. The unit price for Provide Pipe Burst Connections work includes:
1. General work Items of Article 1.2.
2. Excavating and backfilling.

3. Sanitary Sewer Pipe same material strength or better than pipe material listed in the unit price bid schedule. Provide Fernco with stainless steel sheer bands and connection watertight seal at the home.
4. Sanitary sewer service branches of same material strength or better than sanitary sewer main pipe.
5. Excavation along with the sanitary sewer main pipe for installation.
6. Remove and replace up to five feet of lateral pipe through open cut construction if required at the sanitary sewer main.
7. Sanitary sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the pipe bursting method.
8. Tracer wire.
9. Connection in the house with PVC pipe, including up to two feet of riser/cleanout depth.
10. Restoration of basement floor with concrete.

B. Measurement of payment will be the actual number of sanitary laterals pipe burst. The unit price for providing pipe burst connections shall include both the connect at the serviced home and the branch connection at the sanitary sewer main.

C. The unit of measurement for payment is each.

1.10 EXTRA PIPE BURST EXCAVATION

A. The unit price for Pipe Burst Sanitary Sewer Laterals work includes:
   1. General work Items of Article 1.2.
   2. Excavating and backfilling.
   3. Sanitary sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the pipe bursting method.
   4. Tracer wire.

B. Measurement of payment will be the actual number of extra excavations completed.
   1. This item is reserved for emergency situations where an additional excavation is needed to rescue the pipe bursting head after an obstruction is encountered.

C. The unit of measurement for payment is each.

1.11 ADDITIONAL BASEMENT RISER/CLEANOUT

A. The unit price for Additional Basement Riser/Cleanout work includes:
   1. General Work Items of Article 1.2.
   2. Sanitary sewer riser/cleanout pipe and fittings of material stated in special provisions installed in the basement.
   3. Additional floor restoration due to depth.

B. Measurement for payment will be the depth of pipe installed from the invert of the lateral to the top of the riser/cleanout at the floor.
    1. Payment is made only for the depth of pipe greater than two feet.

C. The unit of measurement for payment is vertical feet and calculated by subtracting two feet.

1.12 PIPE BURST TELEVISING

A. The unit price for Pipe Burst Televising work includes:
    1. General work Items of Article 1.2.
    2. Pre & Post Televising of sanitary sewer laterals for each sanitary lateral pipe bursted.
        a. Pre-televising work shall be reviewed to determine if there are existing connections into the sanitary sewer lateral between the basement and the sanitary sewer main.
        b. Flagging of unknown connections into the sanitary sewer lateral for the Engineer's review.
        c. Post-televising of sanitary sewer laterals shall be completed to verify watertight construction.

B. Measurement of payment will be the actual number of sanitary laterals televised.

C. The unit of measurement for payment is each.

1.13 PROVIDE SUMP PUMP BASIN

A. The unit price for Provide Sump Pump Basin work includes:
    1. General work Items of Article 1.2.
    2. Providing a sump pump basin of material and construction standard as outlined in the unified dwelling code.
    3. Connecting existing foundation drains to the new sump pump basin.
    4. Excavating.

B. Measurement of payment will be the actual number of sump pump basins installed.
    1. This is an undistributed item and will only be installed when existing foundation drains are found connected to the sanitary sewer lateral.
    2. This item only requires the installation of the sump pump basin and the connections to existing foundation drain lines. No sump pump installation or associated plumbing work is required as part of this item.

C. The unit of measurement for payment is each.

1.14 SANITARY SEWER LATERAL TRACER WIRE BOXES

A. The unit price for Sanitary Sewer Lateral Tracer Wire Boxes work includes:
    1. General Work Items of Article 1.2.

2. Supply tracer wire box.
3. Install tracer wire box.
4. Connect tracer wire.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.15 SANITARY SEWER MANHOLES

A. The unit price for Sanitary Sewer Manholes work includes:
1. General Work Items of Article 1.2.
2. Precast reinforced concrete components.
3. Joint flexible gasket material.
4. Resilient flexible connector between the manhole structure and the sewer pipe.
5. Adjusting rings and bituminous plastic cement sealant at chimney.
6. Manhole steps.
7. Manhole frame and cover (Neenah Foundry R-1500 Manhole Cover with Non-Rocking Lid or equal). Sanitary Sewer manhole covers shall have gaskets and concealed pick holes.
8. Bedding material.
9. Sewer pipe stub with connections and watertight plug (where required).
10. Final casting adjustment.

B. Measurement for payment will be the distance from the invert of the lowest sewer to the top of the frame and cover as set.

C. The unit of measurement for payment is vertical feet.

1.16 CORE DRILLING TO EXISTING SANITARY MANHOLE

A. The unit price for Core Drilling to Existing Sanitary Manhole work includes:
1. General Work Items of Article 1.2.
2. Core drilling into existing sanitary sewer manhole (where required).
3. Install A-Lok boot.
4. Reform flow line in existing sanitary manhole.

B. Measurement for payment will be the actual number complete.

C. The unit of measurement for payment is each.

1.17 RECONNECT TO EXISTING SANITARY SEWER PIPE/LATERAL

A. The unit price for Reconnect to Existing Sanitary Sewer Pipe/Lateral work includes:
1. General Work Items of Article 1.2.

2. Sanitary Sewer Pipe same material strength or better than sewer main. Provide Fernco with stainless steel sheer bands and connection water tight seal.
3. Backfilling and compacting.

B. Measurement for payment will be the actual number completed.
1. Lateral connection applies only to Martin Street where the existing wye is PVC.

C. The unit of measurement for payment is each.

1.18 DIG DOWN, LOCATE, AND RAISE SANITARY MANHOLE

A. The unit price for Dig Down, Locate, and Raise Sanitary Manhole work includes:
1. General Work Items of Article 1.2.
2. Excavate down to existing sanitary manhole.
3. Provide new rings and casting.
4. Raise to grade with adjusting rings.
5. Backfilling and compacting.
6. Restore terrace.

B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.19 ABANDON/REMOVE SANITARY SEWER LATERAL AND APPURTENANCES AT MAIN

A. The unit price for Abandon/Remove Sanitary Sewer Lateral and Appurtenances at Main work includes:
1. General Work Items of Article 1.2.
2. Excavating
3. Install plug at wye.
4. Backfilling and compacting.
5. Removal and disposal as shown on the Drawings.

B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.20 WATERTIGHT CONNECTION TO MANHOLE FOR LATERAL

A. The unit price for Watertight Connection to Manhole for Lateral work includes:
1. General Work Items of Article 1.2.
2. Core drilling into concrete sanitary manhole.
3. Provide watertight gasket.
4. Install sanitary lateral into manhole.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

END OF SECTION

SECTION 01 22 02

MEASUREMENT AND PAYMENT STORM SEWER

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

	Bid Item No.
1. Storm Sewer Mains (Granular Backfill)	ST-01, ST-02, ST-03, ST-04
2. Storm Sewer Mains (Natural Backfill)	ST-05
3. Storm Sewer Laterals	ST-06
4. Storm Sewer Service Branches	ST-07, ST-08
5. Storm Sewer Tracer Wire Box	ST-09
6. Storm Sewer Manholes	ST-10, ST-11, ST-12, ST-13
7. Catch Basin/Inlets	ST-14, ST-15, ST-16, ST-17
8. Connect to Storm Structure	ST-18
9. Connect to Existing Storm Sewer Pipe	ST-19
10. Concrete Collar	ST-20
11. Flared End Section	ST-21
12. Storm Sewer Dig Down Spot Repair	ST-22
13. Storm Sewer Dig Down and Verify Elevation	ST-23
14. Storm Sewer Outfall Repair	ST-24
15. Abandon/Remove Storm Sewer and Appurtenances	ST-25

B. Unit Prices include:
   1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
   2. The method of measurement for payment.
   3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for storm sewer systems.

B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
   1. Traffic Control.
   2. Sawcutting asphalt and/or concrete.

3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
4. Dewatering.
5. Excavation.
6. Open trench installation method (unless bid item specifies other method).
7. Pipe bedding.
8. Backfilling and compacting native obtained from the excavation.
9. Supplying, hauling, backfilling and compacting granular material.
10. Loading, hauling and disposing of surplus excavated material.
11. Landscaping – turf establishment surface restoration and trees and bushes damaged during construction.
12. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
13. Site access requirements including temporary aggregate material as required for local traffic access.
14. Bulkhead and abandon existing storm sewer with flowable fill as shown on drawings.
15. If crossing or undermining of existing public or private utility, then include:
    a. Maintaining the utility in service.
    b. Replacing of existing utilities, if damaged.
    c. Providing support and bedding material.
16. Dust control.
17. Remove and replace existing mailboxes and traffic signs.
18. Restroom facilities.
19. Easement and right-of-way requirements.
20. Construction staking and other survey work not provided by the Engineer.
21. Regulatory requirements.
22. Preconstruction videotaping and video equipment.
23. Quality assurance and quality control testing and inspections.
24. Shop drawings and other submittals.

1.3 STORM SEWER MAINS (GRANULAR BACKFILL)

A. The unit price for Storm Sewer Main (Granular Backfill) work includes:
    1. General Work Items of Article 1.2.
    2. Storm sewer pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
    3. Excavation, breakdown and removal of abandoned piping inside the trench area, including plugging of existing connections.
    4. Excavation, breakdown and removal of abandoned pipeline structures inside the trench area, including plugging of existing connections.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer from centerline of the manhole to centerline of manhole with no deductions for manholes, sewer services branches and other fittings.

C. The unit of measurement for payment is linear feet.

1.4 STORM SEWER MAINS (NATURAL BACKFILL)

A. The unit price for Storm Sewer Main (Natural Backfill) work includes:
   1. General Work Items of Article 1.2.
   2. Storm sewer pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
   3. Excavation, breakdown and removal of abandoned piping inside the trench area, including plugging of existing connections.
   4. Excavation, breakdown and removal of abandoned pipeline structures inside the trench area, including plugging of existing connections.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer from centerline of the manhole to centerline of manhole with no deductions for manholes, sewer services branches and other fittings.

C. The unit of measurement for payment is linear feet.

1.5 STORM SEWER LATERALS

A. The unit price for Storm Sewer Laterals work includes:
   1. General Work Items of Article 1.2.
   2. Storm sewer lateral pipe and fittings of the material stated in the Unit Price Bid Schedule and installed using the open trench method.
   3. Watertight plug in the end of the sewer service lateral or connection including transition coupling to the existing building sewer lateral.
   4. Tracer wire.
   5. Install an 8’ – 4” X 4” board at the end of the lateral.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed sewer service lateral pipe from centerline of the service branch to the end of the pipe at the right of way, easement or existing sewer service lateral with no deductions for fittings.

C. The unit of measurement for payment is linear feet.

1.6 STORM SEWER SERVICE BRANCHES/INSERTA TEES

A. The unit price for Storm Sewer Service Branches/Inserta Tees work includes:
   1. General Work Items of Article 1.2.

2. Storm sewer service branches of same material strength or better than storm sewer main pipe (where required).
3. Core drilling into concrete storm sewer main (where required).
4. Installation along with the storm sewer main pipe installation.
5. Plug (where required).

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.7 STORM SEWER LATERAL TRACER WIRE BOXES

A. The unit price for Storm Sewer Lateral Tracer Wire Boxes work includes:
1. General Work Items of Article 1.2.
2. Supply tracer wire box.
3. Install tracer wire box.
4. Connect tracer wire.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.8 STORM SEWER MANHOLES

A. The unit price for Storm Sewer Manholes work includes:
1. General Work Items of Article 1.2.
2. Precast reinforced concrete components.
3. Joint flexible gasket material.
4. Grout seal between the manhole and structure and the sewer pipe.
5. Adjusting rings and bituminous plastic cement sealant at chimney.
6. Manhole steps.
7. Manhole frame and cover.
8. Bedding material.
9. Sewer pipe stub with connections and watertight plug (where required).
10. Final casting adjustment.

B. Measurement for payment will be the distance from the invert of the lowest sewer to the top of the frame and cover as set.

C. The unit of measurement for payment is vertical feet.

1.9 CATCH BASIN/INLETS

A. The unit price for Catch Basin/Inlets work includes:

1. General Work Items of Article 1.2.
2. Precast reinforced concrete components.
3. Joint flexible gasket material.
4. Grout seal between the catch basin/inlet structure and the sewer pipe.
5. Adjusting rings grouted in place.
6. Casting frame and grate.
7. Bedding material.
8. Supply and install 6 to 10 feet of 4 inch flexible perforated plastic pipe with geotextile wrap subgrade drain.
9. Sand fill and Class “B” concrete floor and flow line.
10. Temporary cover over catch basin/inlet to prevent eroded materials from entering.
11. Final casting adjustment.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.10 CONNECT TO STORM STRUCTURE

A. The unit price for Connect to Storm Structure work includes:
1. General Work Items of Article 1.2.
2. Modify existing storm sewer manhole opening (where required).
3. Provide concrete around the pipe, gasket, and manhole opening to form a sediment tight seal.
4. Reform flow line in existing storm manhole.

B. Measurement for payment will be the actual number complete.

C. The unit of measurement for payment is each.

1.11 CONNECT TO EXISTING STORM SEWER PIPE

A. The unit price for Connect to Existing Storm Sewer Pipe work includes:
1. General Work Items of Article 1.2.
2. Storm sewer pipe same material strength or better than sewer main. Provide Fernco with stainless steel sheer bands and connection water tight seal.
3. Bends as required in the field.
4. Backfilling and compaction.

B. Measurement for payment will be the actual number complete.

C. The unit of measurement for payment is each.

1.12 CONCRETE COLLAR

A. The unit price for Concrete Collar work includes:
   1. General Work Items of Article 1.2.
   2. Providing and installing concrete and wire or mesh components.
   3. Connection to storm sewer pipe or manhole.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.13 FLARED END SECTION

A. The unit price for Flared End Section includes:
   1. General Work Items of Article 1.2.
   2. Precast concrete components.
   3. Anchors to storm sewer pipe.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.14 STORM SEWER DIG DOWN SPOT REPAIR

A. The unit price work for Storm Sewer Dig Down Spot Repair work includes:
   1. General Work Items of Article 1.2.
   2. Excavation.
   3. Exposing storm sewer line for repairs.
   4. Sawing existing storm sewer.
   5. Remove and replace pipe.
   6. Connection to existing storm sewer.
   7. Repairing offset joints where present.

B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.15 STORM SEWER DIG DOWN AND VERIFY ELEVATION

A. The unit price work for Storm Sewer Dig Down and Verify Elevation work includes:
   1. General Work Items of Article 1.2.
   2. Excavation.
   3. Exposing storm sewer line.
   4. Back and compact after the Engineer determines elevation.

5. Restoration

B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.16 STORM SEWER OUTFALL REPAIR

A. The unit price work for Storm Sewer Outfall Repair work includes:
   1. General Work Items of Article 1.2.
   2. Excavation.
   3. Exposing Outfall for repairs.
   4. Reattach endwall to upstream pipe.
   5. Provide additional bedding.
   6. Anchor to storm sewer pipe.
   7. Restoration.

B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.17 ABANDON/REMOVE STORM SEWER AND APPURTENANCES

A. The unit price for Abandon/Remove Storm Sewer and Appurtenances work includes:
   1. General Work Items of Article 1.2.
   2. Excavating
   3. Install bulkheads and abandon storm sewer and/or structures.
   4. Removing existing storm sewer and/or structures where in conflict with other utilities.
   5. Providing and placing flowable fill.
   6. Backfilling and compacting.
   7. Removal and disposal as shown on the Drawings.

B. Measurement for payment will not be made. This includes all of the project area.

C. The unit of measurement for payment is lump sum.

END OF SECTION

SECTION 01 22 03

MEASUREMENT AND PAYMENT WATER SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

	Bid Item No.
1. Water Mains (Granular Backfill)	W-02, W-04, W-05
2. Water Mains (Natural Backfill)	W-01
3. Water Main (Directional Drilling)	W-03
4. Water Services	W-06
5. Corporation and Curb Stop	W-07
6. 2” Corporation with Plug or Saddle and Galvanized Pipe	W-08, W-09
7. Valve Cover for Curb Box in Concrete	W-10
8. Fire Hydrants	W-14, W-15, W-16
9. Hydrant Leads	W-17
10. Valves	W-11, W-12, W-13
11. Connection to Existing Water Mains	W-20, W-21
12. Water Main Offset	W-18, W-19
13. Dig Down and Abandon Water Service at Main	W-22
14. Abandon/Remove Water Main and Appurtenances	W-23

B. Unit Prices include:
   1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
   2. The method of measurement for payment.
   3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for water systems.

B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
   1. Traffic Control.
   2. Sawcutting asphalt and/or concrete.

3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
4. Dewatering.
5. Excavation.
6. Open Trench installation method (unless bid item specifies other method).
7. Pipe Bedding.
8. Backfilling and compacting native obtained from the excavation.
9. Supplying, hauling, backfilling and compacting granular material.
10. Loading, hauling and disposing of surplus excavated material.
11. Landscaping – turf establishment surface restoration and trees and bushes damaged during construction.
12. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
13. Site access requirements including temporary aggregate material as required for local traffic access.
14. Bulkhead and abandoned existing water main with flowable fill as shown on Drawings.
15. If crossing or undermining of existing public or private utility, then include:
    a. Maintaining the utility in service.
    b. Replacing of existing utilities, if damaged.
    c. Providing support and bedding material.
16. Dust control.
17. Remove and replace existing mailboxes and traffic signs.
18. Restroom facilities.
19. Easement and right-of-way requirements.
20. Construction staking and other survey work not provided by the Engineer.
21. Regulatory requirements.
22. Preconstruction videotaping and video equipment.
23. Quality assurance and quality control testing and inspections.
24. Shop drawings and other submittals.

1.3 WATER MAINS (GRANULAR BACKFILL)

A. The unit price for Water Main (Granular Backfill) work includes:
    1. General Work Items of Article 1.2.
    2. Water pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
    3. Ductile or cast iron fittings.
    4. Tracer wire.
    5. Polyethylene encasement of ductile iron or cast iron pipe and fittings.
    6. Blocking and joint restraints.
    7. Disinfection of pipelines.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed water main with no deductions for fittings and valves.

C. The unit of measurement for payment is linear feet.

1.4 WATER MAINS (NATURAL BACKFILL)

A. The unit price for Water Main (Natural Backfill) work includes:
   1. General Work Items of Article 1.2.
   2. Water pipe and fittings of material stated in the Unit Price Bid Schedule and installed using the open trench method.
   3. Ductile or cast iron fittings.
   4. Tracer wire.
   5. Polyethylene encasement of ductile iron or cast iron pipe and fittings.
   6. Blocking and joint restraint.
   7. Disinfection of pipelines.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed water main with no deductions for fittings and valves.

C. The unit of measurement for payment is linear feet.

1.5 WATER MAINS (DIRECTIONAL DRILL)

A. The unit price for Water Main (Directional Drill) work includes:
   1. General Work Items of Article 1.2.
   2. Field verification of location and elevation of existing utilities before and/or during directional drilling.
   3. Boring pit and receiving pit excavation.
   4. PVC pipe and materials (Fusible PVC or PVC or Certa-Lok Restraint).
   5. Tracer Wire.
   6. Installation of the PVC pipe by directional drilling.
   7. Backfilling and compacting the boring and receiving pits.
   8. Loading, hauling and disposing of surplus excavated material.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed water main with no deductions for fittings and valves.

C. The unit of measurement for payment is linear feet.

1.6 WATER SERVICES

A. The unit price for Water Services work includes:
   1. General Work Items of Article 1.2.

2. Pipe and fittings of material stated in the Unit Price Bid Schedule.
3. Tracer wire.
4. Disinfection of pipelines.
5. Install an 8’- 4”x4” board at the end of the lateral.

B. Measurement of payment will be the actual horizontal length along the centerline of the installed water service with no deductions for fittings and curb stops.

C. The unit of measurement for payment is linear feet.

1.7 CORPORATION AND CURB STOPS

A. The unit price for Corporation and Curb Stops work includes:
1. General Work Items of Article 1.2.
2. Supply curb stops and curb boxes.
3. Connection to existing water service (where required).
4. Installation of curb stops and curb boxes.
5. Tracer wire.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.8 2-INCH CORPORATION WITH PLUG OR SADDLE AND GALVANIZED PIPE

A. The unit price for 2-Inch Corporation with Plug or Saddle and Galvanized Pipe work includes:
1. General Work Items of Article 1.2.
2. Provide and install 2-inch corporation with plug or saddle (where required) with 2-inch galvanized pipe.
3. Remove 2-inch corporation with plug/saddle and repair water main.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.9 VALVE COVER FOR CURB STOP IN CONCRETE

A. The unit price for Valve Cover for Curb Stop in Concrete work includes:
1. General Work Items of Article 1.2.
2. Provide and install valve cover for curb stop in concrete (where required).

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.10 FIRE HYDRANTS

A. The unit price for Fire Hydrants work includes:
   1. General Work Items of Article 1.2.
   2. Fire hydrant complete of the specified bury depth.
   3. Blocking and joint restraints.
   4. Hydrant wrenches.
   5. Hydrant markers.
   6. Polyethylene encasement.
   7. Drainage pit.
   8. Disinfection of hydrant.
   9. Tracer wire.
   10. Tracer wire access box.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.11 HYDRANTS LEADS

A. The unit price for Hydrants Leads work includes:
   1. General Work Items of Article 1.2.
   2. Pipe and fittings of material stated in the Unit Price Bid Schedule.
   3. Blocking and joint restraints.
   4. Tracer wire.
   5. Disinfection of pipeline.

B. Measurement for payment will be the actual horizontal length along the centerline of the installed from the centerline of the water main to the centerline of the hydrant with no deductions for fittings and valves.

C. The unit of measurement for payment is linear feet.

1.12 VALVES

A. The unit price for Valves work includes:
   1. General Work Items of Article 1.2.
   2. Valve.
   3. Valve box.
   4. Polyethylene encasement.
   5. Stem.
   6. Bedding material.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.13 CONNECTIONS TO EXISTING WATER MAINS

A. The unit price for Connection to Existing Water Mains work includes:
   1. General Work Items of Article 1.2.
   2. Locating existing water main.
   3. Connection to the end of existing pipe.
      a. Remove existing plug.
      b. Direct connection to end of existing pipe.
      c. Transition fittings, if required.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.14 WATER MAIN OFFSET

A. The unit price for Water Main Offset work includes:
   1. General Work Items of Article 1.2.
   2. Ductile iron fittings and PVC pipe.
   3. Tracer wire.
   4. Polyethylene encasement of ductile iron pipe and fittings.
   5. Blocking and joint restraints.

B. Measurement for payment will be the actual number installed.

C. The unit of measurement for payment is each.

1.15 DIG DOWN AND ABANDON WATER SERVICE

A. The unit price for Dig Down and Abandon Water Service work includes:
   1. General Work Items of Article 1.2.
   2. Excavate down to existing corporation at water main.
   3. Disconnect water service, remove corporation and provide solid sleeve repair.
   4. Backfilling and compacting.
   5. Restoration.

B. Measurement for payment will be the actual number completed.

C. The unit of measurement for payment is each.

1.16 ABANDON / REMOVE WATER MAIN AND APPURTENANCES

A. The unit price for Abandon/Remove Water Main and Appurtenances work includes:
   1. General Work Items of Article 1.2.
   2. Excavating
   3. Install bulkheads and abandon water line.
   4. Removing existing water main where in conflict with other utilities.
   5. Providing and placing flowable fill.
   6. Backfilling and compacting.
   7. Removal and disposal of appurtenances as shown on the Drawings.

B. Measurement for payment will not be made. This includes all of the project area.

C. The unit of measurement for payment is lump sum.

END OF SECTION

SECTION 01 22 04

MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

	Bid Item No.
1. Clearing and Grubbing	SD-01
2. Garroman Drive Site Preparation	SD-02
3. Topsoil and Unclassified Excavation	SD-03
4. Pulverize Asphaltic Concrete Pavement	SD-04
5. Crushed Aggregate and Pulverized Pavement Base and Surface Course	SD-05, SD-06
6. Asphaltic Concrete Pavement	SD-08, SD-09
7. Asphalt Concrete Pavement Patch	SD-10, SD-11
8. Portland Cement Concrete Curb and Gutter	SD-12, SD-13, SD-14, SD-15, SD-16
9. Portland Cement Concrete Pavement	SD-07
10. Portland Cement Concrete Driveway and Sidewalk	SD-17, SD-18, SD-19, SD-20
11. Deformed Reinforcement Bars	SD-21
12. Drilling Tie Bars and Dowel Bars	SD-22, SD-23, SD-24
13. Detectable Warning Field Natural	SD-25
14. Temporary Asphalt Patch	SD-26
15. Landscaping – Topsoil, Seed, Fertilize, and Mulch	SD-27, SD-28

B. Unit Prices include:
   1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
   2. The method of measurement for payment.
   3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for street and drainage systems.

B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.

1. Traffic Control.
2. Sawcutting asphalt and/or concrete.
3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
4. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.
5. Site access requirements including temporary aggregate material as required for local traffic access.
6. Dust control.
7. Remove and replace existing mailboxes and traffic signs.
8. Restroom facilities.
9. Construction staking and other survey work not provided by the Engineer.
10. Regulatory requirements.
11. Quality assurance and quality control testing and inspections.
12. Final casting and valve box adjustment.
13. Shop drawings and other submittals.

1.3 CLEARING AND GRUBBING

A. The unit price for Clearing and Grubbing work includes:
   1. General Work Items of Article 1.2.
   2. Cutting and disposing of trees, brush, windfalls, logs and other vegetation.
   3. Removing and disposing of roots, stumps, stubs, logs and other timber.
   4. Stripping and stockpiling topsoil.

B. Measurement for payment will be by the tree diameter in inches. The tree diameter will be determined by measuring the tree's trunk circumference approximately 4-1/2 feet above the existing ground level, but above the ground swell, and dividing by three. Diameters will be rounded to the nearest inch.
   1. Trees and shrubs less than 4 inches shall be incidental to other items bid.

C. The unit of measurement for payment is inch diameter.

1.4 GARROMAN DRIVE SITE PREPARATION

A. The unit price for Garroman Drive Site Preparation work includes:
   1. General Work Items of Article 1.2.
   2. Sawcut asphalt concrete pavement.
   3. Removing the surface as shown on the plans.

B. Measurement of payment will not be made.

C. The unit of measurement for payment is lump sum.

1.5 TOPSOIL AND UNCLASSIFIED EXCAVATION

A. The unit price for Topsoil and Unclassified Excavation work includes:
   1. General Work Items of Article 1.2.
   2. Removal of topsoil to depth available.
   3. Hauling and stockpiling topsoil.
   4. Excavation to subgrades shown on the Drawings.
   5. Hauling of unclassified material.
   6. Placing unclassified material in fill areas to subgrades shown on the Drawings and the subgrade required for placement of topsoil.
   7. Compaction of subgrade and fill areas.
   8. Test rolling subgrade.
   9. Excavation of undercut areas for placing topsoil.
   10. Respreading topsoil to final grades shown on the Drawings.
   11. Disposal of surplus topsoil, unclassified material and unsuitable material.
   12. Preparation of disposal site and transportation of material over an Engineer approved haul route from the site including all loading and dumping of material.
   13. Finish grading.

B. Measurement of payment will not be made unless there is a change in project scope. The estimated quantity represents the computed volume by comparing the triangulated surfaces and will be the basis for payment.

C. The unit of measurement for payment is cubic yards.

1.6 PULVERIZE ASPHALTIC CONCRETE PAVEMENT

A. The unit price for Pulverize Asphaltic Concrete Pavement work includes:
   1. General Work Items of Article 1.2.
   2. Pulverizing asphaltic concrete pavement with crushed aggregate base course to a depth of 8-inches.
   3. Compacting and fine grading of pulverized material.
   4. Removal of excess material to established grade elevations.

B. Measurement for payment will be the average horizontal length and width of roadway.

C. The unit of measurement for payment is square yards.

1.7 CRUSHED AGGREGATE AND PULVERIZED PAVEMENT BASE AND SURFACE COURSE

A. The unit price for Crushed Aggregate and Pulverized Pavement Base and Surface Course work includes:
   1. General Work Items of Article 1.2.
   2. Aggregate material.

3. Preparation of foundation.
4. Placing and compacting to thickness and width shown on the Drawings or specified elsewhere.
5. Maintenance until surface pavement is constructed.
6. Preparation of crushed aggregate base for paving.
7. Adjustment of manholes and valve boxes to proposed finish road grade.

B. Measurement of payment will be:
   1. Width:
      a. The width will not be greater than the maximum trench width at the surface which is greater of the pipe outside diameter plus twenty-four (24) inches or the distance from the surface to the top of the pipe embedment; or
      b. If the surface removal and the replacement limits are shown on the drawings outside the maximum trench width, then the actual average width of the area will be measured.
   2. The depth will be the actual measured depth not to exceed the depth shown on the drawings or specified elsewhere.
   3. The length will be the actual length measured longitudinally along the installed facility.

C. The unit of measurement for payment is cubic yards.

1.8 ASPHALTIC CONCRETE PAVEMENT

A. The unit price for Asphaltic Concrete Pavement work includes:
   1. General Work Items of Article 1.2.
   2. Asphaltic concrete mixture, tack coat and other required materials
   3. Surface preparation.
   4. Provide tack coat on base material.
   5. Saw cutting and/or mill adjacent and abutting pavement surfaces.
   6. Asphaltic concrete placement and compaction to thickness and width shown on the drawings or specified elsewhere.
   7. Tack coat between asphaltic concrete courses and abutting pavements.

B. Measurement for payment will be the actual amount of material required and incorporated in the work verified by submitting to the Engineer delivery tickets provided with each load showing the weight measured on a certified scale, type of material, the date delivered and the project name.

C. The Unit Price shall be adjusted for deficiencies for less than minimum density represented by the average lot density of five nuclear density tests of 750 tons of asphaltic concrete placed as shown in the following table:

Density Deficiency-Percent of Unit Price for Payment	
%Lot Density Below Specified Minimum	WisDOT Mixes

From 0.5-1.0 inclusive	98%
From 1.1-1.5 inclusive	95%
From 1.6-2.0 inclusive	91%
From 2.1-2.5 inclusive	85%
From 2.6-3.0 inclusive	70%
More than 3.0	0%

D. The unit of measurement for payment is tons.

1.9 ASPHALTIC CONCRETE PAVEMENT PATCH

A. The unit price for Asphaltic Concrete Pavement Patch work includes:
   1. General Work Items of Article 1.2.
   2. Sawcutting.
   3. Removal of asphalt.
   4. Asphaltic concrete mixture, tack coat and other required materials.
   5. Surface preparation.
   6. Grading subgrade.
   7. Asphaltic concrete placement and compaction to thickness matching surrounding pavements.
   8. Tack coat between asphaltic courses and abutting pavement.

B. Measurement for payment will be the average horizontal length and width of roadway.

C. The unit of measurement for payment is square yards.

1.10 PORTLAND CEMENT CONCRETE CURB AND GUTTER

A. The unit price for Portland Cement Concrete Curb and Gutter work includes:
   1. General Work Items of Article 1.2.
   2. Providing Portland cement concrete mixture of size shown in the drawings or specified elsewhere.
   3. Providing expansion joints.
   4. Providing curing.
   5. Existing curb and gutter removal.
   6. Subgrade preparation.
   7. Provide crushed aggregate base.
   8. Fine grading of subgrade.
   9. Providing contraction joints.
   10. Driveway entrances and handicap ramp entrances.
   11. Adjustment of catch basin/inlets.
   12. Finishing.
   13. Protection.
   14. Restoration behind the curb.

B. Measurement for payment will be along the flow line of the gutter and through inlets/catch basins.

C. The unit of measurement for payment is linear feet.

1.11 PORTLAND CEMENT CONCRETE PAVEMENT

A. The unit price for Portland Cement Concrete Pavement work includes:
   1. General Work Items of Article 1.2.
   2. Furnish all labor, tools, equipment and services.
   3. Providing Portland cement concrete mixture of thickness shown in the drawings or specified elsewhere.
   4. Surface preparation.
   5. Providing reinforcement including tie bars and dowel bars.
   6. Drilling tie bars and dowel bars into existing pavement.
   7. Joint sealing.
   8. Providing curing.
   9. Concrete sealing with linseed oil.
   10. Fine grading of subgrade.
   11. Providing expansion joints and contraction joints.
   12. Adjustment of manholes, water valves, inlets/catch basin and other structures to finish grade.
   13. Finishing.
   14. Protection.

B. Measurement for payment will be length and width of areas paved. Concrete curb and gutter will be measured separately, regardless if the curb is installed with integral curb. Curb and gutter will be paid per linear foot for twenty-four (24) inch width. The width and length will be subtracted from the concrete pavement area if integral curb is constructed.

C. The unit of measurement for payment is square yard.

1.12 PORTLAND CEMENT CONCRETE DRIVEWAY AND SIDEWALK

A. The unit price for Portland Cement Concrete Sidewalk and Driveway work includes:
   1. General Work Items of Article 1.2.
   2. Providing Portland cement concrete mixture of thickness shown in the drawings or specified elsewhere.
   3. Providing reinforcement.
   4. Providing expansion joint.
   5. Providing curing.
   6. Existing pavement removal.
   7. Subgrade preparation.

8. Providing contraction joints.
9. Handicap ramps.
10. Sidewalk steps.
11. Saw cutting adjacent surfaces.
12. Finishing.
13. Protection.
14. Restoration.

B. Measurement for payment will be the average horizontal length and width of the concrete placed.

C. The unit of measurement for payment is square yards.

1.13 DEFORMED REINFORCEMENT BARS

A. The unit price for Deformed Reinforcement Bars work includes:
   1. General Work Items of Article 1.2.
   2. Supply and install two - #4 deformed reinforcement bars over all trenches that fall under any portion of the concrete curb and gutter, sidewalk, and driveway being constructed.

B. Measurement for payment will be the horizontal length of each bar installed.
   1. This item applies to concrete curb and gutter, sidewalk, and driveway.
   2. This item does not apply to concrete pavement and patches.

C. The unit of measurement for payment is linear feet.

1.14 DRILLING TIE BARS

A. The unit price for Drilling Tie Bars work includes:
   1. General Work Items of Article 1.2.
   2. Providing and installing tie bars, including coating.
   3. For drilling holes in concrete not placed under the contract.
   4. For epoxying or driving.

B. Measurement for payment will be the actual number of bars installed.
   1. This item applies to concrete curb and gutter, sidewalk, and driveway.
   2. This item does not apply to concrete pavement and patches.

C. The unit of measurement for payment is each.

1.15 DETECTABLE WARNING FIELD NATURAL

A. The unit price for Detectable Warning Field Natural work includes:
   1. General Work Items of Article 1.2.

2. Providing and installing Detectable Warning Field per ADA requirements.
3. Each detectable warning field shall be two (2) feet by five (5) feet.

B. Measurement for payment will be the actual number of detectable warning field installed.

C. The unit of measurement for payment is each.

1.16 TEMPORARY ASPHALT PATCH

A. The unit price for Temporary Asphalt Patch work includes:
1. General Work Items of Article 1.2.
2. Sawcutting.
3. Placing 2” of hot or cold mix on trench.

B. Measurement for payment will be not be made.
1. This item applies to the Fox River Trail.

C. The unit of measurement for payment is lump sum.

1.17 LANDSCAPING- TOPSOIL, SEED, FERTILIZE AND MULCH

A. The unit price for Landscaping- Topsoil, Seed, Fertilize, and Mulch work includes:
1. General Work Items of Article 1.2.
2. Provide 4” topsoil or salvaged topsoil.
3. Provide seed.
4. Provide fertilizer.
5. Provide mulch.
6. Provide maintenance.

B. Measurement for payment will be the width and length not greater than the road right-of-way, not greater than the easement and not greater than fifteen (15) feet beyond the top of either side of ditches outside the right-of-way.
1. Restoration is for 807 N. Broadway Street, outfall repairs, and hammerhead construction in Braisher Park.
2. Restoration behind curb repairs and at utility construction is incidental to other items bid.

C. The unit of measurement for payment is square yard.

END OF SECTION

SECTION 01 22 05

MEASUREMENT AND PAYMENT SPECIAL CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

	Bid Item No.
1. Pipe Foundation Stabilization	SC-01
2. Silt Fence Erosion Control	SC-02
3. Coffer Dam	SC-03
4. Turbidity Barrier	SC-04
5. Inlet Protection Erosion Control	SC-05, SC-06
6. Rip Rap Erosion Control	SC-07, SC-08
7. Adjusting Existing Structure Frame and Casting	SC-09, SC-10, SC-11
8. Manhole Reconstruct	SC-12, SC-13
9. Chain Link Fence and Appurtenances	SC-14
10. Repair Sprinkler System	SC-15

B. Unit Prices include:
   1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
   2. The method of measurement for payment.
   3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for special construction.

B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
   1. Traffic Control.
   2. Loading, hauling and disposing of surplus material.
   3. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
   4. Dust control.
   5. Restroom facilities.
   6. Construction staking and other survey work not provided by the Engineer.
   7. Regulatory requirements.

8. Quality assurance and quality control testing and inspections.
9. Shop drawings and other submittals.

1.3 PIPE FOUNDATION STABILIZATION

A. The unit price for Pipe Foundation Stabilization work includes:
   1. General Work Items of Article 1.2.
   2. Excavation below the limits of the pipe bedding with the bottom of the excavation wider than the top with 1:1 side slopes.
   3. Dewatering.
   4. Soil Class A-7 or A-8 aggregate material.
   5. Loading, hauling and disposing of surplus excavated material.

B. Measurement of payment will be the volume calculated based on:
   1. The actual depth from four (4) inches below the bottom of pipe to the bottom of the aggregate material placed.
   2. The bottom width is the actual width not to exceed the pipe outside diameter plus twenty-four (24) inches plus1:1 side slopes.
   3. The top width is the pipe outside diameter plus twenty-four (24) inches.

C. The unit of measurement for payment is cubic yards.

1.4 SILT FENCE EROSION CONTROL

A. The unit price for Silt Fence Erosion Control work includes:
   1. General Work Items of Article 1.2.
   2. Provide fabric and post.
   3. Excavate to anchor fabric and compact soil or provide soil class C-3 to anchor the fabric.
   4. Inspection and maintenance of the installed silt fence.
   5. Removal of the silt fence.
   6. Finish grading.
   7. Topsoil, seeding, fertilizing, and mulching area in the vicinity of the removed silt fence which does not have established turf.

B. Measurement of payment will be the actual horizontal length installed.

C. The unit of measurement for payment is linear feet.

1.5 COFFER DAM

A. The unit price for Coffer Dam work includes:
   1. General Work Items of Article 1.2.
   2. Provide materials for construction to meet regulatory requirements.
   3. Provide site preparation to seal construction zone.

4. Dewatering.
5. Inspection and maintenance.
6. Removal coffer dam.
7. Cleaning debris.

B. Measurement for payment will not be made.

C. The unit of measurement for payment is lump sum.

1.6 TURBIDITY BARRIER

A. The unit price for Turbidity Barrier work includes:
1. General Work Items of Article 1.2.
2. Provide fabric, ballast, sand bags, buoys per WisDOT detail SDD 08E11-02.
3. Inspection and maintenance.
4. Remove turbidity barrier.

B. Measurement for payment will not be made.

C. The unit of measurement for payment is lump sum.

1.7 INLET PROTECTION EROSION CONTROL

A. The unit price for Inlet Protection Erosion Control work includes:
1. General Work Items of Article 1.2.
2. Provide geotextile and wood materials for type shown on the Drawings.
3. Placing inlet protection system.
4. Inspection and maintenance of the installed inlet protection.
5. Removal of the inlet protection.
6. Cleaning debris buildup around inlet.

B. Measurement for payment will be actual number of inlet protection erosion control installed.

C. The unit of measurement for payment is each.

1.8 RIP RAP EROSION CONTROL

A. The unit price for Rip Rap Erosion Control work includes:
1. General Work Items of Article 1.2.
2. Provide rip rap material and geotextile fabric.
3. Excavate and place rip rap material.

B. Measurement for payment will be the actual area installed.

C. The unit of measurement for payment is square yards.

1.9 ADJUST EXISTING STRUCTURE FRAME CASTING

A. The unit price for Adjusting Existing Structure Frame Casting work includes:
   1. General Work Items of Article 1.2.
   2. Removal of the casting and existing adjusting rings from the structure as required.
   3. Providing concrete adjusting rings and a 2 inch rubber riser ring from the WisDOT approved product list.
   4. Bituminous plastic cement sealing the exterior of the adjusting rings and casting.
   5. The ring will be secured to the precast section with a 3 ½ inch wide Kent Seal or equal.
   6. Above the concrete ring attach ¼ inch thru 3 inch thick ring using two $^{5}/_{16}$ inch bead above and below the ring of sealant type as recommended by the rubber manufacturer.
   7. Initial and final adjustment.
   8. Backfilling and compacting.

B. Measurement for payment will be the actual number of structure frame casting adjusted.

C. The unit of measurement for payment is each.

1.10 MANHOLE RECONSTRUCT

A. The unit price for Manhole Reconstruct work includes:
   1. General Work Items of Article 1.2.
   2. Provide new castings.
   3. Removal of the casting, existing adjusting rings and sections of structure.
   4. Providing precast cone section for manholes.
   5. Providing concrete adjusting rings and a 2 inch rubber riser ring from the WisDOT approved product list.
   6. Bituminous plastic cement sealing the exterior of the adjusting rings and casting.
   7. The ring will be secured to the precast section with a 3 ½ inch wide Kent Seal or equal.
   8. Above the concrete ring attach ¼ inch thru 3 inch thick ring using two $^{5}/_{16}$ inch bead above and below the ring of sealant type as recommended by the rubber manufacturer.
   9. Initial and final adjustment.
   10. Backfilling and compacting.

B. Measurement for payment will be the distance from the invert of the bottom of the repair to the top of the frame and cover as set.

C. The unit of measurement for payment is vertical feet.

1.11 CHAIN LINK FENCE AND APPURTENANCES

A. The unit price for Chain Link Fence and Appurtenances includes:
   1. General Work Items of Article 1.2.
   2. Remove chain link fence and associated appurtenances in conflict with sewer construction.
   3. Install all fencing and appurtenances after construction.
   4. Provide new fencing if damaged.

B. Measurement for payment will not be made.

C. The unit of measurement for payment is lump sum.

1.12 REPAIR SPRINKLER SYSTEM

A. The unit price for Repair Sprinkler System includes:
   1. General Work Items of Article 1.2.
   2. Provide pipe for damaged sections.
   3. Connection at the existing system.

B. Measurement for payment will be the actual number repaired.

C. The unit of measurement for payment is each.

END OF SECTION

SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes:
   1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

A. Unit Price work will be the Schedule of Values used as the basis for reviewing Applications for Payment.

1.3 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as recommended by the Engineer and approved by Owner.

B. The date for each progress payment should be the 3rd Wednesday of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends the 4th Friday of the Month.

C. Use forms provided by Engineer for Applications for Payment. Sample copy of the Application for Payment and Continuation Sheet is included in Section 00 62 76.

D. Application Preparation Procedures
   1. When requested by the Contractor, the Engineer will determine the actual quantities and classifications of Unit Price Work performed.
      a. Preliminary determinations will be reviewed with the Contractor before completing Application for Payment.
      b. Engineer will complete the Application for Payment based on Engineer's decision on actual quantities and classifications.
      c. Engineer will submit three original copies of Application for Payment to Contractor for certification of all three original copies.
      d. Contractor shall submit signed Application for Payment to Owner for approval within time frame agreed to at the Preconstruction Conference.
   2. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
      a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.

b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.
c. Evidence that the materials and equipment are covered by property insurance.

3. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.

E. With each Application for Payment, submit waivers of liens from subcontractors and suppliers for the construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested before deduction for retainage on each item.
2. When an application shows completion for an item, submit final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work shall submit waivers.
4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application.
5. Submit waivers of lien on forms executed in a manner acceptable to Owner.

F. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
1. List of subcontractors.
2. Schedule of Values (For Lump Sum Work).
3. Contractor's construction schedule.

G. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. Consent of Surety to Final Payment.
5. Final lien waivers as evidence that claims have been settled.
6. Final liquidated damages settlement statement.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 32 33

CONSTRUCTION PHOTOGRAPHS

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Photographs for utility construction sites.

1.2 SUBMITTALS

A. Submit electronic files of each photographic view within seven (7) days of taking photographs.

1.3 QUALITY ASSURANCE

A. Photographs are to be submitted to the Engineer for approval prior to the start of construction.

PART 2 – PRODUCTS

PART 3 – EXECUTION

3.1 UTILITY AND STREET CONSTRUCTION SITES

A. Prior to start of construction provide sufficient photographs to adequately show the existing facilities and conditions within and adjacent to the construction Site to serve as a guide for final restoration including:
   1. Roads including shoulders and/or curb and gutter.
   2. Sidewalks, parking areas, and driveways.
   3. Utility structures.
   4. Landscaping including signs, plantings, walls, fences, trees, shrubbery, etc.
   5. Mailboxes.
   6. Drainage facilities including culverts, inlets, ditches.
   7. Building structures.

B. During construction provide sufficient photographs (a minimum of one per 100 feet of installed utility) to adequately show construction means, methods, and Site conditions including:
   1. Crossings of other utilities.
   2. Exposure of existing structures.
   3. Soil conditions.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for submittals:
   1. Progress Schedule.
   2. Schedule of Shop Drawings and Sample Submittals.
   3. Shop Drawings.

B. Failure to meet Submittal requirements to the satisfaction of the Engineer will constitute unsatisfactory performance of the work in accordance with the Contract Documents, therefore, the Engineer may recommend to the Owner that all or a portion of payments requested during the corresponding pay period be withheld until these requirements are met.

1.2 SUBMITTAL PROCEDURES

A. Coordination: Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
      a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
   3. To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
      a. Allow two weeks for initial submittal.
      b. Allow two weeks for reprocessing each submittal.
      c. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.

B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
   1. Assign a reference number to each submittal and re-submittal.
   2. Provide a space approximately four (4) by five (5) inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
   3. Include the following information on the label for processing and recording action taken.

a. Project name.
b. Date.
c. Name and address of the Engineer.
d. Name and address of the Contractor.
e. Name and address of the subcontractor.
f. Name and address of the supplier.
g. Name of the manufacturer.
h. Number and title of appropriate Specification Section.
i. Drawing number and detail references, as appropriate.

4. Each submittal shall be stamped by the Contractor indicating that submittal was reviewed for conformance with the Contract Documents. The Engineer will not accept unstamped submittals.

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal to the Engineer. The Engineer will not accept submittals received from sources other than the Contractor.
1. On the transmittal, record relevant information and requests for Engineer action. On a form, or separate sheet, record deviations from Contract Document requirements, including variations, limitations, and justifications. Include Contractor's certification that information complies with Contract Document requirements.

1.3 CONTRACTOR'S PROGRESS SCHEDULE

A. Prepare and submit to the Engineer within 10 (ten) days after the Effective Date of the Agreement, four copies of a preliminary progress schedule of the work activities from Notice to Proceed until Substantial Completion.
1. Provide sufficient detail of the work activities comprising the schedule to assure adequate planning and execution of the work, such that in the judgment of the Engineer, it provides an appropriate basis for monitoring and evaluation of the progress of the work. A work activity is defined as an activity which requires substantial time and resources (manpower, equipment, and/or material) to complete and must be performed before the contract is considered complete.
2. The schedule shall indicate the sequence of work activities. Identify each activity with a description, start date, completion date and duration. Include, but do not limit to the following items, as appropriate to this contract:
a. Shop drawing review by the Engineer.
b. Excavation and grading.
c. Asphalt and concrete placement sequence.
d. Restoration.
e. Construction of various segments of utilities.
f. Subcontractor's items of work.
g. Allowance for inclement weather.
h. Contract interfaces, date of Substantial Completion.
i. Interfacing and sequencing with existing facilities and utilities.

j. Sequencing of major construction activities.
k. Milestones and completion dates.

B. Distribution: Following response to the initial submittal, print and distribute copies of the revised construction schedule to the Engineer, Subcontractors, and other parties required to comply with scheduled dates. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.

C. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

D. Punch List: Prepare and submit to the Engineer within ten (10) days after substantial completion a detailed progress schedule for outstanding work and punch list items.

1.4 SCHEDULE OF SHOP DRAWINGS AND SAMPLE SUBMITTALS

A. Submit electronic or one (1) hard copy of preliminary submittal schedule in accordance with the General Conditions of the Contract and as follows:
1. Coordinate submittal schedule with the subcontractors, Schedule of Values, and of products as well as the Contractor's Progress Schedule.
2. Prepare the schedule in chronological order. Provide the following information:
a. Scheduled date for the first submittal.
b. Related Section number.
c. Submittal category (Shop Drawings, Product Data, or Samples).
d. Name of the subcontractor.
e. Description of the part of the work covered.
f. Scheduled date for the Engineer's final release or approval.

B. Distribution: Following response to the initial submittal, print and distribute copies of the revised construction schedule to the Engineer, Subcontractors, and other parties required to comply with scheduled dates. Post copies in the field office. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.

C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 SHOP DRAWINGS

A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or

copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

B. Collect product data into a single submittal for each element of construction of system. Product data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
   1. Mark each copy to show actual product to be provided. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
      a. Manufacturer's printed recommendations.
      b. Compliance with trade association standards.
      c. Compliance with recognized testing agency standards.
      d. Application of testing agency labels and seals.
      e. Notation of dimensions verified by field measurement.
      f. Notation of coordination requirements.

C. Do not use shop drawings without an appropriate final stamp indicating action taken.

D. Submittals: Submit electronic or one (1) hard copy of each required submittal. The Engineer will scan and return the submittal to the Contractor marked with action taken and corrections or modifications required.

E. Distribution: Furnish copies of reviewed submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms. Maintain one copy at the project site for reference.
   1. Do not proceed with installation until a copy of the Shop drawing is in the Installer's possession.
   2. Do not permit use of unmarked copies of the Shop Drawing in connection with construction.

1.6 ENGINEER'S ACTION

A. Except for submittals for the record or information, where action and return is required, the Engineer will review each submittal, mark to indicate action taken, and return promptly. The Engineer will stamp each submittal with a uniform action stamp. The Engineer will mark the stamp appropriately to indicate the action taken, as follows:
   1. "No Exceptions Taken": The work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.
   2. "Make Corrections Noted": The work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.

3. "Amend and Resubmit": Do not proceed with work covered by the submittal. Resubmit without delay. Do not use, or allow others to use, submittals marked "Amend and Resubmit" at the Project Site or elsewhere where work is in progress.
4. "Rejected – See Remarks": Do not proceed with work covered by the submittal. Resubmit without delay. Do not use, or allow others to use, submittals marked "Rejected and Resubmit" at the Project Site or elsewhere where work is in progress.

B. Unsolicited Submittals: The Engineer will return unsolicited submittals to the sender without action.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Underground Utilities.
   2. Property Monuments.
   3. Traffic Control.
   4. Permits for Project.

1.2 UNDERGROUND UTILITIES

A. Under the provisions of Wisconsin Statutes, Section 182.0175, all contractors, subcontractors, and any firm or individual intending to do work on this Contract shall contact all utility firms in the affected area of construction a minimum of three (3) working days prior to beginning construction so that affected utilities will be located and marked.

1.3 PROPERTY MONUMENTS

A. Protect iron pipe monuments from movement.

B. The cost of replacement of any monuments moved or destroyed during construction shall be the Contractor's responsibility.

C. Perpetuation of destroyed or moved monuments shall be performed in accordance with state statutes by a registered land surveyor.

1.4 TRAFFIC CONTROL

A. Provide traffic control facilities including barricades, signs, lights, warning devices, pavement markings, flaggers, etc.

B. Construct and use traffic control facilities in accordance with the U.S. D. O. T. Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways.

C. Maintain traffic control devices as required to properly safeguard the public travel through final completion, including during periods of suspension of work.

1.5 PERMITS FOR PROJECT

A. The following permits are being obtained by the Owner:

1. Wisconsin Department of Natural Resources Water System Plan Review
2. Wisconsin Department of Natural Resources Sanitary Sewer Extension
3. Wisconsin Department of Natural Resources Storm Water Notice of Intent (NOI)

B. Any costs associated with violations pertaining to the NOI permit will be the responsibility of the Contractor.

PART 2 – PRODUCTS (Not used)

PART 3 – EXECUTION (Not used)

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Engineering Surveys Provided by the Engineer.
   2. Engineering Surveys Provided by the Contractor.

1.2 SUBMITTALS

A. None

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 PREPARATION

A. Investigate and verify the existence and location of site improvements, utilities, and other existing facilities.

B. Before construction, verify the location of invert elevations at points of connection of sanitary sewer, storm sewer, water piping and underground electrical services.

C. Furnish information to the Engineer and the appropriate utility regarding conflicts that are necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.

D. Provide the Engineer two (2) working days advance notification when ready for engineering surveys for construction to be provided by the Engineer.

3.2 ENGINEERING SURVEYS TO BE PROVIDED BY THE ENGINEER

A. General
   1. Establish benchmarks for construction as shown on the drawings.
   2. Establish control points as shown on the drawings.

B. Gravity Sewer Systems and Water Distribution Systems
   1. Provide construction reference stakes set for pipe construction location at critical changes in horizontal and vertical alignment.

2. Provide construction stakes for location of pipe at connections.

C. New Road Construction
   1. Provide construction slope intercept stakes for horizontal and vertical alignment on each side of the road base on each cross section in the cross section sheets for requests received at least seventy-two (72) hours before the related work begins.
   2. Provide construction reference stakes for subgrade at a minimum of fifty (50) foot intervals and maximum of one-hundred (100) foot intervals on tangents. Provide construction reference stakes for subgrade at twenty-five (25) foot intervals within vertical and horizontal curves. Provide a reference line stake at each location.
   3. Provide construction reference stakes for top of crushed aggregate/pulverized surface at a minimum of fifty (50) foot intervals and maximum of one-hundred (100) foot intervals on tangents. Provide construction reference stakes for top of crushed aggregate at twenty-five (25) foot intervals within vertical and horizontal curves. Provide a reference or centerline stake.

3.3 ENGINEERING SURVEYS TO BE PROVIDED BY THE CONTRACTOR

A. General
   1. Locate, preserve and protect established construction reference stakes, benchmarks and control points.
   2. Locate, preserve and protect property corners and section corner monuments. If moved or destroyed due to Contractor negligence, then replace in accordance with state requirements; some of which are referenced in the “Regulatory Requirements”.
   3. Provide additional construction staking as necessary to complete construction based on the construction reference stakes provided by the Engineer and the Drawings.
   4. Before beginning with necessary construction staking, verify the information shown on the Drawings, in relation to the established construction reference stakes, benchmarks, control points and property corners. Notify the Engineer of any discrepancies.
   5. Remove construction reference stakes when directed by the Engineer.

B. Gravity Sewer Systems and Water Distribution Systems
   1. Provide any intermediate construction reference points as required to verify installation at the line and grade established and locate appurtenant structures.
   2. Check the line and grade with construction reference stakes at each pipe length.

C. New Road Construction
   1. Provide additional construction reference stakes necessary to establish location and grade in accordance with the plans.

END OF SECTION

SECTION 33 00 02.1

FUSIBLE POLYVINYL CHLORIDE (PVC) PIPE

1.1 SUMMARY

A. Section Includes:
   1. PVC pipe for water main

B. The products described are not installed under this Section.

C. This specification section is a supplement to the City of De Pere Standard Specifications and Section 33 00 02 Polyvinyl Pipe (PVC) Pipe and Fittings.

D. This material specification covers the requirements of fusible polyvinylchloride pipe, including Fusible C-900 and Fusible C-905.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. D1784 Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride)(CPVC) Compounds
   2. D1785 Specifications for Poly (Vinyl Chloride) (PVC) Plastic Pipe Schedules 40, 80, and 120
   3. D2152 Test Method for Degree of Fusion of Extruded Poly(Vinyl Chloride)(PVC) Pipe and Molded Fittings by Acetone Immersion.
   4. D2241 Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)

B. American Water Works Association (AWWA)
   1. C900 Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4-inch through 12-inch for water
   2. C905 Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14-inch through 36-inch
   3. M23 Manual of Supply Practices PVC Pipe-Design and Installation, Second Edition

C. National Sanitation Foundation (NSF)
   1. NSF-14 Plastic Piping System Components and Related Materials
   2. NSF-61 Drinking Water Components-Health Effects

D. PPI
   1. TR-2 PVC Range Composition Listing Qualified Ingredients

1.3 SUBMITTALS

A. Submit the following:
   1. Certification of productions date of all materials.
   2. Manufacturer's certification that the materials delivered were manufactured, sampled, tested, and inspected in accordance with this specifications and appropriate referenced standards.
   3. Product data sheet.
   4. Manufacturer's recommendations for assembly.

1.4 QUALITY ASSURANCE

A. Make pipe available to the Engineer's Representative for inspection.

B. Pipe shall be considered defective and will be rejected when:
   1. Pitted or cratered.
   2. Flaking.
   3. Straightness varies more than ½ inch in 10 feet.
   4. Any defect which prevents assembly according to manufacturer's recommendations.
   5. Not utilized within six months of date of production.
   6. Pipe is not properly marked.

C. Material brands and/or pipe classes shall not be mixed.

D. Pipe Marking – pipe and fittings shall be marked as follows:
   1. Manufacturer's name, trademark or logo.
   2. Nominal size.
   3. PVC cell classification.
   4. Pipe stiffness designation, dimension ration, or schedule size and pressure class.
   5. ASTM or AWWA specification designation.
   6. National Sanitation Foundation approval (pipe for potable water).
   7. Production date.

E. MANUFACTURER REQUIREMENTS
   1. All piping shall be made from PVC compound conforming to cell classification 12454 per ASTM D1784.

F. FUSION TECHNICIAN REQUIREMENTS
   1. Fusion Technician shall be qualified by the pipe supplier to install fusible PVC pipe. Qualification shall be current as of the actual date of the fusion performance on the project.

G. SPECIFIED PIPE SUPPLIERS
   1. Fusible polyvinylchloride pipe shall be used as manufactured under the trade names Fusible C-900, or Fusible C-905 for Underground Solutions, Inc. or Engineer approved equal.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inspect the pipe shipment to identify shifted loads, broken packaging or rough treatment, which could be an indication of damage.

B. Unload the pipe in a manner which will not put stress on the pipe or strike anything causing damage.

C. Place and store the pipe package units on level ground stacked no more than 8 feet high. Do not store close to heat sources.

D. Store gaskets away from excessive exposure to heat, direct sunlight, ozone, oil or grease.

E. Store Solvent cement in tightly sealed containers away from excessive heat.

F. Handle pipe in a manner to prevent impact blows, abrasion damage, gouging or cutting.

G. When handling pipe in cold weather, provide additional care to prevent damage due to impact. Impact strength is reduced in cold weather.

PART 2 – PRODUCTS

2.1 WATER MAIN

A. Fusible polyvinylchloride pipe for potable water shall conform to AWWA C900, ASSA C905, or ASTM D2241, as applicable. Testing shall be in accordance with the referenced AWWA standards for all pipe types. Pipe shall be marked verifying suitability for potable water service per NSF-61

B. Fusible polyvinylchloride pipe shall be extruded with plain ends. The ends shall be square to the pipe and free of any bevel or chamfer. There shall be no bell or gasket of any kind incorporated into the pipe.

C. The pipe shall be manufactured in a standard 40-foot nominal length or custom lengths, unless otherwise approved by the Engineer.

D. Pipe shall be blue in color for potable water use.

2.2 FUSION JOINTS

A. Unless otherwise specified, fusible polyvinylchloride pipe lengths shall be assembled in the field with butt-fused joints.

2.3 FUSIBLE POLYVINYLCHLORIDE SWEEPS OR BENDS

A. Sweeps or bends shall conform to the same sizing convention, diameter, dimensional tolerances and pressure class of the pipe being joined by the sweep or bend.

B. Sweeps or bends shall be manufactured from the same fusible polyvinyl chloride pipe being used for the installation, and shall have at least two feet of straight section on either end of the sweep or bend to allow for fusion of the sweep to the pipe installation.

C. Angles shall not be greater than 22.5 degrees, and shall be used in nominal diameters ranging from 4-inch through 16-inch.

PART 3 – EXECUTION

3.1 FUSION PROCESS

A. Pipe shall be handled in a safe and non-destructive manner before, during, and after the fusion process and in accordance with this specification and the pipe supplier's guidelines.

B. Pipe shall be fused by a qualified fusion technician.

C. Pipe supplier's procedures shall be always followed during fusion procedures.

D. Each fusion shall be recorded and logged by an approved electronic monitoring device (data logger) connected to the fusion machine, which utilizes a current version of the pipe suppliers recommended and compatible software.

E. Only appropriately sized and outfitted fusion machines that have been approved by the pipe supplier shall be used for the fusion process.

3.2 GENERAL INSTALLATION

A. Installation guidelines from the pipe supplier shall be followed for all installations.

B. The Pipe shall be installed in a manner so as not to exceed the recommended bending radius guidelines.

C. Where pipe is installed by pulling in tension, the recommended maximum safe pulling force, established by the pipe supplier, shall not be exceeded.

END OF SECTION

SECTION 33 01 30.23

PIPE BURSTING

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
1. Requirements for the replacement of gravity sanitary sewer lateral lines by bursting of the host pipe and inserting new high density polyethylene pipe (HDPE).

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM)
1. ASTM C425 Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings
2. ASTM D638 Standard Test Method for Tensile Properties of Plastics
3. ASTM D1238 Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer
4. ASTM D1248 Specification for Polyethylene Plastics Molding and Extrusion Materials
5. ASTM D1505 Standard Test Method for Density of Plastics by the Density-Gradient Technique
6. ASTM D1598 Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
7. ASTM D1599 Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings
8. ASTM D2122 Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
9. ASTM D2290 Standard Test Method for Apparent Hoop Tensile Strength of Plastic or Reinforced Plastic Pipe
10. ASTM D2837 Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
11. ASTM D3035 Specification for Polyethylene Plastic
12. ASTM D3261 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
13. ASTM D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials
14. ASTM D638 Standard Test Method for Tensile Properties of Plastics
15. ASTM F2620 Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
16. ASTM F585 Standard Guide for Insertion of Flexible Polyethylene Pipe into Existing Sewers
17. ASTM F714 Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter

B. American Water Works Association (AWWA)
   1. AWWA C901 Standard for Polyethylene (PE) Pressure Pipe and Tubing, ¾ in. (19 mm) through 3 in. (76 mm), for Water Service
   2. AWWA C906 Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4 in. through 63 in., for Water Distribution

1.3 SUBMITTALS

A. Product Data
   1. Shop drawings, catalog data, MSDS sheets, and manufacturer's technical data showing complete information on material composition, physical properties, and dimensions of new pipe and fittings.
   2. Engineering calculations for the design of the HDPE pipe thickness. Loads used in calculations will include the maximum pushing and/or pulling force imposed by the pipe bursting equipment.

B. Contractor Certifications
   1. Certifications of training by pipe bursting system manufacturer stating that installer have been fully trained in the use of the pipe bursting equipment by an authorized representative of the equipment manufacturer.
   2. Certification from the pipe manufacturer of training in the proper method for handling and installing new pipe.
   3. Certification of training by the pipe fusion equipment manufacturer that the operators have been fully trained in the use of the fusion equipment by an authorized representative of the equipment manufacturer.

C. Quality Assurance
   1. Provide references for three (3) pipe bursting sewer projects of similar nature and scope to the proposed work. References shall include, but not be limited to, date of work, location, pipe information (e.g. length, diameter, depth of installation, pipe material), project owner information, (e.g. name, address, telephone number, contact person).
   2. Contingency Plan. Provide for the following potential conditions at a minimum:
      a. Unforeseen obstruction causing burst stoppage, such as unanticipated change in host pipe material, repair section, concrete encasement or cradles(s), buried or abandoned manhole or changes in direction not depicted on drawings provided by the owner.
      b. Substantial surface heave occurs due to depth of the existing pipe versus the amount of upsizing.
      c. Damage to existing service connections or to the replacement pipeline's structural integrity.
      d. Damage to other existing utilities.
      e. Soil heaving or settlement.
      f. Loss of and return to line and grade.
   3. Pre-Installation and Post-Installation Inspection Data and Reports.
      a. Pre-installation inspection video on external hard drive with pdf report.
      b. Post-installation inspection video on external hard drive with pdf report.

c. CCTV inspection equipment shall be in accordance with Section 01 45 23.10 – Testing & Inspection of Pipeline & Appurtenances.

4. Pipe shall be available to Owner's Representative for inspection.
5. Pipe shall be considered defective and will be rejected when:
   a. Any defect which prevents assembly according to manufacturer's recommendations.
   b. Not utilized within 12 months of manufacture date of production.
   c. Pipe is not properly marked.
6. Material manufacturer, pipe diameters, and pressure classes shall not be mixed.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver, store, and handle products as recommended by the manufacturer to prevent damage. Materials shall be made safe from theft, vandalism, and damage.

B. Packing and shipping:
   1. Markings: Pipe materials shall be legibly marked by manufacturer with the following:
      a. Name and trademark of manufacturer.
      b. Nominal pipe size.
      c. Dimension ratio (SDR).
      d. Letters PE, followed by polyethylene grade per ASTM D3350, followed by hydrostatic design basis in hundreds of psi.
      e. Manufacturing standard reference.
      f. Production code from which date and place of manufacture can be determined.

C. Upon delivery, inspect pipe and fittings for damage, cracks, holes, or foreign inclusions.

D. Store pipe and accessories on flat, level ground with no rocks or other objects under the pipe.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Pipe Sizes 4-inch and Larger
   1. Pipe and fittings shall be high density polyethylene (HDPE) meeting AWWA C906 standards.
   2. Polyethylene resin shall meet or exceed the requirements of ASTM D3350. Materials used for the manufacture of the HDPE pipe and fittings shall be made from a PE 4710 material with cell classification of 445474C, or better. Pressure rating shall be based on hydrostatic design stress of 1,00 psi at 73.4 degrees F.
   3. Provide pipe with a dimension ratio (SDR) of 17, pressure class 200.

B. Pipe joining.
   1. Pipe lengths, fittings, and flanged connections to be joined by thermal butt-fusion shall be of a compatible resin mix for the fusion process.
   2. Threaded or solvent cement joints and connections are not permitted. All equipment and procedures used shall be in strict compliance with the manufacturer's recommendations.

C. Transition from HDPE to PVC Pipe
   1. Pipe fittings, couplings, and service saddles or wyes at the mainline sewer shall be in accordance with section 33 00 02 – PVC Pipe and Fittings.

D. Sewer house and clean out connection.
   1. Reconnect sewer house connection and install a clean out for the sewer main to the installed pipe by using heat fusion saddles.
   2. Connection to the existing sewer house connection pipe shall be made using sleeved stainless steel flexible couplings. All flexible couplings shall conform to ASTM C425.

E. Polyethylene Fittings
   1. Shall be thermal butt-fusion type.
   2. Shall have the same or higher-pressure rating as the pipe.

2.2 SOURCE QUALITY CONTROL

A. Certify laboratory data confirming that said tests have been performed on a sample pipe to be provided under this Contract, or pipe from that production run, and that satisfactory results were obtained prior to shipping.

PART 3 – EXECUTION

3.1 EQUIPMENT

A. Pipe bursting. Provide equipment of sufficient size and power to accomplish the specified pipe replacement under adverse conditions. Utilize hydraulically powered, constant tension, static pull pipe bursting system. The bursting unit shall be designed and manufactured to force its way through the existing line by fracturing the pipe and compressing the broken pieces into the surrounding soil as the equipment progresses. The bursting unit shall generate sufficient force to burst and compact the existing pipeline. The bursting unit shall pull the HDPE pipe with it as it moves forward.

3.2 PRE-INSTALLATION PROCEDURES

A. Clean the existing sewer pipe by removing interior debris jetting or other appropriate methods before the pre-installation television inspection.

B. Inspect the existing sewer pipe immediately before the installation of the pipe by remote TV camera to locate obstructions, connections, and defects. Allow the Engineer to review the TV inspection videotapes.

C. Point repairs or obstruction removals shall be performed where TV inspection video tapes reveal heavy solids, dropped joints, sags in lines, or collapsed pipe that cannot be removed by conventional sewer cleaning equipment and prevent completion of the pipe bursting process.

3.3 INSTALLATION

A. During execution of the work, maintain sanitary sewer service to each facility.

B. Machine pits and pipe insertion pits
   1. Excavation of launch pits shall be situated to provide the minimum inconvenience to residents, businesses, or traffic. Launch pits shall not be located in easement areas and private property without the permission of the property owner and the Engineer.
   2. Determine the location and number of machine pits and pipe insertion pits planned and submitted in writing for approval by the engineer prior to excavation.
   3. Insertion pits shall be of sufficient length to allow the bursting head and new HDPE pipe to enter the host pipe at an angle that will maintain the grade of the existing sanitary sewer.
   4. One or more machine pits shall be excavated at the ends of the sewer pipe to be replaced or at appropriate points within the length of the existing pipe. Pits shall be centered over the existing pipe.
   5. The number of pits for machine and pipe insertion shall be the minimum necessary to efficiently accomplish the work.
   6. Rescue Shafts
      a. In the event that the pipe bursting machine encounters an obstruction and is halted, excavate down to the machine to free the obstruction and continue the installation.
      b. The construction of such shafts will be paid for under the extra pipe-bursting excavation item for each excavation completed.

C. Pipe Joining
   1. General
      a. When requested by the Owner, prior to the pipe installation, two trail fusion welds shall be performed, reviewed, and approved by the Owner. Full penetration welds shall provide homogeneous material across the section of weld. Fusion machine employed for trial welds shall be the same machine utilized for project installation.
      b. The HDPE pipe shall be assembled and joined at the site using the butt fusion method to provide a leak proof joint.
      c. All equipment and procedures shall be in strict compliance with ASTM F2620 and with the pipe manufacturer's recommendations.
      d. All connections shall be completed in the absence of flow and in conformance with the manufacturer's installation procedures.
      e. Cut out and replace defective joints. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater than 10 percent of the wall thickness (ASTM F585) shall not be used and shall be removed from the site. However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above. In addition, any section of the pipe having other defects, such as concentrated ridges, discoloration, excessive spot roughness, pitting, variable wall thickness, or any other defect from manufacturing or handling as determined by the Engineer, shall be discarded, and not used.
   2. Joint preparation shall be made by cleaning the inside and outside of pipe ends with cotton or non-synthetic cloth to remove dirt, water, grease, and other foreign materials.

3. Fused pipe shall be laid along (parallel) streets, not across streets, so as not to block traffic. Private property, including landscaping, shall be protected.
4. Pipe ends shall be cut square and carefully aligned prior to fusing. The butt fused joint shall be in true alignment and shall have uniform rollback beads resulting from the use of proper temperature and pressure. The joint shall be allowed adequate cooling time before removal of pressure and shall be watertight with tensile strength equal to that of the pipe.
5. Weld De-beading
   a. Internal beads shall be removed with an approved de-beading device without introducing any defects to the pipe or bead. The pipe and bead must be completely cooled before the bead is removed.
   b. The removed beads shall be in one continuous strip without splitting or defect. The contractor shall remove any joint with defective beads and fuse a new joint.

D. Lubrication
   1. Lubrication shall be used if in the opinion of the Contractor such lubrication is necessary to ensure the successful completion of the job.
   2. Make arrangements for the injection of bentonite into the annular space, behind the pipe bursting head, as the lubricant is required.

E. Restoration
   1. Restore all lateral, launching pits and disturbed surface areas to their original condition.

3.4 POST-INSTALLATION PROCEDURES

A. Prior to inspection and acceptance of the pipe by the Owner, flush and clean sewer pipes to remove accumulated construction debris, rocks, gravel, sand, silt, and other foreign material in accordance with Section 01 45 23.10 – Testing & Inspection of Pipeline & Appurtenances.

B. Perform post-installation CCTV in accordance with Section 01 45 23.10 – Testing & Inspection of Pipeline & Appurtenances.
   1. Post construction video shall be submitted to the Owner for review within two weeks after permanent lateral replacements have been completed. Should any portion of the inspection video be of inadequate quality or coverage, as determined by the Engineer, re-inspect that portion at no additional cost to the Owner.
   2. From the CCTV inspection, the newly installed pipe shall be visibly free of defects, which may affect the integrity or strength of the pipe. If in the opinion of the Engineer, such defects exist, the pipe shall be repaired or replaced.

END OF SECTION

EXHIBIT A

CITY OF DE PERE – 2024 SOIL BORING GEOTECHNICAL ENGINEERING REPORT BY ECS MIDWEST, LLC

ECS Midwest, LLC

Geotechnical Engineering Report

City of De Pere – 2024 Soil Boring

Fox River State Trail
Randall Avenue
Oakdale Avenue
Merrill Street
Pleasant Place
South of American Boulevard
Brown County Fairground
City of De Pere, Brown County, Wisconsin

ECS Project No. 59:4272

December 27, 2024

December 27, 2024

Mr. Eric Rakers
City Engineer
City of De Pere
925 S Sixth Street
De Pere, WI 54115

Cc: Chase K Kuffel
City of De Pere
Email: ckuffel@mail.de-pere.org

ECS Project No. 59:4272

Reference: Geotechnical Engineering Report
City of De Pere – 2024 Soil Boring
Fox River State Trail, Randall Avenue, Oakdale Avenue, Merrill Street, Pleasant Place, South of American Boulevard, and Brown County Fairground
City of De Pere, Brown County, Wisconsin

Dear Mr. Rakers:

ECS Midwest, LLC (ECS) has completed the subsurface exploration for the above-referenced project. Our services were performed in general accordance with our agreed to scope of services. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing.

It has been our pleasure to be of service to the City of De Pere during the design phase of this project. We would appreciate the opportunity to provide our services during construction phase operations to verify subsurface conditions anticipated for this report. Should you have questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Midwest, LLC

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EXECUTIVE SUMMARY

The following summarizes the main findings of the exploration, particularly those that may have a cost impact on the planned improvements. Information gleaned from the Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

- The subsurface profile encountered at the boring locations generally consisted of an asphalt pavement section with gravel base course or topsoil layer at the surface overlying glacial till or lacustrine soils, which extended to the terminal depth of the borings. An exception to this profile occurred in Boring B-03, B-12, and B-19 because these borings encountered an existing fill stratum below the surface layer.

- Boring B-06, B-12, and B-13 encountered a groundwater level at a depth of between 7.5 and 17 feet below the existing grade. None of the other borings contained a measurable groundwater level.

1.0 INTRODUCTION

ECS prepared this report for the purpose of providing the results of our subsurface exploration for the City of De Pere – 2024 Soil Boring project. The project information was supplied by Mr. Eric Rakers, City Engineer for the City of De Pere.

ECS provided services in accordance with our Proposal No. 59:5786-GP, dated January 30, 2024, as authorized by Mr. Anthony Wachewicz on March 20, 2024, which includes our Terms and Conditions of Service.

This report contains the procedures and results of our subsurface explorations for the design and construction for the project.

The report includes the following items:

- A brief review and description of our field test procedures and results.
- A review of the observed surface topographical features and site conditions.
- A review of area and site geologic conditions.
- A review of subsurface soil/rock stratigraphy with pertinent available physical properties.
- Final test boring logs.

Our scope for this project did not include providing geotechnical recommendations for utility or pavement construction. Our scope also did not include sampling, testing, or evaluations for environmental purposes.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION/CURRENT SITE USE/PAST SITE USE

The project sites are located within the City of De Pere, Brown County, Wisconsin. Specifically, the sites are located at the following locations:

- ***Fox River State Trail*** – Directly across from Ridgeway Boulevard (Boring B-01).
- ***Oakdale Avenue and Randall Avenue*** – 937 Oakdale Avenue and 435 Randall Avenue (Borings B-02 and B-03 respectively).
- ***Merrill Street*** – 514 South Erie St., 509 South Huron Street, 603 South Michigan Street (Borings B-04, B-05, and B-06 respectively).
- ***Pleasant Place*** – 205 Pleasant Place (Boring B-07).
- ***South of American Boulevard*** – In an agricultural field (Borings B-08 through B-17).
- ***Brown County Fairground*** – 1500 Fort Howard Avenue (Borings B-18 through B-20).

The site locations are shown in the figure below and on the *Site Location Diagram* in Appendix A of this report:

Site Locations (approximately outlined in red)

The vicinity of the project sites generally consisted of urban residential neighborhoods, a school, a state trail, an industrial business park, agricultural field, and county fairground. The existing street sites generally consisted of urbanized, two-lane, asphalt paved roadways with at-grade intersections, driveway aprons, parking lanes, concrete curb and gutter, sidewalk, groomed lawn terraces, and municipal utilities.

ECS interpreted site specific topography using the Brown County interactive GIS map (https://www.browncountywi.gov/maps/) to estimate the existing site grade elevations. We understand the elevations to be referenced to Mean Sea Level. According to the Brown County interactive map, we anticipate the existing site grade elevations for the Fox River State Trail site to range from approximately EL. +584 feet to EL. +585 feet above Mean Sea Level (MSL), the Oakdale Avenue and Randall Avenue site to range from approximately EL. +604 feet to EL. +607 feet MSL, the Merrill Street site to range from approximately EL. +611 feet to EL. +618 feet MSL, the Pleasant Place site to range from approximately EL. +605 feet to EL. +609 feet MSL, the South of American Boulevard site to range from approximately EL. +637 feet to EL. +642 feet MSL, and the Brown County Fairgrounds site to range from approximately EL. +604 feet to EL. +606 feet MSL.

Our visual review of historical aerial photographs of the subject site obtained from Google Earth dating from 1985 to 2024 detail the sites past and current conditions. Each of the sites, with exception for the South of American Boulevard site, has remained relatively the same as current site conditions since at least 1985. The South of American Boulevard site appeared to have a new subdivision constructed to the northwest of the site sometime between 2018 and 2024, and a new warehouse and the extension of American Boulevard sometime between 2021 and 2024. The site has remained relatively the same as current site conditions since the construction of the subdivision and warehouse.

2.2 PROPOSED CONSTRUCTION

ECS understands the project includes subsurface exploration for the planning and design of municipal utility and street construction projects.

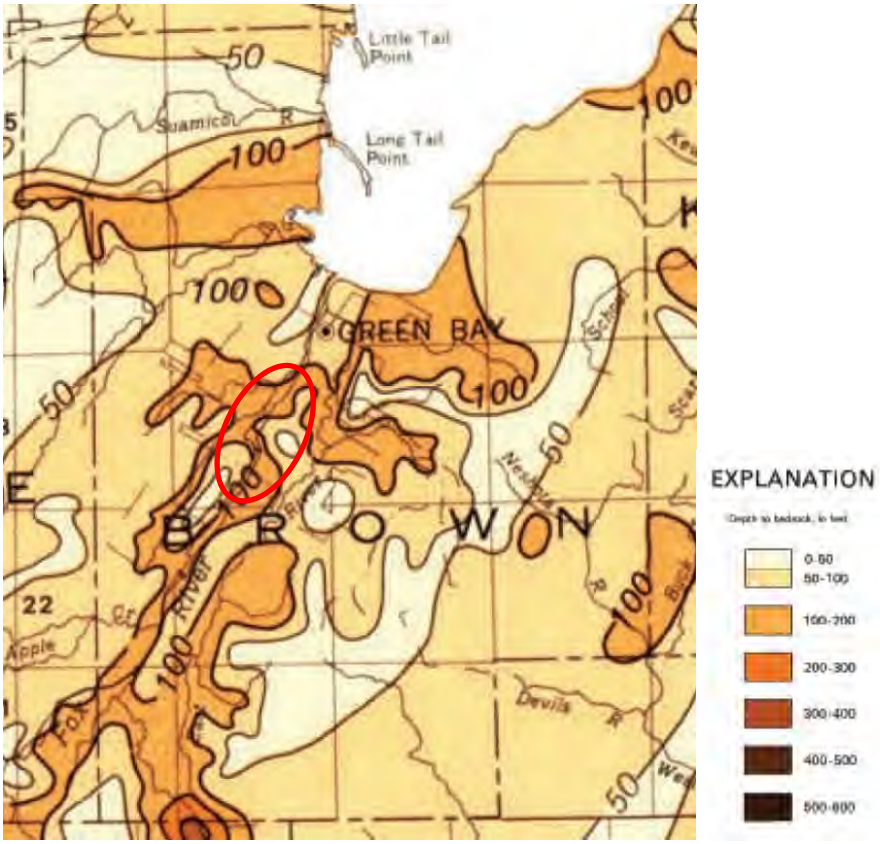
3.0 FIELD EXPLORATION AND LABORATORY TESTING

The exploration procedures are explained in greater detail in Appendix B including the insert titled "Subsurface Exploration Procedures." On December 13 through December 19, 2024, ECS advanced twenty (20) Standard Penetration Test (SPT) soil borings to a depth of approximately 5 to 27 feet below the existing grade. City of De Pere personnel selected the general boring locations and depths. City of De Pere personnel located the borings at the site. The approximate boring locations are shown on the Boring Location Diagram in Appendix A.

A licensed surveyor did not determine the ground surface elevation at the test boring locations, so the elevations are approximate and may not be appropriate for final design and construction. ECS estimated the surface elevation at the boring locations to the nearest 1 foot using the Brown County Land Information Office interactive map interval contours. We anticipate the contour elevations to be referenced to the North American Vertical Datum of 1988 (NAVD-88). The estimated surface elevation at each boring location can be found on the test boring logs included in Appendix B.

3.1 SUBSURFACE CHARACTERIZATION

According to the University of Wisconsin Extension Geological and Natural History Survey and U.S. Geological Survey[1,2] the site of the proposed construction lies above Phanerozoic bedrock of Paleozoic age within the Ordovician System consisting of sedimentary rocks. The bedrock formation generally lies within the Sinnipee Group (Os), which consists of dolomite with some limestone and shale, and includes the Galena, Decorah, and Platteville Formations. The soil overburden in the general project area ranges from 0 feet to 200 feet thick. The depth to bedrock profile[2] is illustrated in Figure 1 below with the approximate site location marked with a red circle.



(Figure 1 – Depth-to-Bedrock Brown County, WI)

According to the Soil Survey from the USDA - Natural Resources Conservation Service (websoilsurvey.nrcs.usda.gov), which provides soil information to a shallow depth (generally less than 5 feet), the near surface soils within the alignments are generally mapped as Dumps (Du), Bellevue silt loam, 0 to 2 percent slopes, frequently flooded (Bc), Kewaunee silt loam, 2 to 6 percent slopes, eroded (KhB2), Manawa silty clay loam, 0 to 3 percent slopes (McA), Oshkosh silty clay loam, 0 to 2 percent slopes (OsA), Oshkosh silty clay loam 2 to 6 percent slopes (OsB), Oshkosh silt loam, 2 to 6 percent slopes (OnB), Oshkosh silt loam, 6 to 12 percent slopes, eroded (OnC2), Oshkosh silt

[1] Trotta, L.C. and Cotter, R.D. *Depth to Bedrock in Wisconsin*. University of Wisconsin Extension Geological and Natural History Survey, U.S. Geological Survey, USGS, 1973.

[2] Mudrey, M.G., Brown B.A., and Greenburg, J.K. *Bedrock Geologic Map of Wisconsin*. University of Wisconsin Extension Geological and Natural History Survey, 1982.

loam, 12 to 20 percent slopes, eroded (OnD2), Poygan silty clay loam, 0 to 2 percent slopes, occasionally ponded, drained (Po). Soil maps of the project site are presented in Appendix A. These soil types are described with the following properties:

- **Dumps (Du)** –Fill land with various soil types and refuse. This soil type is likely mapped within the areas of the Fox River State Trail site, but not at the boring location.

- **Bellevue silt loam, 0 to 2 percent slopes, frequently flooded (Bc)** – Flood plains landform with a parent material of stratified loamy alluvium. These soils are generally moderately well drained, classified as being in Hydrologic Soil Group C, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the Brown County Fairground site, but at none of the boring locations.

- **Kewaunee silt loam, 2 to 6 percent slopes, eroded (KhB2)** – Ground moraines landform with a parent material of loess over clayey till. These soils are generally well drained, classified as being in Hydrologic Soil Group D, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the Pleasant Place site but not at the boring location.

- **Manawa silty clay loam, 0 to 3 percent slopes (McA)** – Drainageways landform with a parent material of clayey till. These soils are generally somewhat poorly drained, classified as being in Hydrologic Soil Group C/D, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the Fox River State Trail site within the area of Boring B-01, and the South of American Boulevard site within the areas of Borings B-08 and B-13.

- **Oshkosh silty clay loam, 0 to 2 percent slopes (OsA)** – Glacial lakes landform with a parent material of silty loess over clayey lacustrine deposits. These soils are generally well drained, classified as being in Hydrologic Soil Group C, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the South of American Boulevard site within the areas of Borings B-09 and B-17.

- **Oshkosh silty clay loam, 2 to 6 percent slopes (OsB)** – Glacial lakes landform with a parent material of silty loess over clayey lacustrine deposits. These soils are generally well drained, classified as being in Hydrologic Soil Group C, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the South of American Boulevard site, but at none of the boring locations.

- **Oshkosh silt loam, 2 to 6 percent slopes (OnB)** – Glacial lakes landform with a parent material of silty loess over clayey lacustrine deposits. These soils are generally well drained, classified as being in Hydrologic Soil Group C, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the Oakdale Avenue and Randall Avenue site within the areas of Borings B-02 and B-03, the Merrill Street site within the areas of Borings B-04, B-05, and B-06, the South of American Boulevard site within the area of Boring B-14, and the Brown County Fairground site within the areas of Borings B-18, B-19, and B-20.

- **Oshkosh silt loam, 6 to 12 percent slopes, eroded (OnC2)** – V-shaped valleys landform with a parent material of loess over clayey lacustrine deposits. These soils are generally well drained, classified as being in Hydrologic Soil Group C, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the Fox River State Trail site but not at the boring location, the Oakdale Avenue and Randall Avenue site but at none of the boring locations, and the Brown County Fairground site but at none of the boring locations.

- **Oshkosh silt loam, 12 to 20 percent slopes, eroded (OnD2)** – V-shaped valleys landform with a parent material of loess over clayey lacustrine deposits. These soils are generally well drained, classified as being in Hydrologic Soil Group C, and have a moderate potential for frost action. This soil type is likely mapped within a portion of the Pleasant Place site within the area of Boring B-07.

- **Poygan silty clay loam, 0 to 2 percent slopes, occasionally ponded, drained (Po)** – Depressions landform with a parent material of silty and clayey till. These soils are generally poorly drained, classified as being in Hydrologic Soil Group C/D, and have a high potential for frost action. This soil type is likely mapped within a portion of the South of American Boulevard site within the areas of Borings B-10, B-11, B-12, B-15, and B-16.

The encountered subsurface conditions in the borings appeared consistent with published geological mapping except for the undocumented fill in Borings B-03, B-12, and B-19. A graphical presentation of the generalized subsurface conditions is shown on the Subsurface Cross-Section diagrams included in Appendix A. For subsurface information at a specific test boring location, refer to the boring logs in Appendix B. The following Table provides generalized characterizations of the soil strata encountered during our subsurface exploration:

APPROXIMATE SUBSURFACE STRATIGRAPHY			
Approximate Depth Increment of Stratum (feet)	**Stratum No.**	**Material Description**	**Range of SPT(1) N-values (bpf)**
0 – 1.38 (Surface cover)	N/A	Approximately 1.5 to 6.0 inches of **asphalt pavement** over 6.0 to 12.0 inches of **gravel base course** or 1.0 to 6.0 inches of **topsoil**.	N/A
0.08 – 2.0	I	**FILL:** stiff SANDY CLAY WITH GRAVEL (CL) [A-6] Present in Boring B-03, stiff ORGANIC LEAN CLAY (OL) [A-8] Present in Boring B-12, and hard ORGANIC LEAN CLAY (OL) [A-8] Present in Boring B-19.	8 - 13
0.08 – 27.0 (End of Boring)	II	**Lacustrine:** soft to very stiff LEAN CLAY (CL) [A-6], stiff SILTY CLAY (CL/ML) [A-6] and loose to medium dense SILTY SAND (SM) [A-2-4], medium dense CLAYEY SAND WITH GRAVEL (SC) [A-2-4]. **Glacial Till:** soft to very hard LEAN CLAY (CL) [A-6], very hard LEAN CLAY WITH GRAVEL (CL) [A-6].	3 – 50+

Notes: (1) Standard Penetration Test.
(2) Estimated from calibrated hand penetrometer.

Auger refusal occurred in Boring B-01 at a depth of 5.1 feet below the existing grade on an unknown obstruction. The drill crew offset Boring B-01A approximately 3 feet southwest of Boring B-01 and drilled past the obstruction to the planned terminal depth of the boring. A 5-foot rock core run advanced into the obstruction at Boring B-01 would be required to document if refusal occurred on a bedrock formation, boulder, or other obstruction.

The soil stratification shown on the boring logs represents the interpreted soil conditions at the actual boring locations. Variations in the stratification can occur between sample intervals and boring locations. The subsurface conditions at other times and locations on the site may differ from those found at the boring locations. If different site conditions are encountered during construction, ECS should be contacted to review our recommendations relative to the new information.

Because of the limitations of the split-spoon sampler, which has a 1⅜-inch inside diameter, the soil classifications noted on the boring logs may not be representative of the entire soil matrix. Materials larger than the 1⅜-inch inside diameter of the split-spoon sampler cannot be collected and observed directly. Where possible, the drill crew noted the estimated depth of larger diameter materials, such as cobbles, based on things such as changes in the observed drilling resistance and auger cuttings.

3.2 GROUNDWATER OBSERVATIONS

The drill crew observed the boreholes for a measurable groundwater level during and at the completion of drilling operations. The observed groundwater levels are noted on the boring logs in Appendix B and the following table summarizes the depth to a measurable groundwater level observed in the boring locations:

GROUNDWATER OBSERVATIONS DURING/AFTER DRILLING ACTIVITIES		
Boring No.	**Depth to Groundwater Below Existing Grade (feet)**	
	During Sampling	**After Drilling**
B-01	None	None
B-02	None	None
B-03	None	None
B-04	None	None
B-05	None	None
B-06	10	17
B-07	None	None
B-08	None	None
B-09	None	None
B-10	None	None
B-11	None	None
B-12	7.5	None
B-13	13	15.7
B-14	None	None
B-15	None	None
B-16	None	None
B-17	None	None
B-18	None	None
B-19	None	None
B-20	None	None

The site likely contains areas of seasonal perched groundwater overlying a saturated (water table) aquifer. Perched groundwater is distinguished differently from the saturated (water table) aquifer. The following definition can be referenced:

> *"Perched water is typically of limited quantity, replenished or recharged very slowly. When encountered in an excavation, perched water will typically drain off very quickly, with limited continuous flow or bleeding, unless a source of recharge, such as a leaking utility is present."*
> From: *Construction Dewatering and Groundwater Control – New Methods and Applications, 3rd Addition*

A water table aquifer is distinguished from a perched groundwater table based on the water table aquifer's recharge ability, which may be limitless but can be lowered temporarily through adequate dewatering techniques such as deep wells and well points. Perched groundwater is often alleviated in excavations by pumping from sump pits and French drains.

The highest groundwater observations are normally encountered in late winter and early spring and the observed groundwater levels in the borings likely differ from the seasonal maximum water table. In addition, variations in both perched groundwater and the groundwater table aquifer can occur because of seasonal variations in precipitation, evaporation, surface water runoff, lateral drainage conditions, construction activities, and other factors. The time of year and the weather history during the advancement of the borings should be considered when estimating groundwater levels at other points in time.

3.3 LABORATORY SERVICES

ECS performed classification and index property tests on representative soil samples obtained from the test borings to aid classification of the soils, and to estimate engineering properties. The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposal.

A geotechnical engineer visually classified each collected soil sample from the test borings based on texture and plasticity using ASTM D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures),* ASTM D2487 *Standard Practice for Classification for Engineering Purposes (Unified Soil Classification System (USCS)),* and the American Association of State Highway and Transportation Officials (AASHTO) Soil Classification System as a guide. After classification, the geotechnical engineer grouped the various soil types into the major zones noted on the test boring logs in Appendix B of this report. The USCS group symbols for each soil type are indicated in parentheses along with the soil descriptions on the test boring logs. The bracketed text noted on the boring logs after the USCS group symbols indicates the AASHTO Classification. The stratification lines designating the interfaces between earth materials on the logs are approximate; in-situ, the transitions may be gradual.

4.0 CLOSING

ECS has prepared this report to guide the geotechnical-related design and construction aspects of the project. We performed these services in accordance with the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at this time in the region. No other representation expressed or implied, and no warranty or guarantee is included or intended in this report.

The description of the proposed project is based on information provided to ECS by the City of De Pere Public Works Department. If this information is inaccurate or changes, either because of our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted so we can review and provide additional or alternate recommendations that reflect the proposed construction.

Field observations, and quality assurance testing during earthwork, utility, and pavement installation are an extension of, and integral to, the geotechnical design. We recommend that ECS be retained to apply our expertise throughout the geotechnical phases of construction, and to provide consultation and recommendation should issues arise.

ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

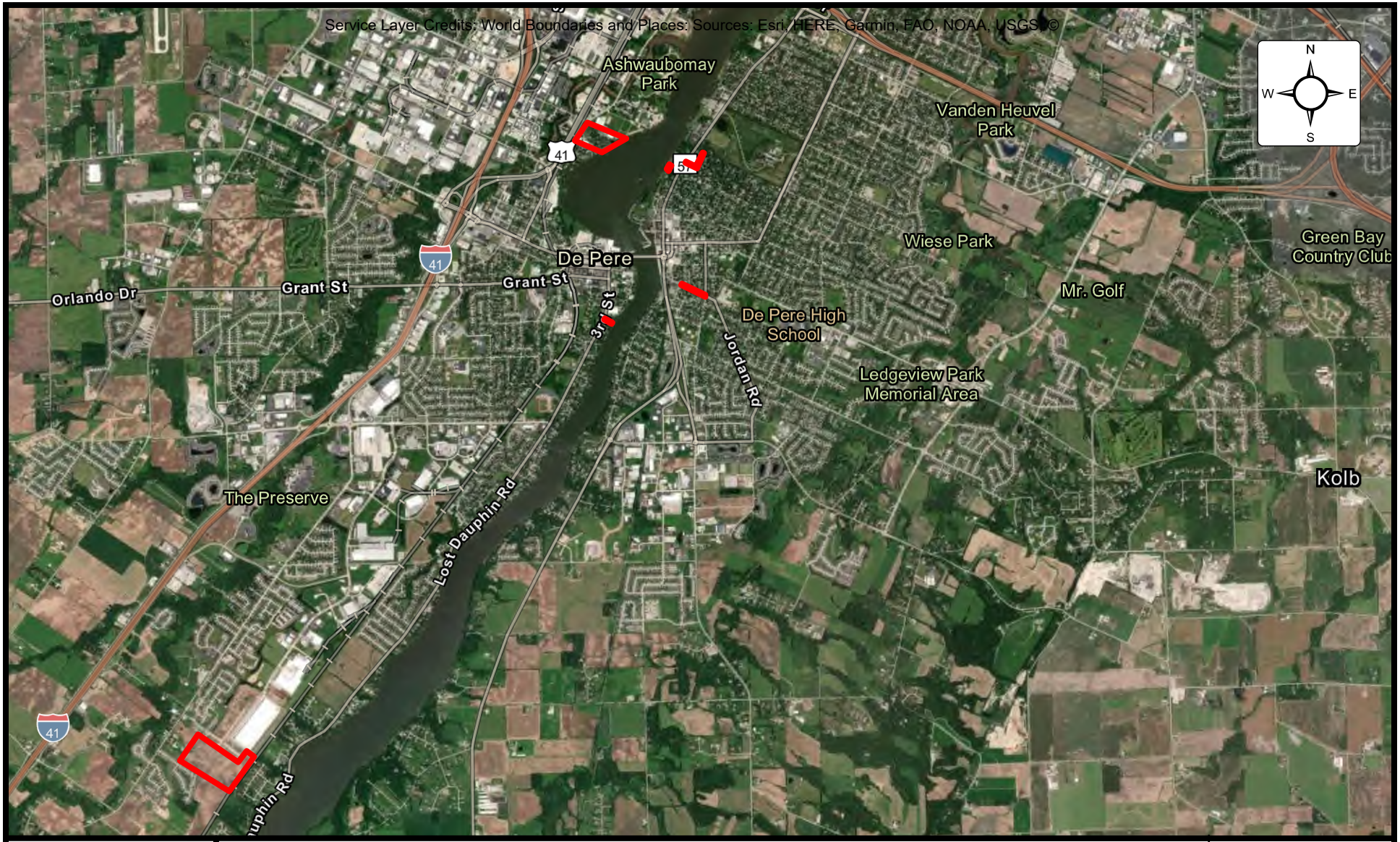
Appendix A - Drawings and Reports

Site Location Diagram

Boring Location Diagrams

Subsurface Cross-Sections

Soil Survey Maps



SITE LOCATION DIAGRAM

2024 Soil Boring

De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	1" = 1mi
PROJECT NO.	59:4272
SHEET	
DATE	11/25/2024

BORING LOCATION DIAGRAM

2024 Soil Boring

Fox River State Trail, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	1" = 80'
PROJECT NO.	59:4272
SHEET	
DATE	11/25/2024

BORING LOCATION DIAGRAM

2024 Soil Boring

Oakdale Avenue and Randall Avenue, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	1" = 150'
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

BORING LOCATION DIAGRAM

2024 Soil Boring

Merrill Street, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	1" = 100'
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

BORING LOCATION DIAGRAM

2024 Soil Boring

Pleasant Place, De Pere, Wisconsin
City of De Pere

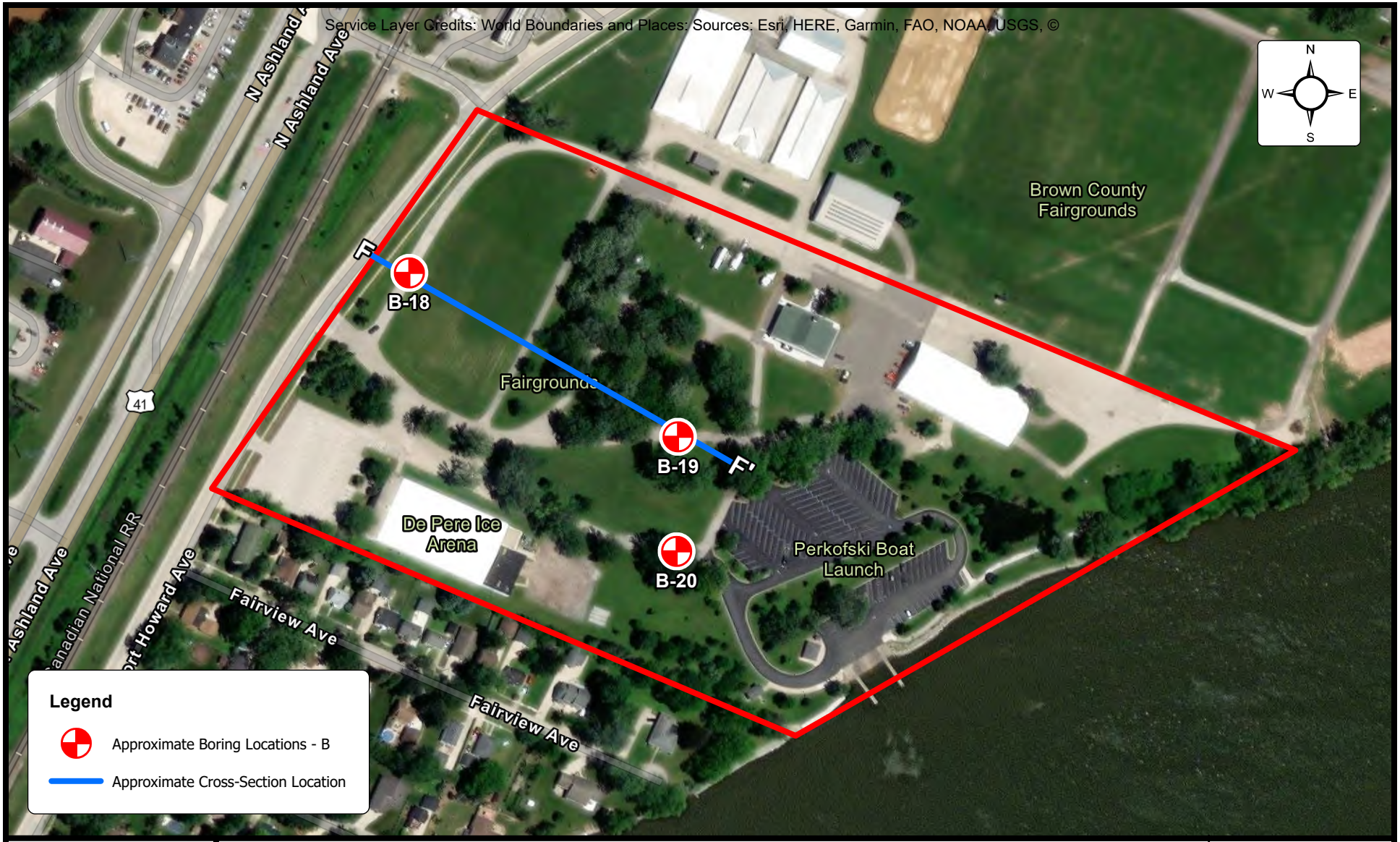
ENGINEER	BNZ
SCALE	1" = 80'
PROJECT NO.	59:4272
SHEET	
DATE	11/25/2024

BORING LOCATION DIAGRAM

2024 Soil Boring

South of American Boulevard, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	1" = 400'
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

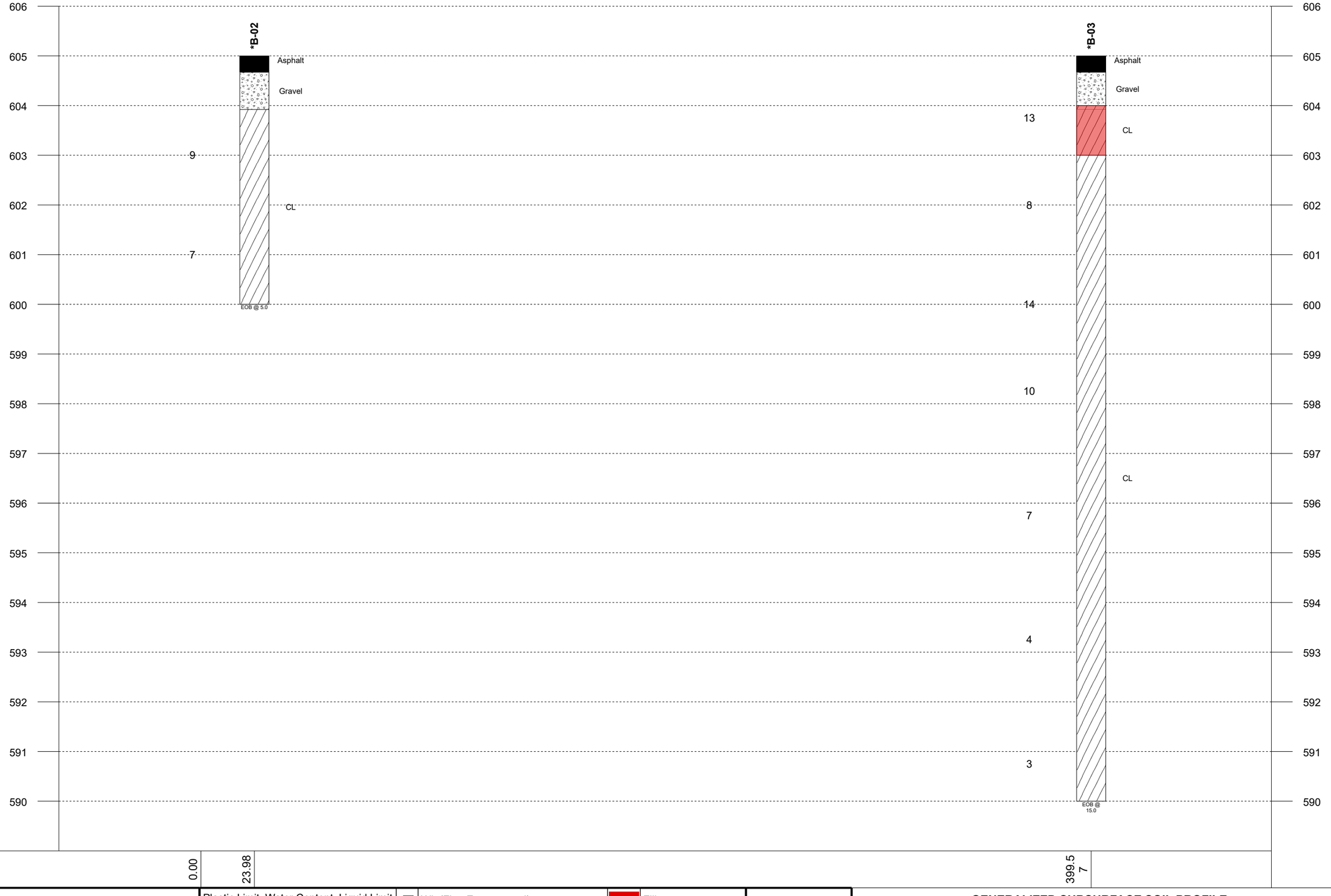


BORING LOCATION DIAGRAM

2024 Soil Boring

Brown County Fairground, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	1" = 250'
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024



Legend Key

- Asphalt
- Gravel
- LEAN CLAY

589.00

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit (X—●—△)	WL (First Encountered)	Fill	
[FINES CONTENT %]	WL (Completion)	Possible Fill	
BOTTOM OF CASING	WL (Estimated Seasonal High Water)	Probable Fill	
LOSS OF CIRCULATION	WL (Stabilized)	Rock	
CALIBRATED PENETROMETER			

GENERALIZED SUBSURFACE SOIL PROFILE

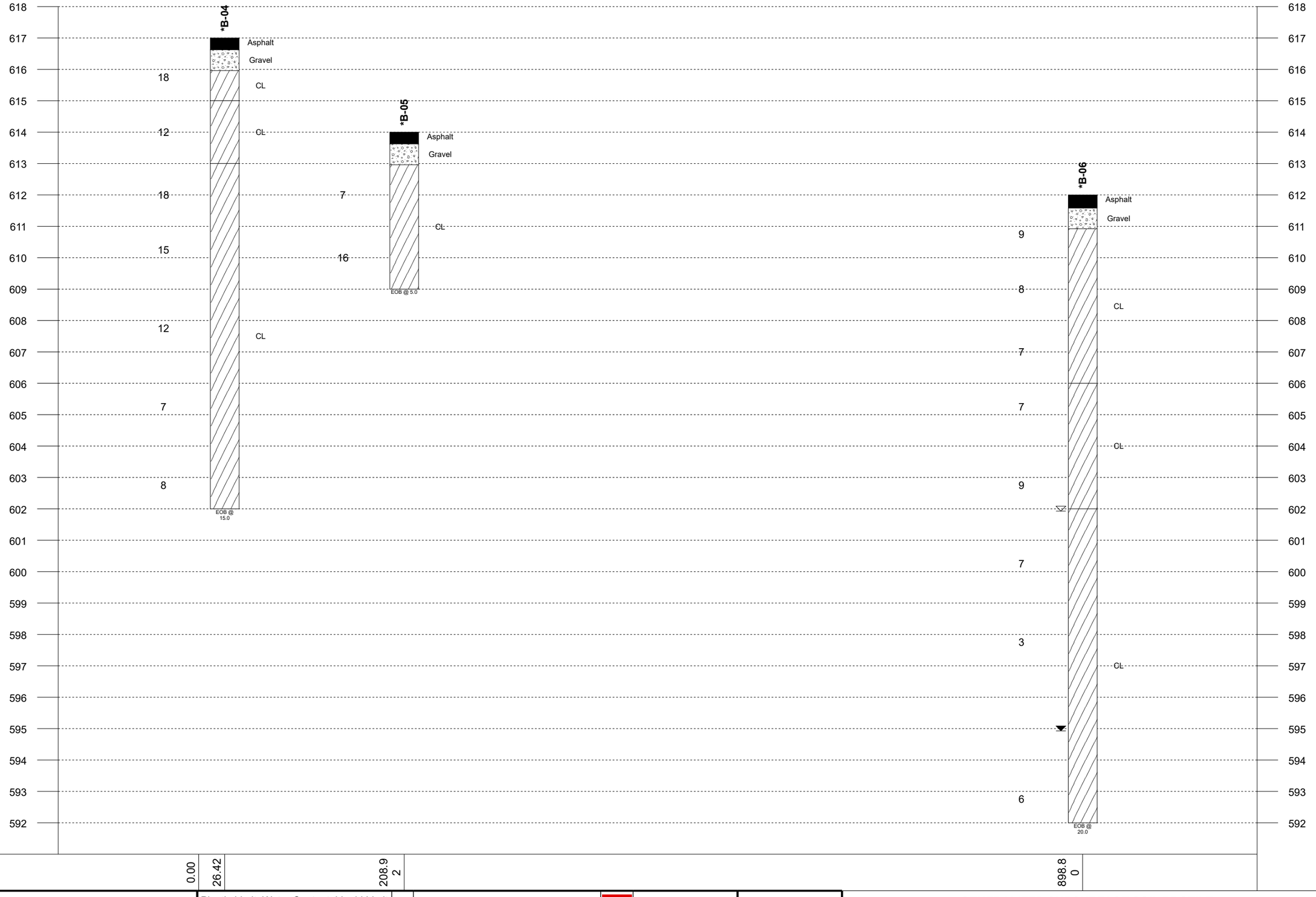
Cross Section A-A'

2024 Soil Boring

City of De Pere

Oakdale Avenue and Randall Avenue, De Pere, Wisconsin, 54115

Project No: 59:4272 Date: 12/26/2024



Legend Key

- Asphalt
- Gravel
- LEAN CLAY

591.00

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit X—● Water Content ●—△ Liquid Limit			
[FINES CONTENT %]			
BOTTOM OF CASING	WL (First Encountered)	Fill	
LOSS OF CIRCULATION	WL (Completion)	Possible Fill	
CALIBRATED PENETROMETER	WL (Estimated Seasonal High Water)	Probable Fill	
	WL (Stabilized)	Rock	

GENERALIZED SUBSURFACE SOIL PROFILE

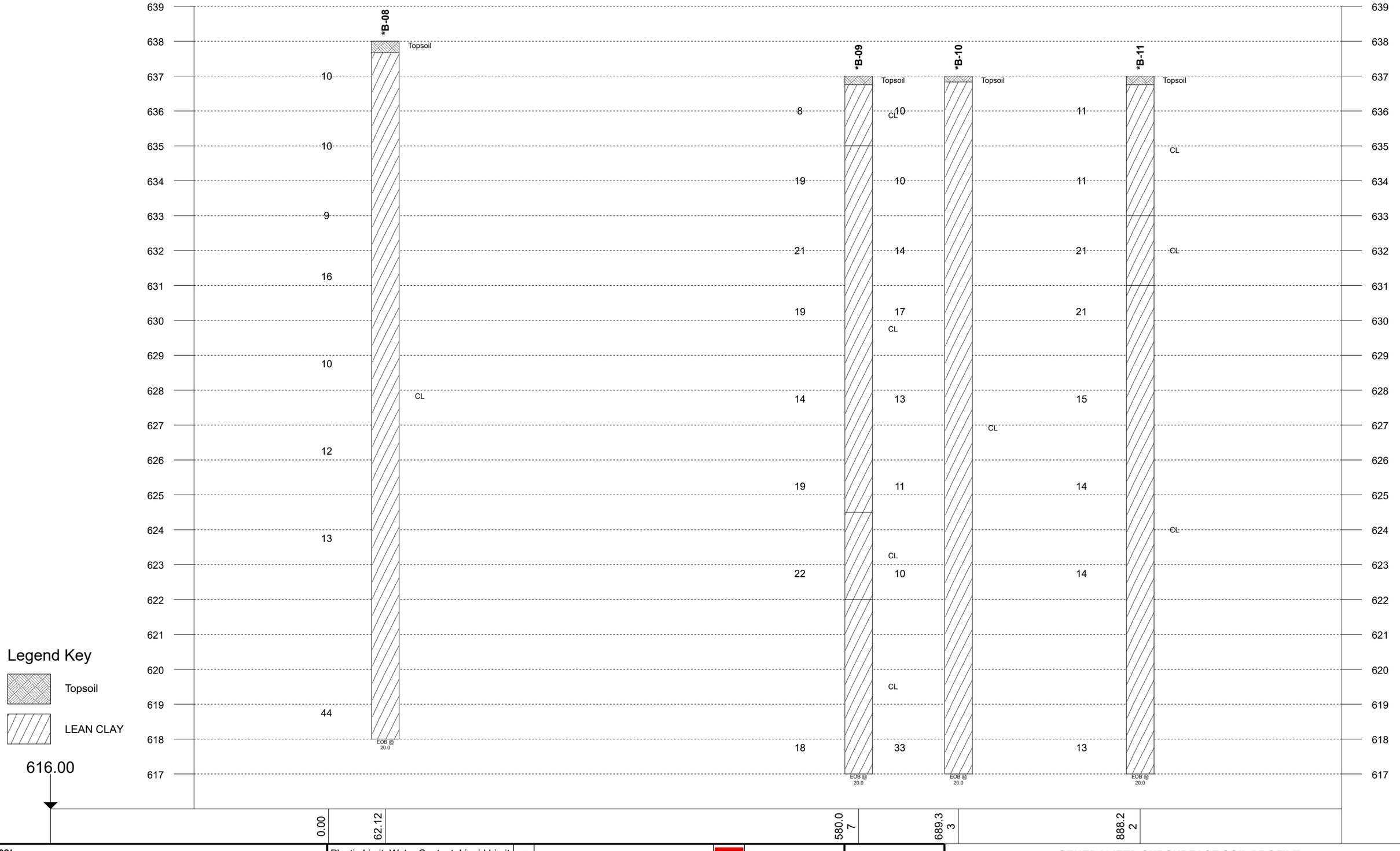
Cross Section B-B'

2024 Soil Boring

City of De Pere

Merrill Street, De Pere, Wisconsin, 54115

Project No: 59:4272 Date: 12/26/2024



Legend Key

- Topsoil
- LEAN CLAY

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit (X—●—△)	
[FINES CONTENT %]	
BOTTOM OF CASING	
100% LOSS OF CIRCULATION	
CALIBRATED PENETROMETER	
WL (First Encountered)	Fill
WL (Completion)	Possible Fill
WL (Estimated Seasonal High Water)	Probable Fill
WL (Stabilized)	Rock

GENERALIZED SUBSURFACE SOIL PROFILE

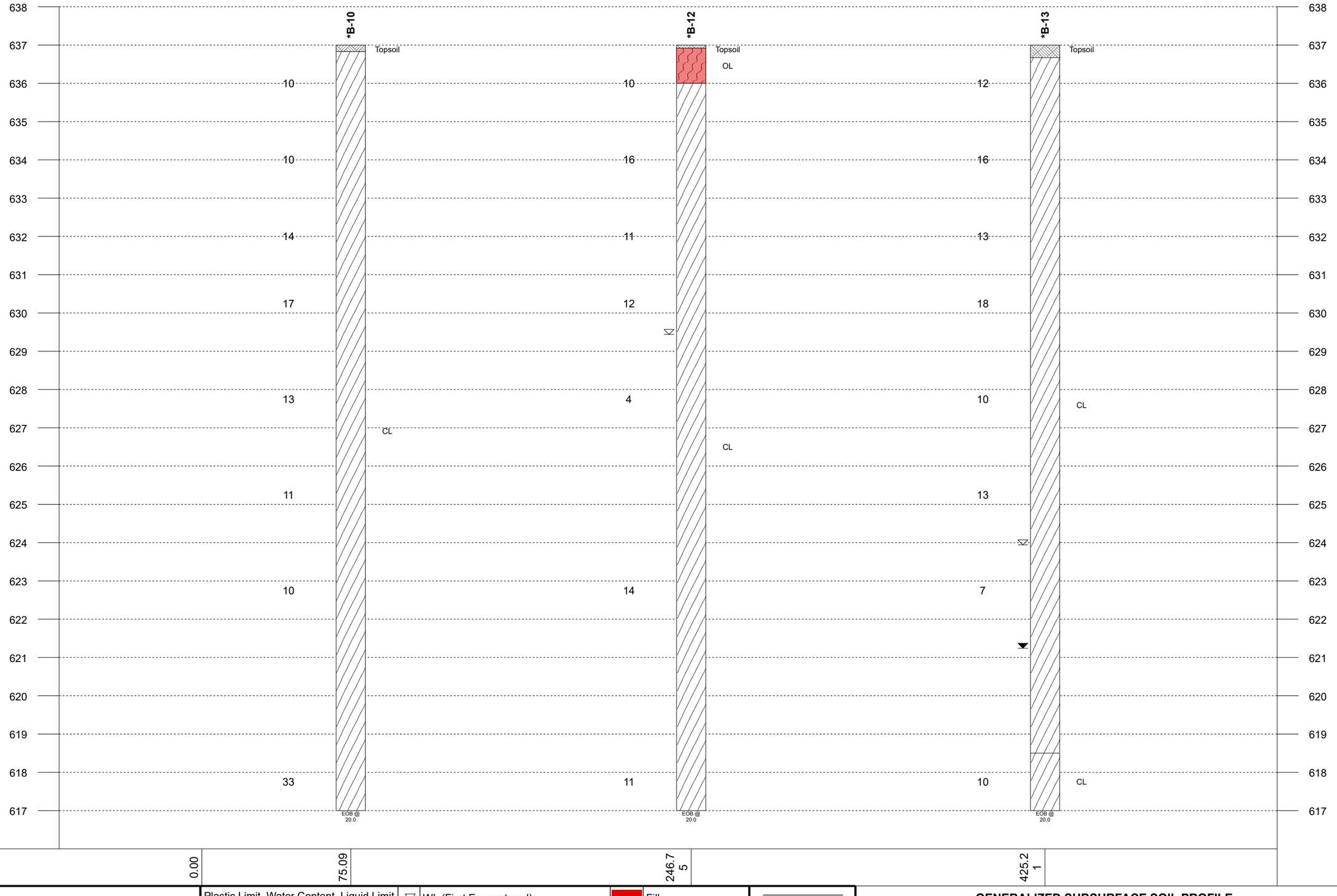
Cross Section C-C'

2024 Soil Boring

City of De Pere

South of American Boulevard, De Pere, Wisconsin, 54115

Project No: 59:4272 Date: 12/26/2024



Legend Key

- Topsoil
- ORGANIC LEAN CLAY
- LEAN CLAY

616.00

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit X—●—△	WL (First Encountered)	Fill
[FINES CONTENT %]	WL (Completion)	Possible Fill
BOTTOM OF CASING	WL (Estimated Seasonal High Water)	Probable Fill
LOSS OF CIRCULATION	WL (Stabilized)	Rock
CALIBRATED PENETROMETER		

GENERALIZED SUBSURFACE SOIL PROFILE

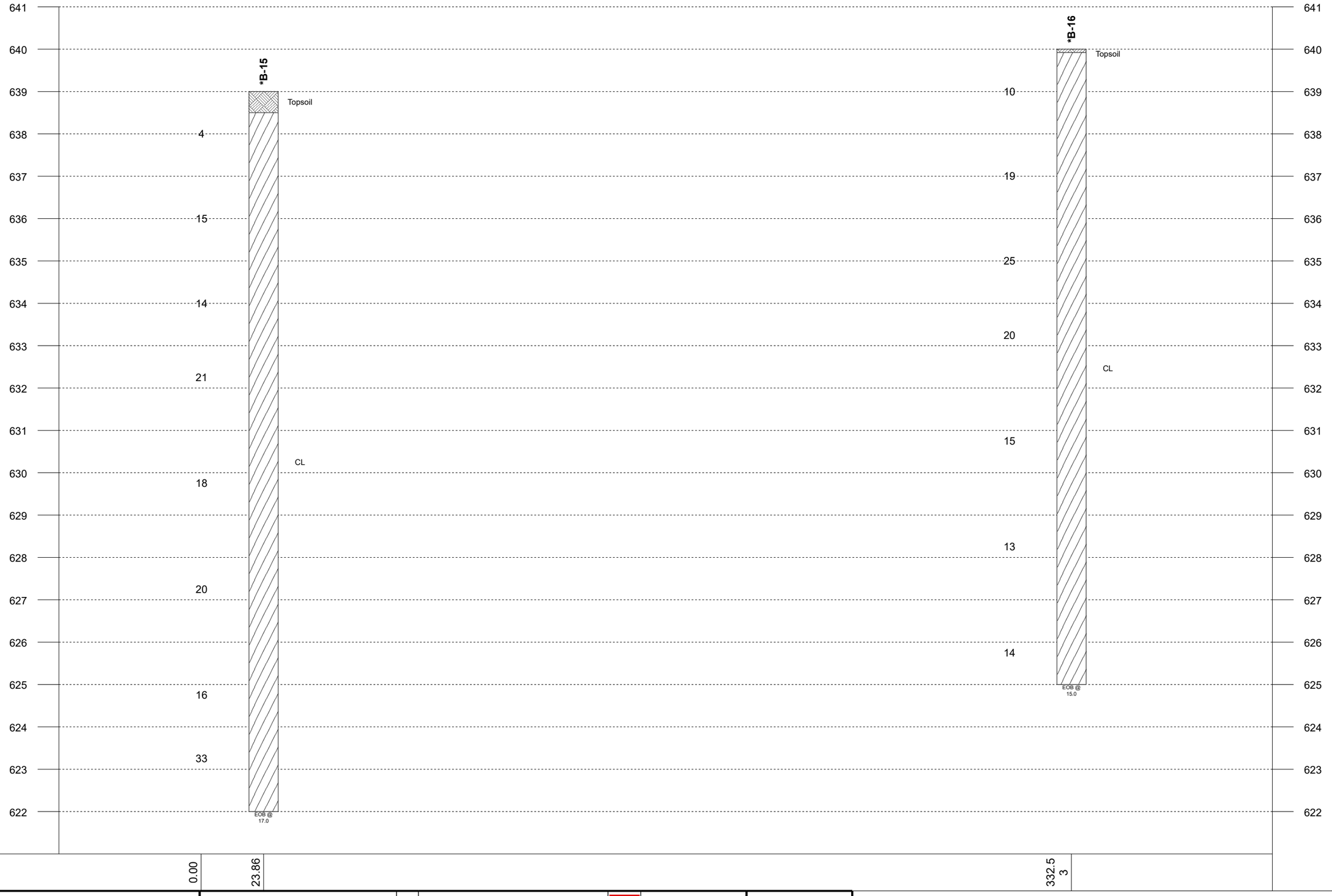
Cross Section D-D'

2024 Soil Boring

City of De Pere

South of American Boulevard, De Pere, Wisconsin, 54115

Project No: 59:4272 Date: 12/26/2024



Legend Key

- Topsoil
- LEAN CLAY

621.00

Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit X—●—△	
[FINES CONTENT %]	
BOTTOM OF CASING	
LOSS OF CIRCULATION	
CALIBRATED PENETROMETER	

WL (First Encountered)	Fill
WL (Completion)	Possible Fill
WL (Estimated Seasonal High Water)	Probable Fill
WL (Stabilized)	Rock

GENERALIZED SUBSURFACE SOIL PROFILE

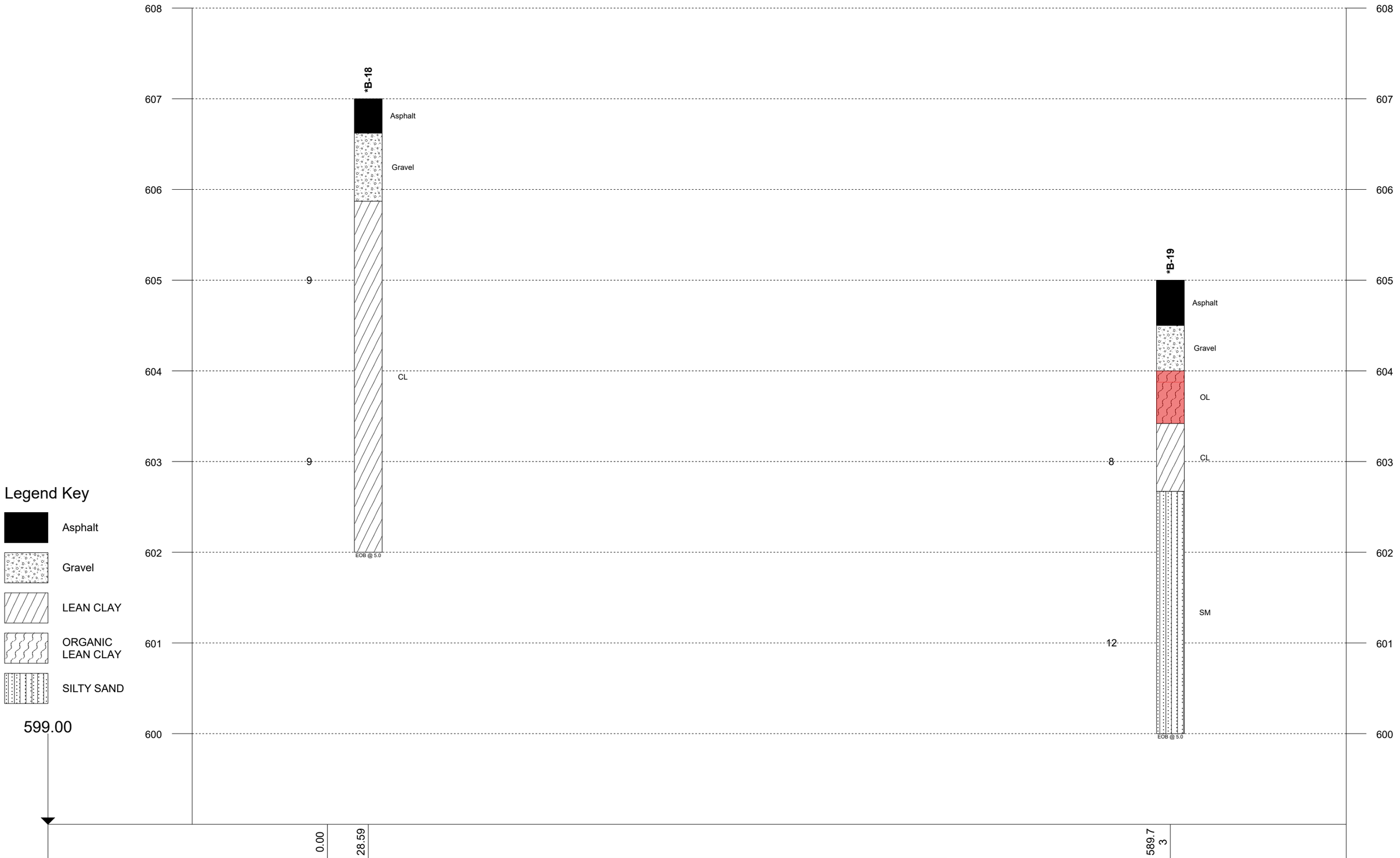
Cross Section E-E'

2024 Soil Boring

City of De Pere

South of American Boulevard, De Pere, Wisconsin, 54115

Project No: 59:4272 Date: 12/26/2024



Notes:

1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit Water Content Liquid Limit X—●—△	WL (First Encountered)	Fill
[FINES CONTENT %]	WL (Completion)	Possible Fill
BOTTOM OF CASING	WL (Estimated Seasonal High Water)	Probable Fill
LOSS OF CIRCULATION	WL (Stabilized)	Rock
CALIBRATED PENETROMETER		

GENERALIZED SUBSURFACE SOIL PROFILE

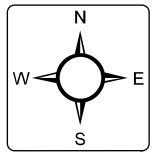
Cross Section F-F'

2024 Soil Boring

City of De Pere

Brown County Fairground, De Pere, Wisconsin, 54115

Project No: 59:4272 Date: 12/26/2024



SOIL SURVEY MAP

2024 Soil Boring

Fox River State Trail, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

SOIL SURVEY MAP

2024 Soil Boring

Oakdale Avenue and Randall Avenue, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

SOIL SURVEY MAP

2024 Soil Boring

Merrill Street, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

SOIL SURVEY MAP

2024 Soil Boring

Pleasant Place, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

SOIL SURVEY MAP

2024 Soil Boring

South of American Boulevard, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

SOIL SURVEY MAP

2024 Soil Boring

Brown County Fairground, De Pere, Wisconsin
City of De Pere

ENGINEER	BNZ
SCALE	
PROJECT NO.	59:4272
SHEET	
DATE	12/26/2024

Appendix B – Field Operations

Subsurface Exploration Procedures: Standard Penetration Testing (SPT)
Reference Notes for Boring Logs
AASHTO Soil Classification System
Boring Logs

SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

SPT Procedure:

- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)

- Auger is advanced* and an additional SPT is performed
- One SPT test is typically performed for every two to five feet

- Obtain 1 3/8-inch diameter soil sample

**Drilling Methods May Vary—* The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]

	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	GW **WELL-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GP **POORLY-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GM **SILTY GRAVEL** gravel-sand-silt mixtures
	GC **CLAYEY GRAVEL** gravel-sand-clay mixtures
	SW **WELL-GRADED SAND** gravelly sand, little or no fines
	SP **POORLY-GRADED SAND** gravelly sand, little or no fines
	SM **SILTY SAND** sand-silt mixtures
	SC **CLAYEY SAND** sand-clay mixtures
	ML **SILT** non-plastic to medium plasticity
	MH **ELASTIC SILT** high plasticity
	CL **LEAN CLAY** low to medium plasticity
	CH **FAT CLAY** high plasticity
	OL **ORGANIC SILT or CLAY** non-plastic to low plasticity
	OH **ORGANIC SILT or CLAY** high plasticity
	PT **PEAT** highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION

DESIGNATION		PARTICLE SIZES
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS

UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	SPT[5] (BPF)	CONSISTENCY[7] (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	2 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS

SPT[5]	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective *(ex: "Silty")*	25 - 45	30 - 45

WATER LEVELS[6]

- WL (First Encountered)
- WL (Completion)
- WL (Seasonal High Water)
- WL (Stabilized)

FILL AND ROCK

FILL | POSSIBLE FILL | PROBABLE FILL | ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.

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AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) SOIL CLASSIFICATION SYSTEM – AASHTO M145

The AASHTO system of soil classification is based upon the observed field performance of subgrade soils under highway pavements and is widely used by highway engineers. According to this system, soils having approximately the same general load-carrying abilities are grouped together to form seven basic groups which are designated as A-1, A-2, A-3, A-4, A-5, A-6, and A-7. In general, A-1 soils would be the best soils for a highway subgrade and then each succeeding group being progressively poorer with A-7 soils being the poorest subgrade. The one exception is the A-3 group which is a better subgrade than the A-2 group. The classification system is shown in the table below:

AASHTO Soil Classification System

General Classification	Granular Materials (35% or less passing No. 200 Sieve)							Silt-Clay Materials (More than 35% passing No. 200 sieve)			
Group Classification	A-1		A-3	A-2				A-4	A-5	A-6	A-7
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5 A-7-6
Sieve Analysis, Percent Passing											
No. 10	50 max.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
No. 40	30 max.	50 max.	51 min.	-----	-----	-----	-----	-----	-----	-----	-----
No. 200	15 max.	25 max.	10 max.	35 max.	35 max.	35 max.	35 max.	36 min.	36 min.	36 min.	36 min.
Characteristics of Fraction Passing No. 40											
Liquid Limit	-----		-----	40 max.	41 min.	40 max.	41 min.	40 max.	41 min.	40 max.	41 min.
Plasticity Index	6 max.		N.P.	10 max.	10 max.	11 min.	11 min.	10 max.	10 max.	11 min.	11 min.[1][2]
Usual Types of Significant Constituent Materials	Stone Fragments Gravel and Sand		Fine Sand	Silty or Clayey Gravel and Sand				Silty Soils		Clayey Soils	
General Rating as Subgrade	Excellent to Good							Fair to Poor			

Notes: [1] – Plasticity Index of A-7-5 subgroup is equal to or less than Liquid Limit minus 30.
[2] – Plasticity Index of A-7-6 subgroup is greater than Liquid Limit minus 30.

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-01**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
Fox River State Trail, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.456770	**-88.595000**		**586.0**

BOTTOM OF CASING

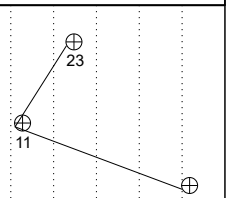
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
0	S-1	SS	24	17	Topsoil Thickness[3"] Asphalt Thickness[1.5"] Gravel Thickness[12"]			13-14-9-7 (23)
	S-2	SS	24	10	(SC) {A-2-6} Lacustrine, CLAYEY SAND, WITH GRAVEL, dark yellowish brown to dark grayish brown, moist, medium dense			6-6-5-7 (11)
5	S-3	SS	13	11	(CL) {A-6} Glacial till, LEAN CLAY, reddish brown, moist, stiff		581	4-6-50/1" (56/7")
					(CL) {A-6} Glacial till, LEAN CLAY, reddish brown, moist, very hard			
					AUGER REFUSAL AT 5.1 FT			
10							576	
15							571	
20							566	
25							561	
30							556	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT

CALIBRATED PENETROMETER TSF
1 2 3 4 5

WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**None**	BORING STARTED: **Dec 17 2024**		CAVE IN DEPTH:
WL (Completion)	**None**	BORING COMPLETED: **Dec 17 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

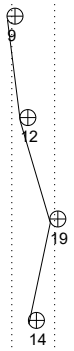
CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-01A**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:		LOSS OF CIRCULATION	
Fox River State Trail, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.456767	**-88.595300**		**586.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Offset 3.0 FT southwest of B-01 due to unknown obstruction. Blind drilled from 0.0 FT to 6.0 FT.			
5	S-1	SS	18	15	(CL) {A-6} Glacial till, LEAN CLAY, reddish brown, moist, stiff to very stiff		581	5-4-5 (9)
10	S-2	SS	18	18			576	3-5-7 (12)
	S-3	SS	18	1				4-8-11 (19)
15	S-4	SS	18	4			571	4-6-8 (14)
					END OF BORING AT 15.0 FT			
20							566	
25							561	
30							556	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

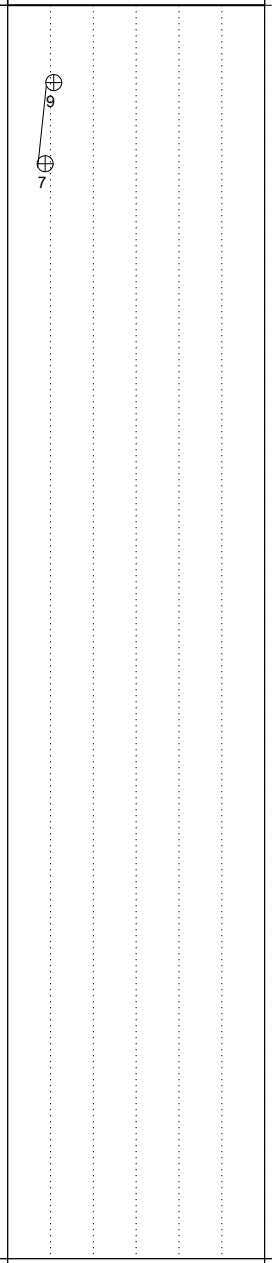
WL (First Encountered)	**None**	BORING STARTED: **Dec 17 2024**		CAVE IN DEPTH:
WL (Completion)	**None**	BORING COMPLETED: **Dec 17 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

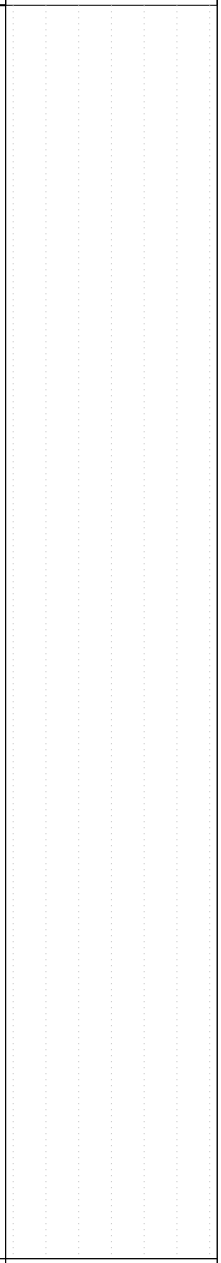
GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-02**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
Oakdale Avenue, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.457590	**-88.054800**		**605.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[4"]			
					Gravel Thickness[9"]			
	S-1	SS	24	9	(CL) {A-6} Lacustrine, LEAN CLAY, yellowish red to reddish brown, moist, stiff to firm			5-4-5-5 (9)
	S-2	SS	24	24				3-3-4-5 (7)
5					**END OF BORING AT 5.0 FT**		600	
10							595	
15							590	
20							585	
25							580	
30							575	





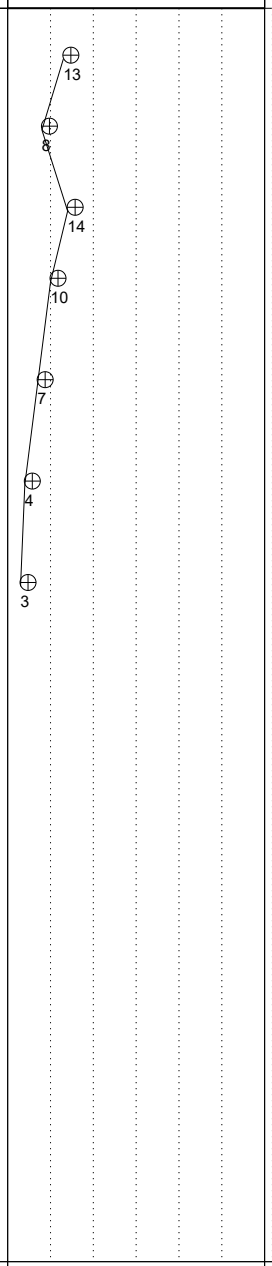
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

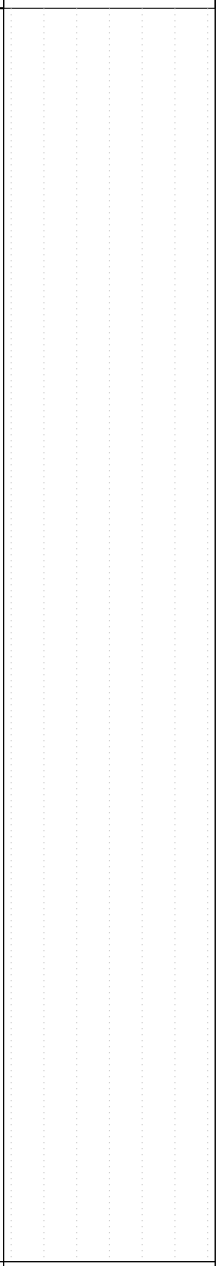
WL (First Encountered)	**None**	BORING STARTED: **Dec 13 2024**		CAVE IN DEPTH:
WL (Completion)	**None**	BORING COMPLETED: **Dec 13 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-03**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **Randall Avenue, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.456850**	LONGITUDE: **-88.055800**	STATION:	SURFACE ELEVATION: **605.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[4"]			
	S-1	SS	18	11	Gravel Thickness[8"]			22-6-7 (13)
	S-2	SS	24	14	(CL) {A-6} FILL, SANDY CLAY, WITH GRAVEL, dark reddish brown, moist, stiff			4-3-5-4 (8)
5	S-3	SS	24	24	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, stiff to soft		600	5-6-8-8 (14)
	S-4	SS	18	18				5-4-6 (10)
	S-5	SS	18	18				2-3-4 (7)
10	S-6	SS	18	18			595	2-2-2 (4)
	S-7	SS	18	18				2-1-2 (3)
15					**END OF BORING AT 15.0 FT**		590	
20							585	
25							580	
30							575	





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 13 2024**		CAVE IN DEPTH:
WL (Completion) **None**	BORING COMPLETED: **Dec 13 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-04**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
2024 Soil Boring	**ECS59 - Crew 1**

SITE LOCATION: **Merrill Street, De Pere, Wisconsin, 54115**

LOSS OF CIRCULATION

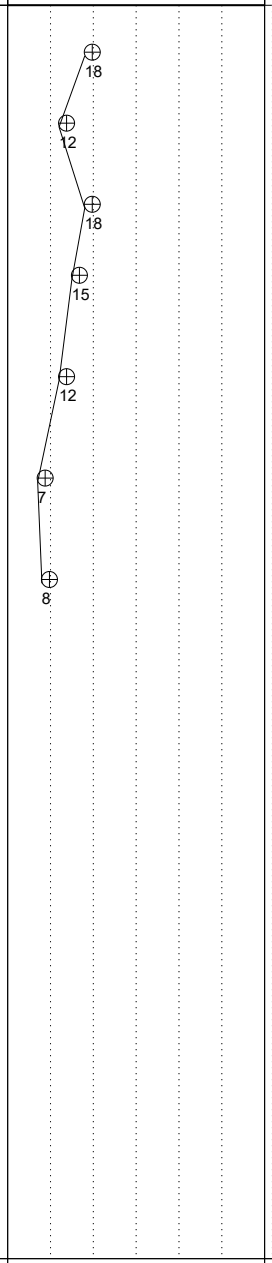
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.443430	**-88.054900**		**617.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[4.5"]			
	S-1	SS	18	10	Gravel Thickness[8"]			21-9-9 (18)
	S-2	SS	24	12	(CL) {A-6} Lacustrine, LEAN CLAY, brown to reddish brown, moist, very stiff			6-5-7-7 (12)
5	S-3	SS	24	20	(CL) {A-6} Lacustrine, LEAN CLAY, trace sand seams about 0.5 inches thick, reddish brown, moist, stiff		612	6-8-10-11 (18)
	S-4	SS	18	16	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, very stiff to firm			4-6-9 (15)
	S-5	SS	18	18				4-6-6 (12)
10	S-6	SS	18	18			607	3-3-4 (7)
	S-7	SS	18	10				3-3-5 (8)
15					**END OF BORING AT 15.0 FT**		602	
20							597	
25							592	
30							587	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT (10 20 30 40 50)
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 16 2024**		CAVE IN DEPTH:
WL (Completion) **None**	BORING COMPLETED: **Dec 16 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

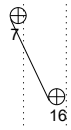
CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-05**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
Merrill Street, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.443690	**-88.055500**		**614.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[4.5"]			
					Gravel Thickness[8"]			
	S-1	SS	24	15	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, firm to very stiff			4-4-3-7 (7)
	S-2	SS	24	18				6-7-9-10 (16)
5					**END OF BORING AT 5.0 FT**		609	
10							604	
15							599	
20							594	
25							589	
30							584	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 16 2024**	CAVE IN DEPTH:	
WL (Completion) **None**	BORING COMPLETED: **Dec 16 2024**	HAMMER TYPE: **Auto**	
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-06**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **Merrill Street, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.444480**	LONGITUDE: **-88.057900**	STATION:	SURFACE ELEVATION: **612.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[5"]		
	S-1	SS	18	10	Gravel Thickness[8"]		13-4-5 (9)
	S-2	SS	24	12	(CL) {A-6} Lacustrine, LEAN CLAY, trace sand seams, reddish brown, moist, stiff to firm		4-3-5-5 (8)
5	S-3	SS	24	11		607	2-3-4-3 (7)
	S-4	SS	18	18	(CL) {A-6} Lacustrine, LEAN CLAY, pale brown to brown, moist, firm to stiff		3-3-4 (7)
	S-5	SS	18	18			4-5-4 (9)
10						602	
	S-6	SS	18	18	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, wet, soft to firm		5-5-2 (7)
	S-7	SS	18	18			1-1-2 (3)
15						597	
	S-8	SS	18	18			1-3-3 (6)
20					**END OF BORING AT 20.0 FT**	592	
25						587	
30						582	

WATER LEVELS

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

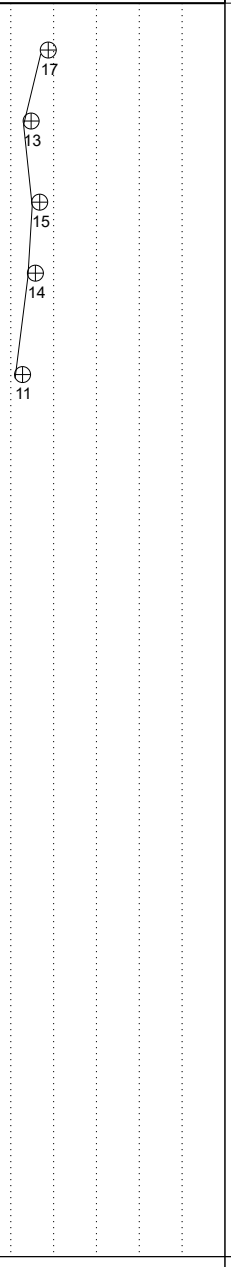
WL (First Encountered)	**10.00**	BORING STARTED: **Dec 16 2024**		CAVE IN DEPTH:
WL (Completion)	**17.00**	BORING COMPLETED: **Dec 16 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-07**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **Pleasant Place, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.440800**	LONGITUDE: **-88.068400**	STATION:	SURFACE ELEVATION: **607.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[4"]			
	S-1	SS	18	9	Gravel Thickness[12"]			56-13-4 (17)
	S-2	SS	24	7	(SC) {A-2-6} Lacustrine, CLAYEY SAND, WITH GRAVEL, brown, moist, medium dense			6-6-7-8 (13)
5	S-3	SS	24	24	(CL/ML) {A-6} Lacustrine, SILTY CLAY, reddish brown, moist, stiff		602	5-7-8-9 (15)
	S-4	SS	18	18				4-6-8 (14)
	S-5	SS	18	18				4-5-6 (11)
10					**END OF BORING AT 10.0 FT**		597	
15							592	
20							587	
25							582	
30							577	

STANDARD PENETRATION BLOWS/FT: 10 20 30 40 50
ROCK QUALITY DESIGNATION & RECOVERY: 20 40 60 80 100
RQD
REC
MC SAMPLER BLOWS/FT: 10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT



LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF: 1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %: 10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 13 2024**		CAVE IN DEPTH:
WL (Completion) **None**	BORING COMPLETED: **Dec 13 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

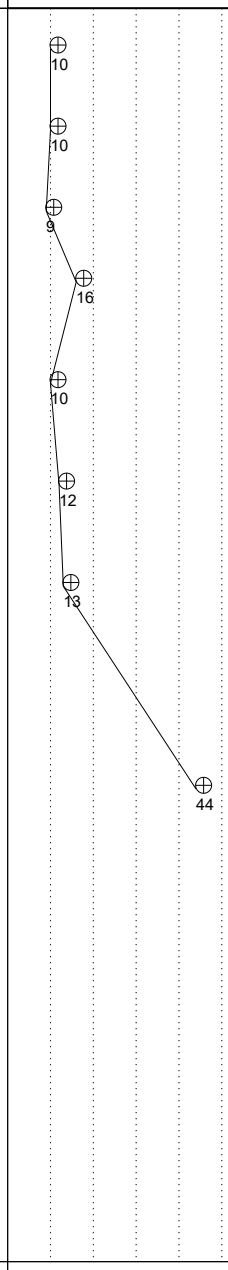
CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-08**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
South of American Boulevard, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.397890	**-88.128800**		**638.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	7	Topsoil Thickness[4"] (CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist, stiff to hard			2-5-5-6 (10)
	S-2	SS	24	16				3-5-5-6 (10)
5	S-3	SS	24	10			633	4-4-5-6 (9)
	S-4	SS	18	18				4-6-10 (16)
	S-5	SS	18	15				3-4-6 (10)
10	S-6	SS	18	18			628	3-4-8 (12)
	S-7	SS	18	18				2-5-8 (13)
15							623	
	S-8	SS	18	13				8-18-26 (44)
20					**END OF BORING AT 20.0 FT**		618	
25							613	
30							608	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 19 2024**	CAVE IN DEPTH:	
WL (Completion) **None**	BORING COMPLETED: **Dec 19 2024**	HAMMER TYPE: **Auto**	
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-09**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.397500**	LONGITUDE: **-88.126800**	STATION:	SURFACE ELEVATION: **637.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	10	Topsoil Thickness[3"] (CL) {A-6} Lacustrine, LEAN CLAY, brown, moist, firm			2-4-4-4 (8)
	S-2	SS	24	12	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, very stiff to stiff			6-9-10-11 (19)
5	S-3	SS	24	18			632	8-10-11-15 (21)
	S-4	SS	18	15				6-10-9 (19)
	S-5	SS	18	16				4-6-8 (14)
10	S-6	SS	18	12			627	5-9-10 (19)
	S-7	SS	18	18	(CL) {A-6} Lacustrine, LEAN CLAY, trace sand seams, reddish brown, moist, very stiff			6-8-14 (22)
15					(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, very stiff		622	
	S-8	SS	18	15				6-10-8 (18)
20					**END OF BORING AT 20.0 FT**		617	
25							612	
30							607	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT (10 20 30 40 50)
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 18 2024**	CAVE IN DEPTH:	
WL (Completion) **None**	BORING COMPLETED: **Dec 18 2024**	HAMMER TYPE: **Auto**	
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-10**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
2024 Soil Boring	**ECS59 - Crew 1**

SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**

LOSS OF CIRCULATION

LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING
44.396940	**-88.126800**		**637.0**	

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	11	Topsoil Thickness[2"] (CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist, stiff to hard			3-5-5-7 (10)
	S-2	SS	24	16				3-5-5-6 (10)
5	S-3	SS	24	17			632	5-7-7-9 (14)
	S-4	SS	18	14				6-8-9 (17)
	S-5	SS	18	13				3-6-7 (13)
10	S-6	SS	18	18			627	4-5-6 (11)
	S-7	SS	18	18				3-4-6 (10)
15	S-8	SS	18	18			622	8-15-18 (33)
20					**END OF BORING AT 20.0 FT**		617	
25							612	
30							607	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT (10 20 30 40 50)
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 18 2024**	CAVE IN DEPTH:	
WL (Completion) **None**	BORING COMPLETED: **Dec 18 2024**	HAMMER TYPE: **Auto**	
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-11**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
South of American Boulevard, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.396600	**-88.126200**		**637.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	14	Topsoil Thickness[3"] (CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist, stiff			2-5-6-6 (11)
	S-2	SS	24	18				3-5-6-7 (11)
5	S-3	SS	24	7	(CL) {A-6} Glacial till, LEAN CLAY, WITH GRAVEL, reddish brown to brown, moist, very stiff		632	5-9-12-14 (21)
	S-4	SS	18	16	(CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist, very stiff to stiff			6-8-13 (21)
	S-5	SS	18	18				5-7-8 (15)
10							627	
	S-6	SS	18	15				4-6-8 (14)
	S-7	SS	18	18				4-6-8 (14)
15							622	
	S-8	SS	18	18				4-6-7 (13)
20					**END OF BORING AT 20.0 FT**		617	
25							612	
30							607	

STANDARD PENETRATION BLOWS/FT: 10 20 30 40 50 | 20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT: 10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF: 1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %: 10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 18 2024**	CAVE IN DEPTH:	
WL (Completion) **None**	BORING COMPLETED: **Dec 18 2024**	HAMMER TYPE: **Auto**	
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-12**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.396470**	LONGITUDE: **-88.126900**	STATION:	SURFACE ELEVATION: **637.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	4	Topsoil Thickness[1"] (OL) {A-8} FILL, ORGANIC LEAN CLAY, wood chunks, dark brown, moist, stiff			3-4-6-6 (10)
	S-2	SS	24	6	(CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist to wet, very stiff to soft			4-7-9-9 (16)
5	S-3	SS	24	20			632	4-5-6-7 (11)
	S-4	SS	18	16		▽		5-6-6 (12)
	S-5	SS	18	18				2-2-2 (4)
10	S-6	ST	24	22			627	
	S-7	SS	18	16				3-5-9 (14)
15							622	
	S-8	SS	18	14				2-5-6 (11)
20					**END OF BORING AT 20.0 FT**		617	
25							612	
30							607	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT (10 20 30 40 50)
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **7.50**	BORING STARTED: **Dec 19 2024**		CAVE IN DEPTH:
▼ WL (Completion) **None**	BORING COMPLETED: **Dec 19 2024**		HAMMER TYPE: **Auto**
▽ WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-13**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.395980**	LONGITUDE: **-88.126800**	STATION:	SURFACE ELEVATION: **637.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	15	Topsoil Thickness[4"] (CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist to wet, very stiff to firm		3-5-7-8 (12)
	S-2	SS	24	13			4-7-9-12 (16)
5	S-3	SS	24	13		632	4-6-7-9 (13)
	S-4	SS	18	18			5-8-10 (18)
	S-5	SS	18	12			3-4-6 (10)
10						627	
	S-6	SS	18	17			5-5-8 (13)
	S-7	SS	18	0			2-3-4 (7)
15						622	
	S-8	SS	18	18			3-4-6 (10)
20					**END OF BORING AT 20.0 FT**	617	
25						612	
30						607	

WATER LEVELS

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**13.00**	BORING STARTED: **Dec 18 2024**		CAVE IN DEPTH:
WL (Completion)	**15.70**	BORING COMPLETED: **Dec 18 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

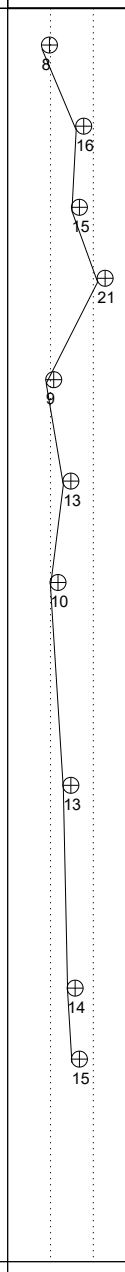
CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-14**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.394400**	LONGITUDE: **-88.128100**	STATION:	SURFACE ELEVATION: **638.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	12	Topsoil Thickness[3"] (CL) {A-6} Lacustrine, LEAN CLAY, reddish brown to brown, moist, firm to very stiff			2-3-5-7 (8)
	S-2	SS	24	15				5-7-9-11 (16)
5	S-3	SS	24	17			633	4-7-8-9 (15)
	S-4	SS	18	14				6-9-12 (21)
	S-5	SS	18	14				2-4-5 (9)
10							628	
	S-6	SS	18	18				3-6-7 (13)
	S-7	SS	18	18				3-4-6 (10)
15							623	
	S-8	SS	18	18				4-6-7 (13)
20							618	
	S-9	SS	18	13				5-6-8 (14)
25	S-10	SS	24	18			613	4-8-7-10 (15)
					END OF BORING AT 27.0 FT			
30							608	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT (10 20 30 40 50)
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 18 2024**		CAVE IN DEPTH:
WL (Completion) **None**	BORING COMPLETED: **Dec 18 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

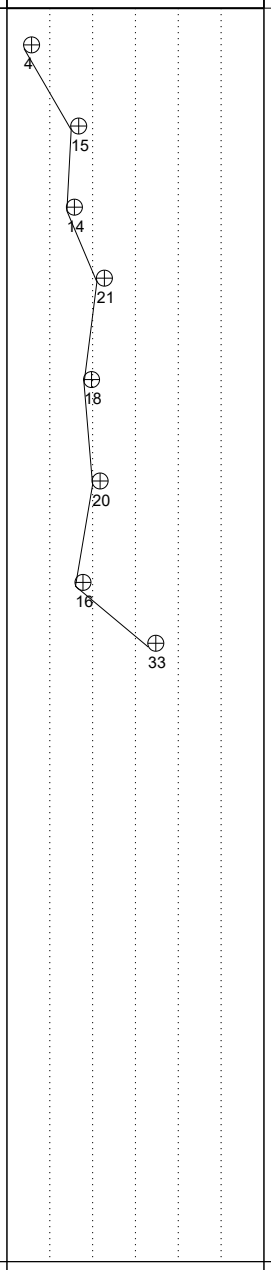
CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-15**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
South of American Boulevard, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.396090	**-88.123500**		**639.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	11	Topsoil Thickness[6"] (CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist, soft to hard			2-1-3-4 (4)
	S-2	SS	24	19				3-6-9-12 (15)
5	S-3	SS	24	16			634	4-7-7-7 (14)
	S-4	SS	18	18				6-10-11 (21)
	S-5	SS	18	18				5-7-11 (18)
10	S-6	SS	18	17			629	5-9-11 (20)
	S-7	SS	18	15				4-6-10 (16)
15	S-8	SS	18	18			624	8-14-19 (33)
					END OF BORING AT 17.0 FT			
20							619	
25							614	
30							609	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



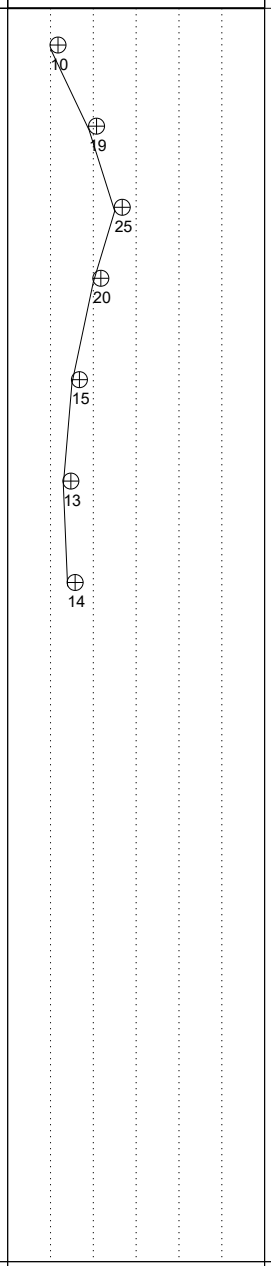
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

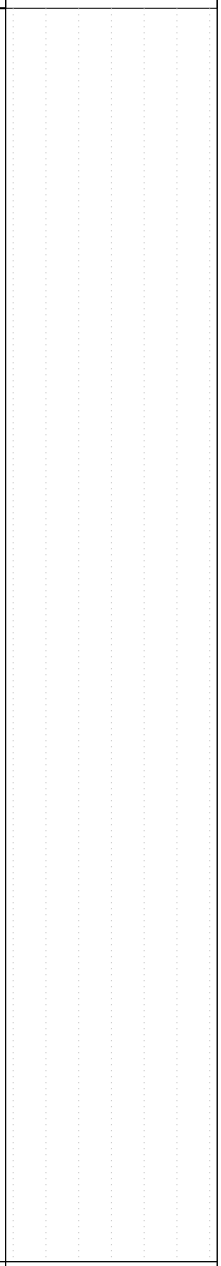
WL (First Encountered) **None**	BORING STARTED: **Dec 18 2024**		CAVE IN DEPTH:
WL (Completion) **None**	BORING COMPLETED: **Dec 18 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-16**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.396540**	LONGITUDE: **-88.122500**	STATION:	SURFACE ELEVATION: **640.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	11	Topsoil Thickness[1"] (CL) {A-6} Glacial till, LEAN CLAY, reddish brown to brown, moist, stiff to very stiff			3-4-6-8 (10)
	S-2	SS	24	22				7-9-10-11 (19)
5	S-3	SS	24	14			635	8-11-14-17 (25)
	S-4	SS	18	18				11-8-12 (20)
	S-5	SS	18	16				5-7-8 (15)
10	S-6	SS	18	18			630	4-6-7 (13)
	S-7	SS	18	18				4-6-8 (14)
15					**END OF BORING AT 15.0 FT**		625	
20							620	
25							615	
30							610	





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **None**	BORING STARTED: **Dec 17 2024**		CAVE IN DEPTH:
WL (Completion) **None**	BORING COMPLETED: **Dec 17 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)	EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)			

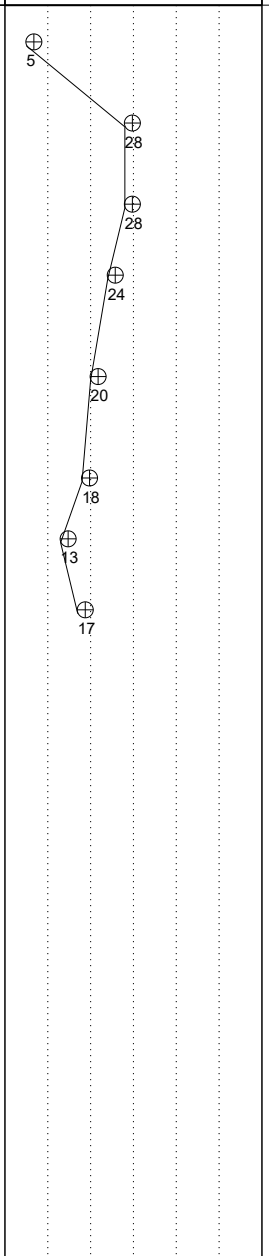
GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-17**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION: **South of American Boulevard, De Pere, Wisconsin, 54115**			LOSS OF CIRCULATION
LATITUDE: **44.395900**	LONGITUDE: **-88.122400**	STATION:	SURFACE ELEVATION: **639.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
	S-1	SS	24	15	Topsoil Thickness[2"] (CL) {A-6} Lacustrine, LEAN CLAY, reddish brown to brown, moist, firm to very stiff			2-3-2-5 (5)
	S-2	SS	24	18				7-11-17-21 (28)
5	S-3	SS	24	19			634	8-11-17-23 (28)
	S-4	SS	18	16				10-12-12 (24)
	S-5	SS	18	18				7-9-11 (20)
10	S-6	SS	18	15			629	6-8-10 (18)
	S-7	SS	18	18				4-6-7 (13)
15	S-8	SS	24	18			624	5-7-10-11 (17)
					END OF BORING AT 16.0 FT			
20							619	
25							614	
30							609	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT (10 20 30 40 50)
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**None**	BORING STARTED: **Dec 17 2024**		CAVE IN DEPTH:
WL (Completion)	**None**	BORING COMPLETED: **Dec 17 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-70**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-18**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
Brown County Fairground, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.460860	**-88.071700**		**607.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[4.5"]			
					Gravel Thickness[9"]			
	S-1	SS	24	10	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown to brown, moist, stiff			6-4-5-5 (9)
	S-2	SS	24	19				3-3-6-9 (9)
5					**END OF BORING AT 5.0 FT**		602	
10							597	
15							592	
20							587	
25							582	
30							577	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**None**	BORING STARTED: **Dec 16 2024**		CAVE IN DEPTH:
WL (Completion)	**None**	BORING COMPLETED: **Dec 16 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-19**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
2024 Soil Boring	**ECS59 - Crew 1**		
SITE LOCATION:			LOSS OF CIRCULATION
Brown County Fairground, De Pere, Wisconsin, 54115			
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:
44.460020	**-88.069900**		**605.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[6"]			
					Gravel Thickness[6"]			
	S-1	SS	24	18	(OL) {A-8} FILL, ORGANIC CLAY, dark brown, moist, firm			4-4-4-7 (8)
	S-2	SS	24	23	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, firm			6-6-6-6 (12)
5					(SM) {A-2-4} Lacustrine, SILTY SAND, yellowish brown, moist, medium dense		600	
					END OF BORING AT 5.0 FT			
10							595	
15							590	
20							585	
25							580	
30							575	

STANDARD PENETRATION BLOWS/FT: 10 20 30 40 50
ROCK QUALITY DESIGNATION & RECOVERY: 20 40 60 80 100
RQD
REC
MC SAMPLER BLOWS/FT: 10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF: 1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %: 10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**None**	BORING STARTED: **Dec 13 2024**		CAVE IN DEPTH:
WL (Completion)	**None**	BORING COMPLETED: **Dec 13 2024**		HAMMER TYPE: **Auto**
WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50**	LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
City of De Pere	**59:4272**	**B-20**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
2024 Soil Boring	**ECS59 - Crew 1**

SITE LOCATION:	LOSS OF CIRCULATION
Brown County Fairground, De Pere, Wisconsin, 54115	

LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING
44.459460	**-88.069900**		**603.0**	

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N value)*
					Asphalt Thickness[5"] Gravel Thickness[8"]			
	S-1	SS	24	4	(SM) {A-2-4} Lacustrine, SILTY SAND, yellowish brown, moist, loose			7-3-5-4 (8)
	S-2	SS	24	24	(CL) {A-6} Lacustrine, LEAN CLAY, reddish brown, moist, firm			3-4-4-7 (8)
5					**END OF BORING AT 5.0 FT**		598	
10							593	
15							588	
20							583	
25							578	
30							573	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MC SAMPLER BLOWS/FT
10 20 30 40 50
TEXAS CONE PENETRATION BLOWS/FT

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**None**	BORING STARTED: **Dec 13 2024**	CAVE IN DEPTH:
▼ WL (Completion)	**None**	BORING COMPLETED: **Dec 13 2024**	HAMMER TYPE: **Auto**
▼ WL (Seasonal High Water)		EQUIPMENT: **Diedrich D-50** / LOGGED BY: **BNZ**	DRILLING METHOD: **4-1/4" Solid stem auger**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

Appendix C – Supplemental Documents

Important Information About This Geotechnical Engineering Report

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

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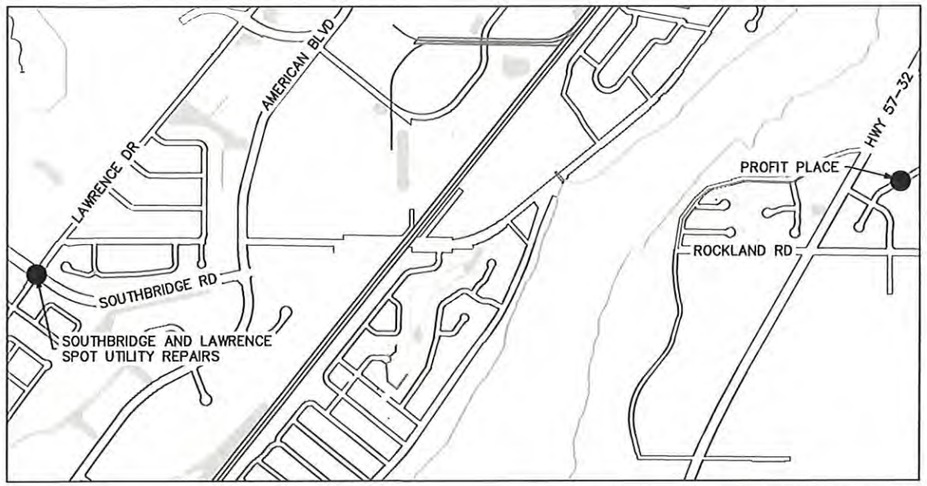
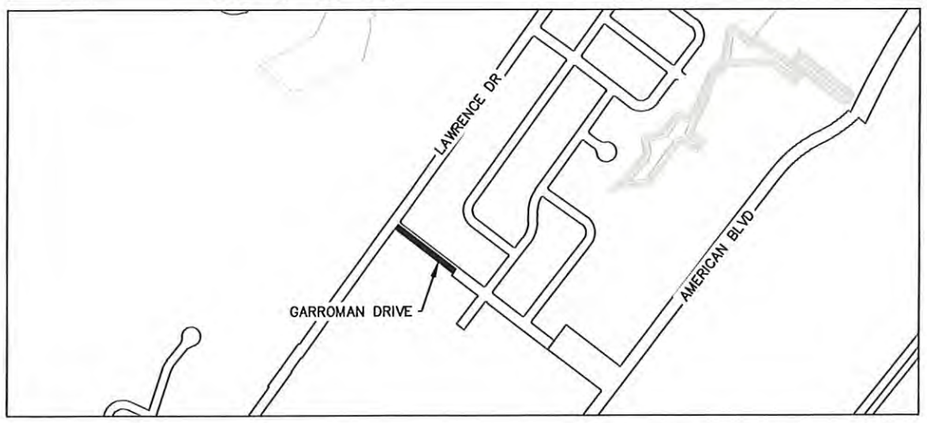
PROJECT 25-01
SEWER AND WATER RELAY AND STREET RESURFACING

CITY OF DE PERE

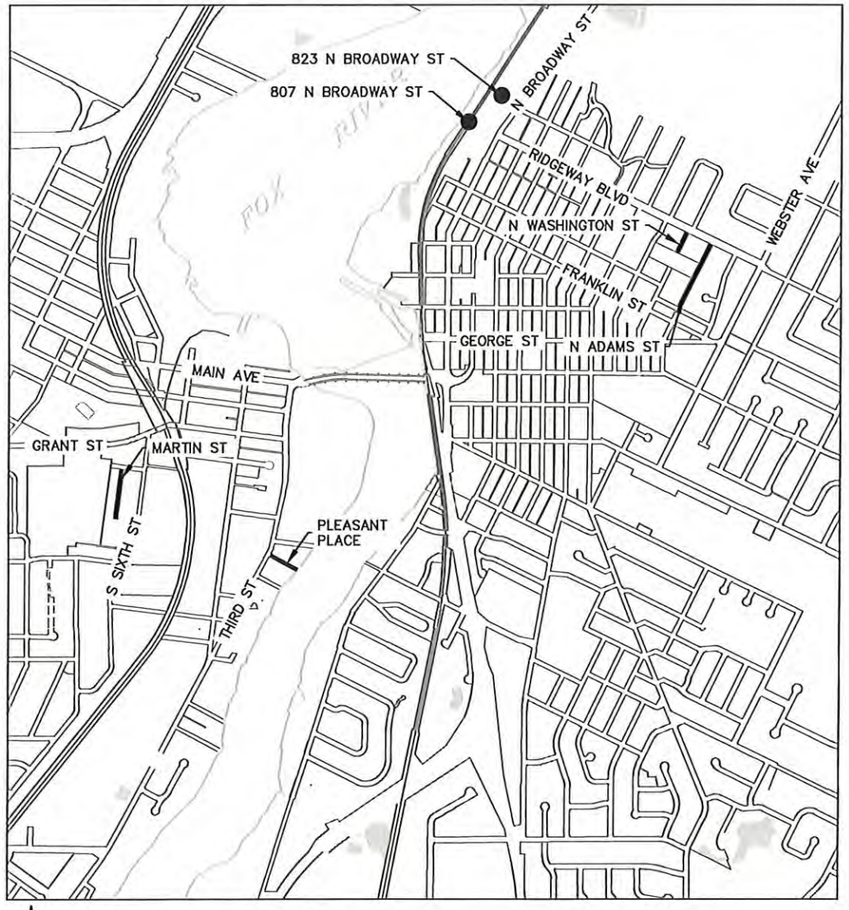
DE PERE

ENGINEER DIVISION
925 S. SIXTH ST
DE PERE, WI 54115





SITE LOCATION MAP
N.T.S.



SHEET NO.	DESCRIPTION
G001	TITLE SHEET
G002	STANDARD ABBREVIATION & SYMBOLS
G003 – G005	TYPICAL SECTIONS
C101 – C105	N. ADAMS STREET PLAN AND PROFILE SHEETS
C106 – C107	N. WASHINGTON STREET PLAN AND PROFILE SHEETS
C108 – C113	MARTIN STREET PLAN AND PROFILE SHEETS
C114 – C116	PLEASANT PLACE PLAN AND PROFILE SHEETS
C117	PROFIT PLACE PLAN AND PROFILE SHEET
C118 – C119	GARROMAN DRIVE PLAN AND PROFILE SHEETS
C120	807 N. BROADWAY STREET PLAN AND PROFILE SHEET
C121	823 N. BROADWAY STREET PLAN AND PROFILE SHEET
C122 – C123	SOUTHBRIDGE & LAWRENCE SPOT UTILITY REPAIRS
C124	2186 LOST DAUPHIN PLAN AND PROFILE SHEET
C301 – C302	N WASHINGTON STREET CROSS SECTIONS
C303 – C307	MARTIN STREET CROSS SECTIONS
C308 – C309	PLEASANT PLACE CROSS SECTIONS
C310 – C311	GARROMAN DRIVE CROSS SECTIONS
C401	N WASHINGTON STREET GRADING PLAN
C402	N WASHINGTON STREET HAMMERHEAD PLAN
C403	MARTIN STREET HAMMERHEAD PLAN
C404	MARTIN STREET INTERSECTION DETAIL
C405	807 N BROADWAY STREET EROSION CONTROL & RESTORATION
C406	WEST SIDE POND REPAIR PLAN
C407	CULVERT ENDWALL REPAIRS
C408 – C413	BENCHMARK AND EROSION CONTROL PLANS
C501	N WASHINGTON STREET CONSTRUCTION DETAILS
C502 – C505	807 N BROADWAY STREET CONSTRUCTION DETAILS
C506	PIPE BURSTING CONSTRUCTION DETAIL
C507 – C508	CONSTRUCTION DETAILS
C509 – C510	TRAFFIC CONTROL DETAILS

CITY OF DE PERE
BOARD OF PUBLIC WORKS

1/30/2025 — DATE — E. P. Rakers — CITY ENGINEER

1/30/25 — DATE — CITY MANAGER

STAMPS:

WISCONSIN
ERIC P. RAKERS
E-30929
GREEN BAY, WI
PROFESSIONAL ENGINEER
E. P. Rakers
1/30/2025

LIST OF STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AGGR	AGGREGATE
AH	AHEAD
ASPH	ASPHALT
B/B	BACK TO BACK
BARR	BARRICADE
BC	BACK OF CURB
BK	BACK
BL	BASELINE
BLVD	BOULEVARD
BLDG	BUILDING
BM	BENCHMARK
BOW	BACK OF SIDEWALK
BSMT	BASEMENT
C	CUT
C&G	CURB AND GUTTER
C/C	CENTER TO CENTER
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CE	CONSTRUCTION ENTRANCE
CI	CAST IRON PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CNTY	COUNTY
CO	CLEANOUT
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONSTR JT	CONSTRUCTION JOINT
CORP	CORPORATION
CP	CONTROL POINT
CTH	COUNTY TRUNK HIGHWAY
CTRL JT	CONTROL JOINT
CTV	CABLE TV
CY	CUBIC YARD
D	DEPTH
DIA	DIAMETER
DI	DUCTILE IRON PIPE
DISCH	DISCHARGE
DW	DRIVEWAY
E	EAST (SEE ELEC BELOW)
EA	EACH
EB	EASTBOUND
EBS	EXCAVATION BELOW SUBGRADE
EL	ELEVATION
ELEC	ELECTRIC (E WHEN USED IN LINE STYLE)
EMB	EMBANKMENT
ENTR	ENTRANCE
EP	EDGE OF PAVEMENT
EW	ENDWALL
EXC	EXCAVATION
EXIST	EXISTING
F	FILL
F/F	FACE TO FACE
FDN	FOUNDATION
FE	FIELD ENTRANCE
FERT	FERTILIZER
FIN GR	FINISHED GRADE
FL	FLOWLINE
FO	FIBER OPTIC
FOW	FRONT OF SIDEWALK
FT	FOOT
FTG	FOOTING
G	GAS
GV	GAS VALVE
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE
HR	HANDICAP RAMP
HSE	HOUSE
HT	HEIGHT
HYD	HYDRANT
I	INTERSECTION ANGLE
ID	INSIDE DIAMETER
IN	INCH
INL	INLET
INTERS	INTERSECTION
INV	INVERT
IP	IRON PIPE OR PIN
L	LENGTH (OF CURVE)
LC	LONG CHORD OF CURVE
LP	LIGHTPOLE
LS	LIFT STATION OR LUMP SUM
LT	LEFT
MAINT	MAINTENANCE
MATL	MATERIAL
MB	MAILBOX
MH	MANHOLE
MP	MARKER POST
N	NORTH
NB	NORTHBOUND
NC	NORMAL CROWN
NE	NORTHEAST
NO	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCC	PORTLAND CEMENT CONCRETE
PED	PEDESTAL
PLE	PERMANENT LIMITED EASEMENT
PVMT	PAVEMENT
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
POC	POINT OF CURVE
POT	POINT ON TANGENT
PP	POLYETHYLENE
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PRZ	PROTECTIVE ROOT ZONE
PSI	POUND PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RANGE OR RADIUS
RCP	REINFORCED CONCRETE PIPE
REBAR	REINFORCEMENT BAR
REL	RELOCATE
REM	REMAINING
REQD	REQUIRED
RL	REFERENCE LINE
ROW	RIGHT OF WAY
RP	REFERENCE POINT
RR	RAILROAD
RT	RIGHT
RW	RETAINING WALL
S	SOUTH
SALV	SALVAGE
SAN	SANITARY
SB	SOUTHBOUND
SDWK	SIDEWALK
SE	SOUTHEAST
SF	SQUARE FEET
SHLDR	SHOULDER
SY	SQUARE YARD
SS	SANITARY SEWER
ST	STREET (ST WHEN USED FOR STORM SEWER LINE)
STA	STATION
STD	STANDARD
STH	STATE HIGHWAY TRUNK
STM	STORM
STRUCT	STRUCTURE OR STRUCTURAL
SW	SOUTHWEST
TAN	TANGENT
T	TELEPHONE LINE
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TOC	TOP OF CURB
TOW	TOP OF WATER
TRANS	TRANSITION
TYP	TYPICAL
UG	UNDERGROUND
USH	US HIGHWAY
VC	VERTICAL CURVE
VERT	VERTICAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVE
VPT	VERTICAL POINT OF TANGENCY
W	WEST (W WHEN USED FOR WATER LINE)
WB	WESTBOUND
WM	WATERMAIN
WSO	WATER SHUTOFF VALVE
WV	WATER VALVE
YD	YARD

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
BENCHMARK		
BUSH		
CATCH BASIN/INLET		
CABLE TV BOX	CTV	
CONTROL POINT		
ELECTRICAL BOX	E	
EROSION CONTROL – INLET		
FIBER OPTIC PEDESTAL	FO	
FIELD INLET		
GAS VALVE	GV	
GUY WIRE		
HEDGE		
HYDRANT		
IRON PIPE		
LIGHTPOLE		
MAILBOX	MB	
MANHOLE ELECTRIC	E	
MANHOLE SANITARY	SS	SS
MANHOLE STORM	ST	ST
MONTORING WELL	MW	
POWER POLE		
SIGN		
SOIL BORING		(B–#)
STUMP		
TELEPHONE MANHOLE	tel	
TELEPHONE PEDESTAL	TEL	
TREE		
WELL	W	
WATER SERVICE VALVE		
BUTTERFLY WATER VALVE		
WATER VALVE		

GENERAL CONSTRUCTION NOTES:

1. ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
2. THE WORK UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE CITY OF DE PERE, CURRENT CONSTRUCTION SPECIFICATIONS AND THESE SPECIAL PROVISIONS AND PLANS, AND THE LATEST ADDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION SPECIFICATIONS, LATEST EDITION, WHERE REFERENCED IN THE CITY SPECIFICATIONS.
3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL CONFIRM TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONSTRUCTION SITE EROSION CONTROL AND TECHNICAL STANDARDS.
4. EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES. WHETHER SHOWN OR NOT, FROM THE OWNERS OF THE RESPECTIVE UTILITIES. ALL UTILITIES OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR 72 HOURS PRIOR TO EXCAVATION.

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL
PLAN	
EXISTING SANITARY SEWER LINE	(SIZE AND MATERIAL) SAN
PROPOSED SANITARY SEWER LINE	100'–8" PVC SAN SAN
EXISTING STORM SEWER LINE	(SIZE AND MATERIAL) ST
PROPOSED STORM SEWER LINE	100'–8" PVC STM ST
EXISTING WATER MAIN LINE	(SIZE AND MATERIAL) W
PROPOSED WATER MAIN LINE	100'–8" PVC WM (TEE–BEND) W
EXISTING ELECTRICAL LINE	E
EXISTING GAS MAIN LINE	G
EXISTING TELEPHONE LINE	T
EXISTING CABLE TV LINE	TV
EXISTING SANITARY LATERAL	SAN
EXISTING WATER SERVICE	W
RIGHT OF WAY	ROW
PROPERTY LINE	PL
EASEMENT	ESM
LANDSCAPE FENCE	
SILT FENCE EROSION CONTROL	
EXISTING FIBER OPTIC	FO
EXISTING MAJOR CONTOUR	615
EXISTING MINOR CONTOUR	612
PROPOSED MAJOR CONTOUR	615
PROPOSED MINOR CONTOUR	612
EXISTING OVERHEAD UTILITY	OH OH
PROFILE	
EXISTING SANITARY SEWER LINE	(SIZE AND MATERIAL)
PROPOSED SANITARY SEWER LINE	100'–8" PVC SAN @ 0.40%
EXISTING STORM SEWER LINE	(SIZE AND MATERIAL)
PROPOSED STORM SEWER LINE	100'–8" PVC STM @ 1.0%
EXISTING WATER MAIN LINE	(SIZE AND MATERIAL)
PROPOSED WATER MAIN LINE	PROPOSE 8" PVC WM

PATCH SYMBOLS

ASPHALTIC CONCRETE PAVEMENT

CRUSHED AGGREGATE BASE COURSE

PORTLAND CEMENT CONCRETE

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4060 FAX 920-339-4071

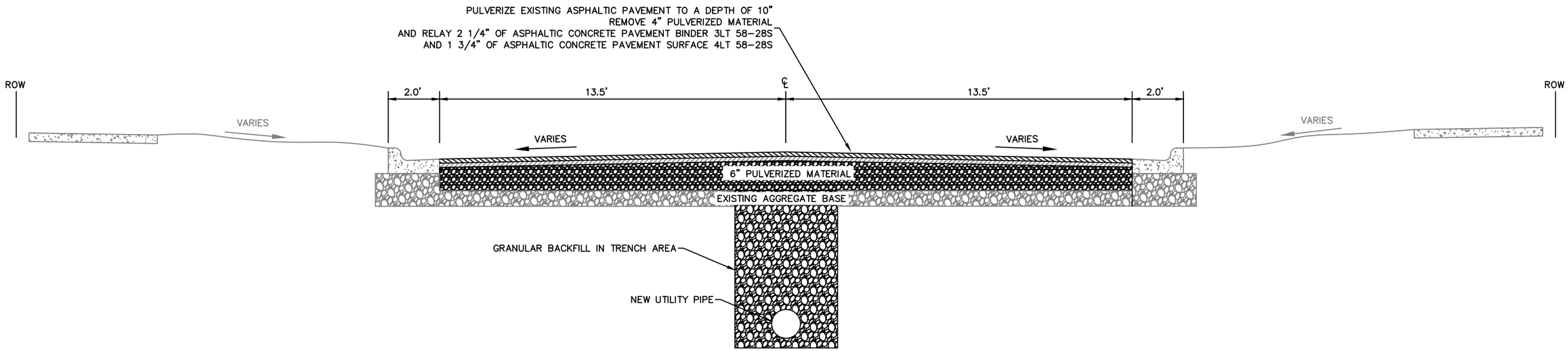
STANDARD ABBREVIATIONS AND SYMBOLS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

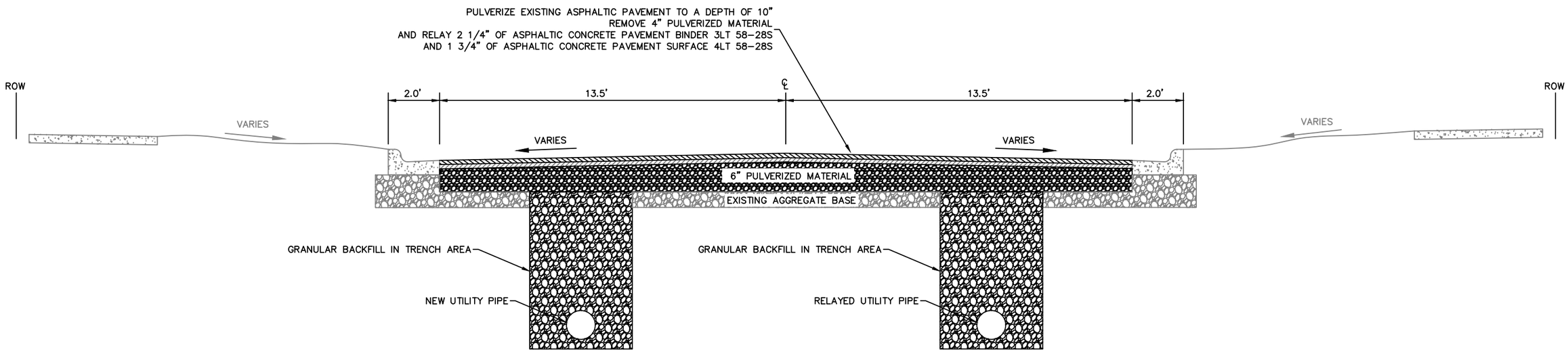
	BY	DATE
SURVEYED		
DRAWN	KAD	02–2024
DESIGNED		
CHECKED		

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS



ADAMS STREET (STA 20+77 TO STA 25+15)
TYPICAL PULVERIZE AND OVERLAY SECTION
WITH CURB AND GUTTER



ADAMS STREET (STA 25+15 TO STA 30+05)
TYPICAL PULVERIZE AND OVERLAY SECTION
WITH CURB AND GUTTER

CITY OF DE PERE
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OFFICE 920-339-4061 FAX 920-339-4071

TYPICAL SECTION
ADAMS STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED		
DRAWN	KAD	01-2025
DESIGNED	KAD	01-2025
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REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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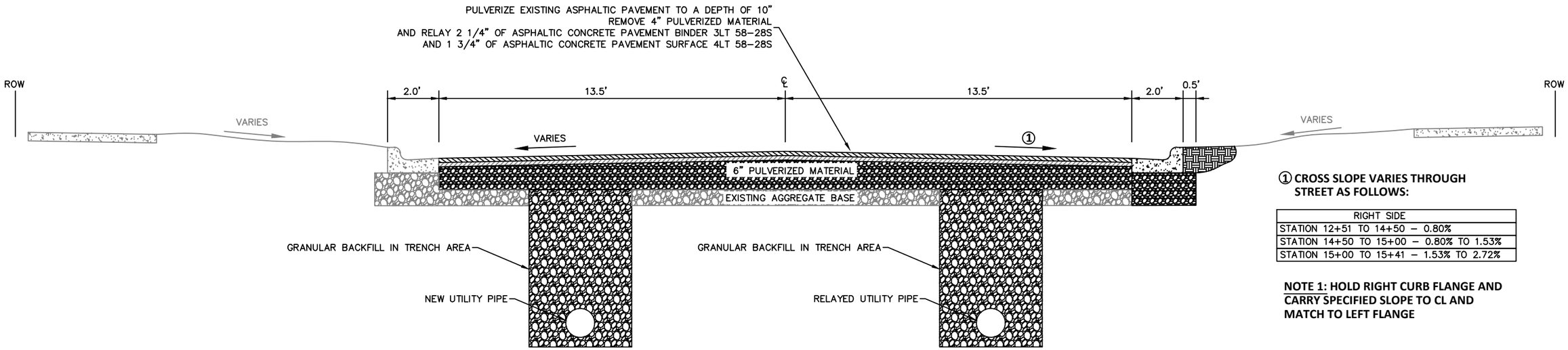
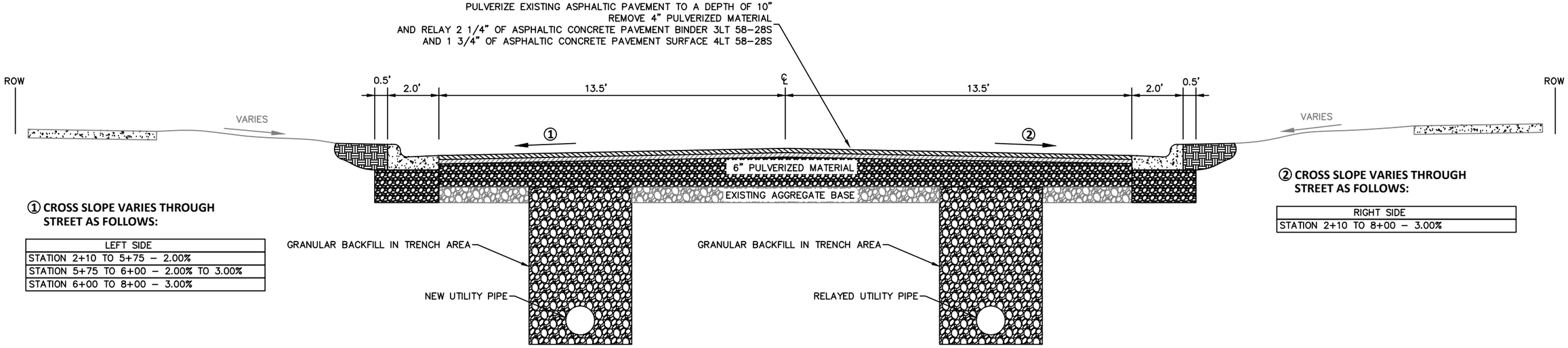


① CROSS SLOPE VARIES THROUGH STREET AS FOLLOWS:

RIGHT SIDE
STATION 12+51 TO 14+50 – 0.80%
STATION 14+50 TO 15+00 – 0.80% TO 1.53%
STATION 15+00 TO 15+41 – 1.53% TO 2.72%

NOTE 1: HOLD RIGHT CURB FLANGE AND CARRY SPECIFIED SLOPE TO CL AND MATCH TO LEFT FLANGE

N WASHINGTON STREET (STA 25+15 TO STA 30+05)
TYPICAL PULVERIZE AND OVERLAY SECTION
WITH CURB AND GUTTER



① CROSS SLOPE VARIES THROUGH STREET AS FOLLOWS:

LEFT SIDE
STATION 2+10 TO 5+75 – 2.00%
STATION 5+75 TO 6+00 – 2.00% TO 3.00%
STATION 6+00 TO 8+00 – 3.00%

② CROSS SLOPE VARIES THROUGH STREET AS FOLLOWS:

RIGHT SIDE
STATION 2+10 TO 8+00 – 3.00%

MARTIN STREET (STA 2+10 TO STA 8+00)
TYPICAL PULVERIZE AND OVERLAY SECTION
WITH CURB AND GUTTER

CITY OF DE PERE
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OFFICE 920-339-4061 FAX 920-339-4071

TYPICAL SECTION
N WASHINGTON STREET AND MARTIN STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED		
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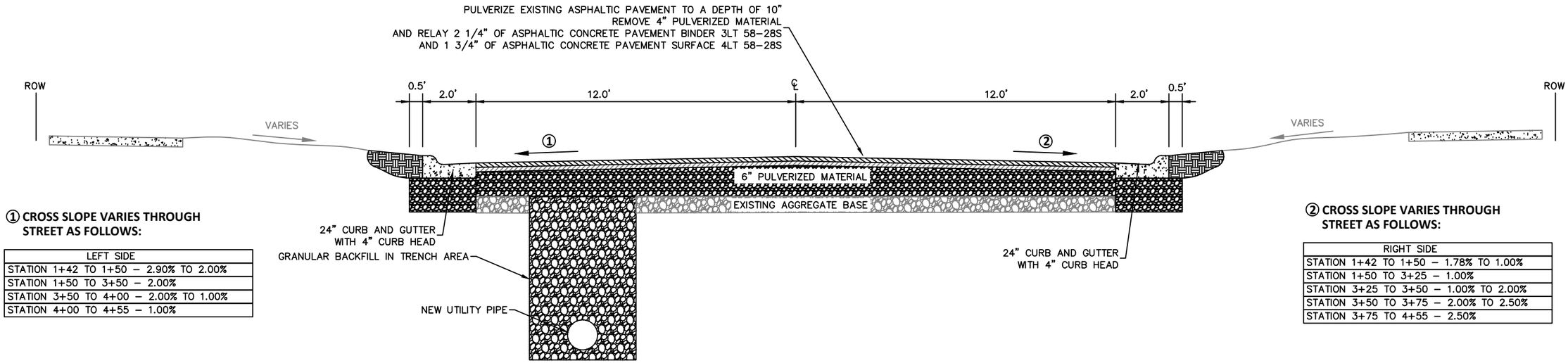

① CROSS SLOPE VARIES THROUGH STREET AS FOLLOWS:

LEFT SIDE
STATION 1+42 TO 1+50 – 2.90% TO 2.00%
STATION 1+50 TO 3+50 – 2.00%
STATION 3+50 TO 4+00 – 2.00% TO 1.00%
STATION 4+00 TO 4+55 – 1.00%

② CROSS SLOPE VARIES THROUGH STREET AS FOLLOWS:

RIGHT SIDE
STATION 1+42 TO 1+50 – 1.78% TO 1.00%
STATION 1+50 TO 3+25 – 1.00%
STATION 3+25 TO 3+50 – 1.00% TO 2.00%
STATION 3+50 TO 3+75 – 2.00% TO 2.50%
STATION 3+75 TO 4+55 – 2.50%

PLEASANT PLACE (STA 1+42 TO STA 4+55)
TYPICAL PULVERIZE AND OVERLAY SECTION
WITH CURB AND GUTTER

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TYPICAL SECTION
PLEASANT PLACE

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED		
DRAWN	KAD	01-2025
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NO.	DATE	BY	REMARKS

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STA 20+20, 18.0' RT
1-CONNECT TO EXIST WM

STA 20+20, 15.0' RT
1-45° BEND

STA 20+23, 12.3' RT
1-45° BEND

STA 20+21, 8.9' RT
1-CAP EXIST WM W/ 2" CORP AND GALVANIZED STEEL PIPE

STA 20+51, 15.2' RT
1-8"X8" CROSS
2-8" GATE VALVES
1-8" PLUG W/ 2" CORP AND GALVANIZED STEEL PIPE

IRWIN AVENUE

1215 ED-1435-24

1219 ED-563-3

525 ED-563-1

607 ED-563-1-A

615 ED-563-A

619 ED-563

1301 ED-1435-23

1305 ED-565-1

600 ED-565

602 ED-565-3

606 ED-565-4

612 ED-565-2

624 ED-29

630 ED-29-3

WATER SERVICE OFF IRWIN AVENUE
SANITARY SERVICE OFF IRWIN AVENUE

WATER SERVICE OFF IRWIN AVENUE
SANITARY SERVICE OFF IRWIN AVENUE

REMOVE AND REPLACE SANITARY LATERAL (TYP)

NEW 1" HDPE WATER SERVICE (TYP)

REMOVE HYDRANT AND VALVE

REMOVE 21" DIA TREE

ADJUST MANHOLE PROVIDE NEW CASTING

28"-8" PVC WM (BEND-CROSS)

557'-8" PVC WM (CROSS-TEE)

FUTURE WM

DIRECTIONAL DRILL WM

EXIST RL PROFILE

PROP 8" PVC WM

STA 20+51
TOW 612.70

TOW 612.87

TOW 612.54

STA 24+84
TOW 610.54

EXIST STMH (17)
STA 20+40 8' LT
RIM = 618.57
D = 3.74'
DIA = 48"
FL = 614.83 (12" N)
FL = 614.83 (12" NW)
FL = 615.04 (10" S)
FL = 615.04 (12" SW)

STA 20+11 15' RT
EXIST INL (21)
RIM = 618.06
D = 2.70'
FL = 615.73 (8" E)
FL = 615.36 (10" N)
FL = 615.84 (4" SE)

STA 20+79 16' LT
EXIST INL (16)
RIM = 617.96
D = 3.30'
FL = 614.66 (12" SE)
FL = 614.66 (12" S)

EXIST SANMH (30)
STA 24+84 7' RT
RIM = 618.24
D = 9.48'
DIA = 48"
FL = 608.76 (8" NE)
FL = 608.76 (8" SW)

38'-10" ST CONC 0.84%
159'-12" ST CONC 0.21%
42'-12" ST CONC -0.42%
357'-8" SAN CONC 0.71%
440'-8" SAN PVC 0.41%
223'-8" SAN PVC

618.6 618.7 618.7 618.8 618.9 619.0 619.0 618.8 618.7 618.5 618.3 618.1 617.9

20+00 21+00 22+00 23+00 24+00 25+00 26+00

620 610 5' 0

0 20' 40'

SEE PAGE C102 & C104

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CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

NORTH ADAMS STREET

IRWIN AVENUE TO 600' N/O IRWIN AVENUE
SANITARY SEWER AND WATER MAIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
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SEE PAGE C101 & C103

STA 26+10, 11.7' RT
1-8"X6" TEE
1-6" GATE VALVE
31'-6" PVC WM
1-HYDRANT (6.5' BURY)
CAP COLOR CLASS-AA BLUE

ED-29-1
BRAISHER PARK

STA 26+15, 10.5' RT
1-8" GATE VALVE

STA 26+30, 11.0' RT
1-1/2 VERTICAL OFFSET

STA 29+81, 9.1' RT
1-CAP W/ 2" CORP AND GALVANIZED STEEL PIPE

STA 30+08, 9.2' RT
1-CONNECT TO EXIST 8" PVC WM
1-45° VERTICAL BEND

RIDGEWAY BOULEVARD

REMOVE HYDRANT AND VALVE

REMOVE 24" DIA TREE

NEW 1" HDPE WATER SERVICE (TYP)

REMOVE AND REPLACE SANITARY LATERAL (TYP)

DECORATIVE FENCE

DIRECTIONAL DRILL FEED PIT

BLOCK RETAINING WALL

223'-8" PVC SAN

345'-8" PVC SAN

398'-8" PVC WM (TEE-EXIST)

33'-8" LINED CLAY SAN

117'-6" LINED CLAY SAN

317'-8" LINED CLAY SAN

DIRECTIONAL DRILL WM

EXIST RL PROFILE

TOW 612.54

STA 24+84
TOW 610.54

STA 26+10
TOW 611.70

TOW 613.33

STA 26+50
TOW 609.24

PROP 8" PVC WM

TOW 609.61

STA 30+06
TOW 608.30

TOW 606.21

223'-8" SAN PVC 0.61%

345'-8" SAN PVC 0.41%

12'-12" ST PVC 1.32%

1'-8" SAN CONC 0.41%

EXIST SANMH (30)
STA 24+84 7' RT
RIM = 618.24
D = 9.48'
DIA = 48"
FL = 608.76 (8" NE)
FL = 608.76 (8" SW)

EXIST SANMH (29)
STA 27+07 0' RT
RIM = 617.46
D = 7.35'
DIA = 48"
FL = 610.11 (8" NE)
FL = 610.11 (8" SW)

EXIST STMH (9)
STA 30+02 8' LT
RIM = 615.82
D = 4.55'
DIA = 48"
FL = 611.35 (12" W)
FL = 611.36 (12" SE)
FL = 611.27 (12" N)
FL = 611.35 (12" SW)

EXIST STMH (6)
STA 30+14 9' LT
RIM = 615.91
D = 6.19'
DIA = 48"
FL = 609.86 (21" SE)
FL = 609.72 (30" NW)
FL = 611.11 (12" S)

EXIST SANMH (27)
STA 30+53 0' LT
RIM = 616.75
D = 8.36'
DIA = 48"
FL = 608.52 (8" SE)
FL = 608.39 (8" NW)
FL = 608.68 (8" SW)

619 ED-563
703 ED-582-N-15
711 ED-582-N-11
1220 ED-582-N-9
624 ED-29
630 ED-29-3
636 ED-29-4
702 ED-582-N-24
706 ED-582-N-22
1302 ED-582-N-16

618.5 618.3 618.1 617.9 617.7 617.5 617.3 617.0 616.9 616.7 616.4 616.0 616.7

620 610 5' 0

25+00 26+00 27+00 28+00 29+00 30+00 30+75

0 20' 40'

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

NORTH ADAMS STREET
600' N/O IRWIN AVENUE TO RIDGEWAY BLVD
SANITARY SEWER AND WATER MAIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT # 25-01

	BY	DATE
SURVEYED	KAD	10-2024
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IRWIN AVENUE

REMOVE AND REPLACE
STA 20+77 14' LT
INL (49) TYPE B
FLANGE = 618.08
FL = 615.04 (12" SE)
FL = 615.04 (6" NW)
D = 3.04'

1219
ED-563-3

525
ED-563-1

607
ED-563-1-A

615
ED-563-A

619
ED-563

1215
ED-1435-24

PROVIDE 6" STORM LATERAL(TYP)

SEE PAGE C102 & C104

INL (49)
14'-12" ST 0.40%
RCP CL IV

STMH (39)

37'-12" ST

13'-12" ST 0.40%
RCP CL IV

103'-8" ST

STMH (36)

RL

360'-8" ST

EXIST SANMH (30)

223'-8" PVC SAN

440'-8" PVC SAN

INL (50)

REMOVE AND REPLACE
STA 20+77 13' RT
INL (50) TYPE B
FLANGE = 618.31
FL = 615.03 (12" NW)
FL = 615.48 (10" SE) (RECONNECT)
D = 3.28'

FUTURE STORM SEWER

STORM SERVICE OFF IRWIN STREET

1305
ED-565-1

600
ED-565

602
ED-565-3

606
ED-565-4

612
ED-565-2

624
ED-29

630
ED-29-3

1301
ED-1435-23

EXIST STMH (17)
STA 20+40 8' LT
RIM = 618.57
D = 3.74'
DIA = 48"
FL = 614.83 (12" N)
FL = 614.83 (12" NW)
FL = 615.04 (10" S)
FL = 615.04 (12" SW)

STMH (55)
STA 20+77 0'
RIM = 618.65
D = 3.68'
DIA = 48"
FL = 614.98 (8" NE)
FL = 614.98 (12" SW)
FL = 614.98 (12" NW)
FL = 614.98 (12" SE)

EXIST INL (21)
RIM = 618.06
D = 2.70'
FL = 615.73 (8" E)
FL = 615.36 (10" N)
FL = 615.84 (4" SE)

STMH (54)
STA 21+79 0'
RIM = 618.91
D = 3.52'
DIA = 48"
FL = 615.39 (8" SW)
FL = 615.39 (6" E)

STMH (36)
STA 23+00 0'
RIM = 618.95
D = 4.20'
DIA = 48"
FL = 614.90 (6" W)
FL = 614.75 (8" NE)
FL = 614.90 (6" SE)

EXIST RL PROFILE

38'-10" ST CONC 0.84%
159'-12" ST CONC 0.21%
42'-12" ST CONC -0.42%
103'-8" ST 0.40%
7'-12" ST 3.40%
37'-12" ST 0.40%
RCP CL IV
360'-8" ST 0.40%
TOW 612.87
TOW 612.54
357'-8" SAN CONC 0.71%
440'-8" SAN PVC 0.41%
223'-8" SAN PVC

STA 20+79 16' LT
EXIST INL (16)
RIM = 617.96
D = 3.30'
FL = 614.66 (12" SE)
FL = 614.66 (12" S)

REMOVE AND REPLACE
STMH (39)
STA 20+40 8' LT
RIM = 618.57
D = 3.74'
DIA = 48"
FL = 614.83 (12" NW)(15" OPENING, RECONNECT 12")
FL = 614.83 (12" SW)
FL = 614.83 (15" SE)
FL = 614.83 (12" NE)

EXIST SANMH (30)
STA 24+84 7' RT
RIM = 618.24
D = 9.48'
DIA = 48"
FL = 608.76 (8" NE)
FL = 608.76 (8" SW)

620
610
5'
0

618.6 618.7 618.7 618.8 618.9 619.0 619.0 618.8 618.7 618.5 618.3 618.1 617.9

20+00 21+00 22+00 23+00 24+00 25+00 0 20' 40' 26+00

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

NORTH ADAMS STREET
IRWIN AVENUE TO 600' N/O IRWIN AVENUE
STORM SEWER AND STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
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SEE PAGE C101 & C103

619
ED-563

ED-29-1
BRAISHER PARK

STA 26+60 14' LT
INL (52) TYPE B
FLANGE = 617.20
FL = 613.20 (12" SE)
D = 4.00'

703
ED-582-N-15

711
ED-582-N-11

STORM SERVICE TO INLET

1220
ED-582-N-9

RIDGEWAY BOULEVARD

REMOVE TREE

PROVIDE 6" STORM LATERAL(TYP)

DECORATIVE FENCE

360'-8" ST
EXIST SANMH (30)

223'-8" PVC SAN

8'-12" ST 0.40%

20'-12" ST 0.40%

INL (52)

STMH (37)

INL (53)

EXIST SANMH (29)

341'-12" ST

343'-8" PVC SAN

BLOCK RETAINING WALL

EXIST INL (8)

EXIST STMH (9)

EXIST STMH (6)

194'-30" CONC ST

117'-8" LINED CLAY SAN

EXIST SANMH (27)

EXIST INL (10)

33'-8" LINED CLAY SAN

EXIST SANMH (26)

317'-8" LINED CLAY SAN

612
565-2

624
ED-29

630
ED-29-3

636
ED-29-4

702
ED-582-N-24

706
ED-582-N-22

1302
ED-582-N-16

STA 26+60 14' RT
INL (53) TYPE B
FLANGE = 617.37
FL = 613.37 (12" NW)
FL = 613.87 (6" SE)
D = 4.00'

STMH (37)
STA 26+60 6' LT
RIM = 617.46
D = 4.29'
DIA = 48"
FL = 613.31 (8" SW)
FL = 613.17 (12" NE)
FL = 613.17 (12" NW)
FL = 613.29 (12" SE)

360'-8" ST 0.40%

341'-12" ST 0.53%

EXIST RL PROFILE

TOW 612.54

TOW 613.33

223'-8" SAN PVC 0.61%

345'-8" SAN PVC 0.41%

12'-12" ST PVC 1.32%

TOW 609.61

1'-8" SAN CONC 0.41%

TOW 606.21

EXIST SANMH (30)
STA 24+84 7' RT
RIM = 618.24
D = 9.48'
DIA = 48"
FL = 608.76 (8" NE)
FL = 608.76 (8" SW)

EXIST SANMH (29)
STA 27+07 0' RT
RIM = 617.46
D = 7.35'
DIA = 48"
FL = 610.11 (8" NE)
FL = 610.11 (8" SW)

EXIST STMH (9)
STA 30+02 8' LT
RIM = 615.82
D = 4.55'
DIA = 48"
FL = 611.35 (12" W)
FL = 611.36 (12" SE)
FL = 611.27 (12" N)
FL = 611.35 (12" SW)
OPENING BULKHEADED IN MANHOLE

EXIST STMH (6)
STA 30+14 9' LT
RIM = 615.91
D = 6.19'
DIA = 48"
FL = 609.86 (21" SE)
FL = 609.72 (30" NW)
FL = 611.11 (12" S)

EXIST SANMH (27)
STA 30+53 0' LT
RIM = 616.75
D = 8.36'
DIA = 48"
FL = 608.52 (8" SE)
FL = 608.39 (8" NW)
FL = 608.68 (8" SW)

620
610
5'
0

618.5 618.3 618.1 617.9 617.7 617.5 617.3 617.0 616.9 616.7 616.4 616.0 616.7

25+00 26+00 27+00 28+00 29+00 30+00 30+75

0 20' 40'

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

NORTH ADAMS STREET
600' N/O IRWIN AVENUE TO RIDGEWAY BLVD
STORM SEWER AND STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	11-2024
DESIGNED	KAD	11-2024
CHECKED	EPR	12-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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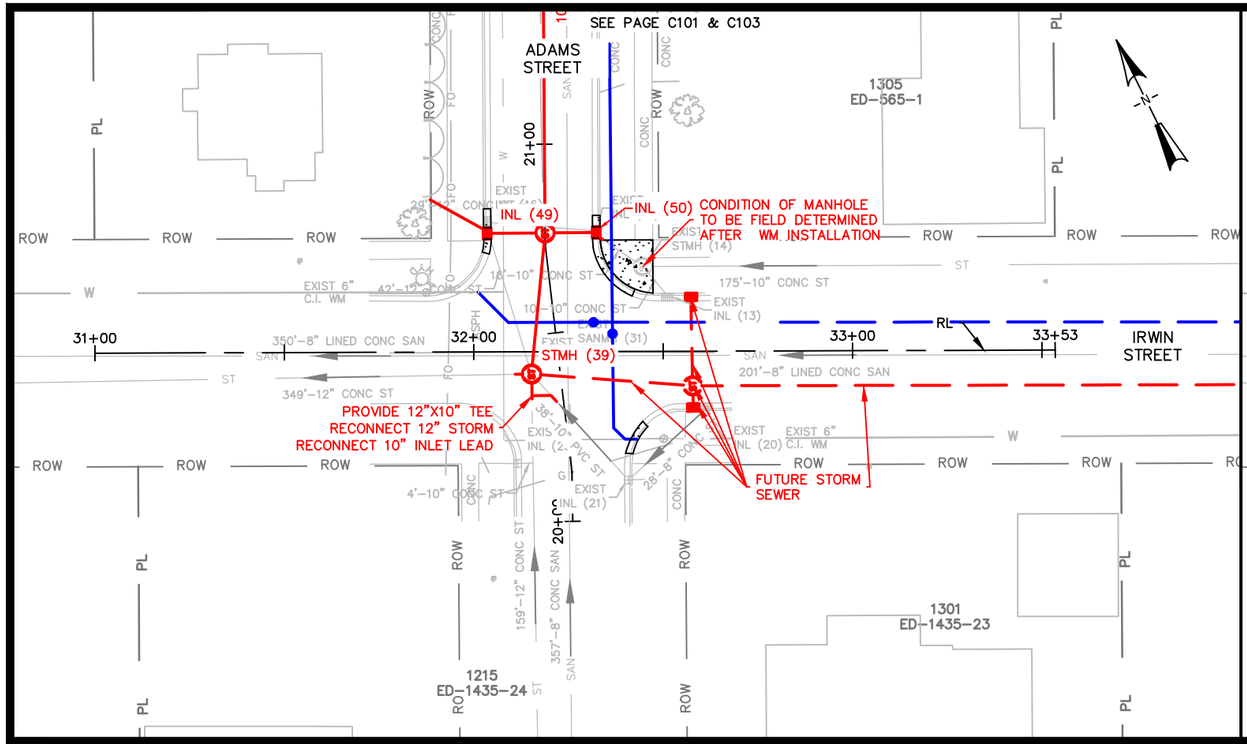

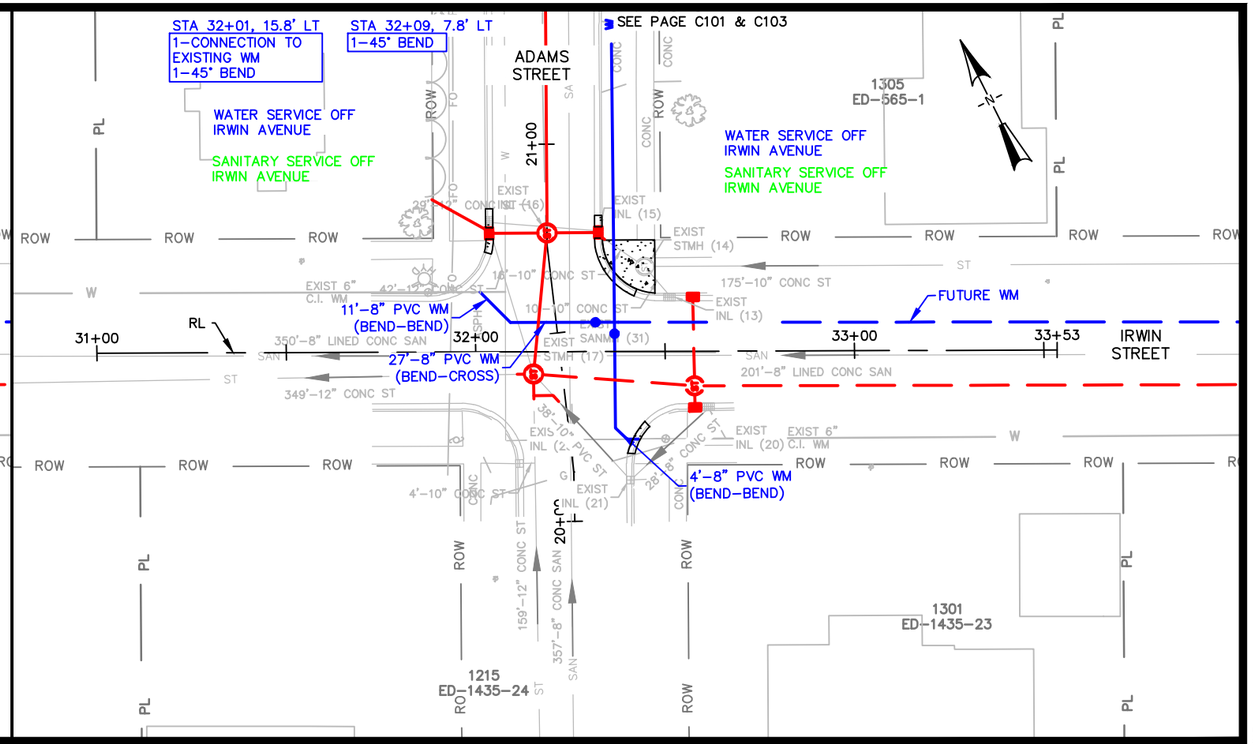

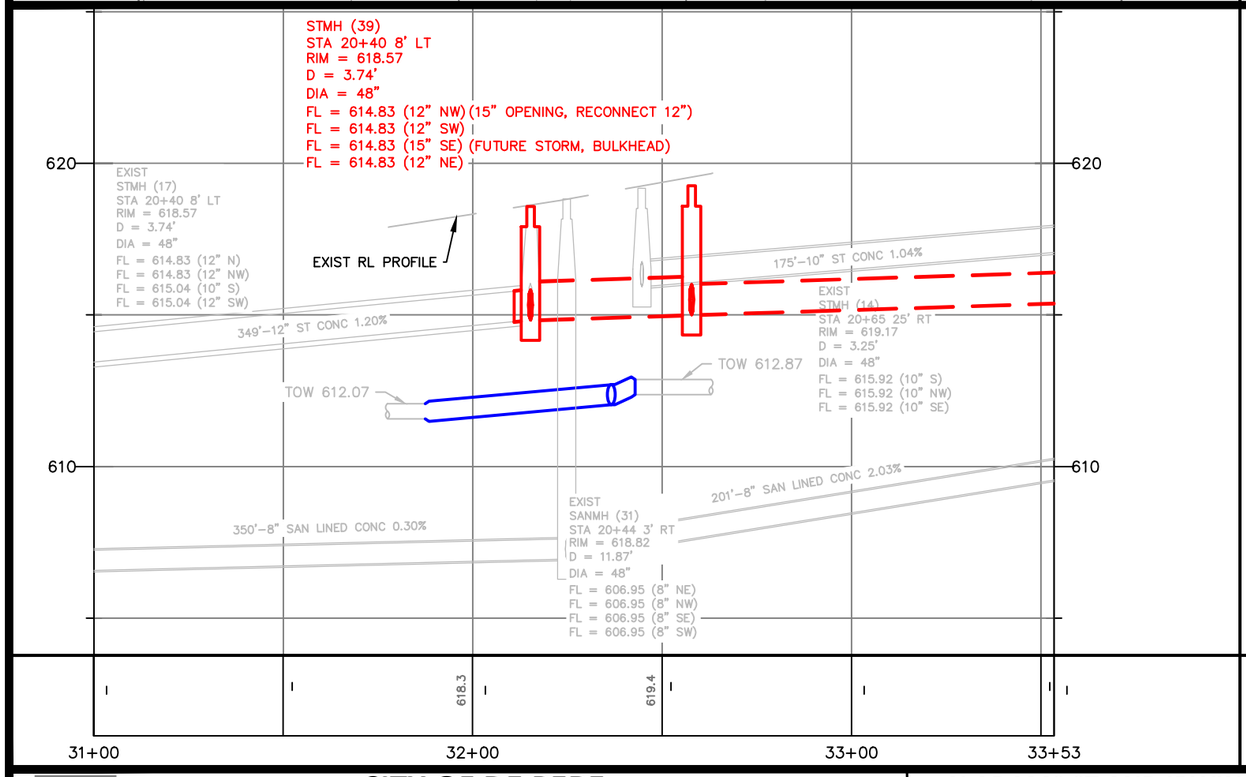

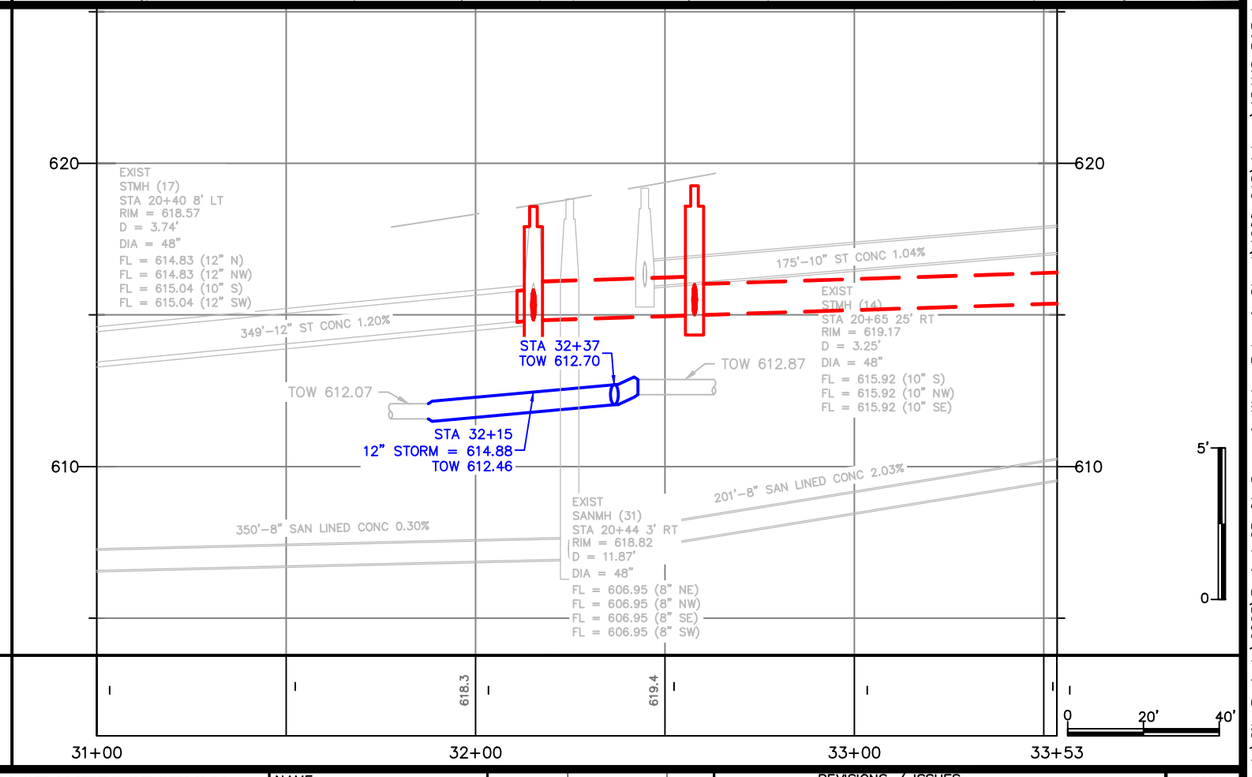

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N ADAMS ST AND IRWIN ST INTERSECTION

SANITARY SEWER, STORM SEWER AND WATER MAIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
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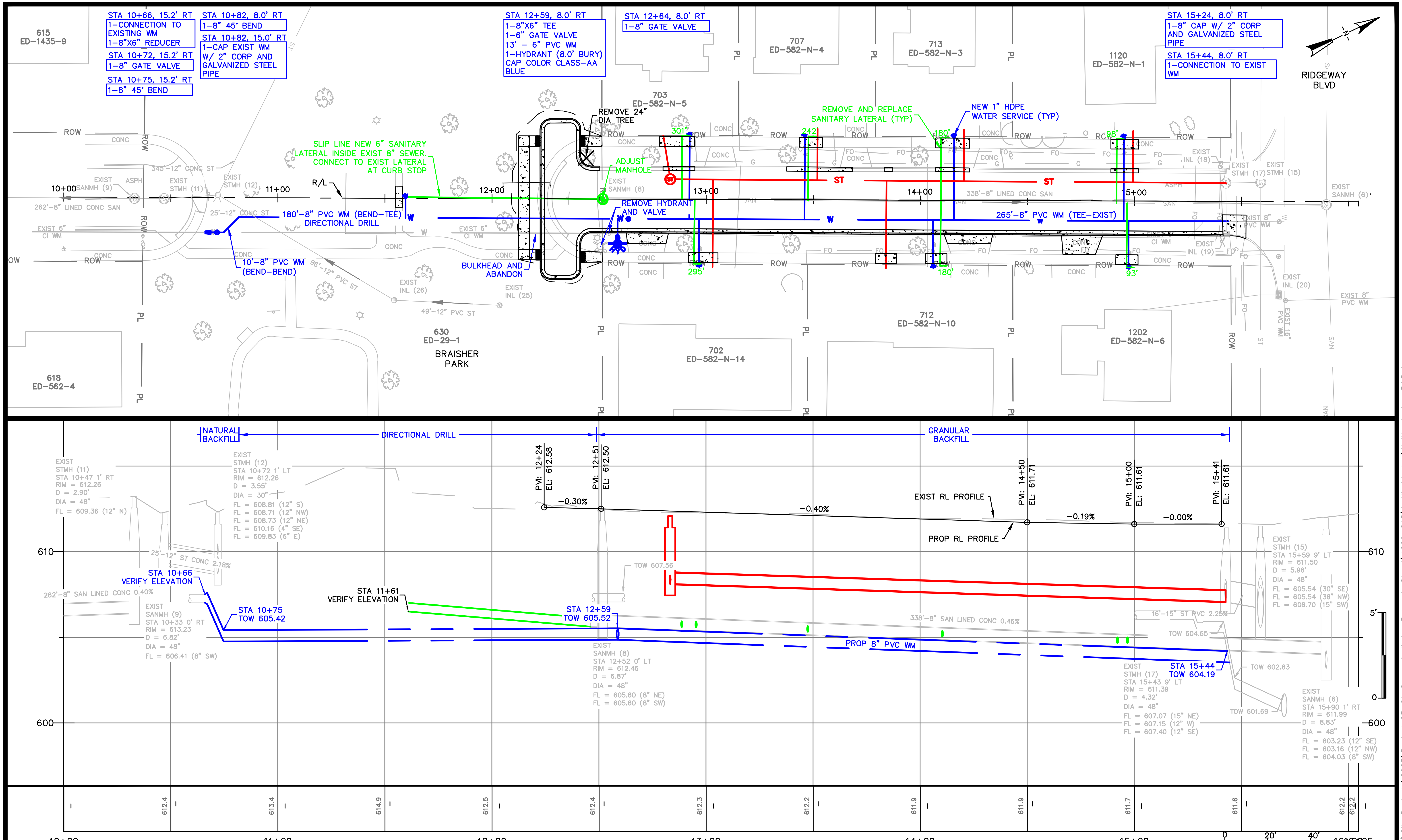
STA 10+66, 15.2' RT
1–CONNECTION TO EXISTING WM
1–8"X6" REDUCER
STA 10+72, 15.2' RT
1–8" GATE VALVE
STA 10+75, 15.2' RT
1–8" 45° BEND
STA 10+82, 8.0' RT
1–8" 45° BEND
STA 10+82, 15.0' RT
1–CAP EXIST WM W/ 2" CORP AND GALVANIZED STEEL PIPE
STA 12+59, 8.0' RT
1–8"X6" TEE
1–6" GATE VALVE
13' – 6" PVC WM
1–HYDRANT (8.0' BURY)
CAP COLOR CLASS–AA BLUE
STA 12+64, 8.0' RT
1–8" GATE VALVE
STA 15+24, 8.0' RT
1–8" CAP W/ 2" CORP AND GALVANIZED STEEL PIPE
STA 15+44, 8.0' RT
1–CONNECTION TO EXIST WM
615
ED–1435–9
707
ED–582–N–4
713
ED–582–N–3
1120
ED–582–N–1
703
ED–582–N–5
RIDGEWAY BLVD
REMOVE 24" DIA TREE
REMOVE AND REPLACE SANITARY LATERAL (TYP)
NEW 1" HDPE WATER SERVICE (TYP)
SLIP LINE NEW 6" SANITARY LATERAL INSIDE EXIST 8" SEWER. CONNECT TO EXIST LATERAL AT CURB STOP
ADJUST MANHOLE
REMOVE HYDRANT AND VALVE
180'–8" PVC WM (BEND–TEE) DIRECTIONAL DRILL
10'–8" PVC WM (BEND–BEND)
BULKHEAD AND ABANDON
265'–8" PVC WM (TEE–EXIST)
338'–8" LINED CONC SAN
262'–8" LINED CONC SAN
345'–12" CONC ST
25'–12" CONC ST
96'–12" PVC ST
49'–12" PVC ST
10+00
11+00
12+00
13+00
14+00
15+00
630
ED–29–1
BRAISHER PARK
618
ED–562–4
702
ED–582–N–14
712
ED–582–N–10
1202
ED–582–N–6
NATURAL BACKFILL
DIRECTIONAL DRILL
GRANULAR BACKFILL
PVI: 12+24 EL: 612.58
PVI: 12+51 EL: 612.50
PVI: 14+50 EL: 611.71
PVI: 15+00 EL: 611.61
PVI: 15+41 EL: 611.61
–0.30%
–0.40%
–0.19%
–0.00%
EXIST RL PROFILE
PROP RL PROFILE
EXIST STMH (11) STA 10+47 1' RT RIM = 612.26 D = 2.90' DIA = 48" FL = 609.36 (12" N)
EXIST STMH (12) STA 10+72 1' LT RIM = 612.26 D = 3.55' DIA = 30" FL = 608.81 (12" S) FL = 608.71 (12" NW) FL = 608.73 (12" NE) FL = 610.16 (4" SE) FL = 609.83 (6" E)
STA 10+66 VERIFY ELEVATION
STA 10+75 TOW 605.42
STA 11+61 VERIFY ELEVATION
STA 12+59 TOW 605.52
EXIST SANMH (9) STA 10+33 0' RT RIM = 613.23 D = 6.82' DIA = 48" FL = 606.41 (8" SW)
EXIST SANMH (8) STA 12+52 0' LT RIM = 612.46 D = 6.87' DIA = 48" FL = 605.60 (8" NE) FL = 605.60 (8" SW)
PROP 8" PVC WM
STA 15+44 TOW 604.19
EXIST STMH (17) STA 15+43 9' LT RIM = 611.39 D = 4.32' DIA = 48" FL = 607.07 (15" NE) FL = 607.15 (12" W) FL = 607.40 (12" SE)
EXIST STMH (15) STA 15+59 9' LT RIM = 611.50 D = 5.96' DIA = 48" FL = 605.54 (30" SE) FL = 605.54 (36" NW) FL = 606.70 (15" SW)
EXIST SANMH (6) STA 15+90 1' RT RIM = 611.99 D = 8.83' DIA = 48" FL = 603.23 (12" SE) FL = 603.16 (12" NW) FL = 604.03 (8" SW)
610
600
X:\ENG\Projects\City Projects\2025\Project 25–01–Sewer_&_Water_Relay_&_Street\1200–CAD\N Washington\N Washington_P&P.dwg

CITY OF DE PERE

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OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET
250' N/O FULTON ST TO RIDGEWAY BLVD
SANITARY SEWER AND WATER MAIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
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615
ED-1435-9

618
ED-562-4

630
ED-29-1
BRAISHER PARK

703
ED-582-N-5

707
ED-582-N-4

713
ED-582-N-3

1120
ED-582-N-1

712
ED-582-N-10

702
ED-582-N-14

1202
ED-582-N-6

RIDGEWAY BLVD

REMOVE 24" DIA TREE

PROVIDE 6" STORM LATERAL(TYP)

STORM LATERAL OFF RIDGEWAY BLVD

STMH (27)

260'-8" ST

338'-8" LINED CONC SAN

262'-8" LINED CONC SAN

345'-12" CONC ST

25'-12" CONC ST

96'-12" PVC ST

49'-12" PVC ST

EXIST STMH (11)
EXIST STMH (12)
EXIST SANMH (9)
EXIST SANMH (8)
EXIST STMH (17)
EXIST STMH (15)
EXIST SANMH (6)
EXIST INL (18)
EXIST INL (19)
EXIST INL (20)
EXIST INL (26)
EXIST INL (25)
EXIST 6" CI WM
EXIST 8" PVC WM
EXIST 16" PVC WM

10+00 11+00 12+00 13+00 14+00 15+00 16+00

R/L

DRIVEWAY WIDTH		
HO#	CURB	FOW
1202	19.2'	15.1'
712	22.5'	
702	19.7'	

PVI: 12+24 EL: 612.58
PVI: 12+51 EL: 612.50
PVI: 14+50 EL: 611.71
PVI: 15+00 EL: 611.61
PVI: 15+41 EL: 611.61

-0.30% -0.40% -0.19% -0.00%

EXIST RL PROFILE
PROP RL PROFILE

STMH (27)
STA 12+83 9' LT
RIM = 612.07
D = 3.96'
DIA = 48"
FL = 608.11 (8" NE)
FL = 608.11 (6" W)

EXIST STMH (11)
STA 10+47 1' RT
RIM = 612.26
D = 2.90'
DIA = 48"
FL = 609.36 (12" N)

EXIST STMH (12)
STA 10+72 1' LT
RIM = 612.26
D = 3.55'
DIA = 30"
FL = 608.81 (12" S)
FL = 608.71 (12" NW)
FL = 608.73 (12" NE)
FL = 610.16 (4" SE)
FL = 609.83 (6" E)

EXIST SANMH (9)
STA 10+33 0' RT
RIM = 613.23
D = 6.82'
DIA = 48"
FL = 606.41 (8" SW)

EXIST SANMH (8)
STA 12+52 0' LT
RIM = 612.46
D = 6.87'
DIA = 48"
FL = 605.60 (8" NE)
FL = 605.60 (8" SW)

EXIST STMH (17)
STA 15+43 9' LT
RIM = 611.39
D = 4.32'
DIA = 48"
FL = 607.07 (15" NE)
FL = 607.15 (12" W)
FL = 607.40 (12" SE)
FL = 607.07 (8" SW)
OPENING BULKHEADED IN MANHOLE

EXIST STMH (15)
STA 15+59 9' LT
RIM = 611.50
D = 5.96'
DIA = 48"
FL = 605.54 (30" SE)
FL = 605.54 (36" NW)
FL = 606.70 (15" SW)

EXIST SANMH (6)
STA 15+90 1' RT
RIM = 611.99
D = 8.83'
DIA = 48"
FL = 603.23 (12" SE)
FL = 603.16 (12" NW)
FL = 604.03 (8" SW)

25'-12" ST CONC 2.18%
262'-8" SAN LINED CONC 0.40%
260'-8" ST 0.40%
338'-8" SAN LINED CONC 0.46%
16'-15" ST RVC 2.25%

TOW 607.56
TOW 604.65
TOW 602.63
TOW 601.69

STA 11+61
VERIFY ELEVATION

612.4 613.4 614.9 612.5 612.4 612.3 612.2 611.9 611.9 611.7 611.6 612.2 612.2

610
600
5'
0
0 20' 40'

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET
250' N/O FULTON ST TO RIDGEWAY BLVD
STORM SEWER AND STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	10-2024
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REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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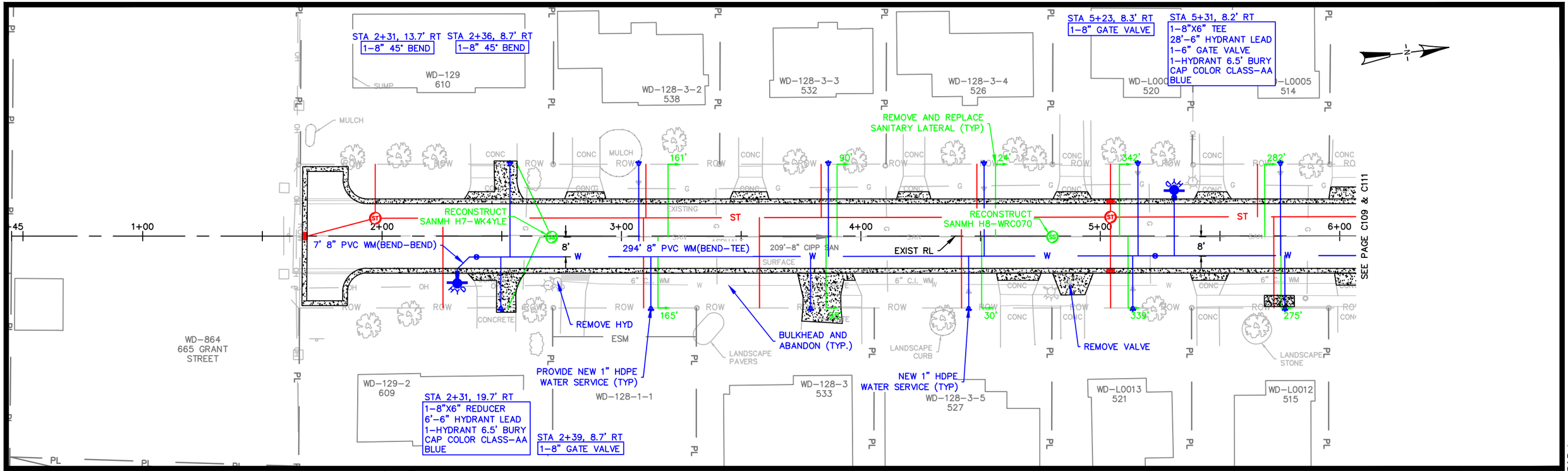

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

MARTIN STREET

SOUTHERN TERMINUS TO 250' SOUTH OF BUTLER ST
SANITARY SEWER AND WATER MAIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	APB	12–2023
DRAWN	APB	12–2023
DESIGNED	APB	01–2024
CHECKED	CKK	01–2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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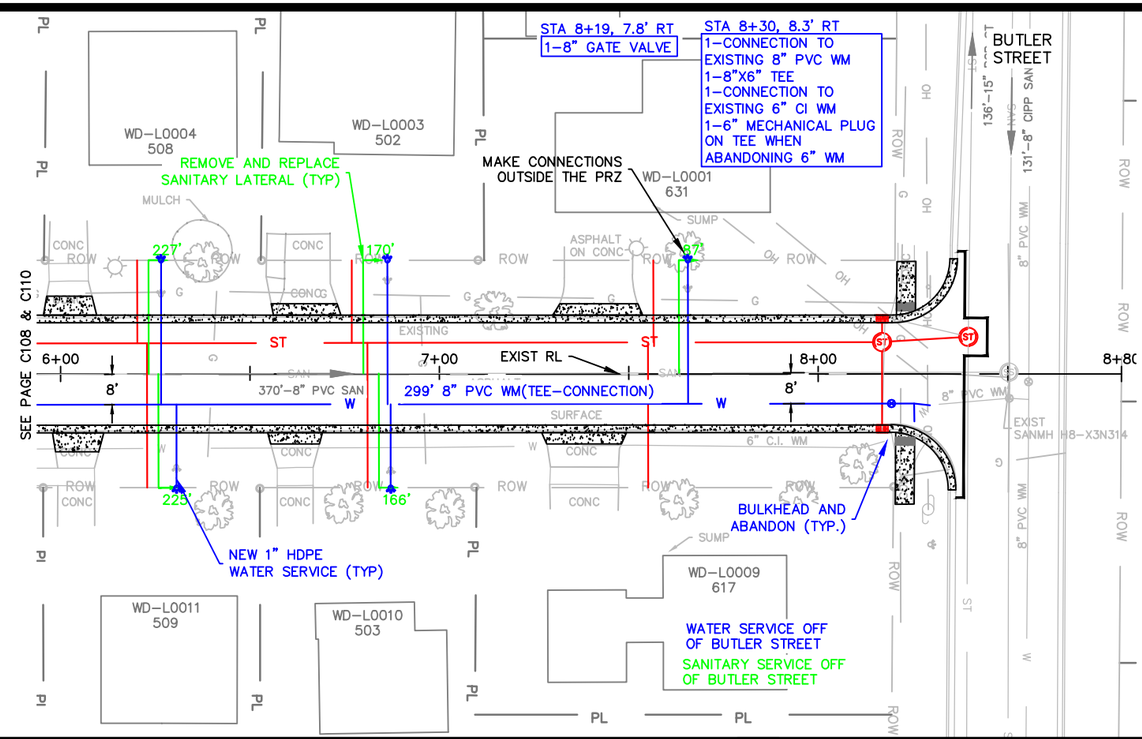

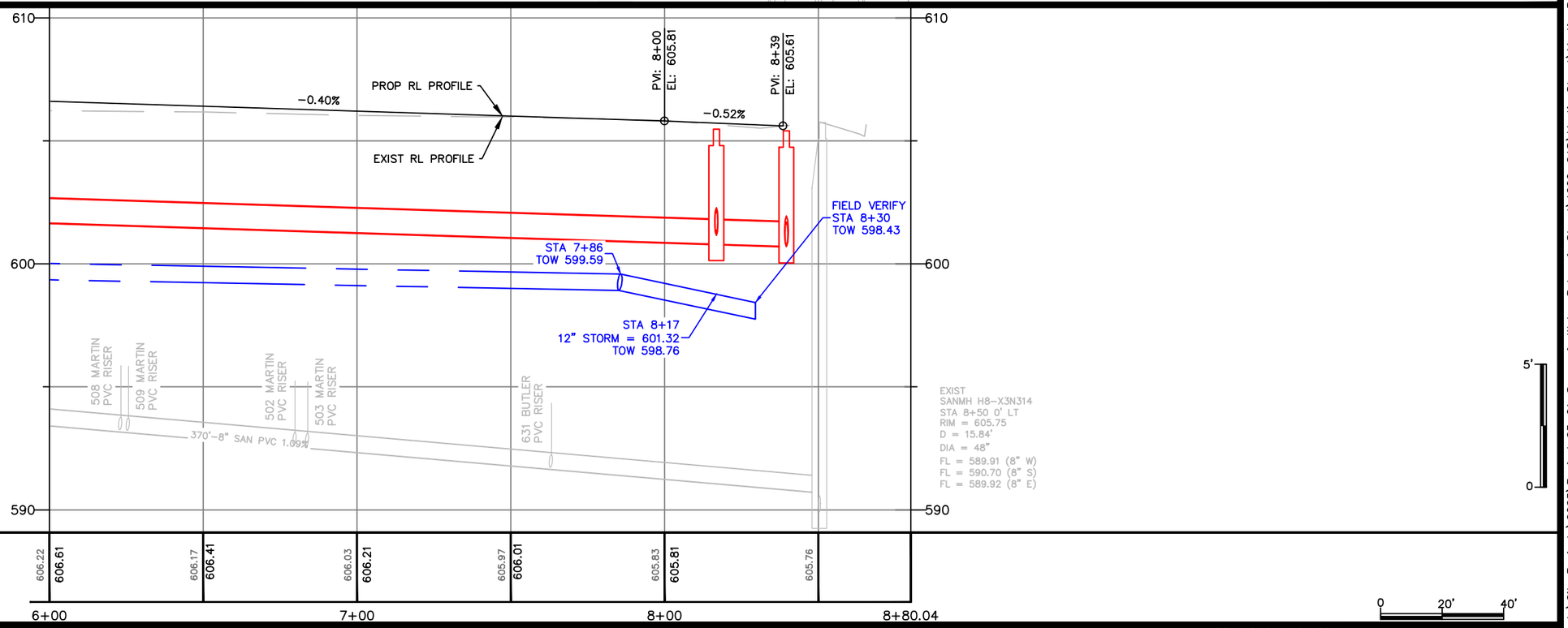

CITY OF DE PERE

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MARTIN STREET

250' SOUTH OF BUTLER ST TO BUTLER ST
SANITARY SEWER AND WATERM AIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
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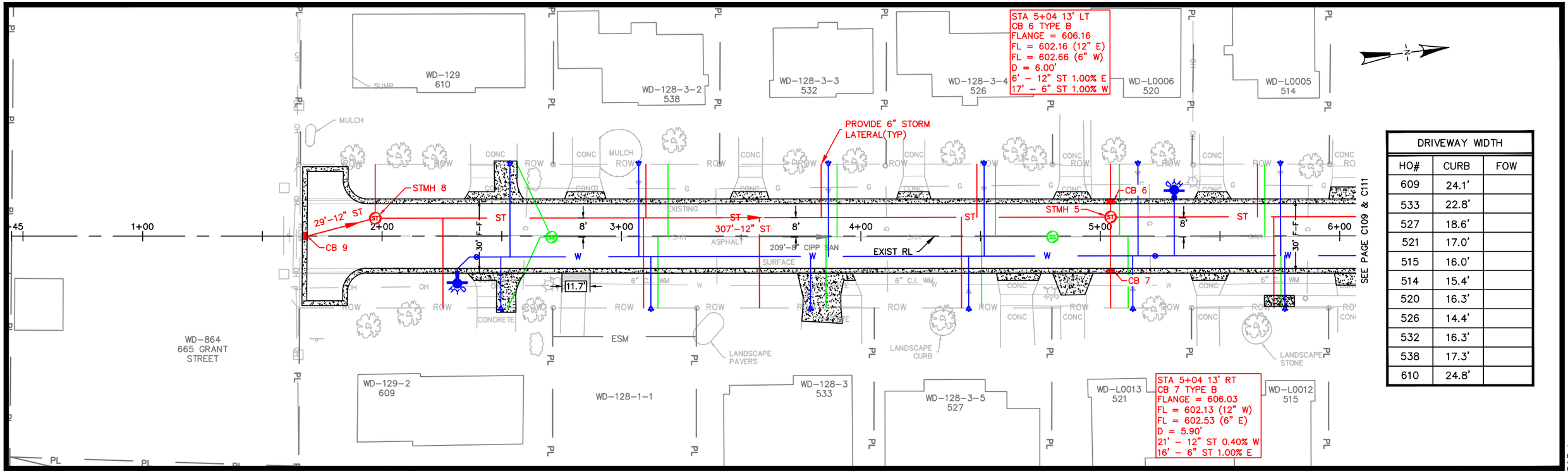
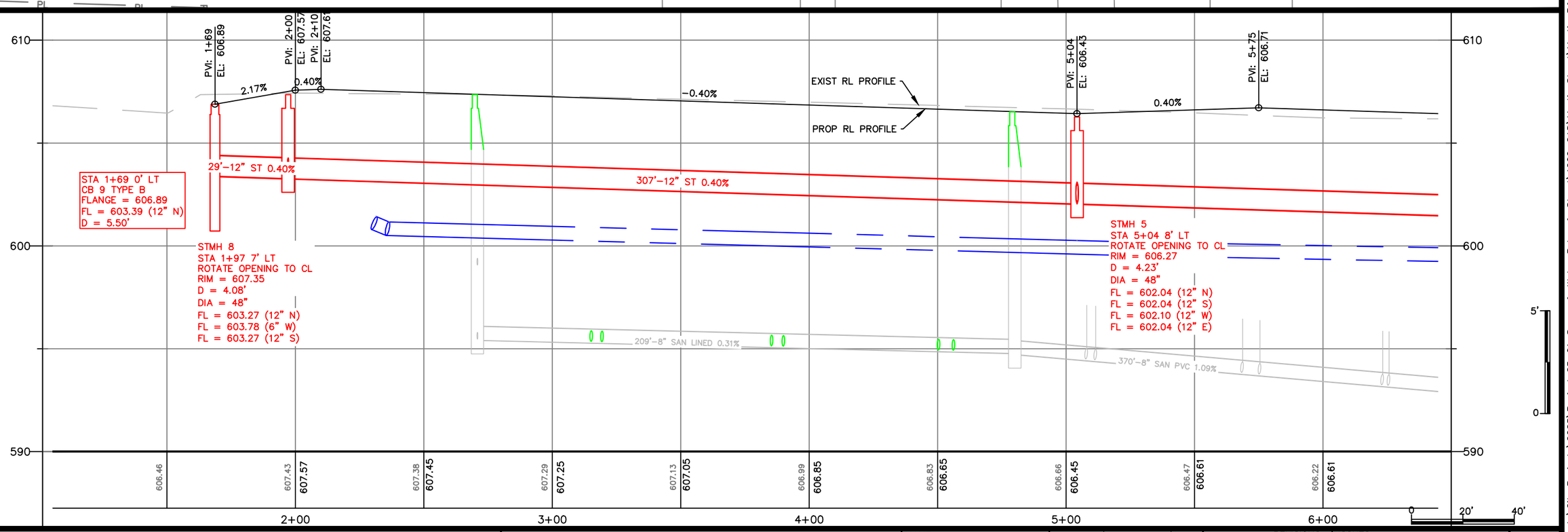


DRIVEWAY WIDTH		
HO#	CURB	FOW
609	24.1'	
533	22.8'	
527	18.6'	
521	17.0'	
515	16.0'	
514	15.4'	
520	16.3'	
526	14.4'	
532	16.3'	
538	17.3'	
610	24.8'	



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MARTIN STREET
SOUTHERN TERMINUS TO 250' SOUTH OF BUTLER ST
STORM SEWER AND STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
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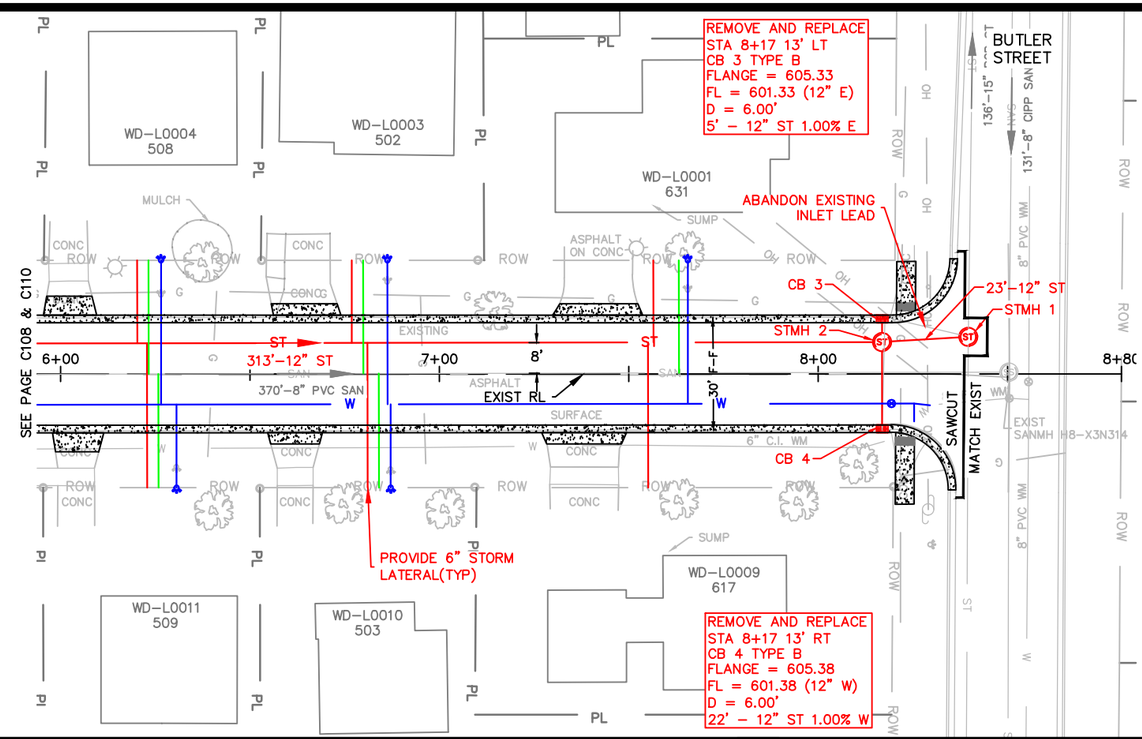
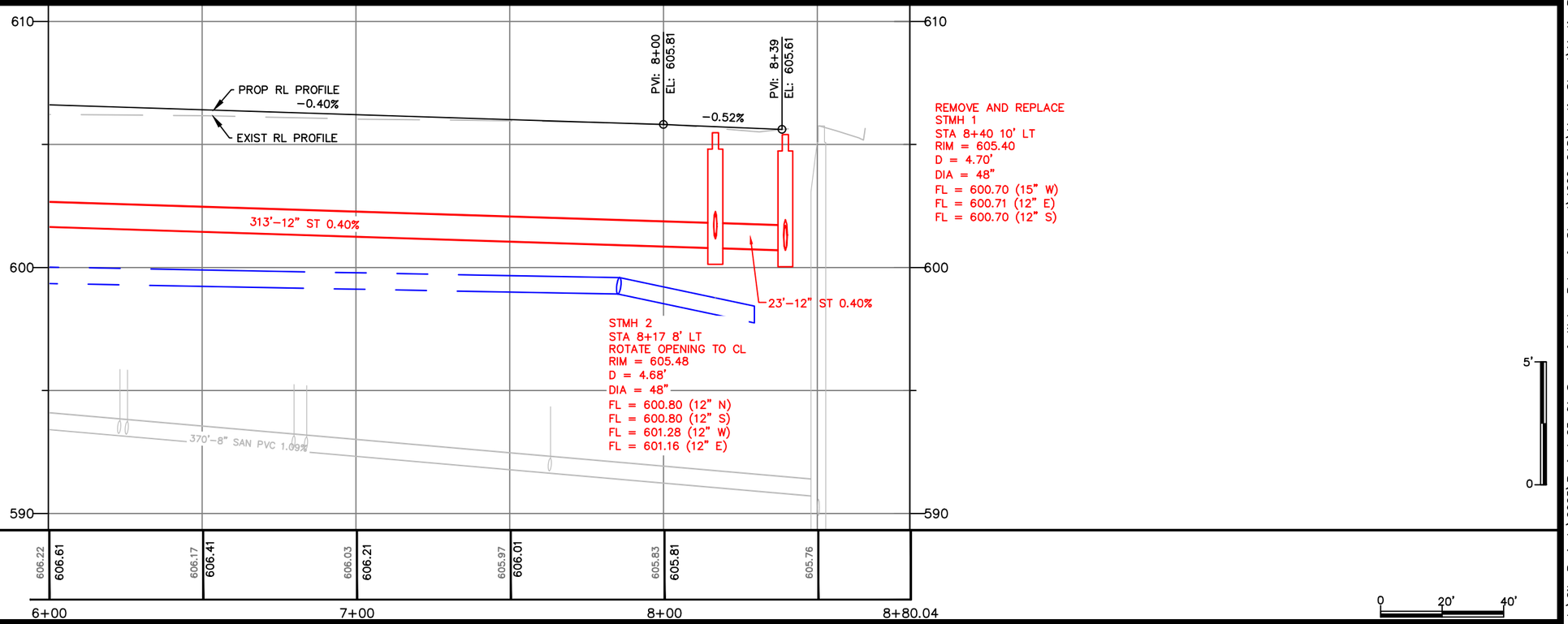


DRIVEWAY WIDTH		
HO#	CURB	FOW
509	13.5'	
503	14.5'	
617	22.4'	
631	23.7'	
502	17.8'	
508	14.0'	



CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

MARTIN STREET
250' SOUTH OF BUTLER ST TO BUTLER ST
STORM SEWER AND STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

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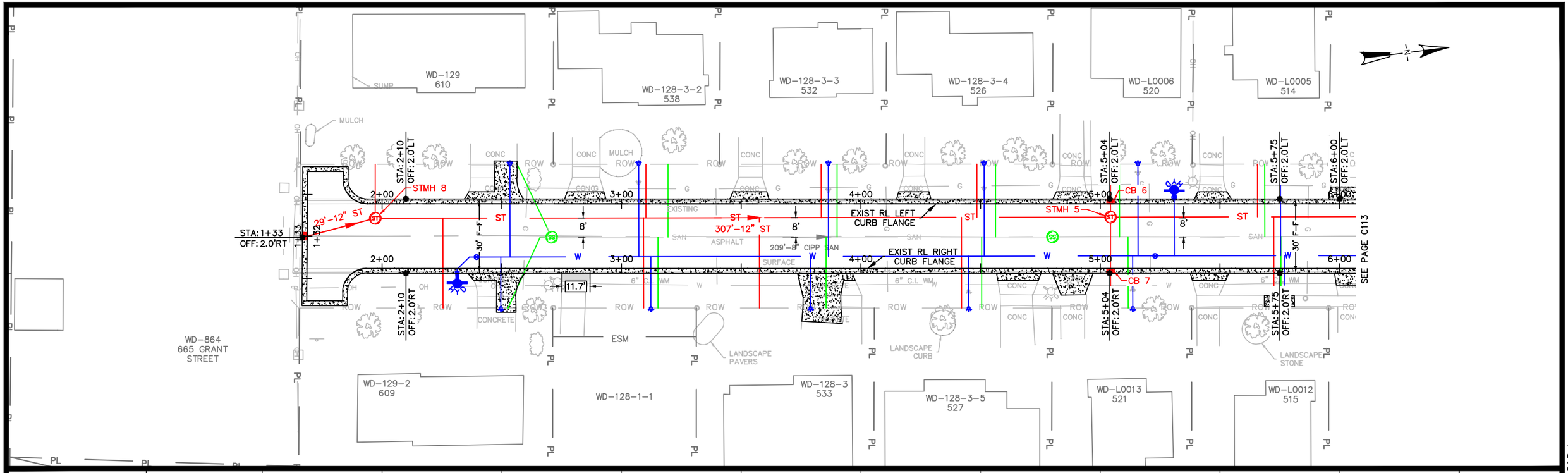

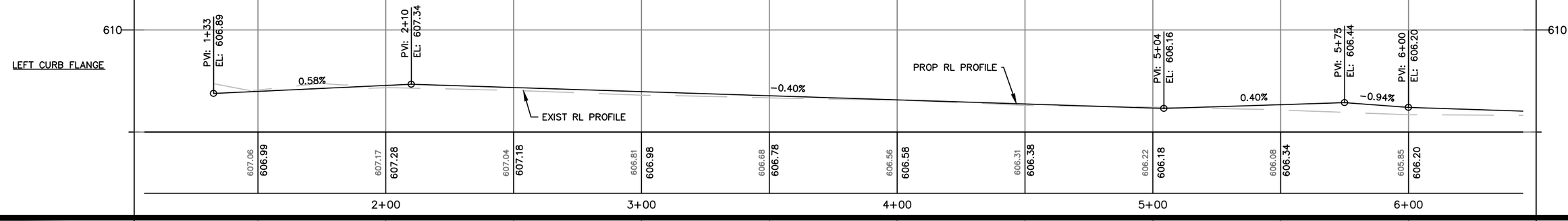

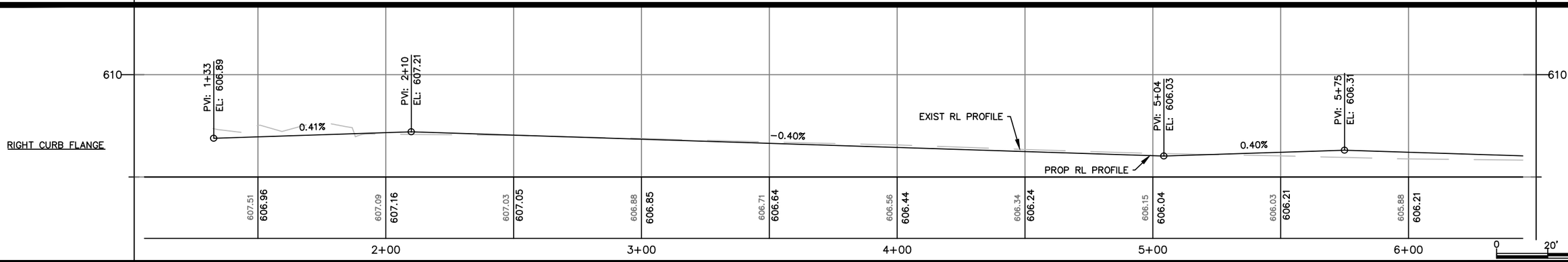

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MARTIN STREET
SOUTHERN TERMINUS TO 250' SOUTH OF BUTLER ST
CURB FLANGE PROFILES

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
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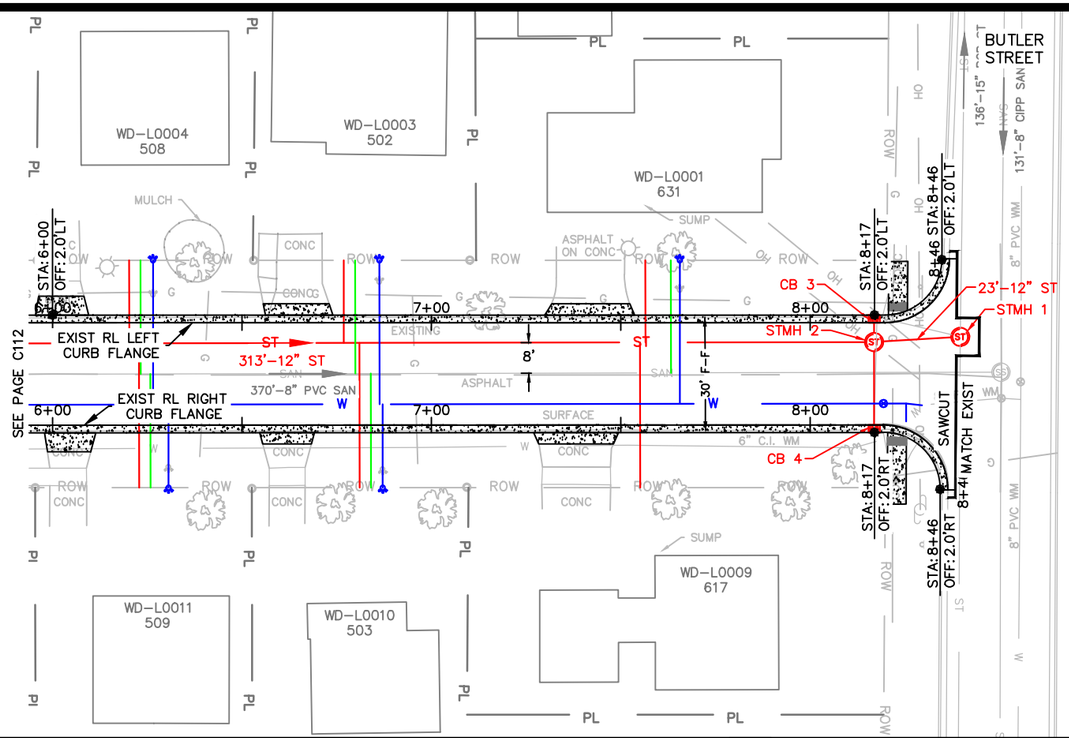

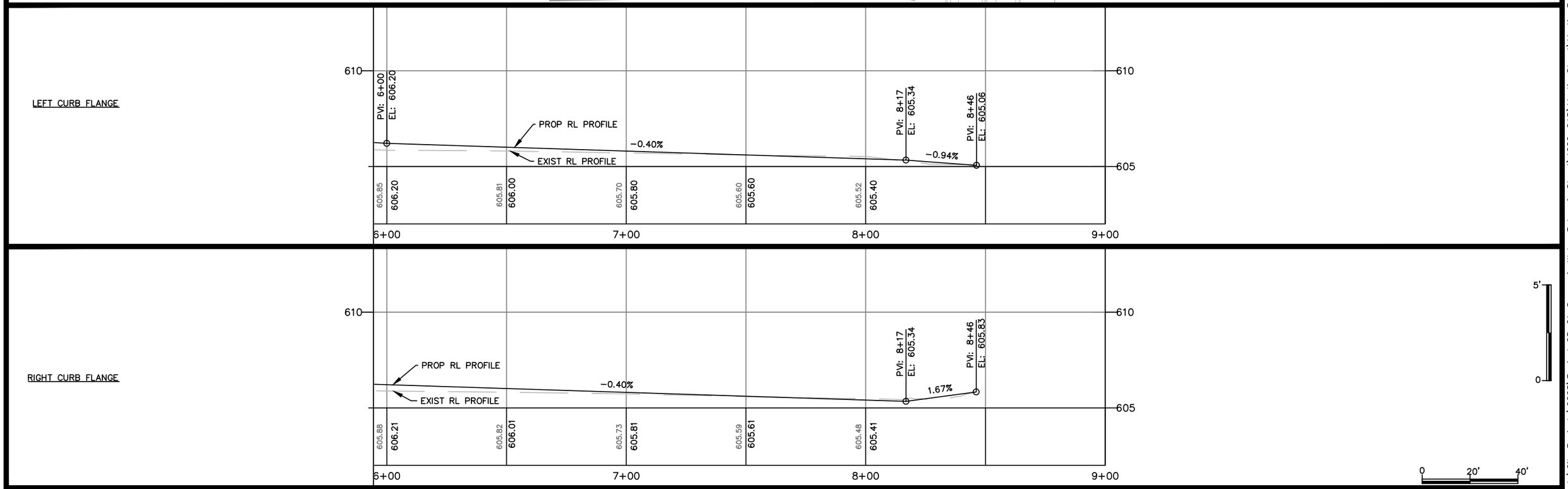

CITY OF DE PERE

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MARTIN STREET

250' SOUTH OF BUTLER ST TO BUTLER ST

CURB FLANGE PROFILES

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
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STA 1+39, 7.0' LT
1–CONNECTION TO EXISTING WM

STA 1+44, 7.0' LT
1–1/2 VERTICAL WM OFFSET

THIRD STREET

STA 1+52, 15.7' LT
1–8"X6" TEE
1–6" VALVE
9'–6" PVC WM
1–HYDRANT (6.5' BURY)
CAP COLOR CLASS–AA BLUE

STA 1+55, 6.9' LT
1–45° BEND
1–TEMPORARY 2" CORPORATION VALVE CONNECTION TO EXISTING WM
1–SOLID SLEEVE WHEN ABANDONING 2" CI WM

STA 1+63, 15.5' LT
1–45° BEND
1–8" VALVE

STA 1+63, 15.5' LT
1–START OF DIRECTIONAL DRILL

STA 4+53, 15.5' LT
1–END OF DIRECTIONAL DRILL

STA 4+53, 15.5' LT
1–8" 8"X6" REDUCER

STA 4+59, 15.5' LT
1–6" VALVE
5'–6" PVC WM
1–HYDRANT (6.5' BURY)
CAP COLOR CLASS–AA BLUE

12'–8" PVC WM (BEND–BEND)

13'–8" PVC WM (CONNECTION–TEE)

3'–8" PVC WM (TEE–BEND)

PROP. 8" PVC WM

290'–8" PVC WM DIRECTIONAL DRILL (BEND–REDUCER)

EXIST RL

301'–8" CIPP SAN

REMOVE VALVE BOX

ADJUST SANMH I7–EQ4SUU PROVIDE NEW CASTING

102'–8" PVC ST

NEW 1" HDPE WATER SERVICE(TYP)

REMOVE AND REPLACE SANITARY LATERAL(TYP)

MAKE SANITARY LATERAL CONNECTION TO LINER OUTSIDE OF MANHOLE

REMOVE AND REPLACE SANMH I7–DY6T2Z

SANITARY SERVICES OFF OF FOX RIVER EASEMENT

EXIST SANMH I7–BWDU60

316'–8" PVC SAN

WD–616 631
WD–617 222
WD–618 216
WD–619 208
WD–172 701
WD–622 217
WD–621 215
WD–1313
WD–1314
201–205

0 20' 40'

DIRECTIONAL DRILL 8" PVC WM

EXIST RL PROFILE OFFSET 15.5'L

STA 1+39 VERIFY ELEVATION TOW 605.78

STA 1+55 TOW 604.61

STA 1+63 TOW 604.54

STA 1+41 TOW 604.61

EXISTING 8" PVC STA 1+24 TOW 605.78

301'–8" SAN CIPP 0.65%

STA 4+12 TOW 602.16

STA 4+53 TOW 599.85

STA 4+59 TOW 599.85

EXIST SANMH I7–BWDU60
STA 0+96 3' RT
RIM = 610.82
D = 9.88'
DIA = 48"
FL = 600.96 (8" SE)
FL = 600.94 (8" SW)

REMOVE AND REPLACE SANMH I7–DY6T2Z
STA 3+96 5' RT
RIM = 608.39
D = 5.48'
DIA = 48"
FL = 602.91 (8" NW)

EXIST SANMH I7–EQ4SUU
STA 4+99 16' LT
RIM = 597.78
D = 5.51'
DIA = 48"
FL = 592.27 (12" SW)
FL = 592.27 (12" NE)

102'–8" ST PVC 12.87%

12" SAN CIPP STA 4+96 INV 592.31

610.93 610.39 610.33 609.93 610.13 609.56 609.81 609.10 609.49 608.78 609.09 608.19 608.43 607.15 597.58

0+50 1+00 2+00 3+00 4+00 5+00 6+00

5' 0

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
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PLEASANT PLACE
THIRD ST TO EAST END
SANITARY SEWER AND WATER MAIN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT # 25–01

	BY	DATE
SURVEYED	APB	12–2023
DRAWN	APB	12–2023
DESIGNED	CKK	01–2024
CHECKED	CKK	02–2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. C114

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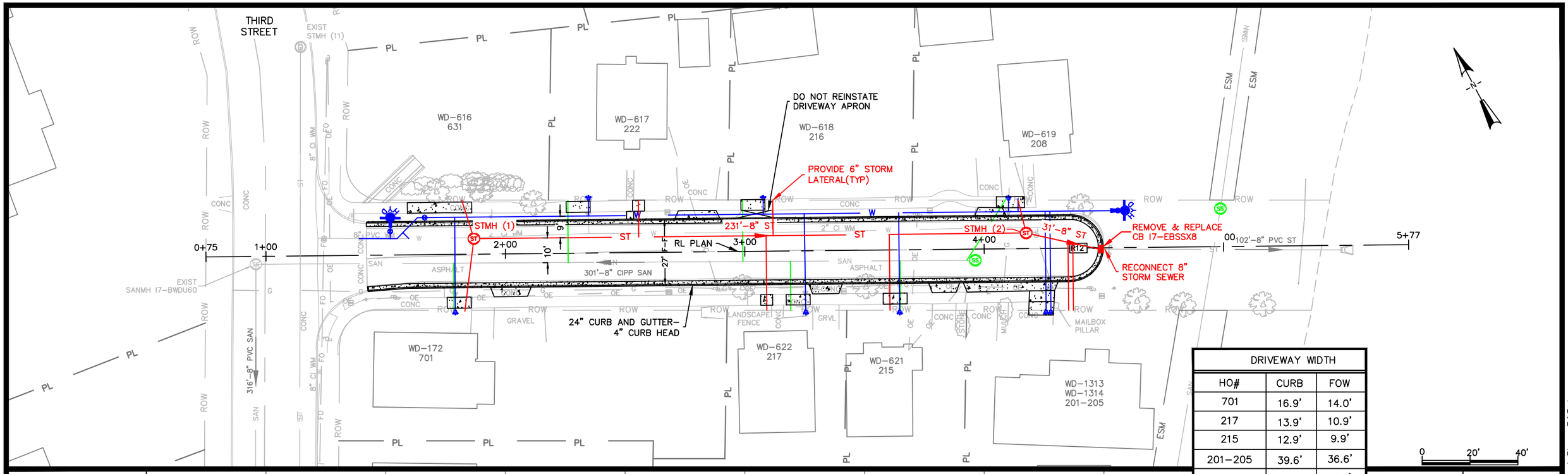
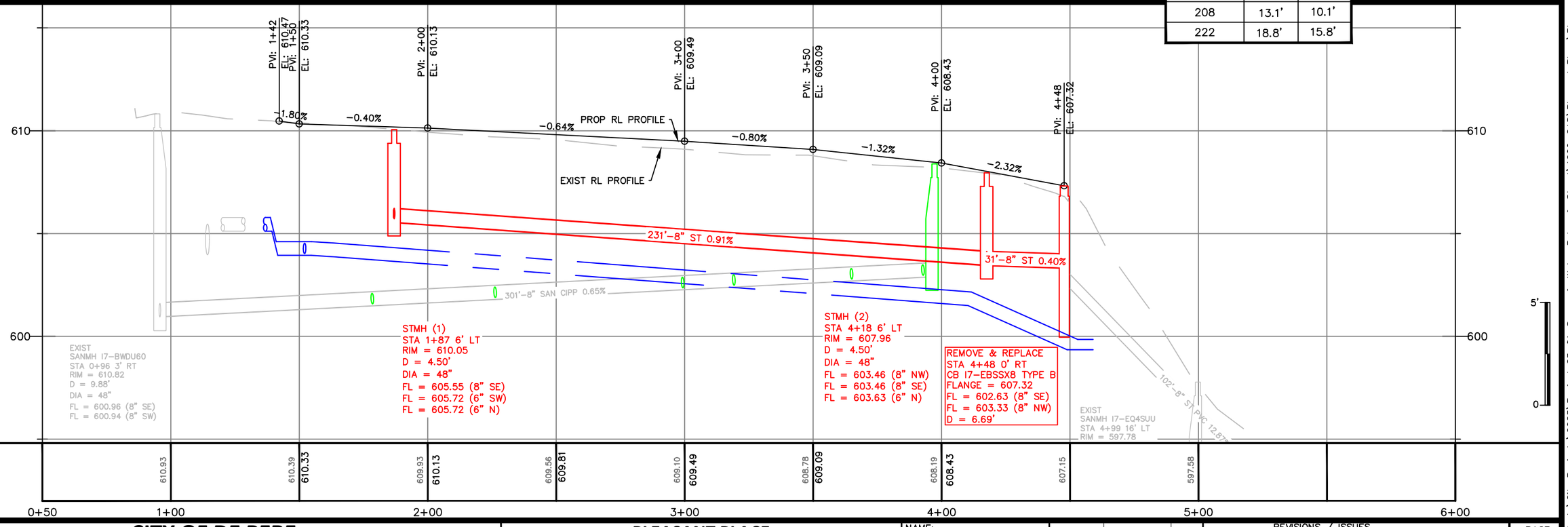


DRIVEWAY WIDTH		
HO#	CURB	FOW
701	16.9'	14.0'
217	13.9'	10.9'
215	12.9'	9.9'
201–205	39.6'	36.6'
208	13.1'	10.1'
222	18.8'	15.8'



CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

PLEASANT PLACE

THIRD ST TO EAST END

STORM SEWER AND STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT # 25–01

	BY	DATE
SURVEYED	APB	12–2023
DRAWN	APB	12–2023
DESIGNED	CKK	01–2024
CHECKED	CKK	02–2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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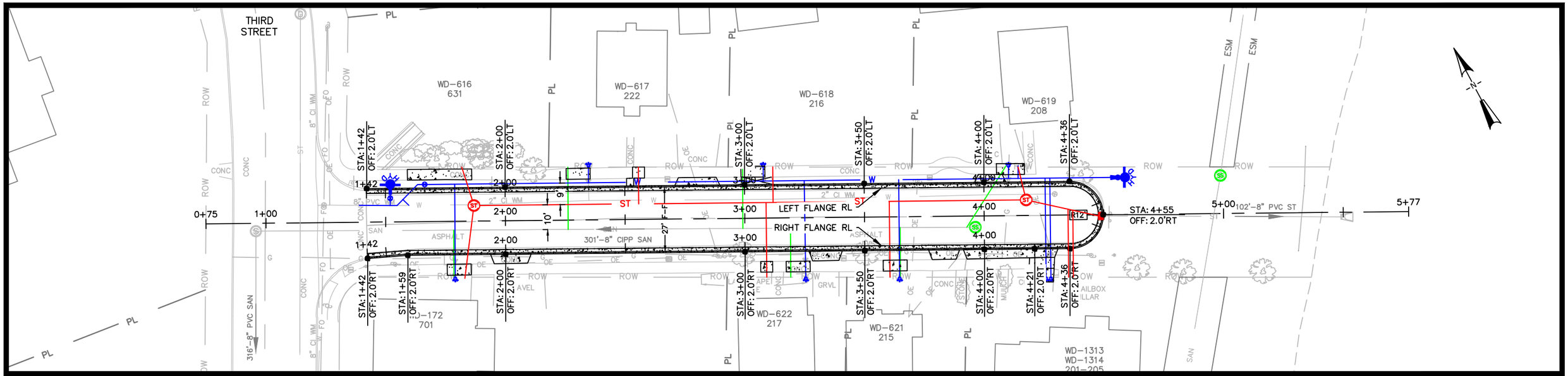

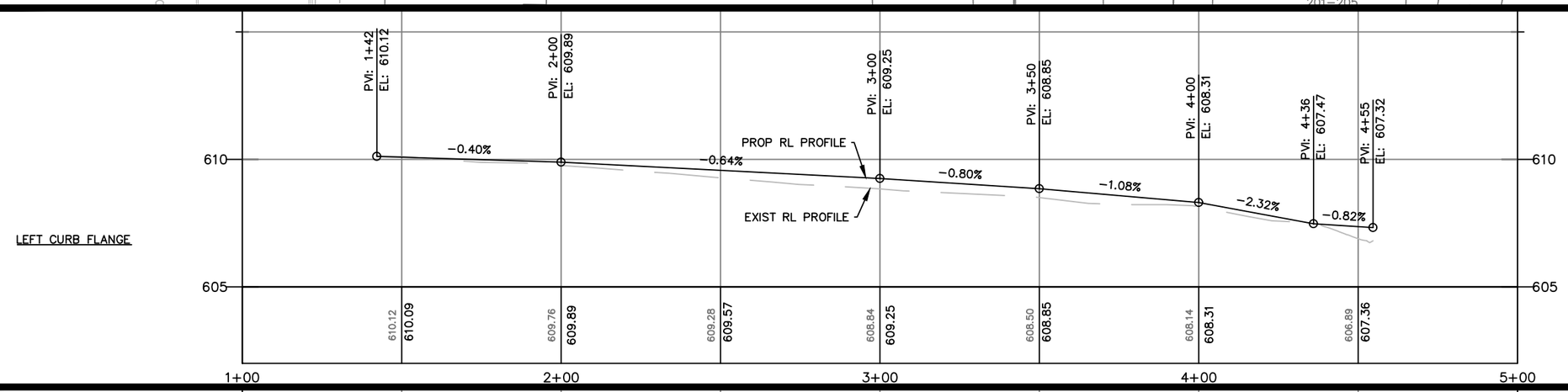

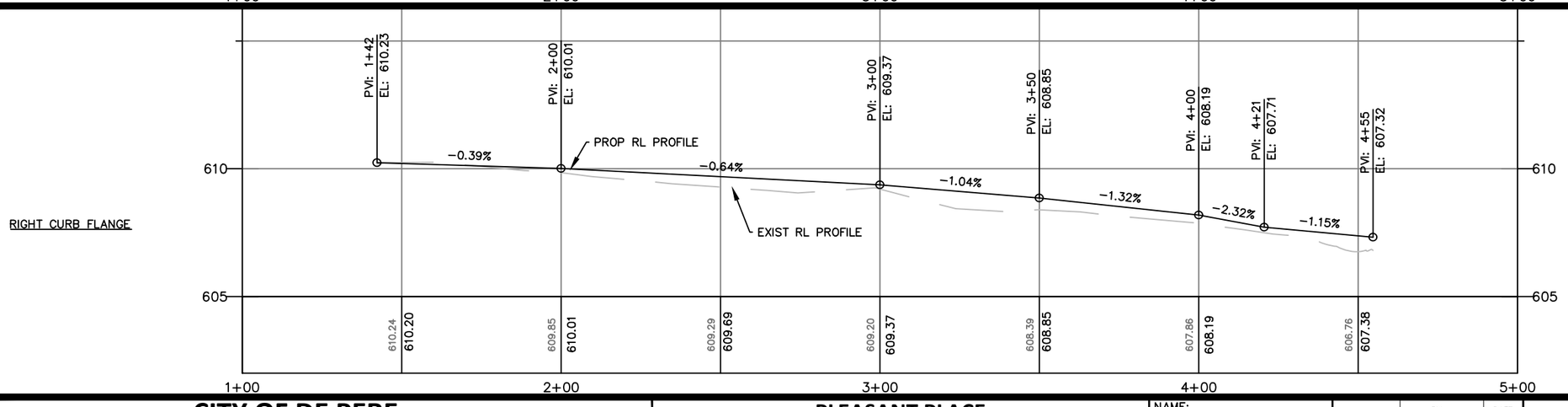

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PLEASANT PLACE
THIRD ST TO EAST END
CURB FLANGE PROFILES

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT # 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2024
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REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

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X:\ENG\Projects\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\Pleasant Place\Pleasant Place_P&P.dwg

STA 2+13 22' LT
INL (13) TYPE B
FLANGE = 637.53
FL = 632.63 (18" SE)
FL = 632.63 (18" NW)
D = 4.73'
44'–18" ST 0.63% SE
123'–18" ST 1.01% NW

ED–F0081–1
411

REMOVE AND REPLACE
OR ROTATE EXIST INL
STA 2+13 22' LT
INL (13) TYPE B
FLANGE = 637.53
FL = 632.63 (18" SE) (RECONNECT)
FL = 632.63 (18" NW) (RECONNECT)
D = 4.73'

ROW
FUTURE APRON
BY OTHERS

STA 3+32, 18.3' RT
1–12"X4" TEE
2–CONNECT TO
EXIST WM
1–45° BEND

STA 3+63, 7.8' RT
47'–4" PVC WM
1–4" GATE VALVE
1–4" CAP

ED–3103
2000

EXIST
SANMH (1)

86'–8" SAN

SANMH (9)

58'–8" SAN

3+64

EXIST
INL (13)

REMOVE
HYDRANT

3+00

CONCRETE
PAVEMENT
BY OTHERS

FUTURE SIDEWALK
BY OTHERS

REMOVE EXISTING
2'X3' INLET

BULKHEAD AND ABANDON
OR REMOVE 15" STORM
INLET LEAD

SIGN TO BE
REMOVED BY CITY

REMOVE EXISTING
2'X3' INLET

REMOVE 15" STORM
INLET LEAD

REMOVE STORM
MANHOLE

0+00
1+00
2+00

PROP RL

410'–10" PVC SAN

299'–24" RCP ST

44'–18" PVC ST

EXIST
INL (12)

76'–6" PVC SAN

6'–18" PVC ST

STMH (14)

192'–18" PVC ST

EXIST 12" PVC WM

EXIST
INL (4)

EXIST
INL (5)

44'–15" PVC ST

7'–15" PVC ST

BULKHEAD AND
ABANDON 18" PVC
STORM SEWER

EXIST
INL (7)

25'–12" PVC ST

ED–2383
2045

ED–2382
2051

STA 2+28, 47.40' LT
23'–6" PVC WM
1–CONNECT TO EXIST WM
1–6" GATE VALVE
1–45° BEND
1–HYDRANT 8.0' BURY CAP
COLOR CLASS–AA BLUE

PVI: 2+08
EL: 637.90

PVI: 2+37
EL: 637.98

PVI: 2+50
EL: 638.05

PVI: 2+75
EL: 638.26

PVI: 3+46
EL: 639.48

PVI: 3+58
EL: 640.45

PVI: 3+64
EL: 640.53

0.28%
0.53%
0.84%
1.72%
4.00%
1.50%

640
630

EXIST
STMH (11)
STA 2+11 28' RT
RIM = 638.41
D = 6.18'
DIA = 48"
FL = 632.30 (18" NE)
FL = 632.23 (24" SW)
FL = 632.30 (18" N)

EXIST RL PROFILE

PROP RL PROFILE

299'–24" ST RCP 0.14%

96'–18" ST PVC 0.47%

192'–8" ST PVC 0.47%

STA 2+41
EXIST 12" PVC WM
TOW 630.85

STMH (14)
STA 2+84 53' RT
RIM = 638.89
D = 6.14'
DIA = 48"
FL = 632.75 (18" SW) (RECONNECT)

SANMH (9)
STA 3+17 3' LT
RIM = 638.96
D = 13.62'
DIA = 48"
FL = 625.34 (8" SW)
FL = 625.34 (8" NE)

EXIST
SANMH (1)
STA 2+21 36' LT
RIM = 638.56
D = 14.11'
DIA = 48"
FL = 624.45 (10" SW)
FL = 624.53 (6" SE)
FL = 625.00 (8" NE) (CORE DRILL)

PRIVATE SANITARY
LATERAL

58'–8" SAN PVC 0.40%

86'–8" SAN PVC 0.40%

410'–10" SAN PVC 0.35%

637.9
638.0
638.05
638.1
638.69
638.5
640.13
638.7
640.53

0+00
1+00
2+00
3+00
3+64

5'
0

0
20'
40'

DE PERE

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PROFIT PLACE
300' NE OF DESTINY DR TO 900' NE OF DESTINY DR
UTILITY REPAIR

NAME:
SEWER AND WATER RELAY
AND STREET RESURFACING
PROJECT
25–01

	BY	DATE
SURVEYED	MAL	11–2021
DRAWN	MAL	12–2024
DESIGNED	MAL	12–2024
CHECKED	CKK	12–2024

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

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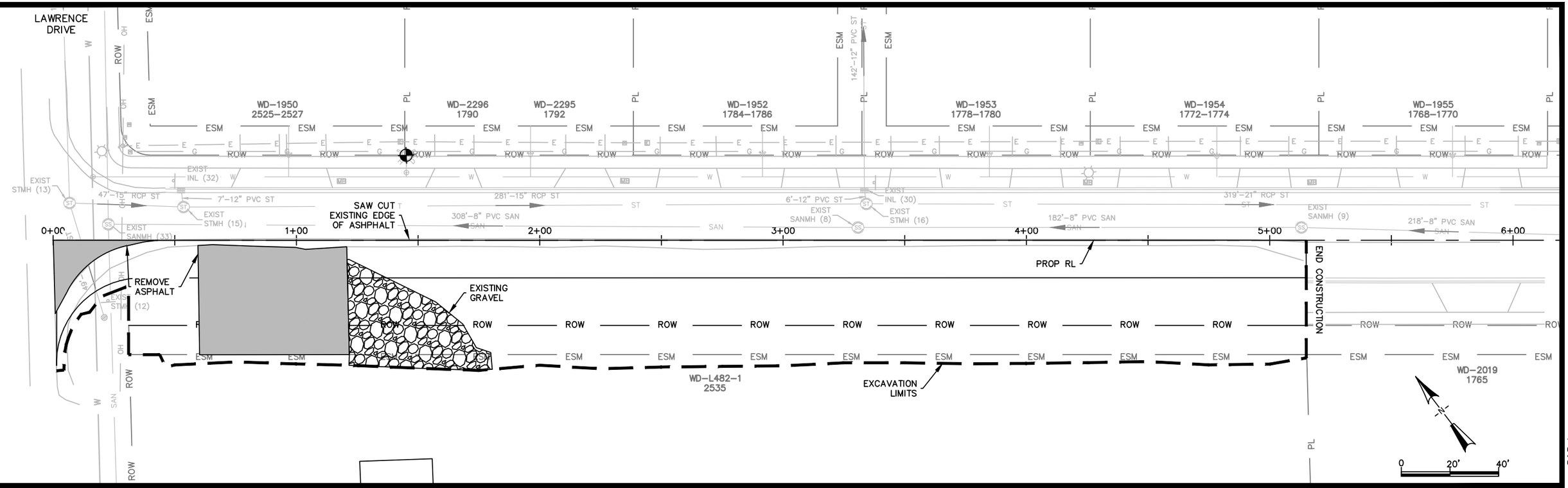
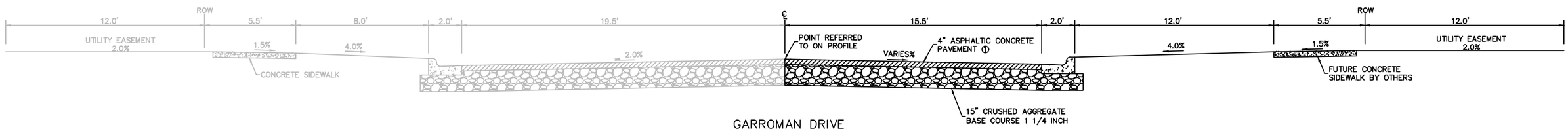
X:\ENG\Projects\City Projects\2025\Project 25–01–Sewer_&_Water_Relay_&_Street\1200–CAD\Profit Pl (copies of old plans)\25–01_Profit_P&P.dwg





GARROMAN DRIVE
TYPICAL STREET DETAIL
39' BACK TO BACK
70' RIGHT OF WAY

① 4" ASPHALTIC CONCRETE PAVEMENT CONSISTS OF:
2.25" BINDER COURSE: 3 LT 58–28 S
1.75" SURFACE COURSE: 4 LT 58–28 S

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GARROMAN DRIVE
LAWRENCE DRIVE TO 600' SE/O LAWRENCE DRIVE
DEMO AND TYPICAL SECTION

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	MAL	11–2024
DRAWN	MAL	11–2024
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REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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LAWRENCE DRIVE

STA 1+35, 26.1' LT
1–12"X8" TAPPING TEE AND VALVE
73'–8" PVC WM
1–8" PLUG

STA 3+79, 26.1' LT
1–12"X8" TAPPING TEE AND VALVE
73'–8" PVC WM
1–8" PLUG

PROPOSED ASPHALT LOCATION

WD–1950 2525–2527 | WD–2296 1790 | WD–2295 1792 | WD–1952 1784–1786 | WD–1953 1778–1780 | WD–1954 1772–1774 | WD–1955 1768–1770

EXIST STMH (13)
47'–15" RCP ST
7'–12" PVC ST
EXIST STMH (15)
EXIST SANMH (33)
EXIST INL (32)
281'–15" RCP ST
308'–8" PVC SAN
12" PVC WM
6'–12" PVC ST
EXIST SANMH (8)
EXIST INL (30)
EXIST STMH (16)
319'–21" RCP ST
EXIST SANMH (9)
182'–8" PVC SAN
218'–8" PVC SAN
38' F-F
0+00 1+00 2+00 3+00 4+00 5+00 6+00
31'–12" ST –0.40%
INL (36)
32'–12" ST –0.40%
INL (35)
PROP RL
EXIST STMH (12)
R35'
30'–12" ST 0.40%
30'–12" ST 0.40%
FUTURE SIDEWALK BY OTHERS
PROVIDE 6" SANITARY LATERAL W/ CUT IN FACTORY WYE (TYP.)
WD–L482–1 2535
WD–2019 1765

STA 0+54 17' RT
INL (36) TYPE B
FLANGE = 639.37
FL = 635.10 (12" NE)
FL = 635.10 (12" SW)
D = 4.27'

STA 3+40 17' RT
INL (35) TYPE B
FLANGE = 638.22
FL = 632.92 (12" NE)
FL = 632.92 (12" SW)
D = 5.30'

PVI: 0+46
EL: 639.40

PVI: 5+15
EL: 637.53

640
630

EXIST STMH (13)
STA 0+07 15' LT
RIM = 640.76
D = 7.22'
DIA = 48"
FL = 633.54 (12" S)
FL = 633.54 (12" NE)
FL = 633.54 (15" SE)

EXIST STMH (15)
STA 0+54 14' LT
RIM = 639.22
D = 5.74'
DIA = 48"
FL = 633.48 (15" NW)
FL = 633.48 (15" SE)
FL = 635.03 (12" NE)
FL = 634.98 (12" SW)
OPENING BULKHEADED IN MANHOLE

EXIST STMH (16)
STA 3+34 15' LT
RIM = 638.34
D = 5.55'
DIA = 48"
FL = 632.79 (15" NW)
FL = 632.79 (21" SE)
FL = 632.79 (12" NE)
FL = 632.79 (12" SW)
OPENING BULKHEADED IN MANHOLE

EXIST SANMH (9)
STA 5+13 5' LT
RIM = 637.82
D = 12.85'
DIA = 48"
FL = 624.97 (8" NW)
FL = 624.97 (8" SE)

EXIST SANMH (33)
STA 0+23 7' LT
RIM = 640.04
D = 18.30'
DIA = 48"
FL = 621.86 (8" SE)
FL = 621.74 (12" NE)
FL = 621.74 (12" SW)

EXIST SANMH (8)
STA 3+31 5' LT
RIM = 638.53
D = 14.26'
DIA = 48"
FL = 624.27 (8" NW)
FL = 624.27 (8" SE)

PROP FLANGE PROFILE
–0.40%
EXIST RL PROFILE
47'–15" ST RCP 0.13%
281'–15" ST RCP 0.25%
319'–21" ST RCP 0.17%
12" PVC WM
5.0' RISER
2.5' RISER
308'–8" SAN PVC 0.78%
182'–8" SAN PVC 0.38%
218'–8" SAN PVC 0.38%
PROP CURB FLANGE
EXIST RL

641.0 639.6 639.39 639.5 639.19 639.3 638.99 639.1 638.79 638.9 638.59 638.6 638.39 638.4 638.19 638.2 637.99 638.0 637.79 637.9 637.59 637.7 637.6

0+00 1+00 2+00 3+00 4+00 5+00 6+00

0 20' 40'
5'
0

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GARROMAN DRIVE

LAWRENCE DRIVE TO 600' SE/O LAWRENCE DRIVE
STREET

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	MAL	11–2024
DRAWN	MAL	11–2024
DESIGNED	MAL	11–2024
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REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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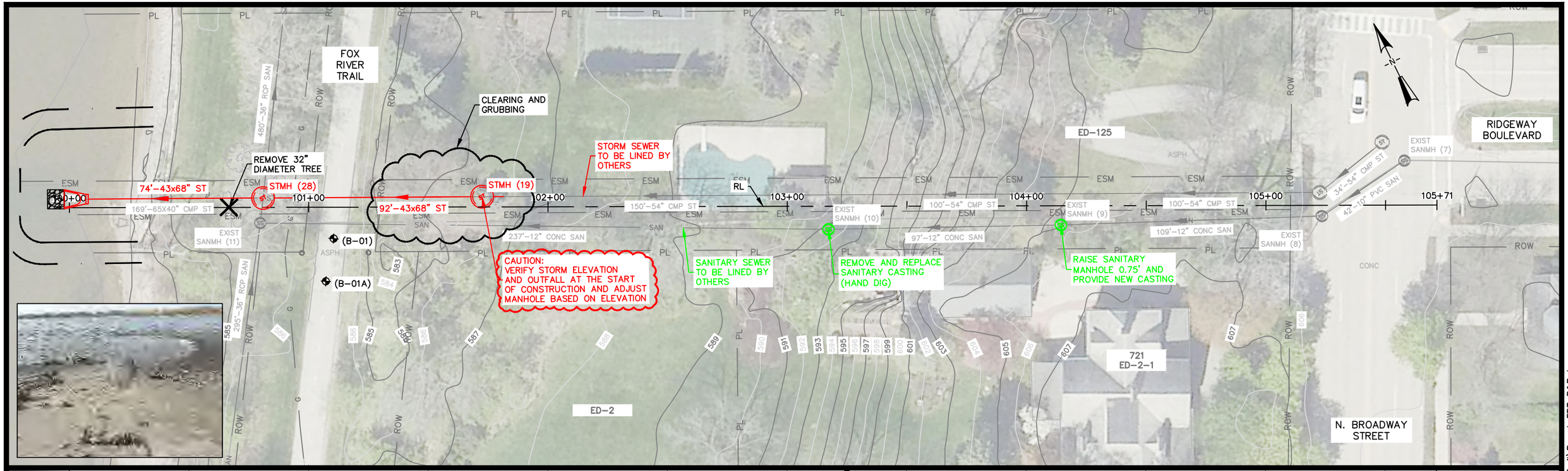

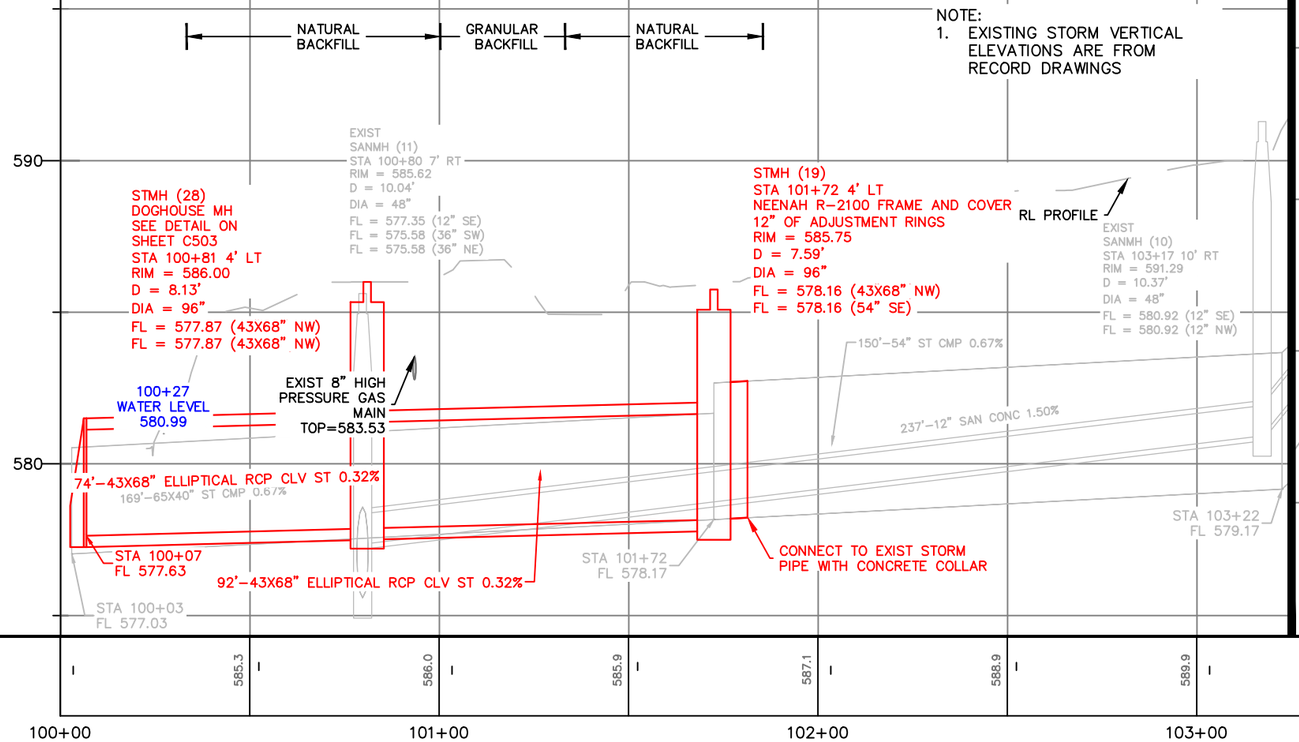

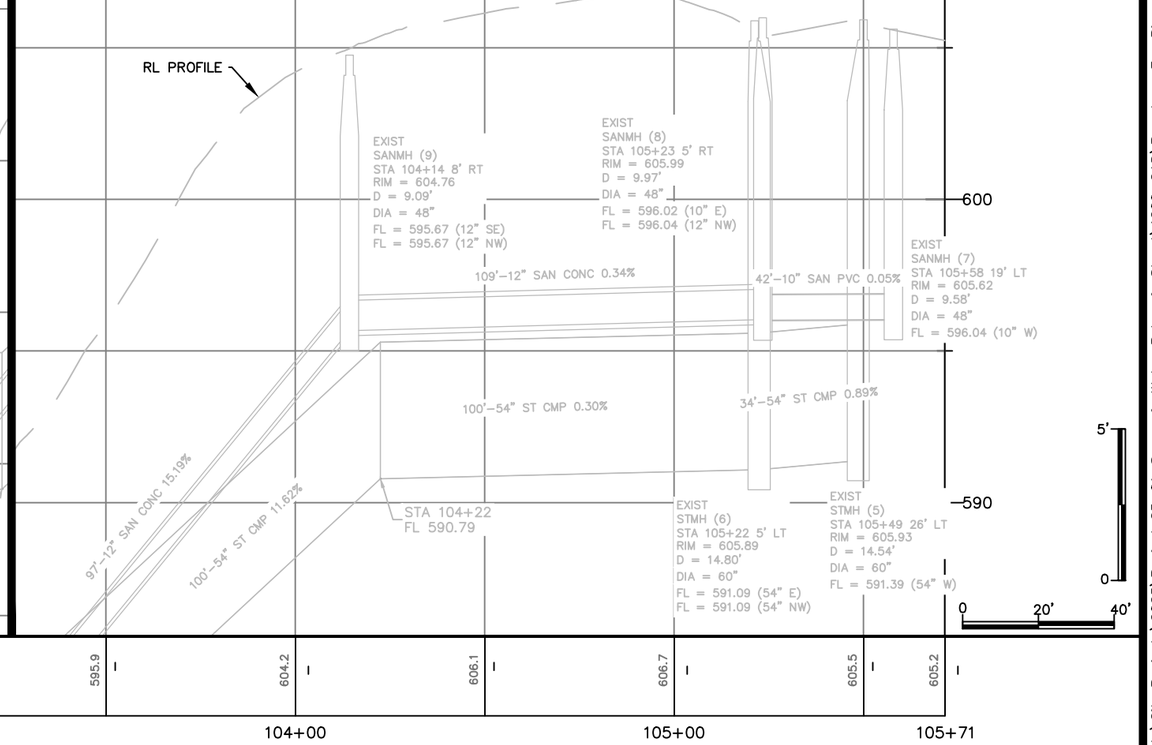

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807 NORTH BROADWAY ST

FOX RIVER TO N. BROADWAY ST

UTILITY WORK

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	07-2024
DRAWN	KAD	07-2024
DESIGNED	KAD	07-2024
CHECKED	EPR	07-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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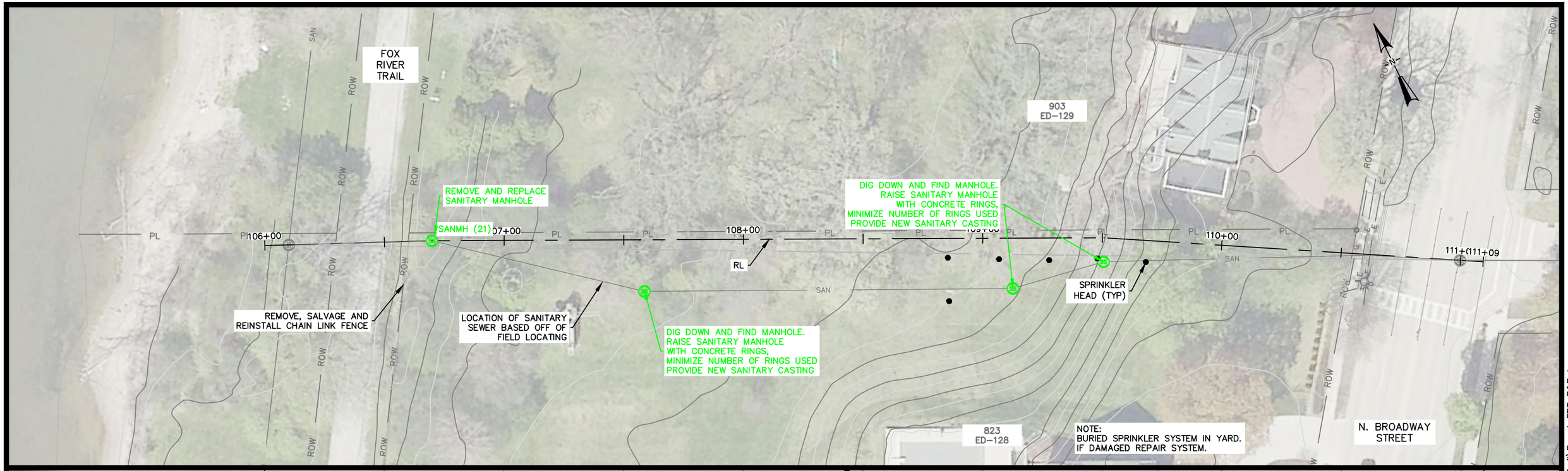

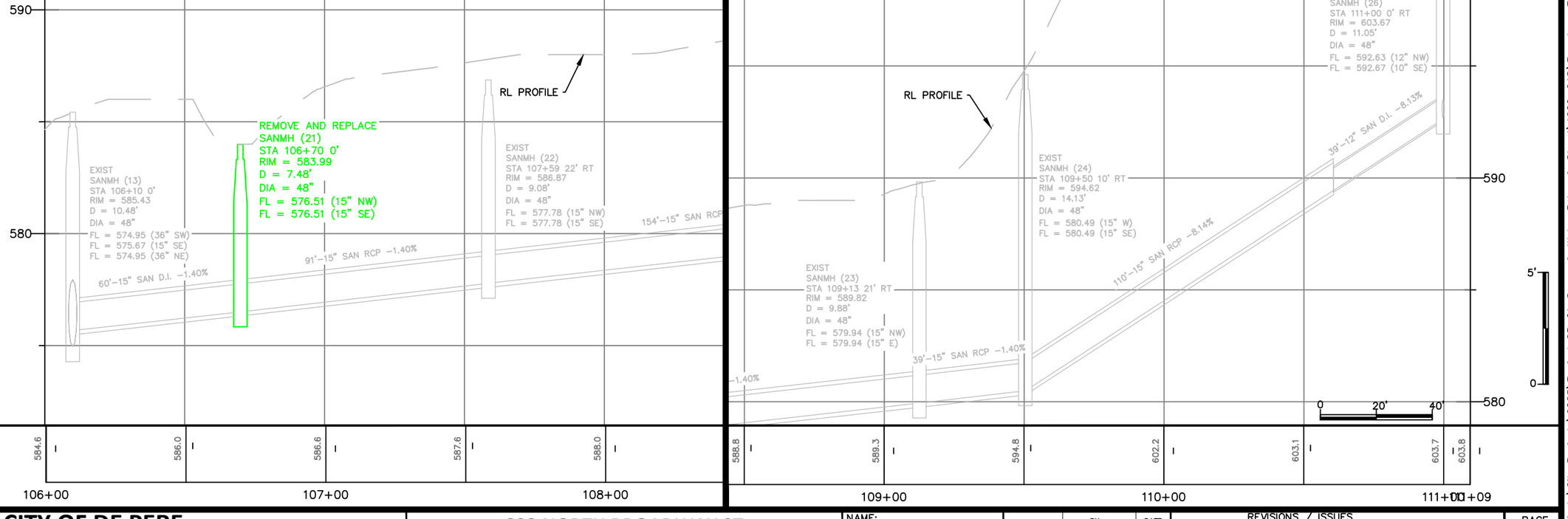

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OFFICE 920-339-4061 FAX 920-339-4071

823 NORTH BROADWAY ST
FOX RIVER TO N. BROADWAY ST
UTILITY WORK

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	07-2024
DRAWN	KAD	07-2024
DESIGNED	KAD	07-2024
CHECKED	EPR	07-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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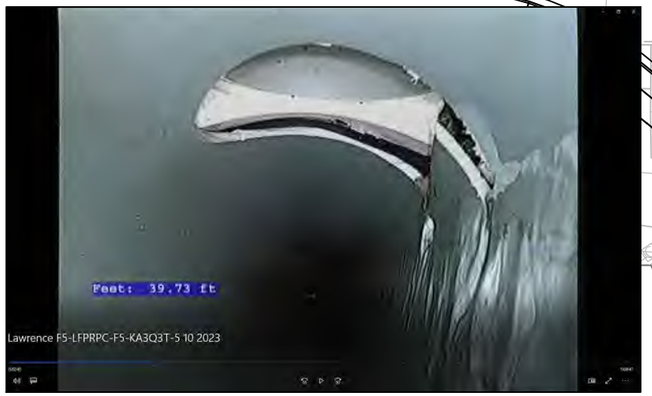
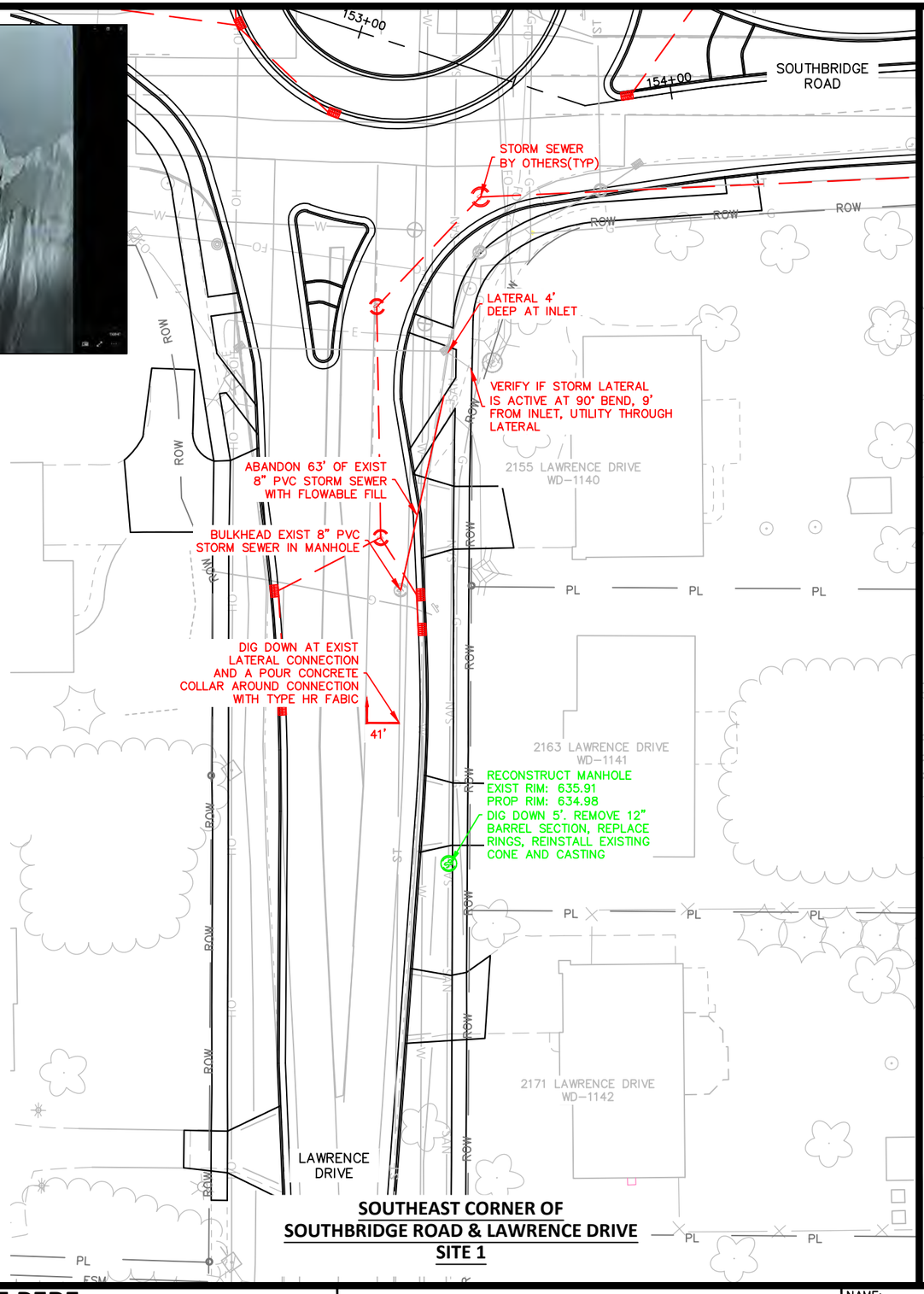
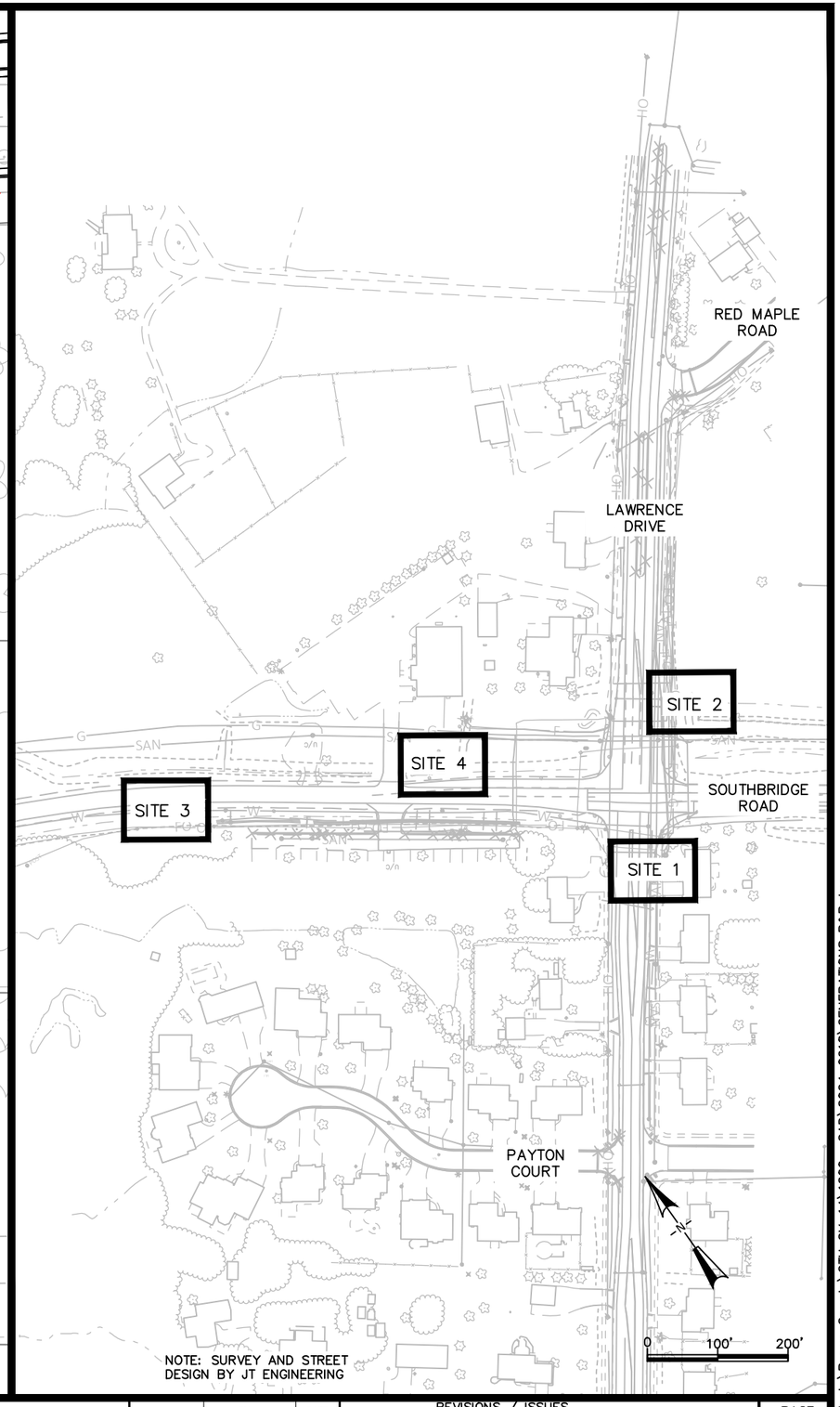


OVER CUT STORM LATERAL REQUIRING CONCRETE COLLAR



SOUTHEAST CORNER OF SOUTHBRIDGE ROAD & LAWRENCE DRIVE SITE 1



NOTE: SURVEY AND STREET DESIGN BY JT ENGINEERING

DE PERE

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

SOUTHBRIDGE ROAD & LAWRENCE DRIVE
SPOT UTILITY REPAIRS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	JT ENGINEERING	06-2024
DRAWN	KAD	09-2024
DESIGNED	KAD	09-2024
CHECKED	EPR	01-2025

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO. **C122**

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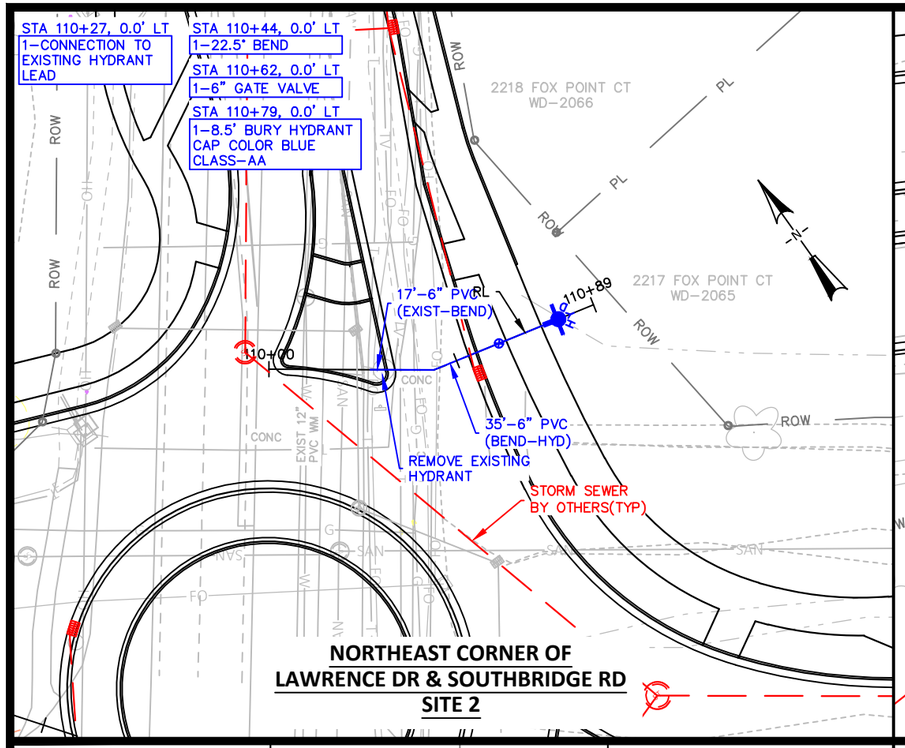
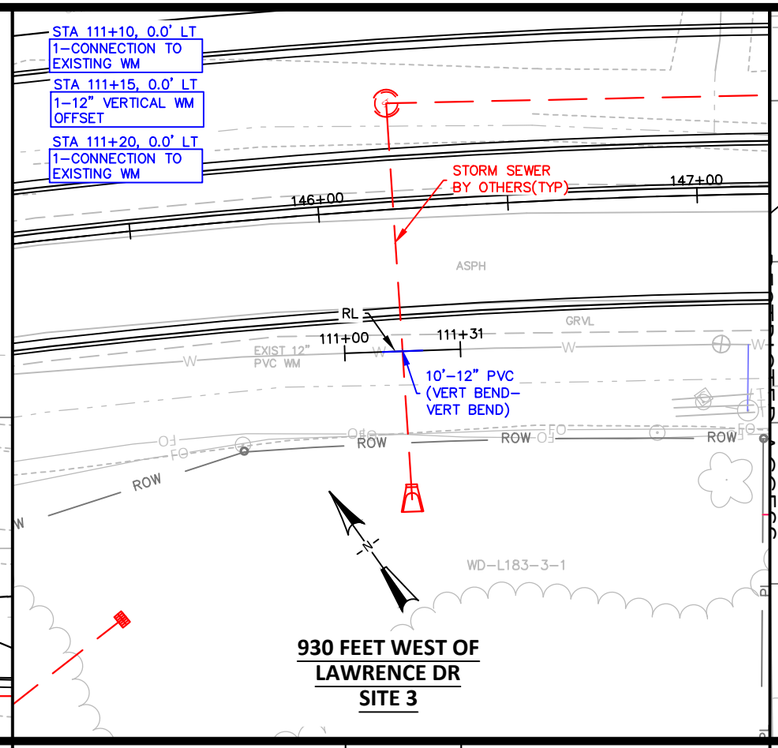
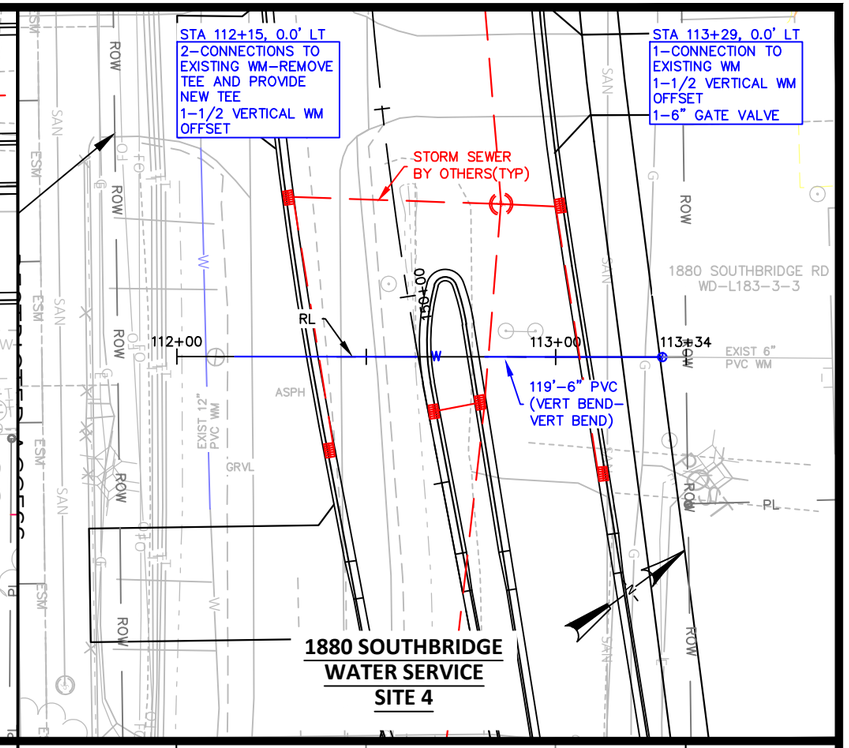


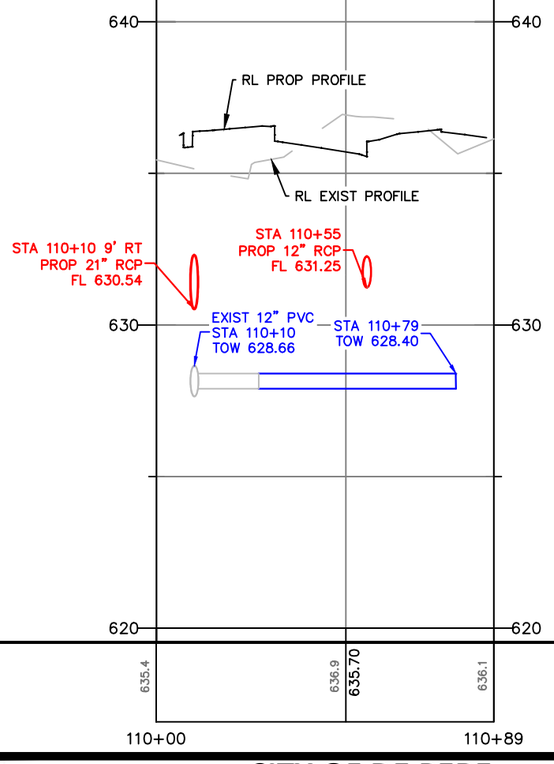
NORTHEAST CORNER OF LAWRENCE DR & SOUTHBRIDGE RD
SITE 2



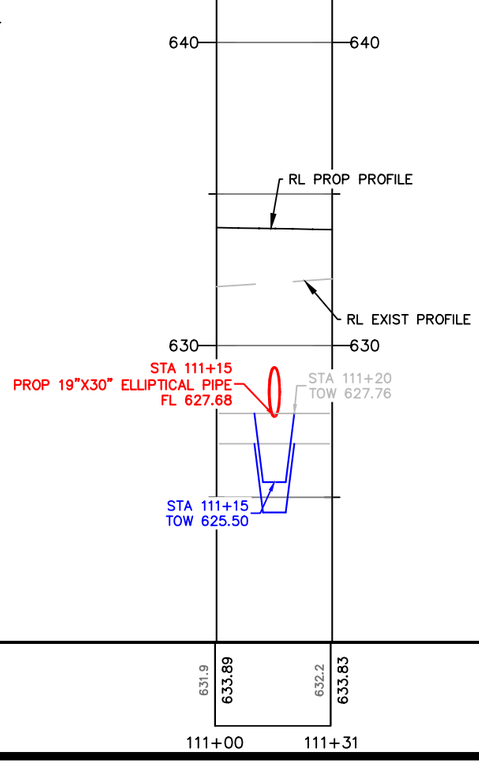
930 FEET WEST OF LAWRENCE DR
SITE 3

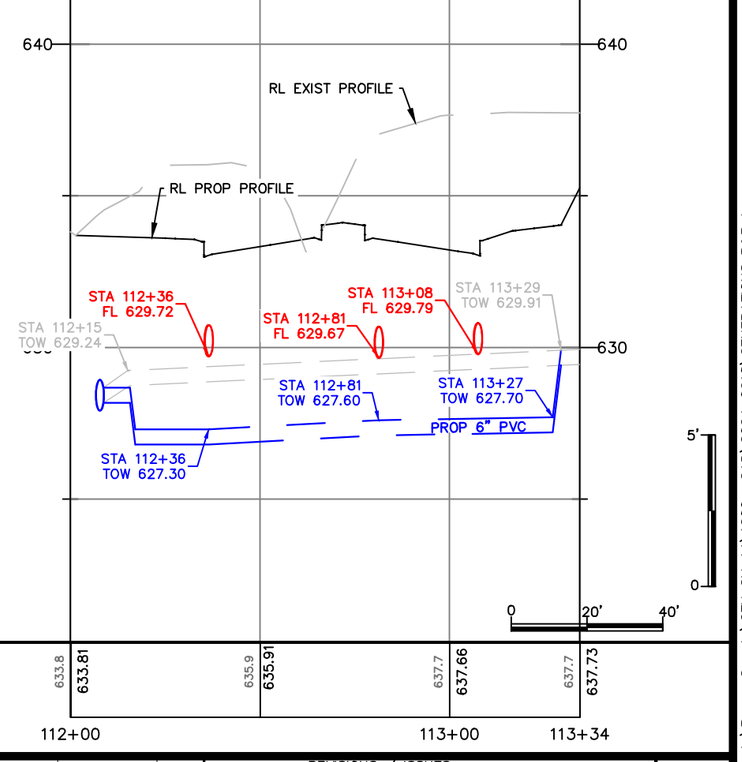


1880 SOUTHBRIDGE WATER SERVICE
SITE 4



NOTE: SURVEY AND STREET DESIGN BY JT ENGINEERING





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SOUTHBRIDGE ROAD & LAWRENCE DRIVE
SPOT UTILITY REPAIRS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	JT ENGINEERING	06-2024
DRAWN	KAD	09-2024
DESIGNED	KAD	09-2024
CHECKED	EPR	01-2025

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO. **C123**

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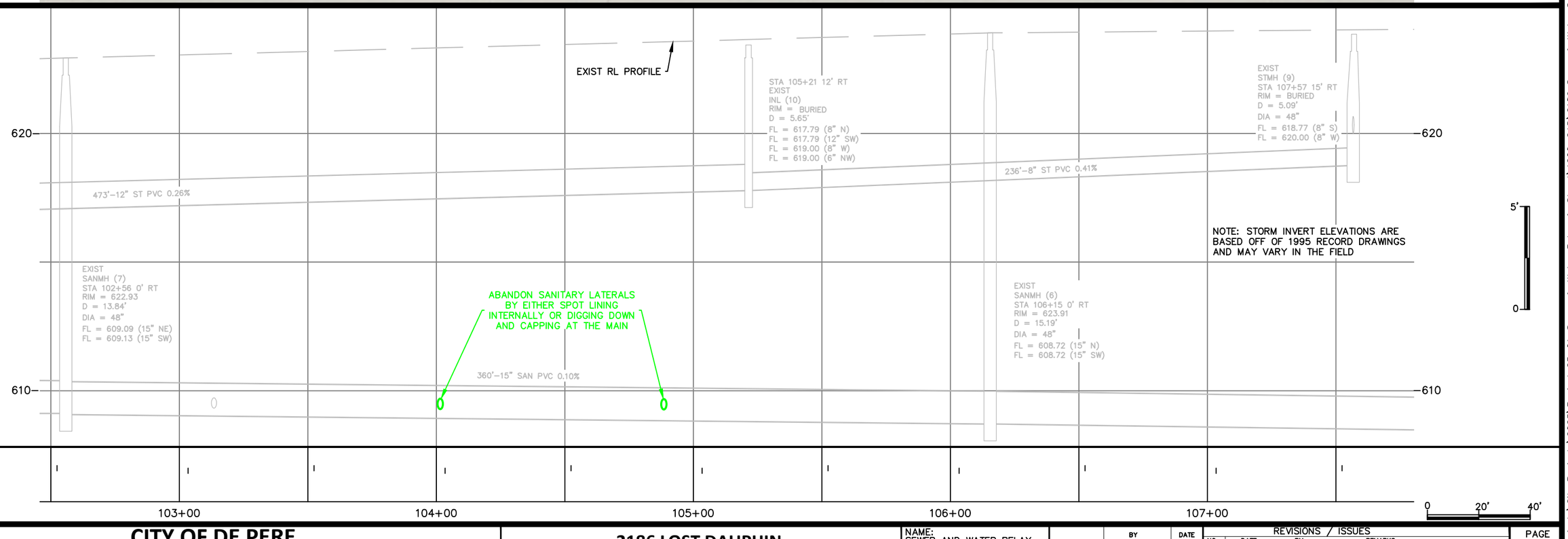

DE PERE

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

2186 LOST DAUPHIN
SERVICE LATERAL ABANDONMENTS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED		
DRAWN	MJT	01–2025
DESIGNED	CKK/MJT	01–2025
CHECKED	EPR	01–2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C124**

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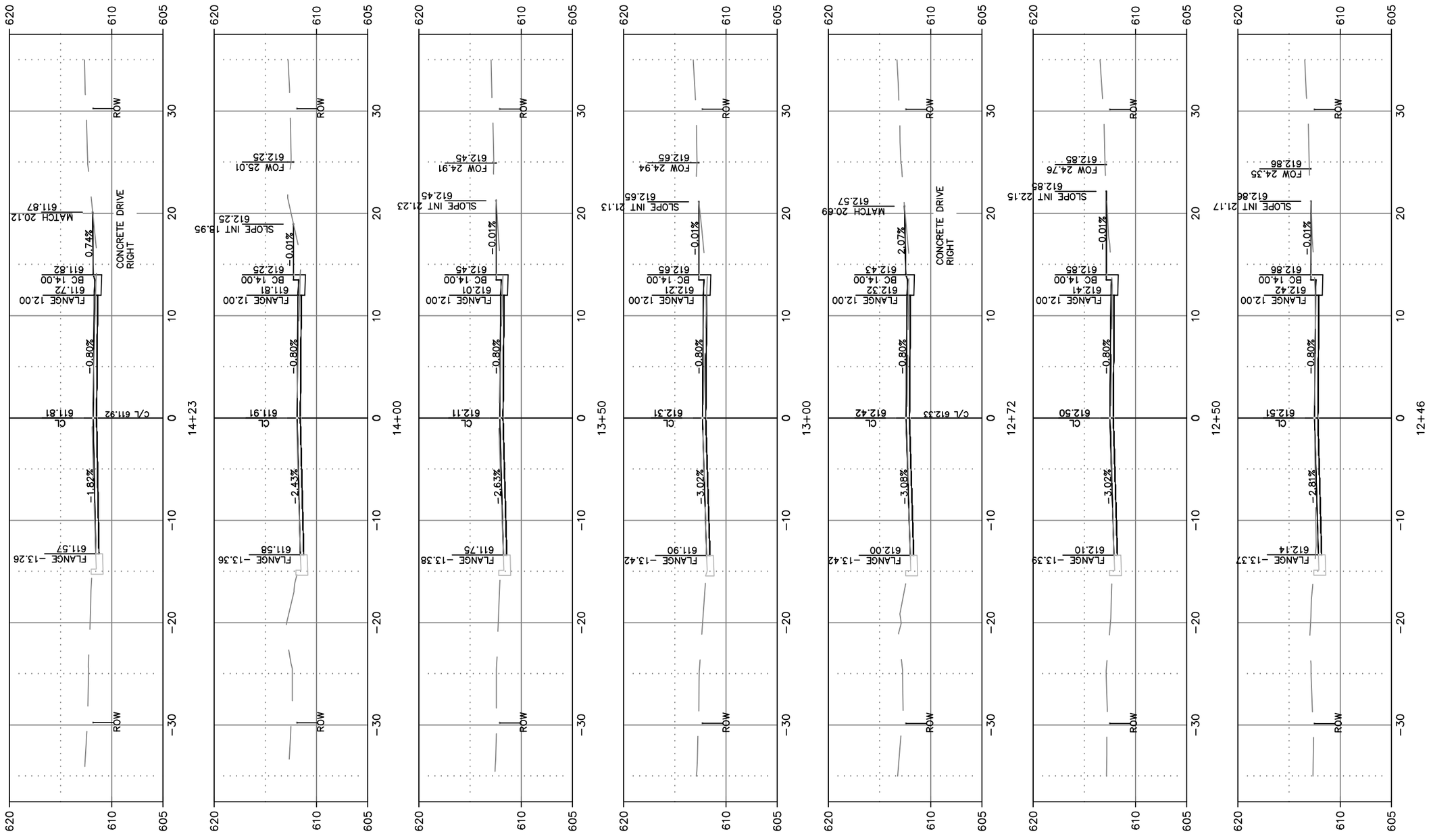

CITY OF DE PERE

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OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET

CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	01-2025
DESIGNED	KAD	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C301**

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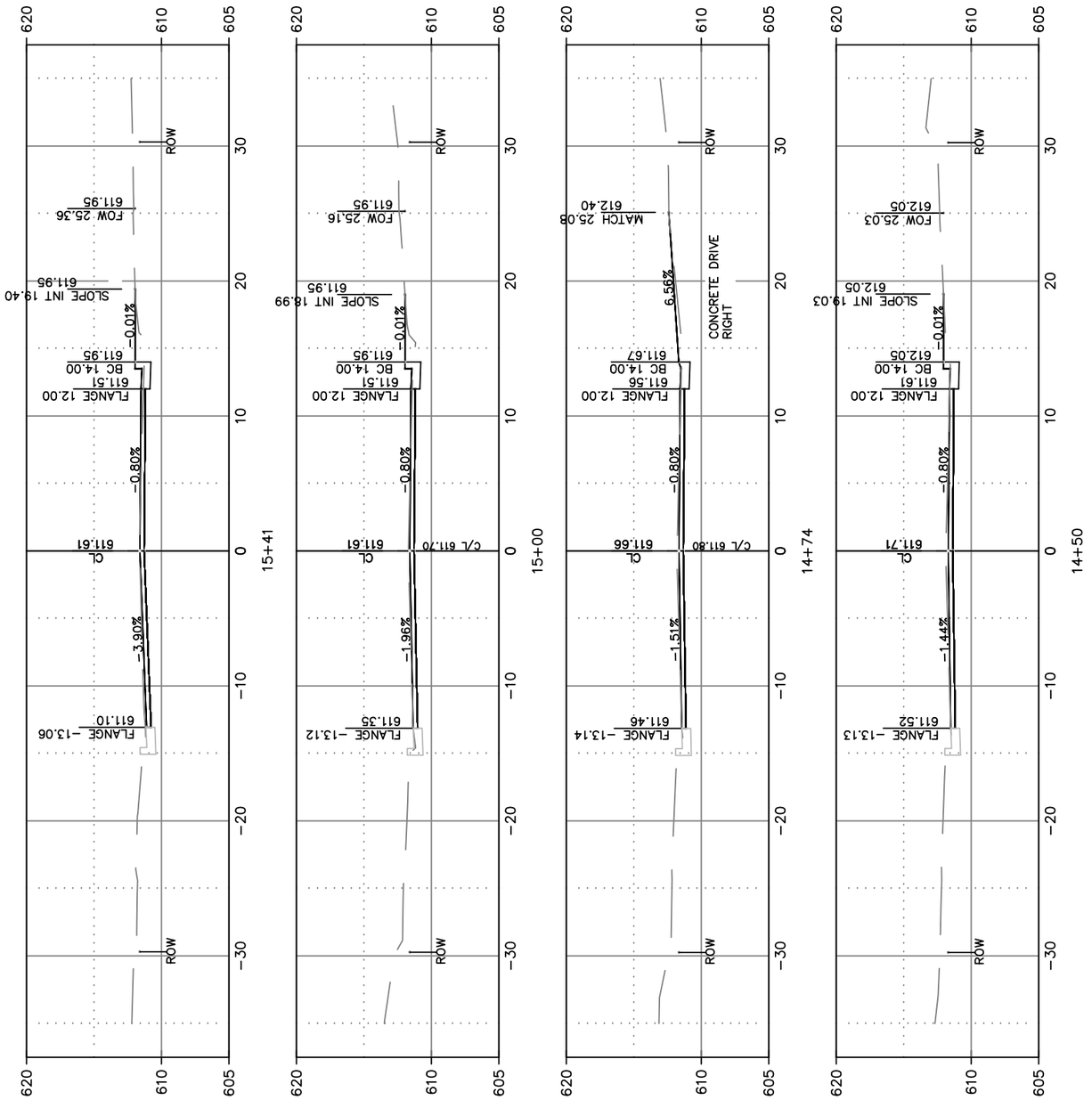

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET
CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	01-2025
DESIGNED	KAD	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO. **C302**

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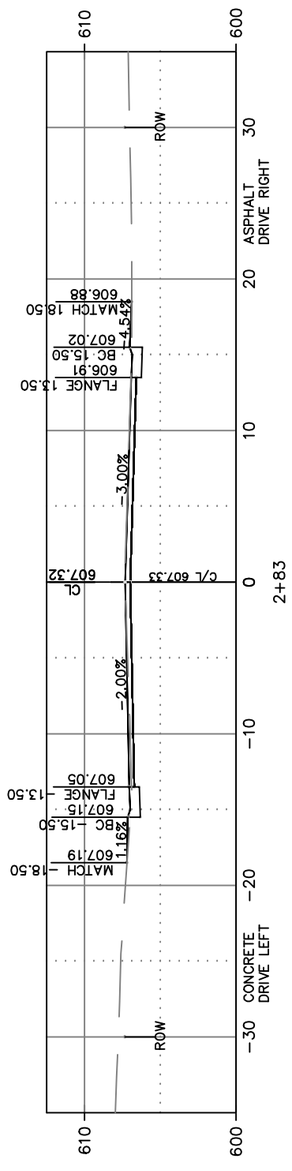

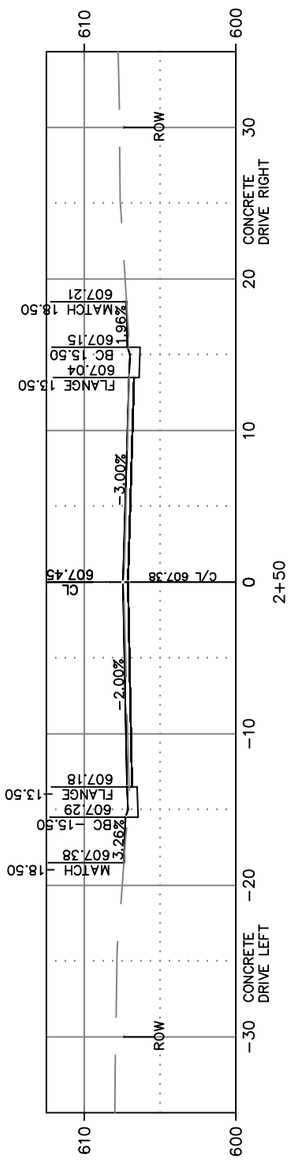

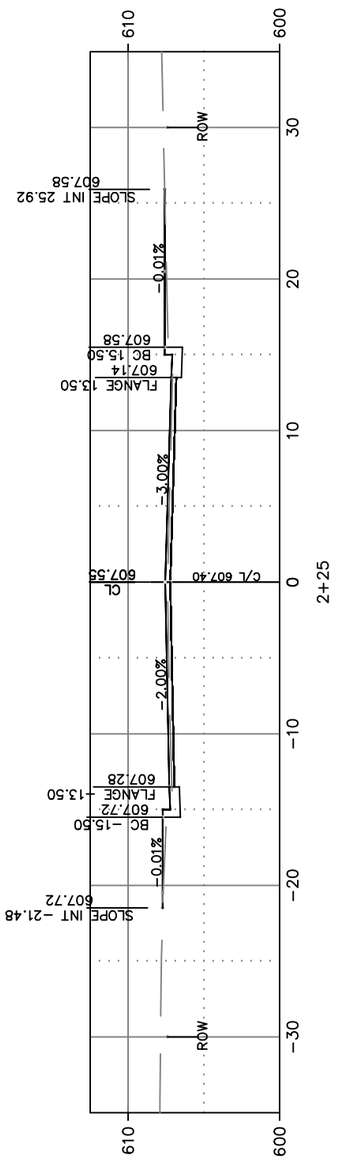

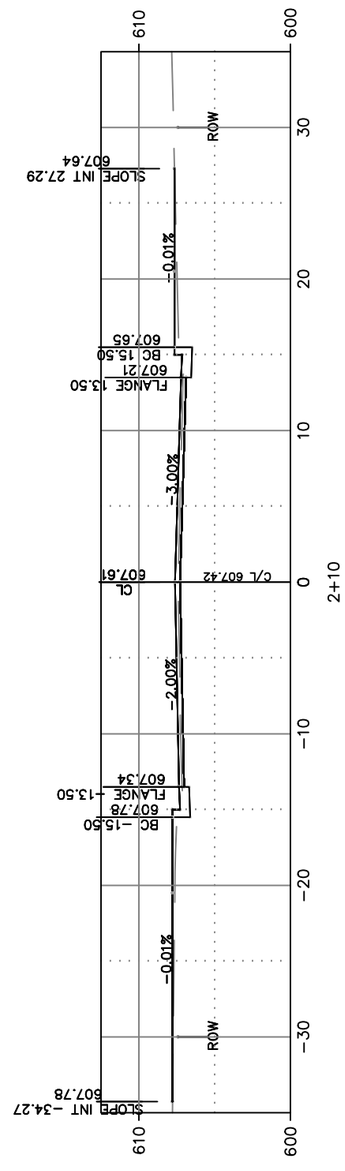

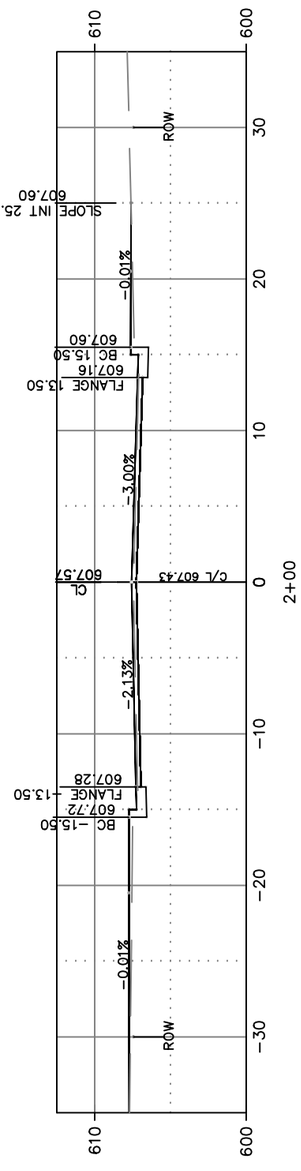

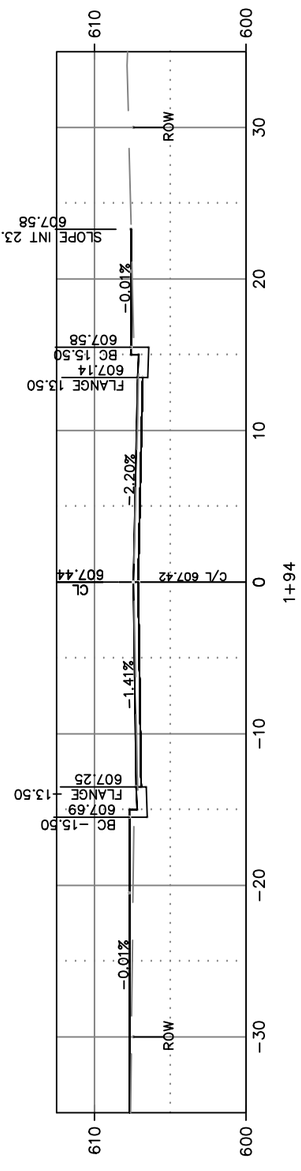

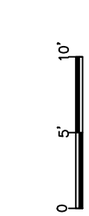

CITY OF DE PERE
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MARTIN STREET
CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. **C303**

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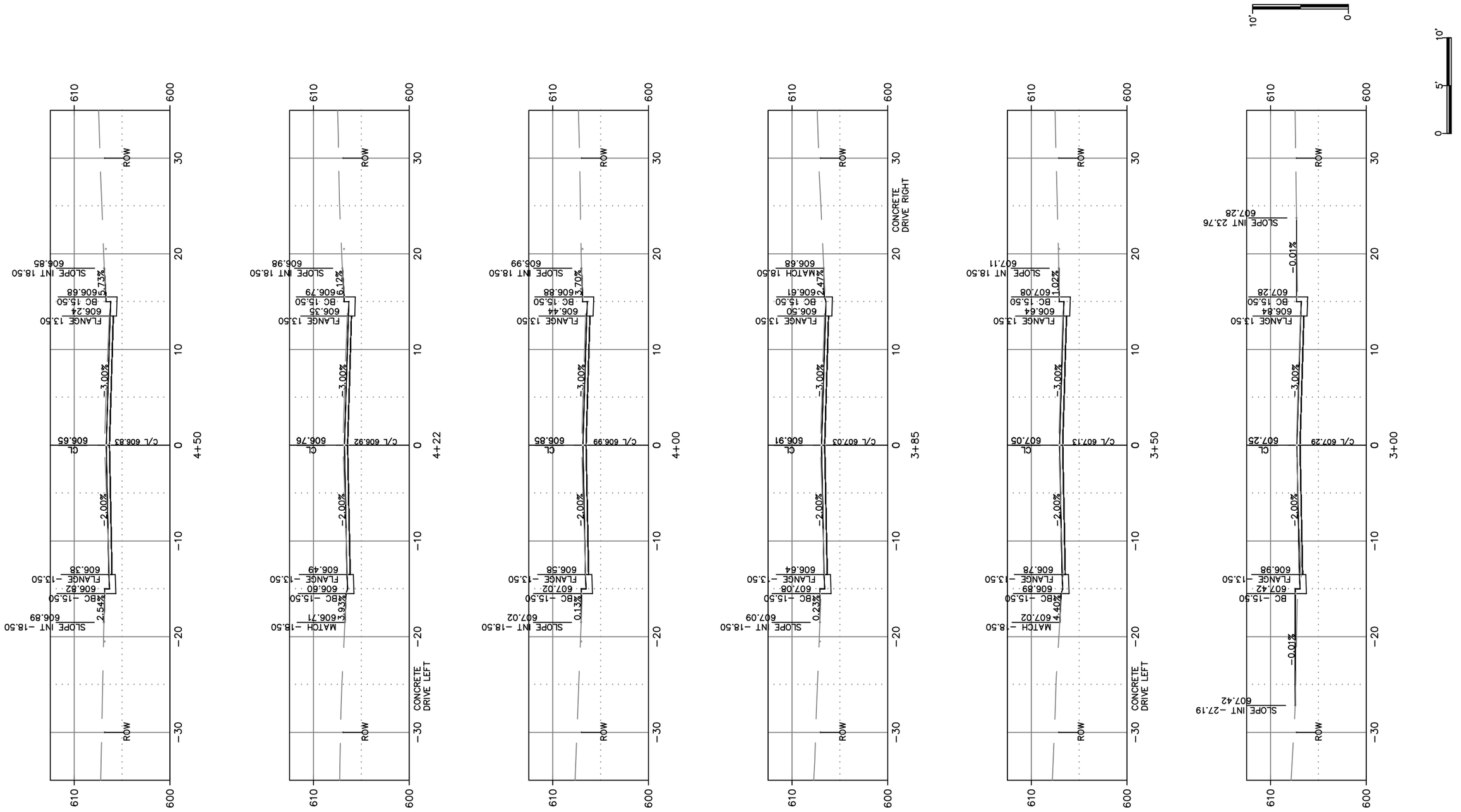

CITY OF DE PERE

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MARTIN STREET

CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C304**

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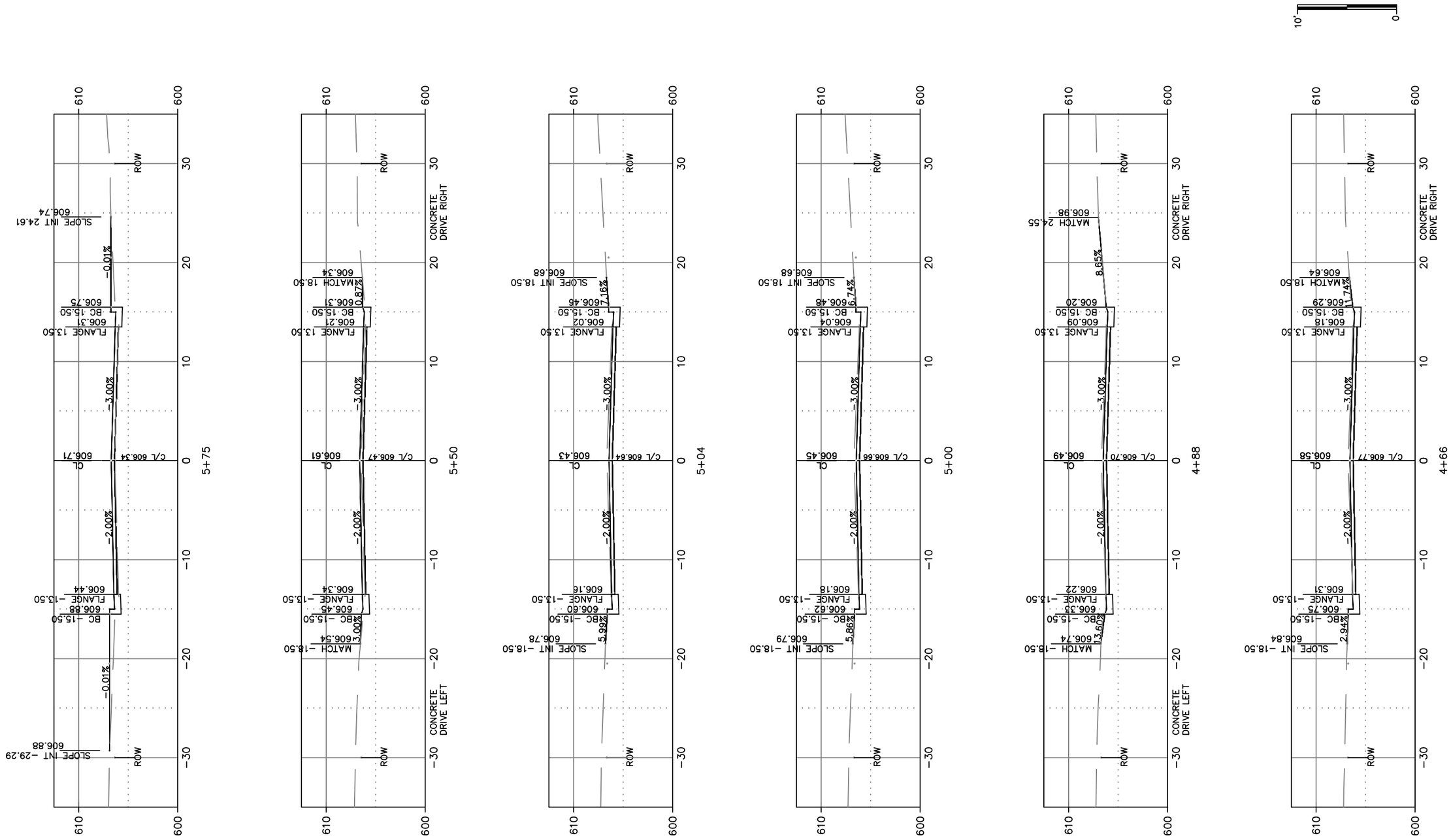

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MARTIN STREET

CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C305**

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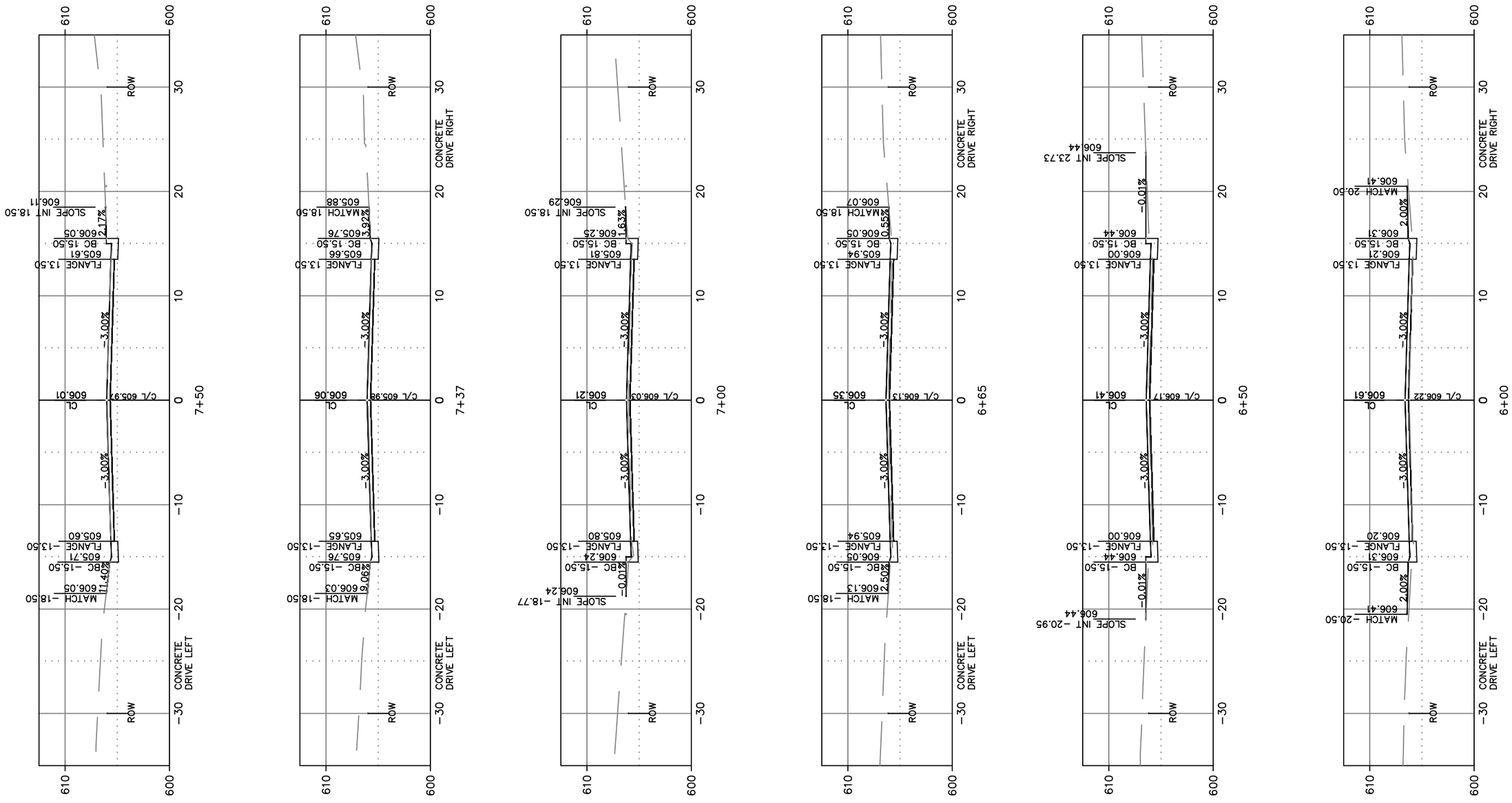

CITY OF DE PERE

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MARTIN STREET

CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C306**

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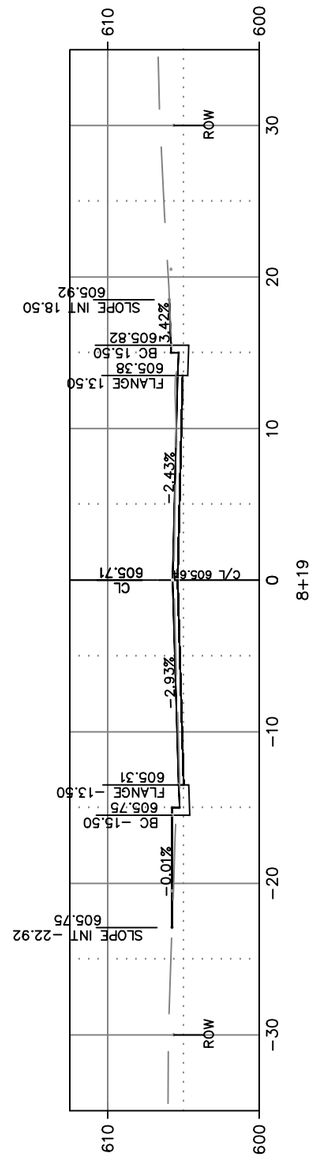

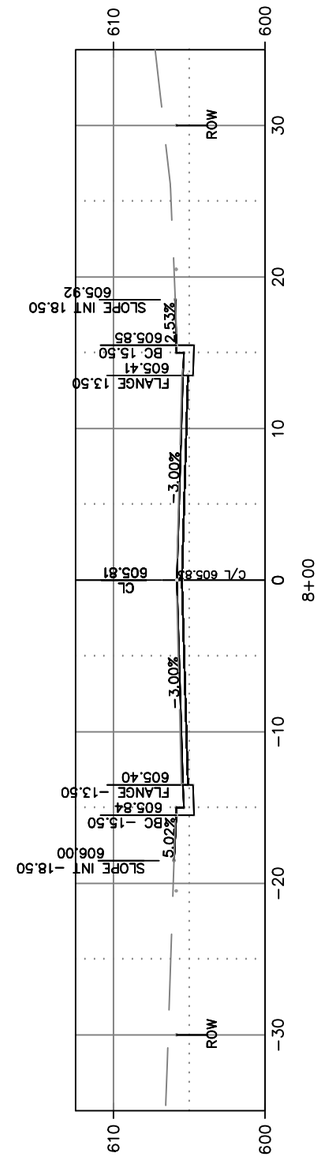

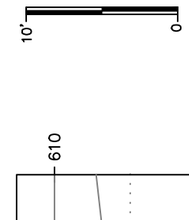

CITY OF DE PERE
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MARTIN STREET
CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2025
CHECKED	EPR	01-2025

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. **C307**

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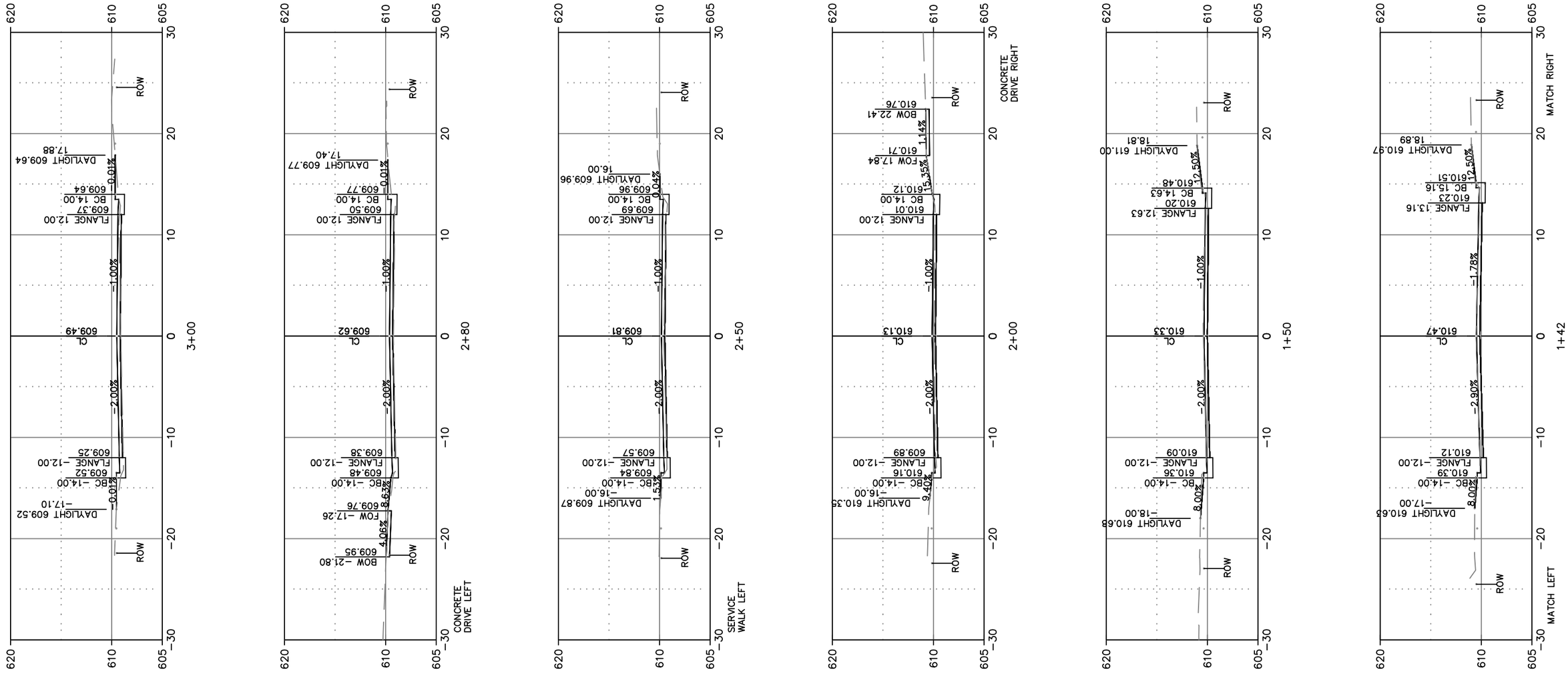

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

PLEASANT PLACE
CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	CKK	01-2024
CHECKED	CKK	02-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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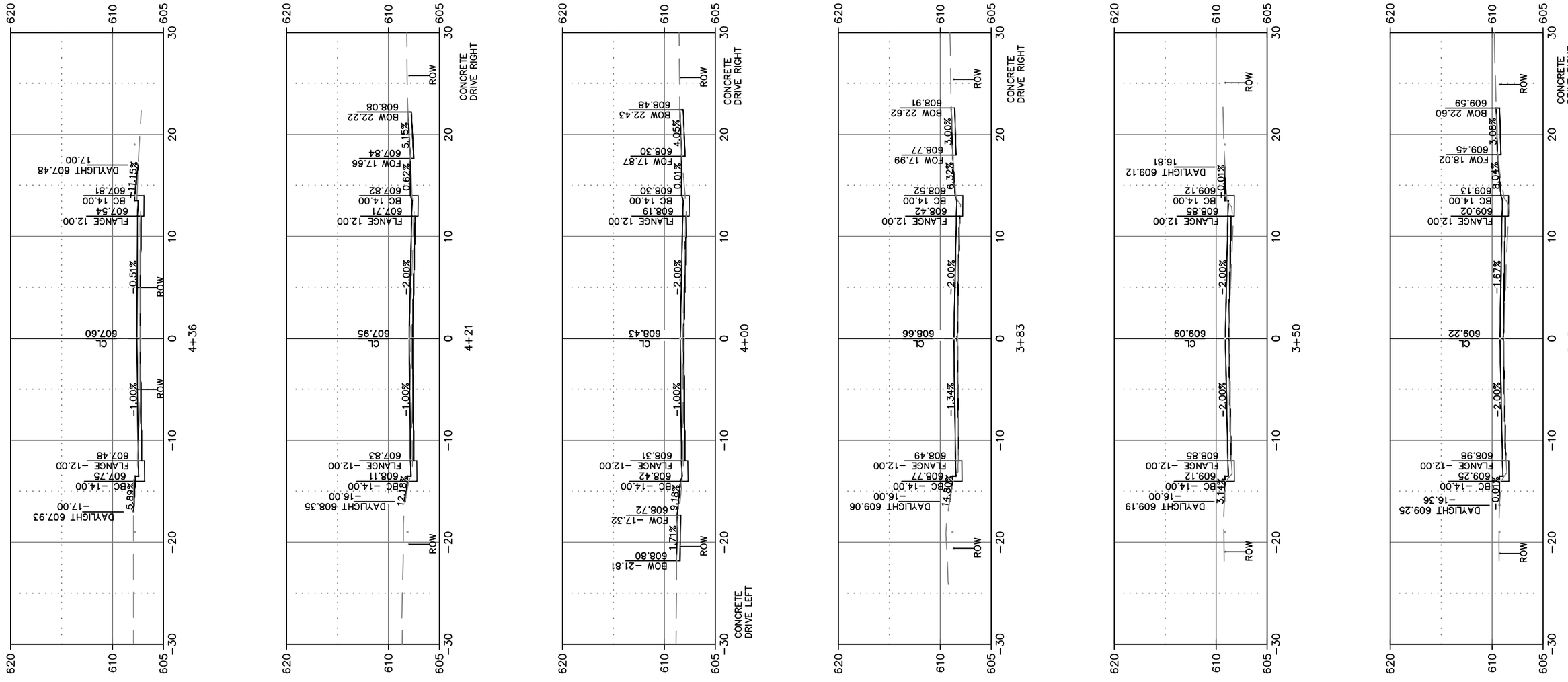
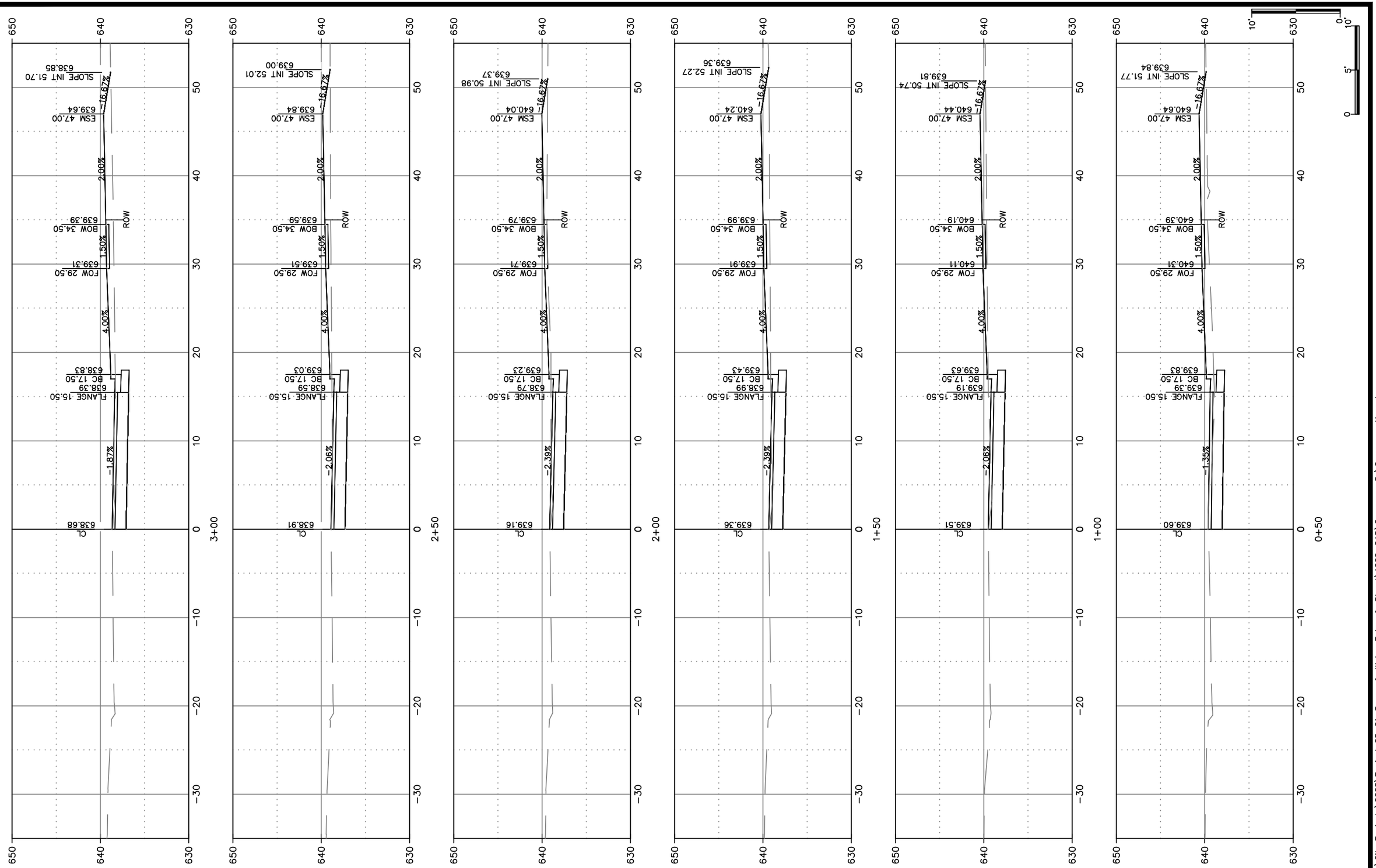

3+34
4+00
4+21
4+36
CONCRETE DRIVE RIGHT
CONCRETE DRIVE LEFT
ROW
CL
609.22
608.43
607.95
607.60
FLANGE 12.00
BC 14.00
FLANGE -12.00
BC -14.00
BOW 22.60
FOW 18.02
BOW 22.43
FOW 17.87
BOW 22.22
FOW 17.66
FOW -17.32
BOW -21.81
DAYLIGHT 609.59
DAYLIGHT 608.30
DAYLIGHT 608.35
DAYLIGHT 607.48
-2.00%
-1.67%
-1.00%
-0.51%
3.08%
8.04%
4.05%
0.01%
5.15%
0.62%
9.18%
1.71%
12.18%
5.89%
11.15%
10'
0
5'



CITY OF DE PERE

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GARROMON DRIVE

CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	MAL	11-2024
DRAWN	MAL	12-2024
DESIGNED	MAL	12-2024
CHECKED	EPR	12-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C310**

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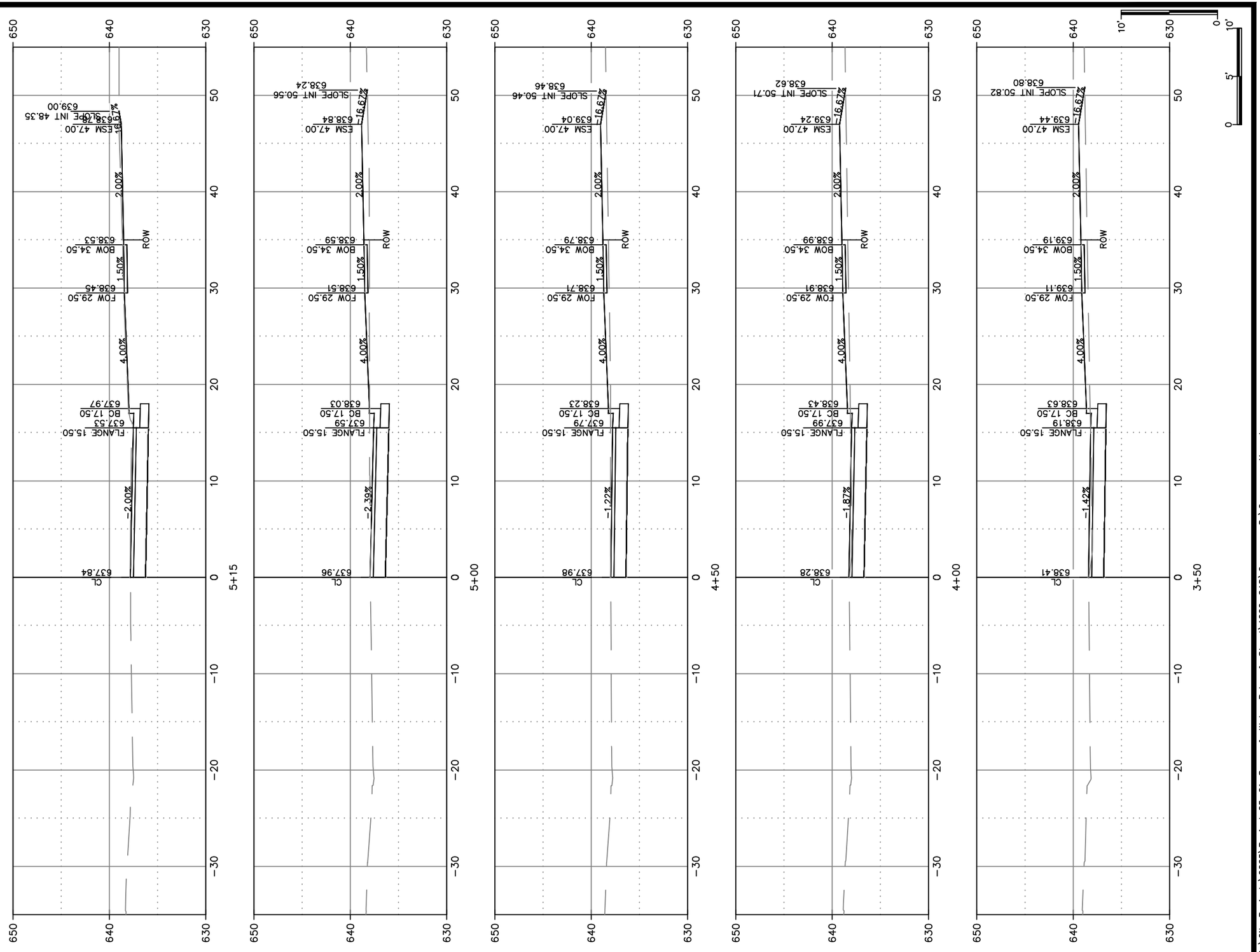

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

GARROMON DRIVE
CROSS SECTIONS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	MAL	11-2024
DRAWN	MAL	12-2024
DESIGNED	MAL	12-2024
CHECKED	EPR	12-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C311**

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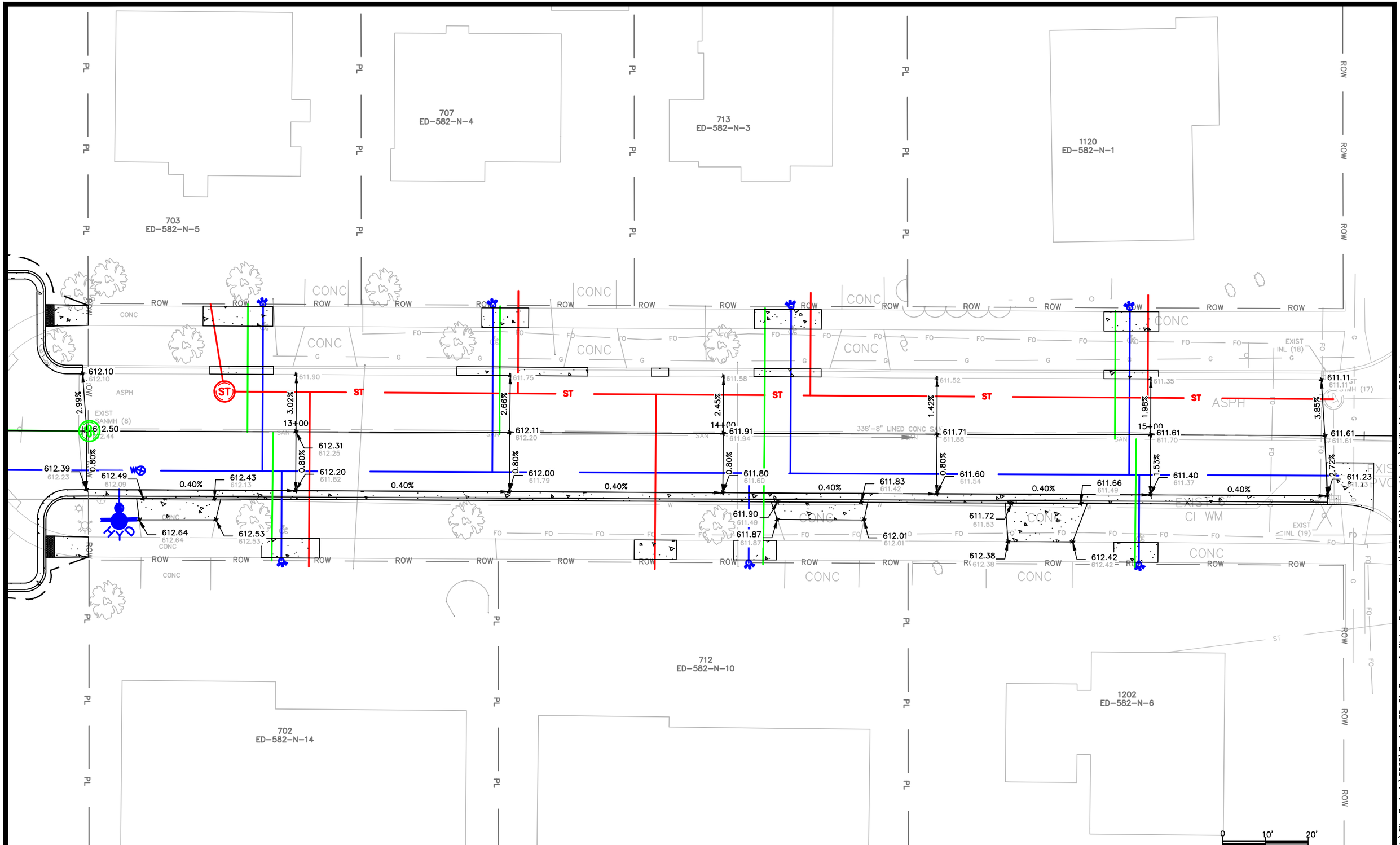

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CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

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N WASHINGTON STREET
GRADING PLAN

NAME:
SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT
25–01

	BY	DATE
SURVEYED	KAD	10–2024
DRAWN	KAD	10–2024
DESIGNED	KAD	11–2024
CHECKED	EPR	11–2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO.
C401

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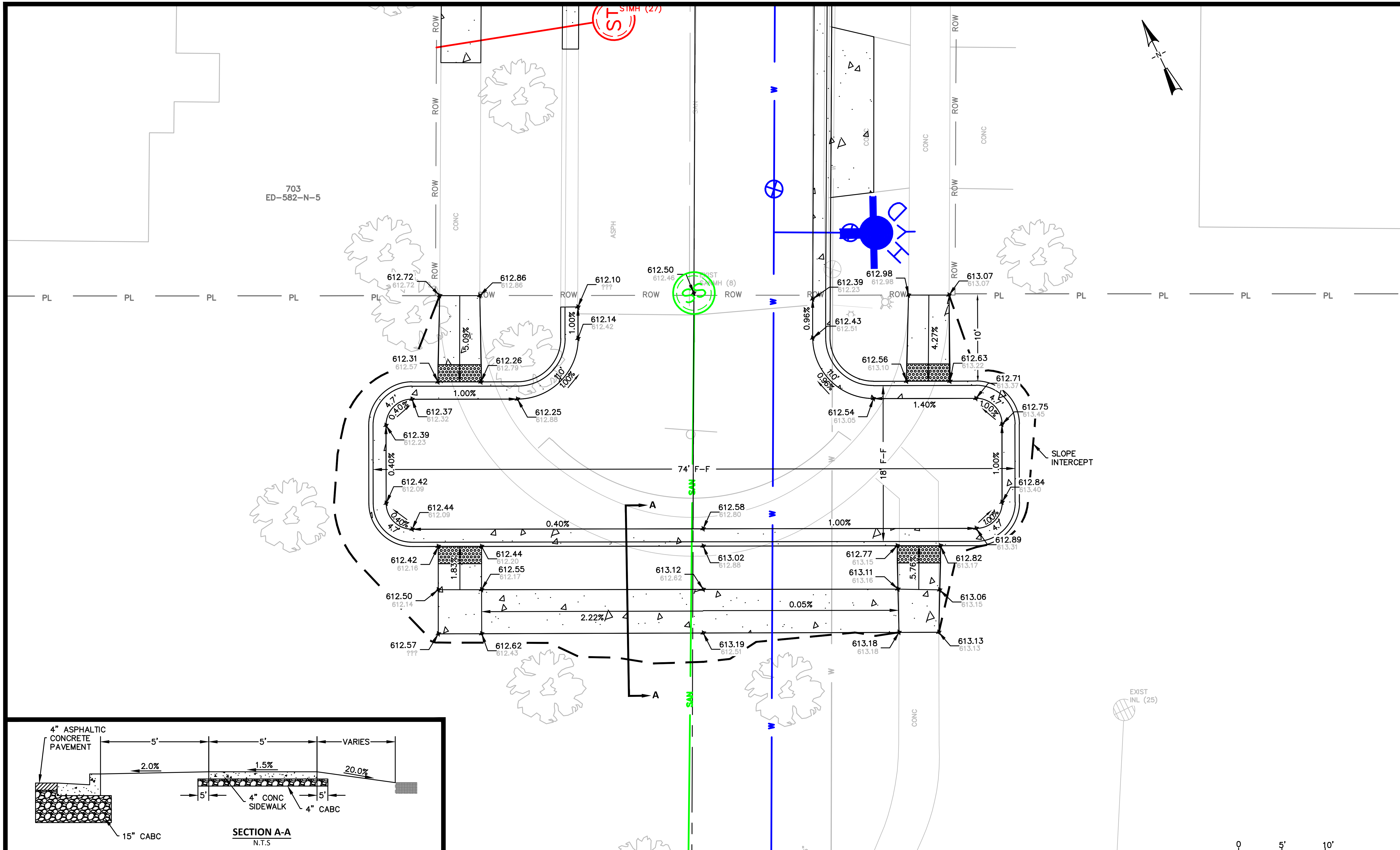

STMH (27)
703
ED-582-N-5
ROW
PL
CONC
ASPH
SAN
W
HYD
EXIST SANMH (8)
612.72
612.86
612.10
612.50
612.39
612.98
613.07
612.14
612.43
612.31
612.26
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612.44
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612.44
612.55
613.02
613.12
612.77
613.11
612.82
612.50
613.06
612.57
612.62
613.19
613.18
613.13
5.09%
1.00%
0.96%
4.27%
1.40%
0.40%
2.22%
0.05%
1.83%
5.76%
74' F-F
18' F-F
10'
4.7'
SLOPE INTERCEPT
A
EXIST INL (25)
4" ASPHALTIC CONCRETE PAVEMENT
5'
VARIES
2.0%
1.5%
20.0%
4" CONC SIDEWALK
4" CABC
15" CABC
SECTION A-A
N.T.S
0
5'
10'

DE PERE

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET

HAMMERHEAD PLAN

NAME:
SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	10-2024
DESIGNED	KAD	11-2024
CHECKED	EPR	11-2024

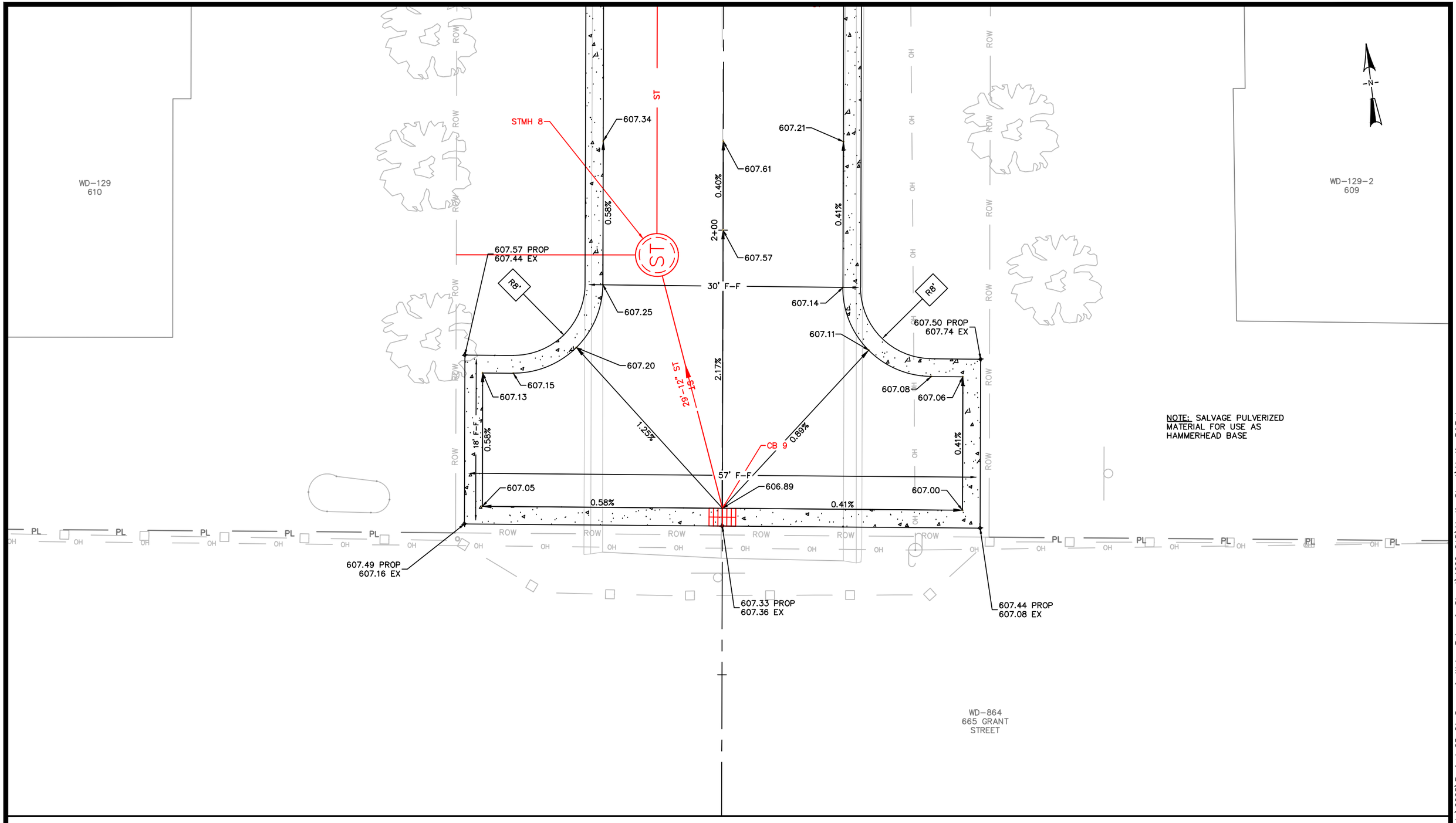
REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO.

C402

X:\ENG\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\N Washington\N Washington_P&P.dwg



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MARTIN STREET
SOUTHERN TERMINUS
HAMMERHEAD PLAN

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	APB	12–2023
DRAWN	APB	12–2023
DESIGNED	APB	01–2024
CHECKED	CKK	01–2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C403**

X:\ENG\Projects\City Projects\2025\Project 25–01–Sewer_&_Water_Relay_&_Street\1200–CAD\Martin Street\Martin_P&P.dwg

BUTLER
STREET

605.06 FLG
MATCH EXISTING

605.20 FLG

605.77 FOW
MATCH EXISTING

605.72 FOW

605.20 FL
605.23 BOC
6.00%

605.26 FLG

0.95%

5.59%

605.80 BOW

605.94 BOW
MATCH EXISTING

605.28 BOC
605.24 FL

605.30 FLG
605.31 FLG

605.34 FLG

605.61
MATCH EXISTING

0.52%

605.71

605.83 FLG
MATCH EXISTING

605.67 FLG

605.49 FLG

605.43 FL
605.47 BOC

5.92%

1.67%

606.51 FOW
MATCH EXISTING

605.40 FLG
605.38 FLG

6.52%

605.38 BOC
605.34 FL

606.61 BOW
MATCH EXISTING

605.34 FLG

WD–L0001
631

WD–L0009
617

EXIST
SANMH H8–X3N314

0 2.5' 5'

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

MARTIN STREET
INTERSECTION DETAIL

NAME:
SEWER AND WATER RELAY
AND STREET RESURFACING

PROJECT
25–01

	BY	DATE
SURVEYED	APB	12–2023
DRAWN	APB	01–2025
DESIGNED	CKK	01–2025
CHECKED	EPR	01–2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO.
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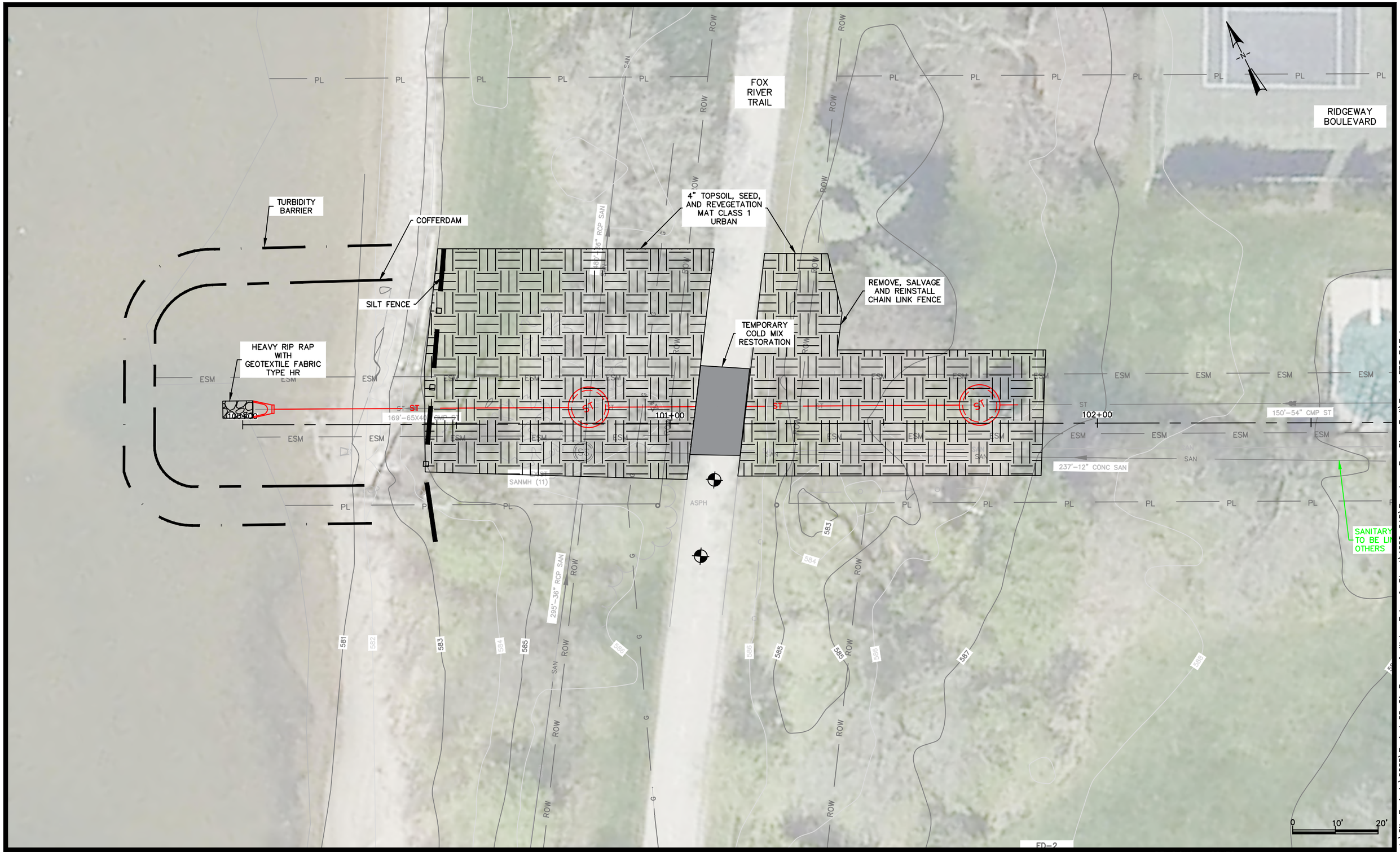

DE PERE

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ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

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807 NORTH BROADWAY ST

FOX RIVER TO N. BROADWAY ST

EROSION CONTROL AND RESTORATION

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	07-2024
DRAWN	KAD	07-2024
DESIGNED	KAD	07-2024
CHECKED	EPR	07-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. **C405**

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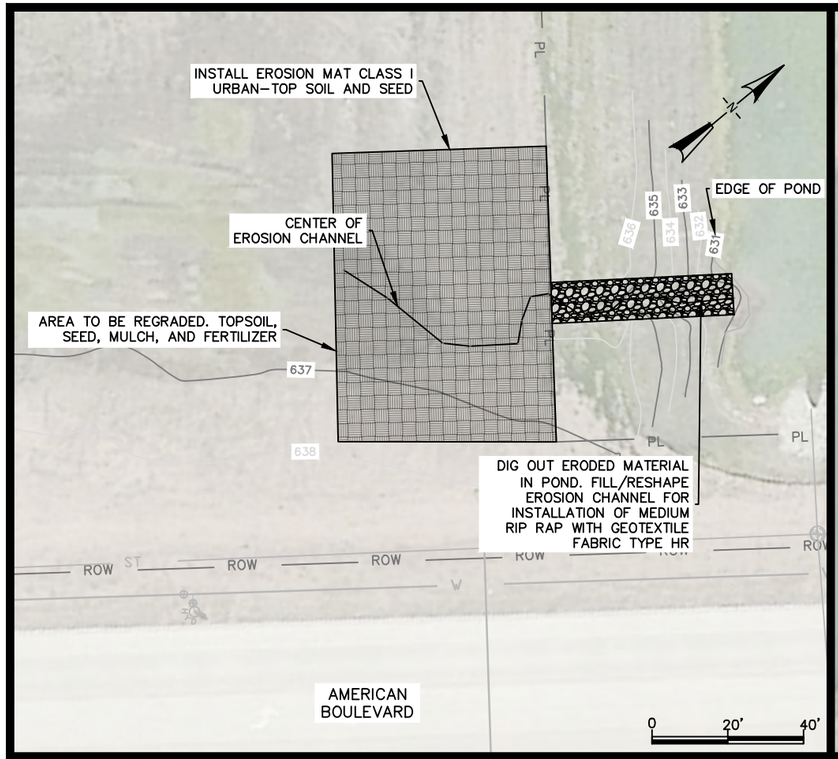

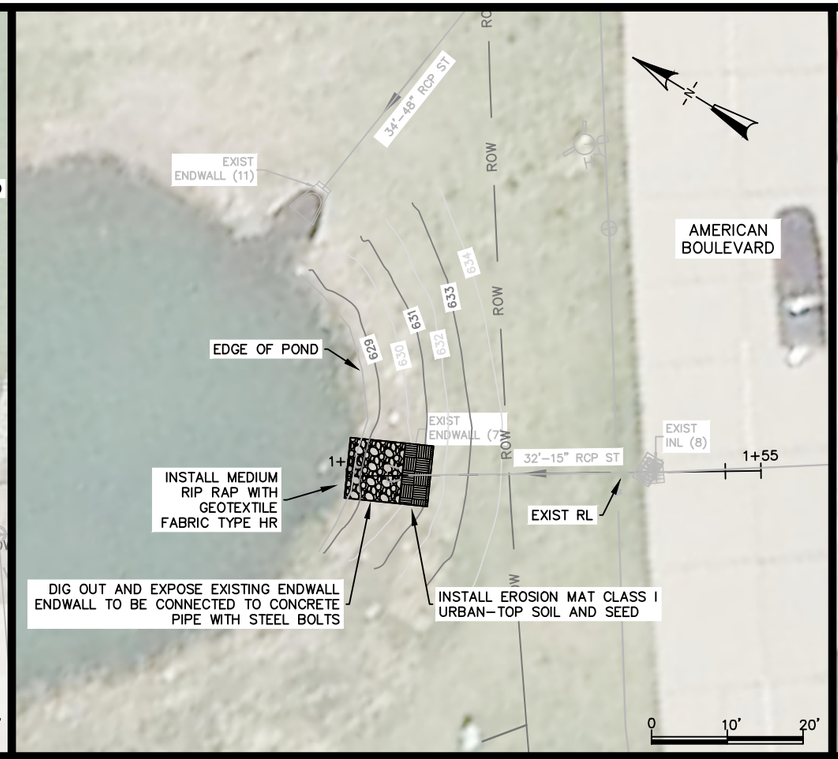

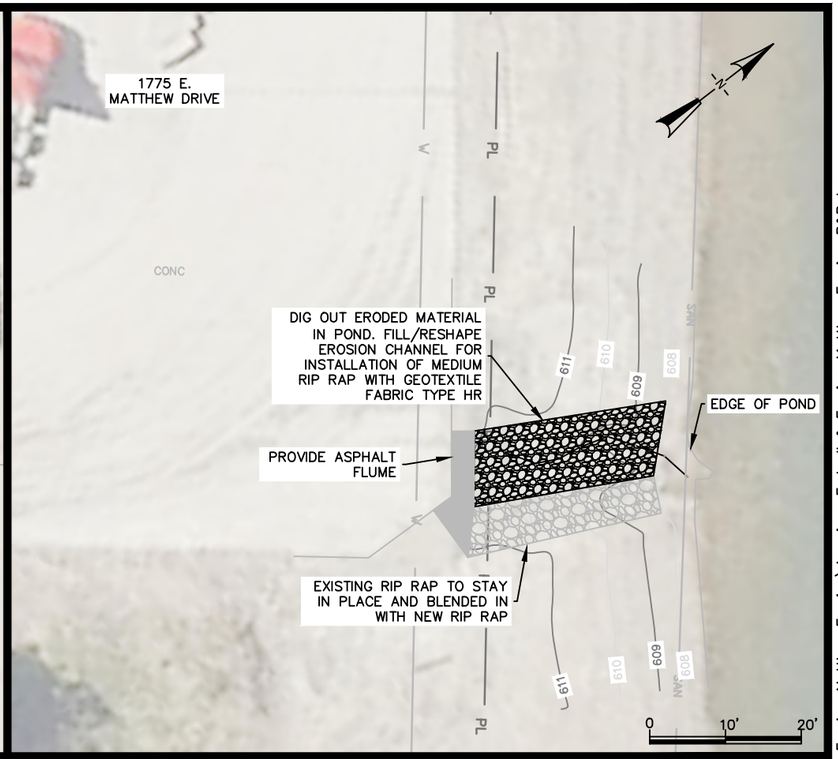

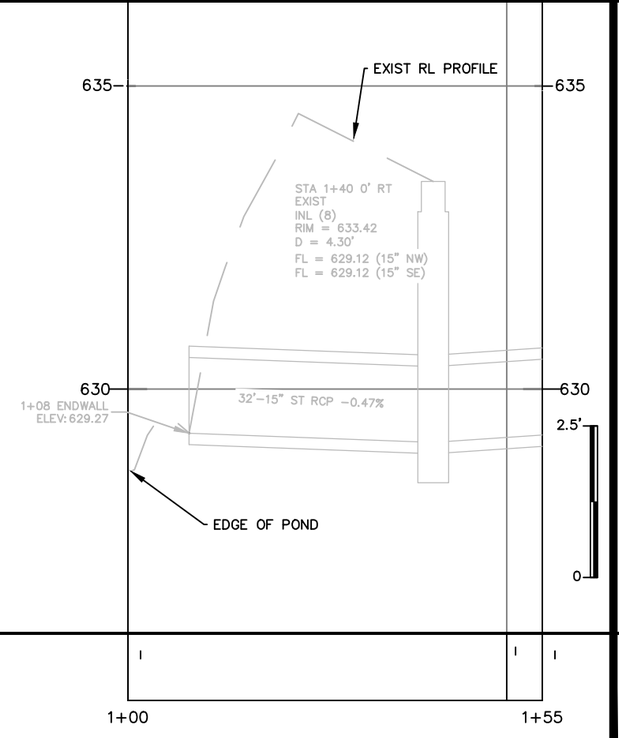

DE PERE

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ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

WEST SIDE POND REPAIRS
ENDWALL & EROSION CONTROL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	MJT	05–2024
DRAWN	MJT	01–2025
DESIGNED	MJT	01–2025
CHECKED	CKK	01–2025

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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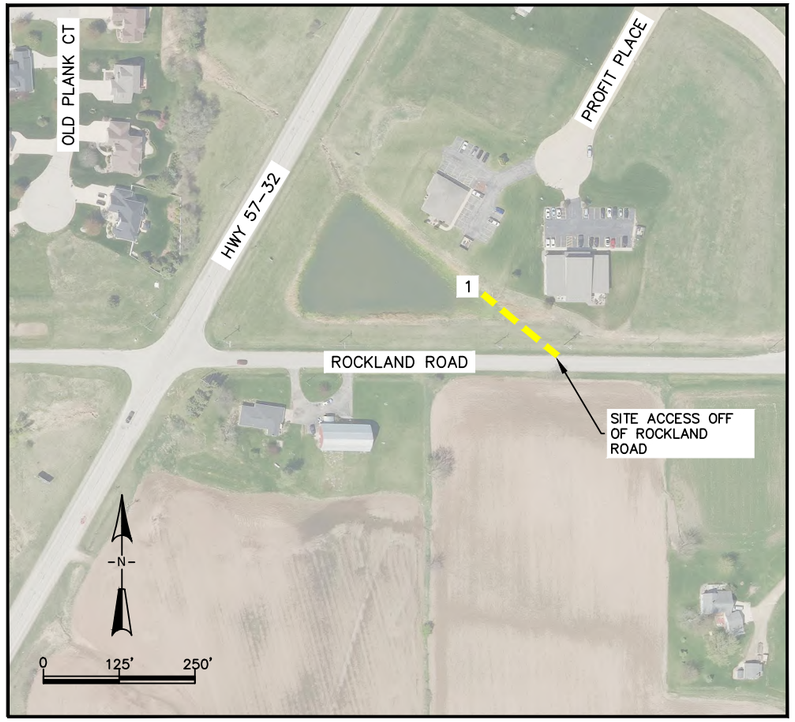

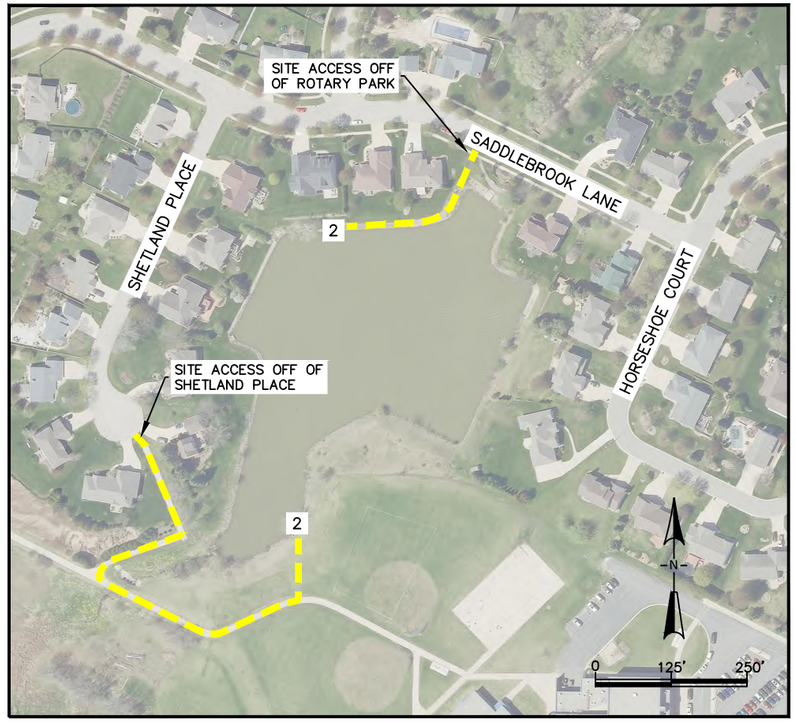

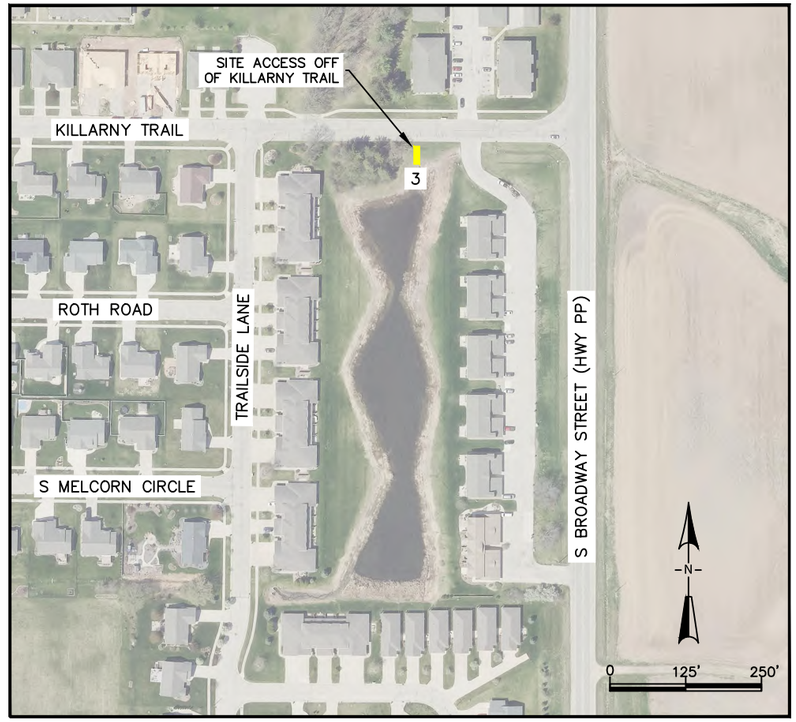

1. REPAIR EXISTING ENDWALL ON ROCKLAND POND OUTFALL FOLLOWING JOINT TIES DETAIL ON SHEET C507

2. REPAIR EXISTING ENDWALL ON SADDLEBROOK LANE POND OUTFALL FOLLOWING JOINT TIES DETAIL ON SHEET C507

3. REPAIR EXISTING ENDWALL ON TRAILSIDE POND OUTFALL FOLLOWING JOINT TIES DETAIL ON SHEET C507

DE PERE

CITY OF DE PERE

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CULVERT ENDWALL REPAIRS

NAME:
SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT
25-01

	BY	DATE
SURVEYED		
DRAWN	MAL	12-2024
DESIGNED	MAL	12-2024
CHECKED	ANH	12-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO.
C407

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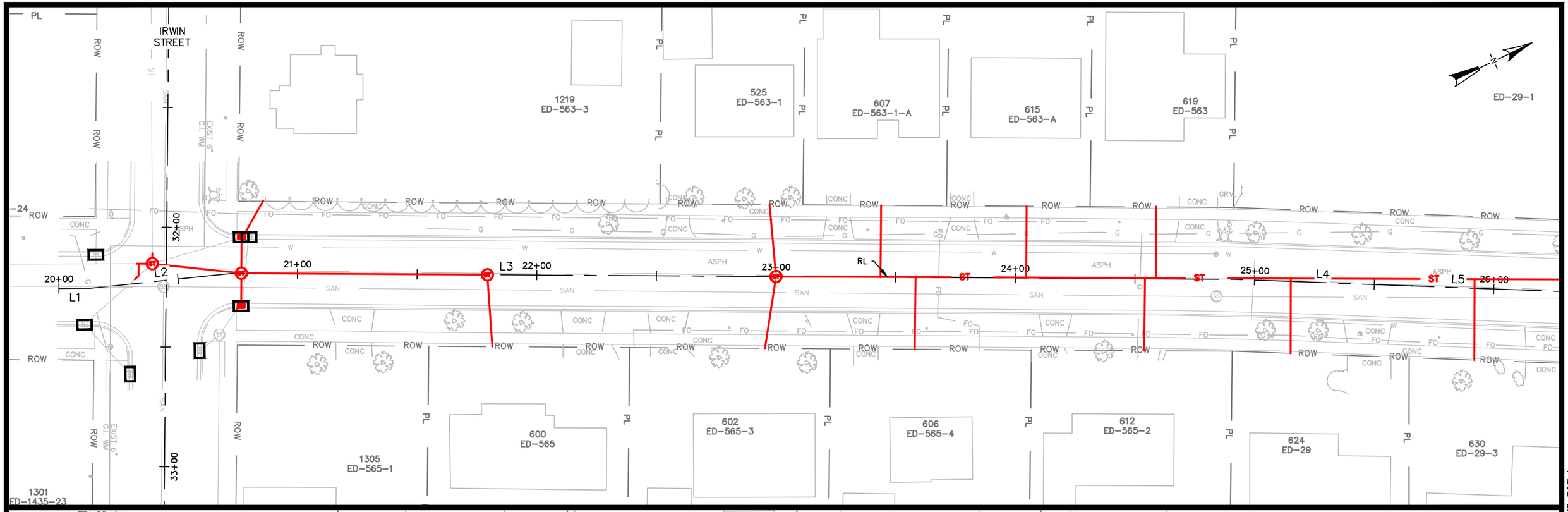

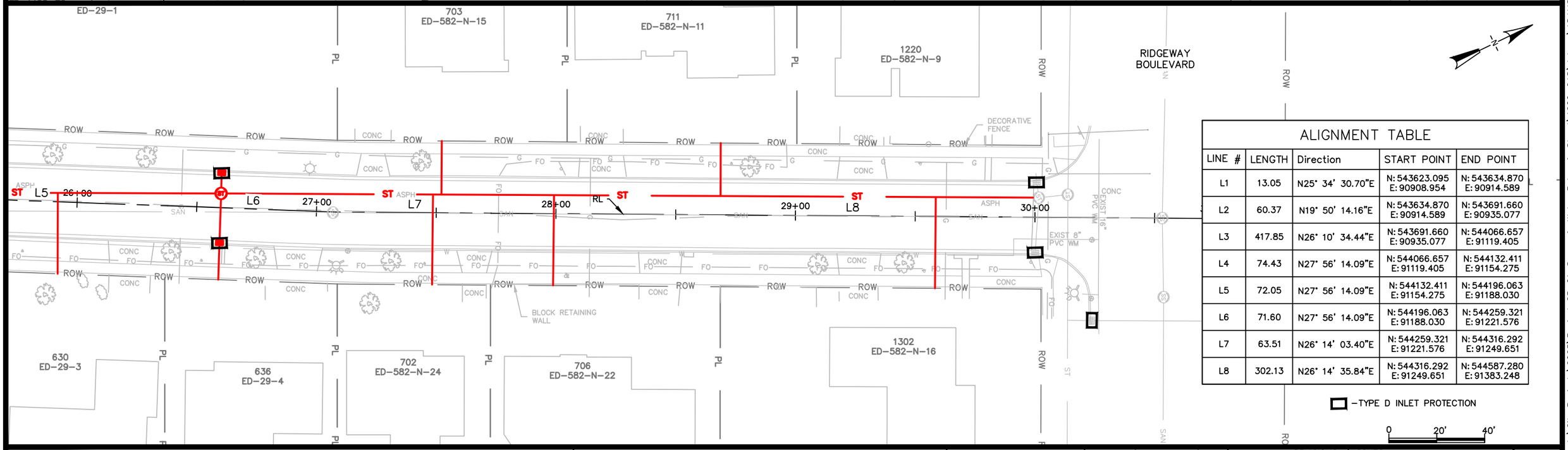

ALIGNMENT TABLE

LINE #	LENGTH	Direction	START POINT	END POINT
L1	13.05	N25° 34' 30.70"E	N: 543623.095 E: 90908.954	N: 543634.870 E: 90914.589
L2	60.37	N19° 50' 14.16"E	N: 543634.870 E: 90914.589	N: 543691.660 E: 90935.077
L3	417.85	N26° 10' 34.44"E	N: 543691.660 E: 90935.077	N: 544066.657 E: 91119.405
L4	74.43	N27° 56' 14.09"E	N: 544066.657 E: 91119.405	N: 544132.411 E: 91154.275
L5	72.05	N27° 56' 14.09"E	N: 544132.411 E: 91154.275	N: 544196.063 E: 91188.030
L6	71.60	N27° 56' 14.09"E	N: 544196.063 E: 91188.030	N: 544259.321 E: 91221.576
L7	63.51	N26° 14' 03.40"E	N: 544259.321 E: 91221.576	N: 544316.292 E: 91249.651
L8	302.13	N26° 14' 35.84"E	N: 544316.292 E: 91249.651	N: 544587.280 E: 91383.248

▭ – TYPE D INLET PROTECTION

0 20' 40'

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
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NORTH ADAMS STREET
ALIGNMENT AND EROSION CONTROL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT # 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	11-2024
DESIGNED	KAD	11-2024
CHECKED	EPR	12-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

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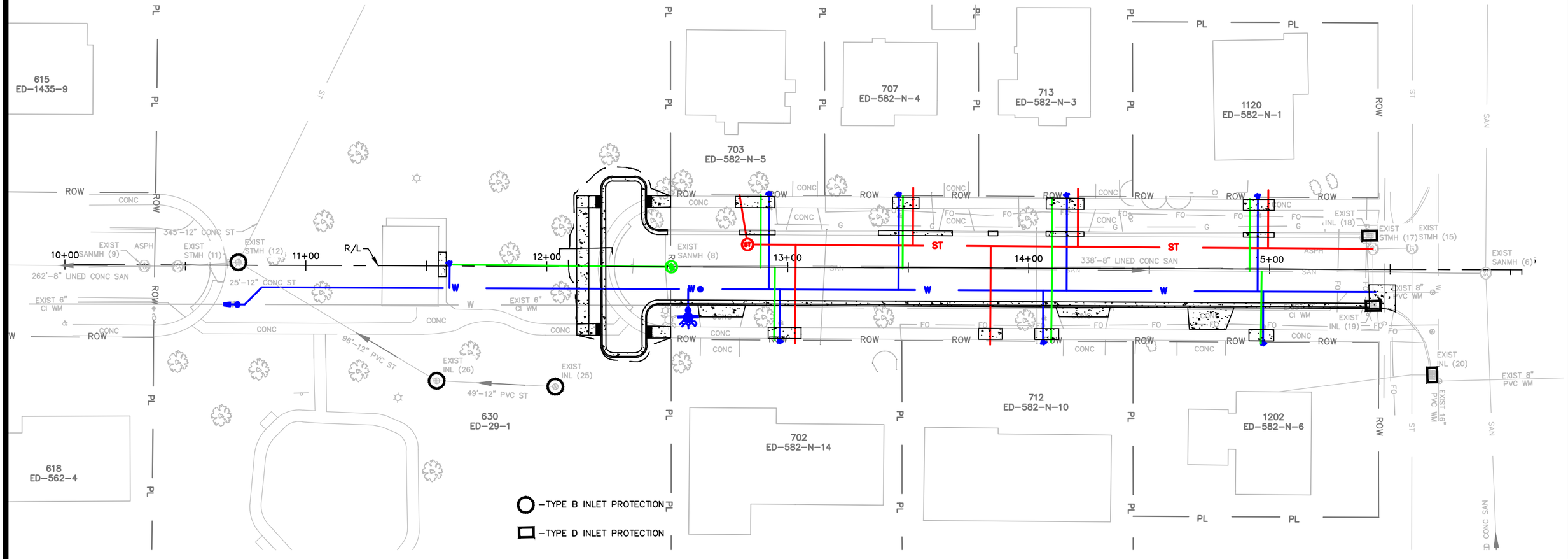

DE PERE

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ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET
EROSION CONTROL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	10-2024
DESIGNED	KAD	11-2024
CHECKED	EPR	11-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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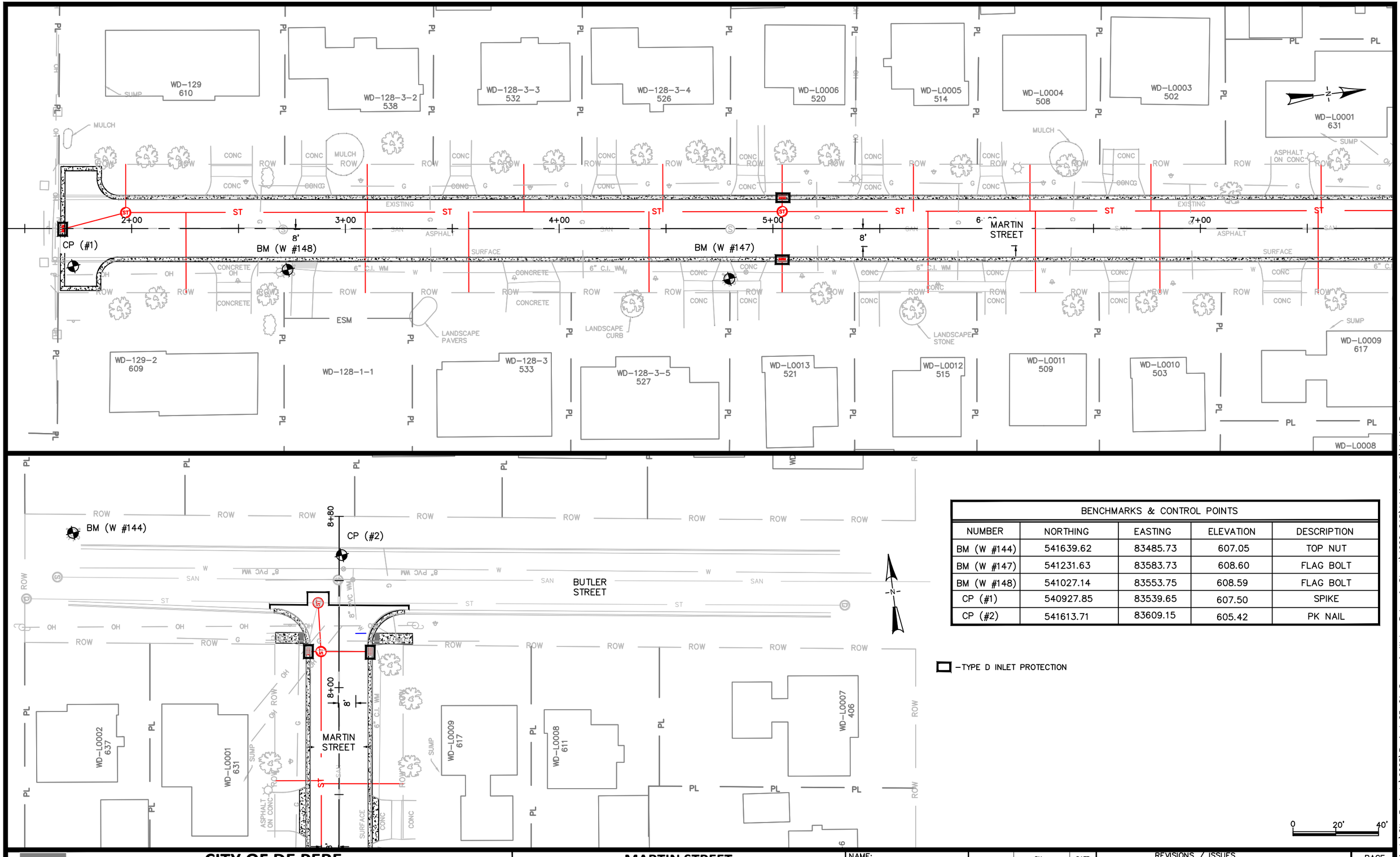

BENCHMARKS & CONTROL POINTS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM (W #144)	541639.62	83485.73	607.05	TOP NUT
BM (W #147)	541231.63	83583.73	608.60	FLAG BOLT
BM (W #148)	541027.14	83553.75	608.59	FLAG BOLT
CP (#1)	540927.85	83539.65	607.50	SPIKE
CP (#2)	541613.71	83609.15	605.42	PK NAIL

—TYPE D INLET PROTECTION

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ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
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MARTIN STREET
MARTIN ST & BUTLER ST
BENCHMARKS AND EROSION CONTROL

NAME: SEWER & WATER RELAY STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	APB	01-2024
CHECKED	CKK	01-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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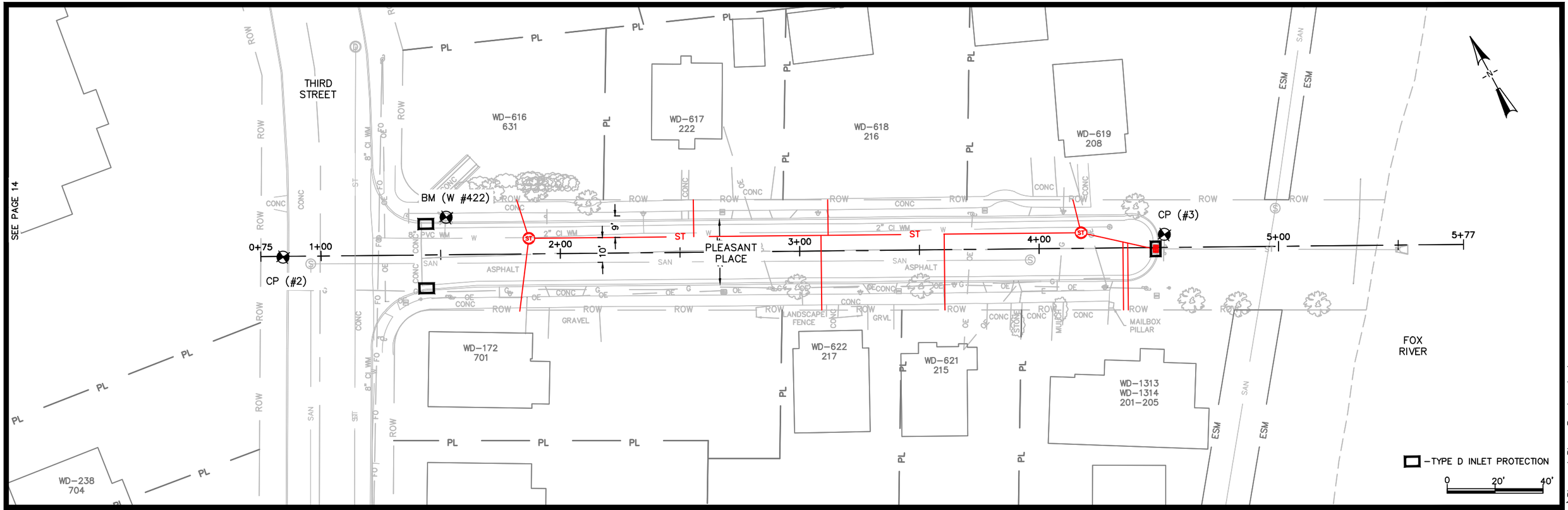

BENCHMARKS & CONTROL POINTS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM (W #422)	540443.99	85582.12	613.09	TOP NUT
CP (#2)	540461.47	85514.17	611.02	SPIKE
CP (#3)	540167.94	83610.62	609.12	SPIKE

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PLEASANT PLACE
THIRD ST TO FOX RIVER
BENCHMARKS AND EROSION CONTROL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	APB	12-2023
DRAWN	APB	12-2023
DESIGNED	APB	01-2024
CHECKED	CKK	01-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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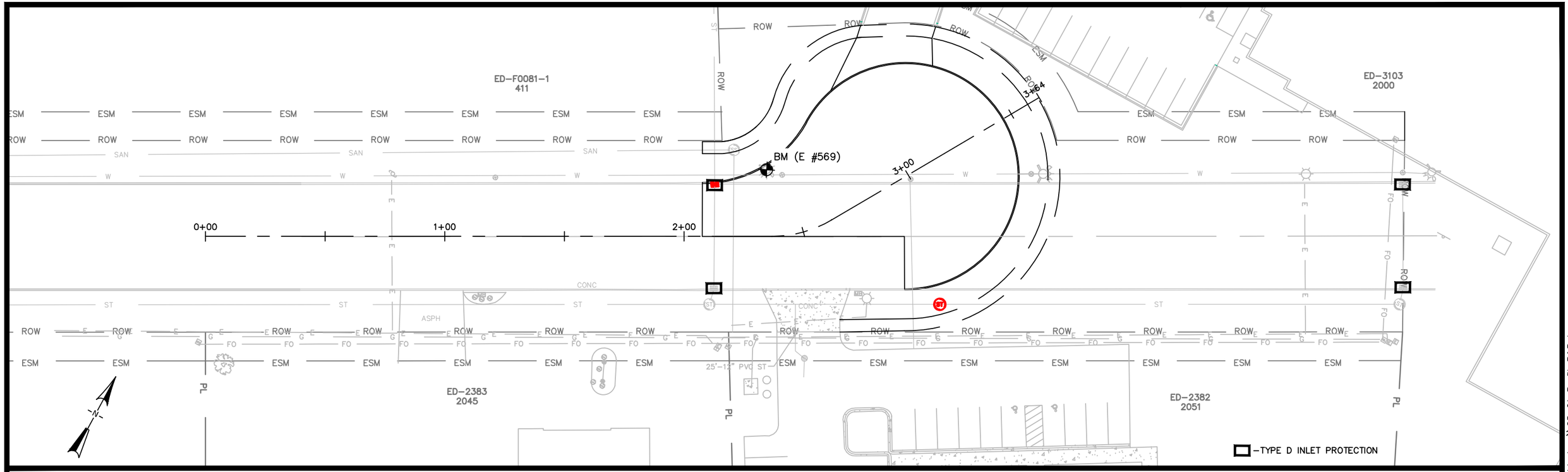

BENCHMARKS & CONTROL POINTS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM (E #569)	532216.556	84269.519	640.48	TOP NUT

5'
0

0 20' 40'

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PROFIT PLACE
300' NE OF DESTINY DR TO 900' NE OF DESTINY DR
BENCHMARKS AND EROSION CONTROL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	MAL	11–2021
DRAWN	MAL	12–2024
DESIGNED	MAL	12–2024
CHECKED	CKK	12–2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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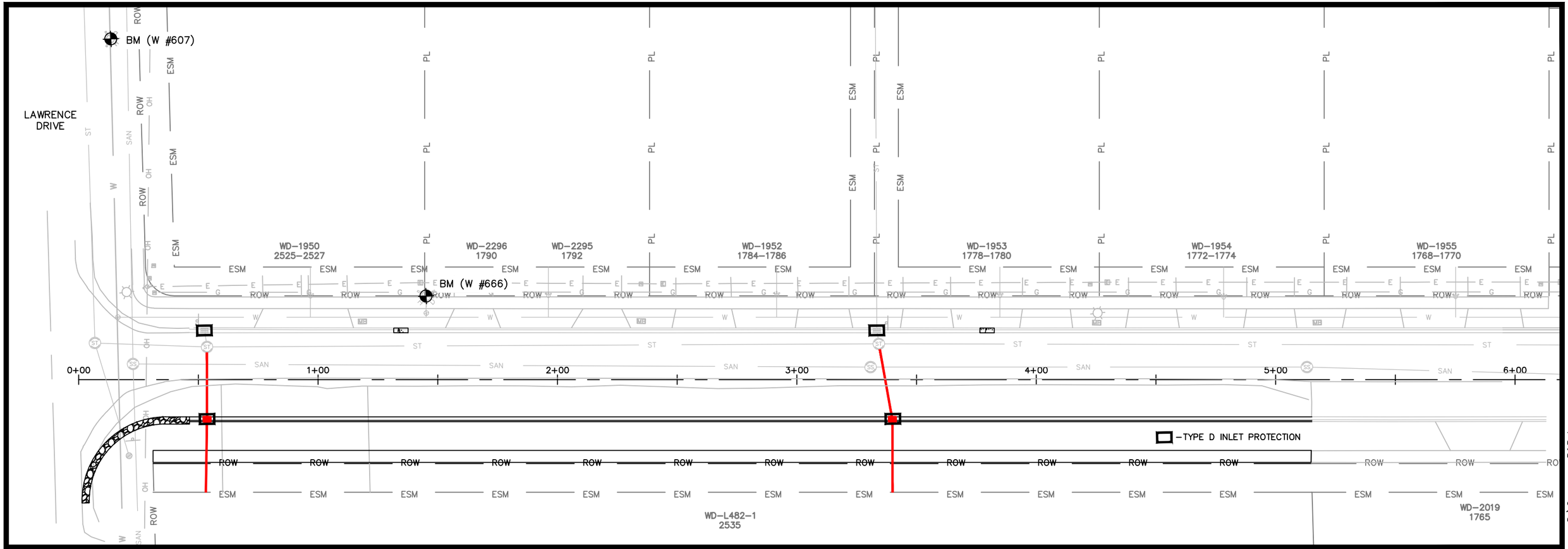

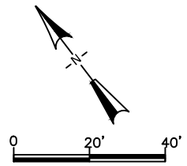

BENCHMARKS & CONTROL POINTS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM (W #607)	525931.606	69278.665	641.26	TOP NUT
BM (W #666)	525766.344	69318.028	642.15	TOP NUT

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ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
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GARROMAN DRIVE
LAWRENCE DRIVE TO 600' SE/O LAWRENCE DRIVE
BENCHMARKS AND EROSION CONTROL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

	BY	DATE
SURVEYED	MAL	11–2024
DRAWN	MAL	11–2024
DESIGNED	MAL	11–2024
CHECKED	EPR	11–2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

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FIXTURE ROUGH-IN SCHEDULE

TAG	FIXTURE TYPE	W	V	CW	HW	CARRIER	MOUNTING	NOTES
WC-1	WATER CLOSET 1.28 GPF	4"	2"	1 1/4"	--	ZURN #Z-1203-H-XH	RIM AT 15" A.F.F.	--
WC-2	WATER CLOSET 1.28 GPF	4"	2"	1 1/4"	--	ZURN #Z-1203-N-XH	RIM TO BE 17 1/8" A.F.F.	--
U-1	URINAL, 0.125 GPF	2"	1 1/2"	3/4"	--	ZURN #Z-1221	RIM TO BE 24" A.F.F.	--
L-1	LAVATORY	1 1/2"	1 1/2"	1/2"	--	--	RIM AT 34" A.F.F.	--
DF-1	DRINKING FOUNTAIN	1 1/2"	1 1/2"	1/2"	--	GALVANIZED STRUCTURAL STEEL SUPPORT	DUAL HEIGHT LEFT SPOUT @ 36" A.F.F. RT. SPOUT @ 42" A.F.F.	--
SS-1	SERVICE SINK	3"	1 1/2"	3/4"	--	--	FLOOR OUTLET MOUNT FAUCET 36" A.F.F.	--
HB-1	EXTERIOR HOSE BIBB	--	--	3/4"	--	--	MOUNT 18" A.F.G.	--

DRAIN SCHEDULE

TAG	MANUF.	MODEL	DRAIN TYPE	WASTE	VENT	TRAP	REMARKS
FD-1	FROSET	#T2563O-F-P	FL. DRAIN W/TRAP GUARD", 5" ADJ. STRAINER	2"/3"	1 1/2"	2"/3"	POLISHED BRONZE GRATE.

PLUMBING FIXTURE SCHEDULE

TAG	MANUFACTURER/ MODEL No.	FIXTURE TYPE	ADDITIONAL EQUIPMENT			
			FAUCET	TRAP	SUPPLIES	NOTES
WC-1	KOHLER "KINGSTON" #K-4325	WATER CLOSET WHITE V.C., 1.28 GPF FL. VALVE, WALL HUNG	--	INTEGRAL	SLOAN HET #111-1.28 EXPOSED FL. VA.	SEE NOTES #1, 3
WC-2	KOHLER "KINGSTON" #K-4325	WATER CLOSET WHITE V.C., 1.28 GPF FL. VALVE, WALL HUNG	--	INTEGRAL	SLOAN HET #111-1.28 EXPOSED FL. VA.	SEE NOTES #1, 3, 4 VERIFY SIDE FOR FLUSH VALVE HANDLE
U-1	KOHLER "BARDON" #K-4904-ET	URINAL WHITE V.C., .125 GPF FL. VALVE, WALL HUNG	--	INTEGRAL	SLOAN "OPTIMA" HEU #186-0.125 FL. VA.	SEE NOTE #3
L-1	KOHLER "KINGSTON" #K-2032	WALL HUNG 20-3/4" X 18 1/4" WHITE V.C.	DELTA #86T1053 MIXING METERING HANDWASH FAUCET	PRO-FLO #PF6912 P-TRAP WITH #PFHGD OFFSET	PRO-FLO #PF57LK12 LOOSE KEY ANGLE STOP	SEE NOTES #3, 4, 5, 6
DF-1	STERN-WILLIAMS #BF-5000	DUAL HEIGHT DRINKING FOUNTAIN WALL HUNG	--	1 1/4" x 1 1/2" (2) PIECE PVC P-TRAP	PRO-FLO #PF57LK12 LOOSE KEY ANGLE STOP	SEE NOTES #3, 4
SS-1	STERN-WILLIAMS #MTB-2424	24" X 24" X 10" MOLDED STONE MOP BASIN	CHICAGO #782-ISCP W/WATTS 8A VACUUM BREAKER	--	--	SEE NOTES #2, 3, 6 W/ STRAINER AND 3" OUTLET
HB-1	WOODFORD MODEL #67	EXTERIOR FREEZELESS WALL HYDRANT AUTOMATIC DRAINING				LOOSE TEE KEY. VACUUM BREAKER

PLUMBING FIXTURE SCHEDULE NOTES:

1. BEMIS #1655-SS-C, WHITE, OPEN FRONT SEAT, LESS COVER, WITH SELF-SUSTAINING CHECK HINGE.
2. STAINLESS STEEL BUMPER GUARDS, 8# STAINLESS STEEL BACK SPLASH, T-35 HOSE AND HOSE BRACKET, T-40 MOP HANGER.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
4. MEETS AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS.
5. PROVIDE AND INSTALL TRU-BRO TRAP WRAP #103 E-Z P-TRAP COVER AND ONE VALVE SUPPLY COVER WITH OFFSET COVER.
6. COLD WATER ONLY.

PLAN NOTES:

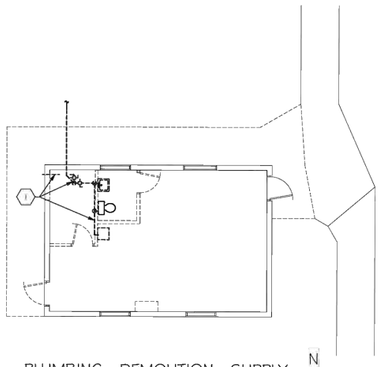
1. SITE CLEAR EXISTING DOMESTIC COLD WATER SUPPLY PIPING TO EXTERIOR OF BUILDING.
2. SITE CLEAR EXISTING WASTE AND VENT PIPING. SITE CLEAR WASTE PIPING TO EXTERIOR WALL. SITE CLEAR VENT PIPING TO ABOVE CEILING.
3. PROVIDE SYSTEM DRAIN VALVE DISCHARGING INTO NEW SERVICE SINK. SLOPE SUPPLY PIPING SUCH THAT THE PIPING DOWNSTREAM OF DRAIN FITTING WILL DRAIN INTO SERVICE SINK FOR WINTER STORAGE.
4. PROVIDE NEW DOW SUPPLY PIPING UNDERGROUND ROUTED UP INTO ROOM 102.
5. TIE INTO EXISTING SANITARY AT EXTERIOR WALL.
6. TIE INTO EXISTING VENT ABOVE CEILING.
7. LOCATE GRILLE IN SOFFIT. PROVIDE INSECT SCREEN.
8. MOUNT FAN BELOW CEILING.
9. SITE CLEAR EXISTING GAS FIRED SPACE HEATER AND PIPING.

NOTE:

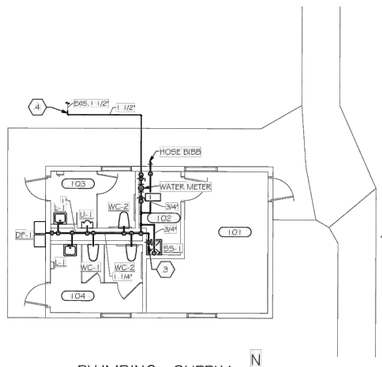
ALL PIPING SHALL BE DRAINABLE. PROVIDE DRAIN VALVES WITH HOSE THREADS AS REQUIRED.

GRILLE AND DIFFUSER SCHEDULE

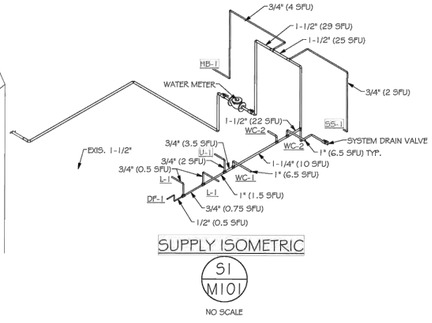
TAG	MFR.	MODEL	MATERIAL	NECK/DUCT SIZE (IN.)	FACE SIZE (IN.)	PANEL SIZE (IN.)	MAX. NC VALUES	REMARKS
E-1	TITUS	350FL	ALUMINUM	12/6	14/8	--	NC-20	35° DEFLECTION, 3/4" SPACING
E-2	TITUS	350FL	ALUMINUM	14/14	16/16	--	--	35° DEFLECTION, 3/4" SPACING
T-1	TITUS	35FL	ALUMINUM	10/10	12/12	--	--	35° DEFLECTION, 3/4" SPACING



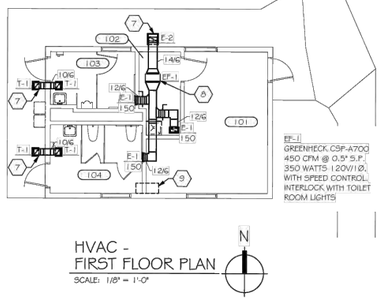
PLUMBING - DEMOLITION - SUPPLY FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



PLUMBING - SUPPLY FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

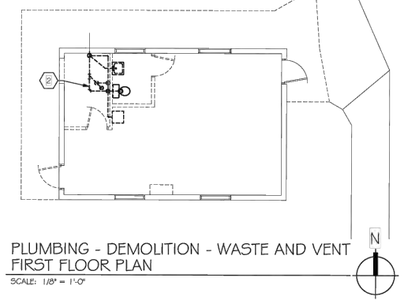


SUPPLY ISOMETRIC
S1 / M101
NO SCALE



EF-1
GREENHECK, CSP-A700
450 CFM @ 0.5" S.P.
350 WATTS 120V/1Ø,
WITH SPEED CONTROL,
INTERLOCK WITH TOILET
ROOM LIGHTS

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



PLUMBING - DEMOLITION - WASTE AND VENT FIRST FLOOR PLAN
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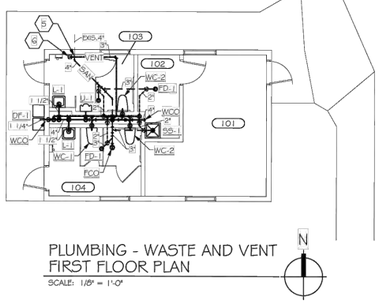
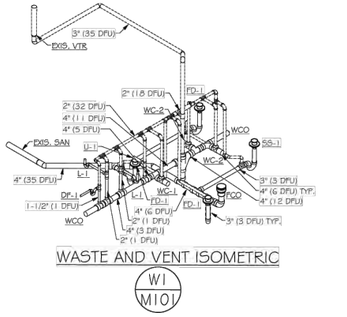


PLUMBING - WASTE AND VENT FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



WASTE AND VENT ISOMETRIC
W1 / M101
NO SCALE

6/18/2014 2:18:45 PM

design matters

somerville architects | engineers
Somerville Inc. | 2100 Riverside Drive, Green Bay, WI 54301-2390
P 920.437.8536 | F 920.437.1131 | www.somervilleinc.com

Revisions	Description	Date

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BRAISHER PARK SHELTER REMODEL FOR:
CITY OF DE PERE PROJECT 14-14
624 N. WASHINGTON STREET, DE PERE, WISCONSIN

Date: 6/17/14
Project No. 6483
Sheet: **M101**

X:\ENG\Projects\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\N Washington\N Washington_P&P.dwg

DE PERE

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

N WASHINGTON STREET
BRAISHER PARK BATHROOM
RECORD DRAWING

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	10-2024
DRAWN	KAD	10-2024
DESIGNED	KAD	11-2024
CHECKED	EPR	11-2024

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO. **C501**

DE PERE

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

807 NORTH BROADWAY ST

ACCESS ROUTE

NAME:
SEWER AND WATER RELAY
AND STREET RESURFACING

PROJECT
25-01

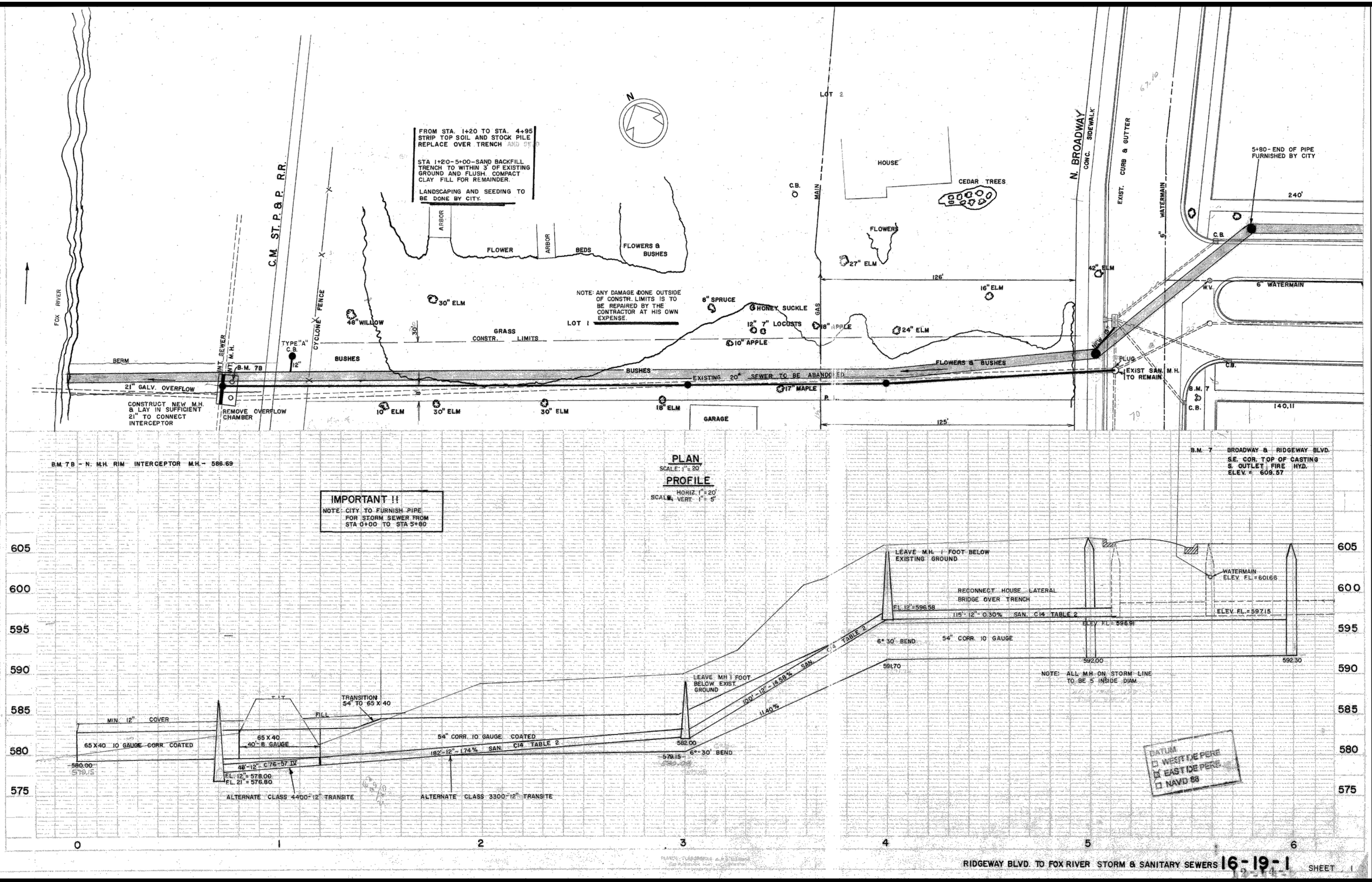
	BY	DATE
SURVEYED	KAD	07-2024
DRAWN	KAD	07-2024
DESIGNED	KAD	07-2024
CHECKED	EPR	07-2024

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO.
C502

X:\ENG\Projects\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\Broadway-Fox River Trail\Brood-FRT_P&P.dwg



RIDGEWAY BLVD. TO FOX RIVER STORM & SANITARY SEWERS 16-19-1 SHEET 1

DE PERE

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

807 NORTH BROADWAY ST

RECORD DRAWINGS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED	KAD	07-2024
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DESIGNED	KAD	07-2024
CHECKED	EPR	07-2024

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. C503

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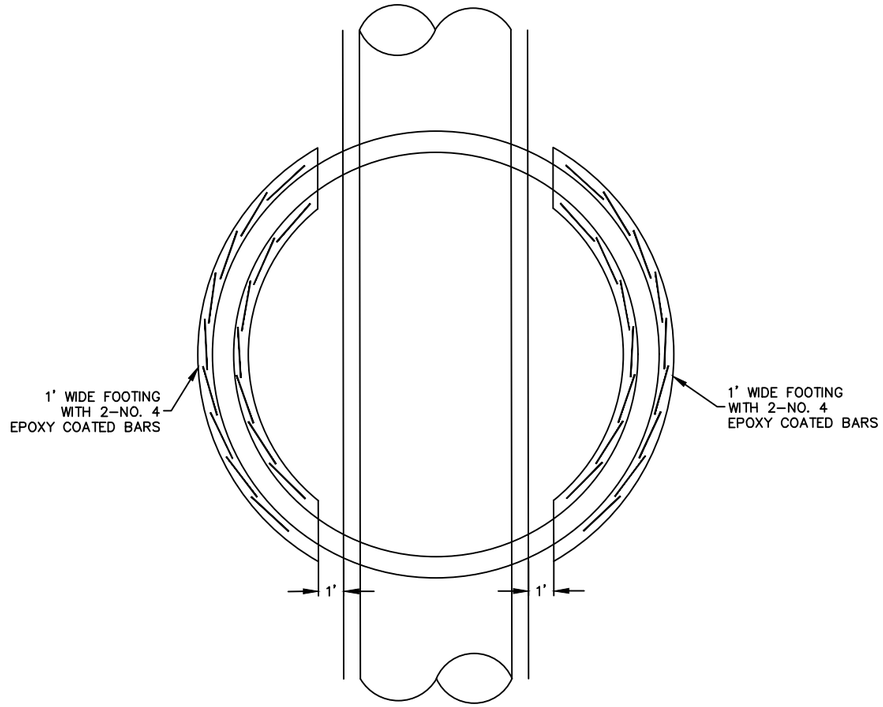

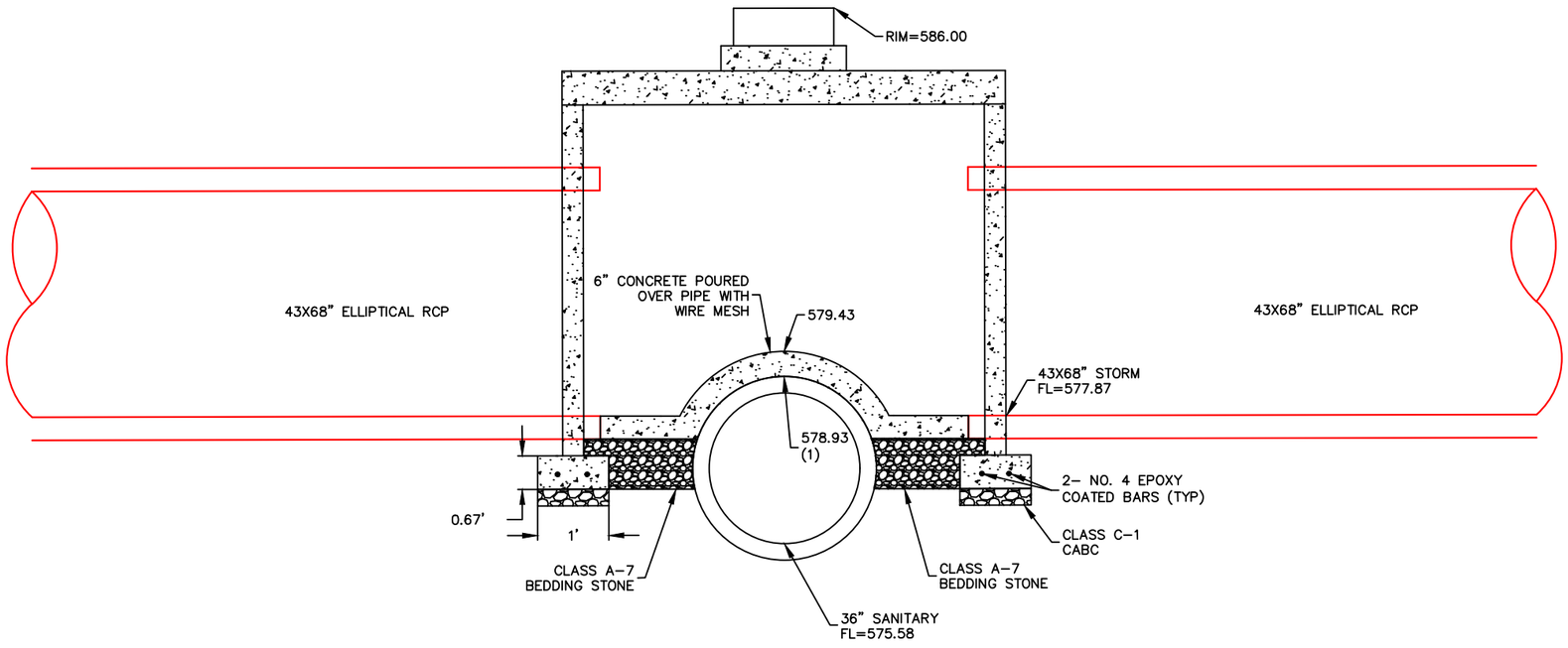

(1) ESTIMATED TOP OF OUTSIDE OF 36"

0 3'

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OFFICE 920-339-4061 FAX 920-339-4071

807 NORTH BROADWAY ST

CONSTRUCTION DETAILS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
SURVEYED	KAD	07-2024
DRAWN	KAD	07-2024
DESIGNED	KAD	07-2024
CHECKED	EPR	07-2024

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C504**

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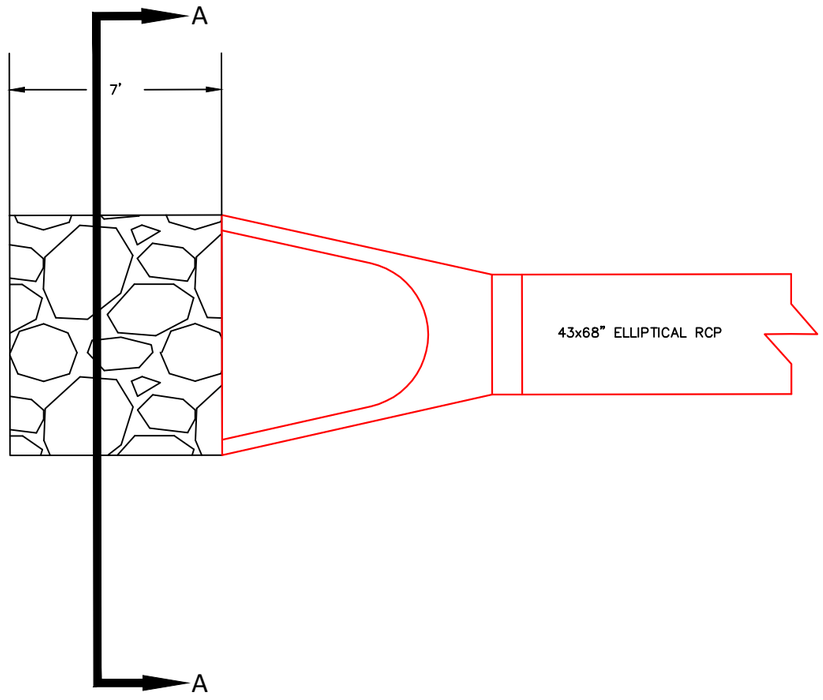
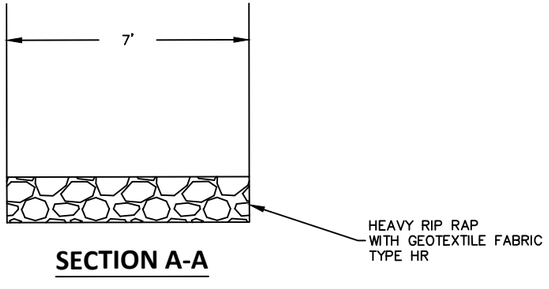
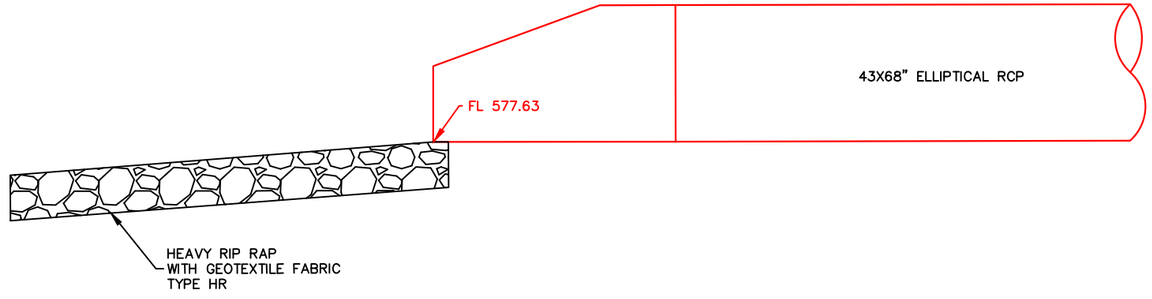




SECTION A-A



0 2.5' 5'

DE PERE

CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115

OFFICE 920-339-4061 FAX 920-339-4071

807 NORTH BROADWAY ST

CONSTRUCTION DETAILS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING

PROJECT 25-01

	BY	DATE
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DESIGNED	KAD	07-2024
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REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

PAGE NO. **C505**

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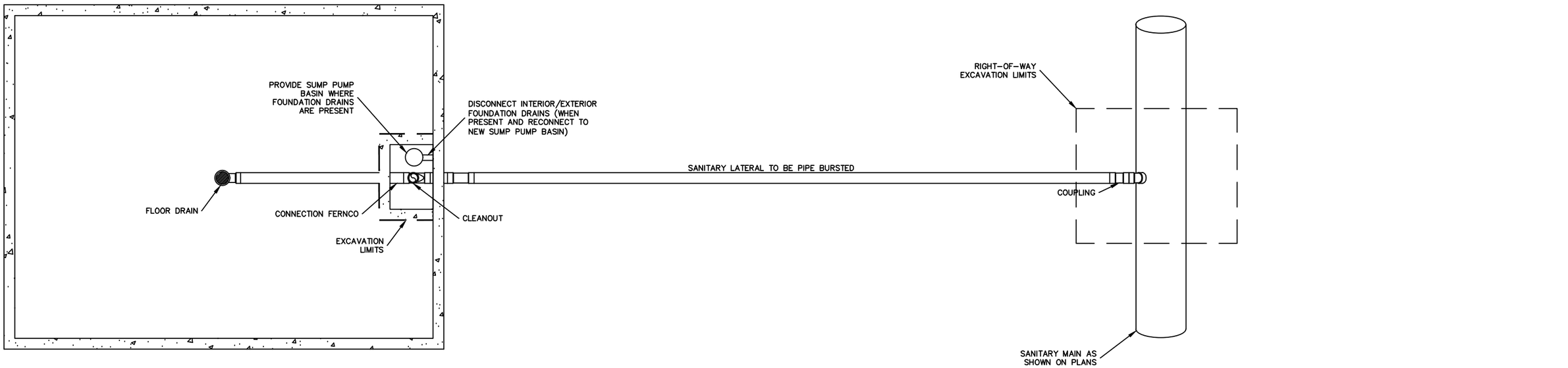

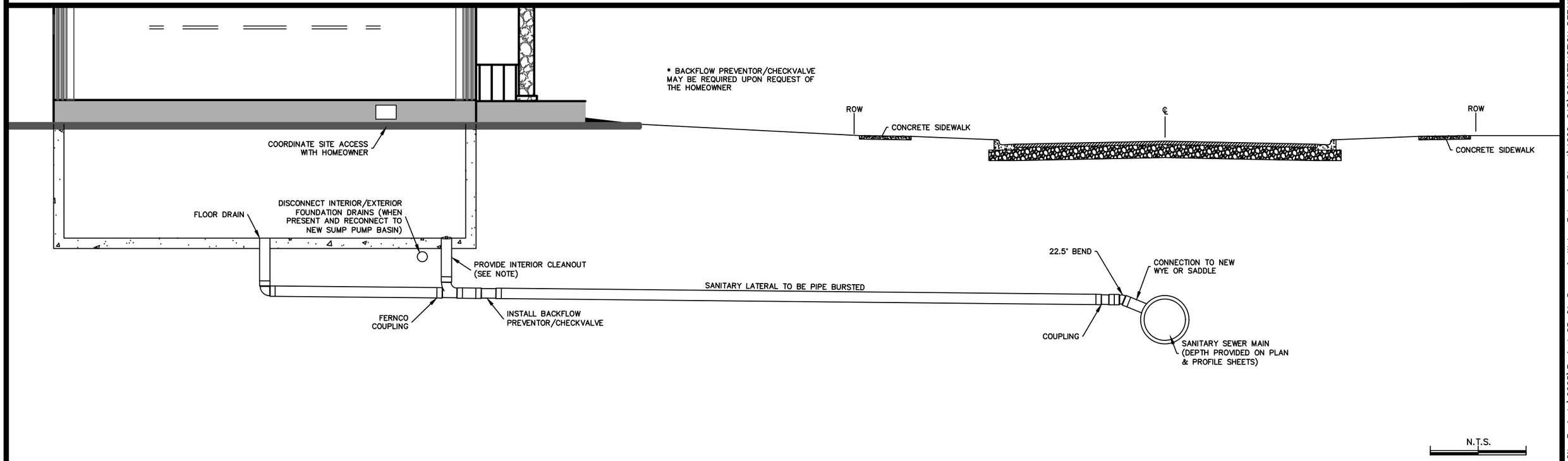

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

PIPE BURSTING CONSTRUCTION DETAIL

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED		
DRAWN		
DESIGNED		
CHECKED	EPR	01-2025

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. **C506**

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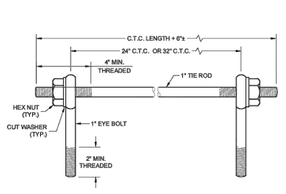
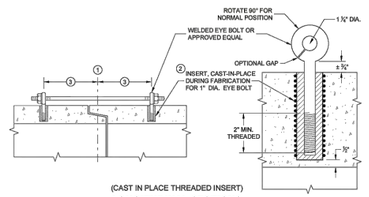
SDD 08F04 Joint Ties for Concrete Pipe and Concrete Collar Detail



EYE BOLTS AND TIE ROD



LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

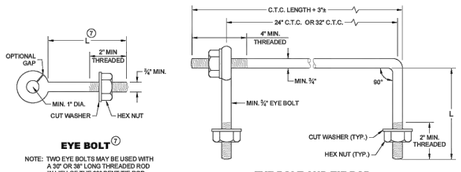
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

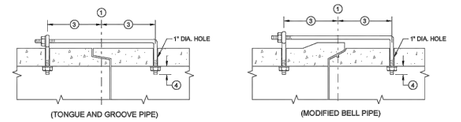
1. CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
2. THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
3. HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
4. BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
5. OPENING TO BE ROD DIAMETER PLUS 1 INCH.
6. LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.
7. EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30° OR 38° LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

EYE BOLT AND TIE ROD



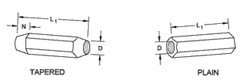
LONGITUDINAL SECTION
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

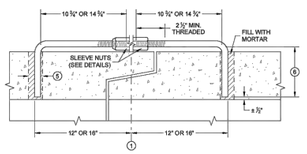
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	6	½
66 - 84	¾	¾	6	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



RIGHT AND LEFT THREADS
SLEEVE NUTS

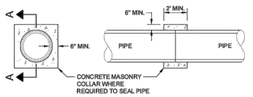


LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

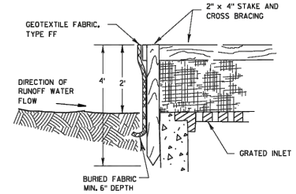
APPROVED: November 2021 (DATE) — /S/ Rodney Taylor (ROADWAY STANDARDS DEVELOPMENT ENGINEER)

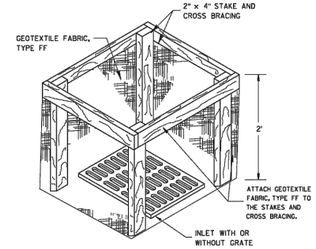
FINAL

SDD 08F04 - 08

SDD 08F04 - 08

SDD 8e10 Inlet Protection Type A, B, C and D





INLET PROTECTION, TYPE A

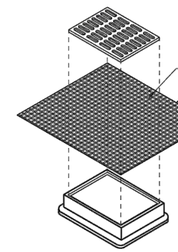
GENERAL NOTES

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.

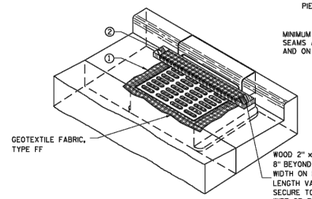
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

1. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
2. 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.
3. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

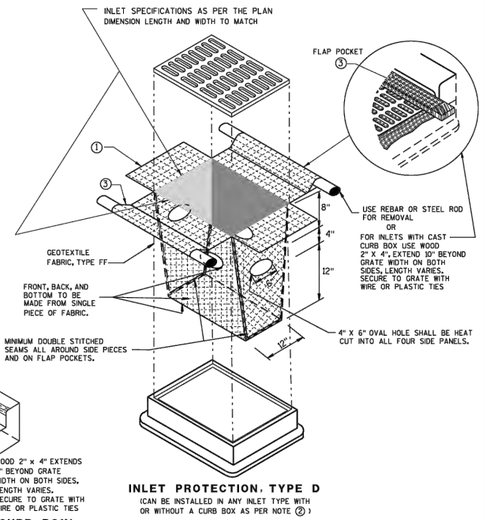


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

INSTALLATION NOTES

TYPE B & C

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.

TYPE D

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 A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

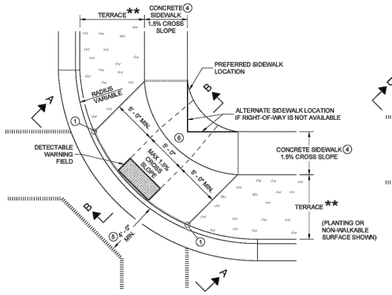
APPROVED: 10-16-02 (DATE) — /S/ Beth Cannestra (CHIEF ROADWAY DEVELOPMENT ENGINEER)

FINAL

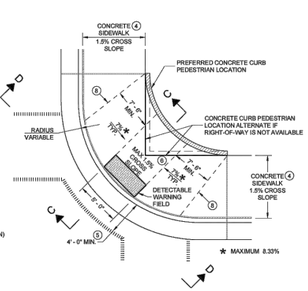
SDD 8 E 10-2

SDD 8 E 10-2

SDD 08D05-a: Curb Ramps Types 1 and 1-A



PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)



PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

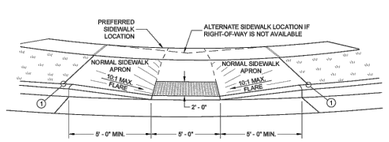
DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

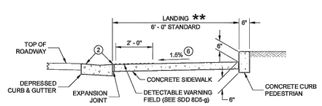
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

1. THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
2. GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
3. MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
4. ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
5. PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
6. PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
8. PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

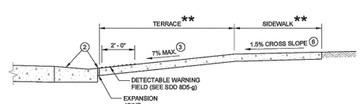


VIEW A - A FOR TYPE 1

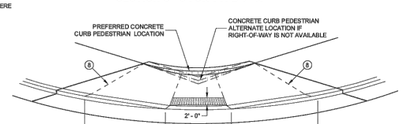


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

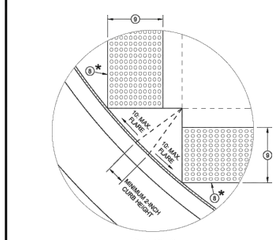
CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

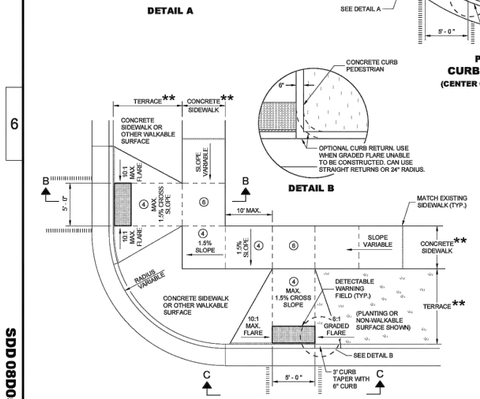
SDD 08D05 - 20a

SDD 08D05 - 20a

SDD 08D05-b Curb Ramps Types 2 and 3



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

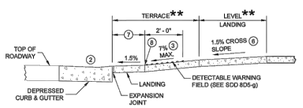
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

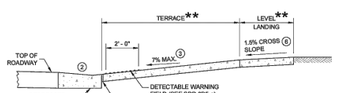
2. GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
3. AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
4. ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
6. PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
7. WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
8. PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
9. WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 3-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



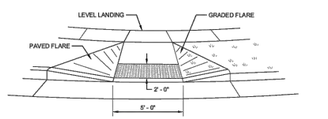
SECTION A - A FOR TYPE 2

★ MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20b

SDD 08D05 - 20b

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

CONSTRUCTION DETAILS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

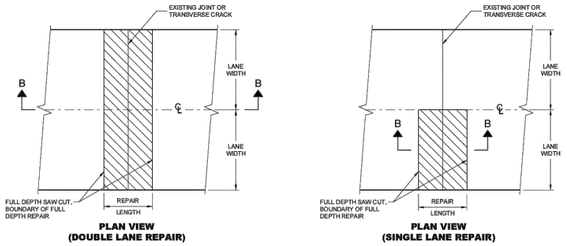
	BY	DATE
SURVEYED		
DRAWN		
DESIGNED		
CHECKED	EPR	01–2025

REVISIONS / ISSUES

NO.	DATE	BY	REMARKS

PAGE NO. **C507**

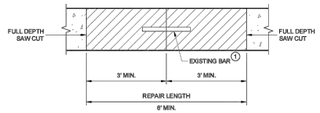
X:\ENG\Projects\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\CONSTRUCTION DETAILS.dwg



PLAN VIEW (DOUBLE LANE REPAIR)

PLAN VIEW (SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B
CONCRETE REMOVAL

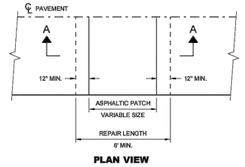
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

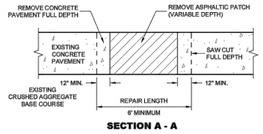
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.



PLAN VIEW



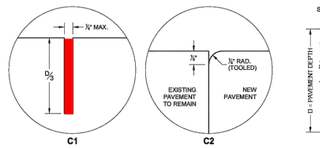
SECTION A - A
HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

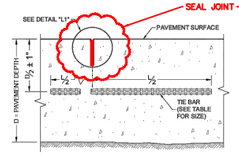
SDD 13C09 - 17a

SDD 13C09 - 17a

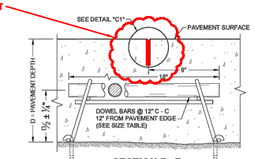


C1 C2

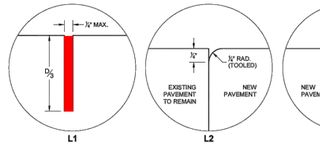
TRANSVERSE JOINTS



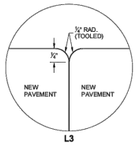
SECTION C - C
SAWED LONGITUDINAL JOINT



SECTION F - F
DOWELED CONTRACTION JOINT

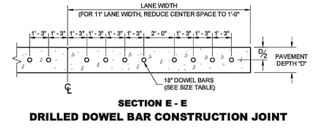


L1 L2



L3

LONGITUDINAL JOINTS



SECTION E - E
DRILLED DOWEL BAR CONSTRUCTION JOINT

GENERAL NOTES

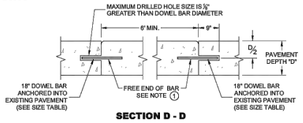
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

① APPLY A THIN UNIFORM COATING OF *SURFACE* TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D - D

TIE BAR TABLE

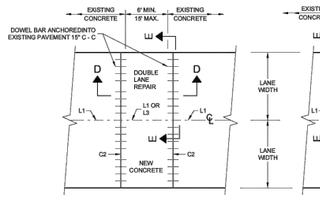
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

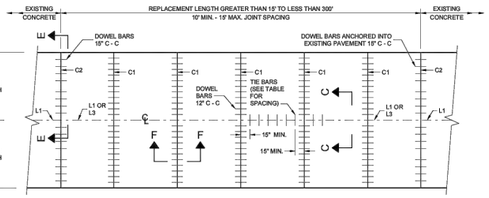
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ½"	15'



PLAN VIEW
MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW
MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 13C09 - 17b

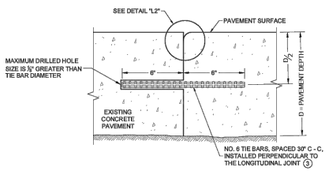
SDD 13C09 - 17b

GENERAL NOTES

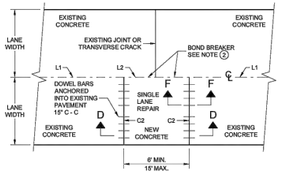
① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 50 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

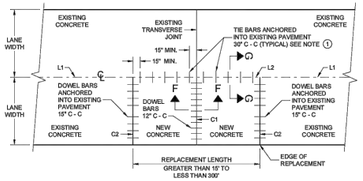
③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



SECTION G - G
TIE BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW
SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW
SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE REPAIR AND REPLACEMENT

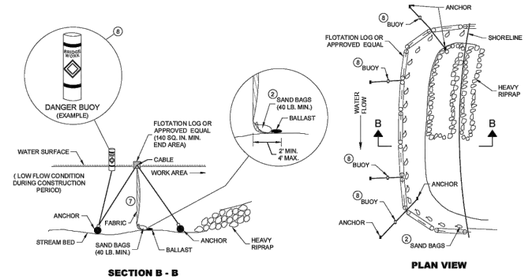
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED: November 2022 DATE — /S/ Peter Kemp P.E. PAVEMENT SUPERVISOR — Portals

SDD 13C09 - 17c

SDD 13C09 - 17c

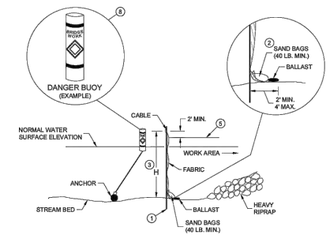
SDD 08E11 Turbidity Barrier



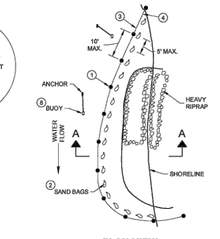
SECTION B - B

PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

SDD 08E11 - 02

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

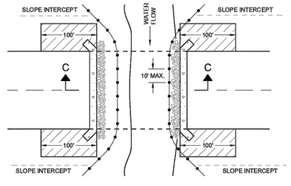
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

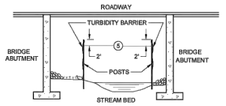
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED: 6/4/02 DATE — /S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER — Portals

SDD 08E11 - 02

X:\ENG\Projects\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\CONSTRUCTION DETAILS.dwg

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

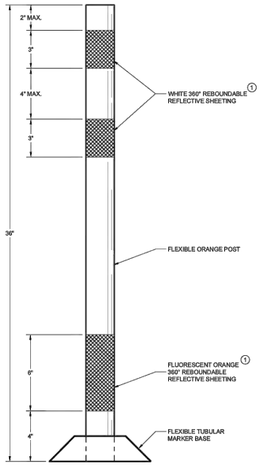
CONSTRUCTION DETAILS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED		
DRAWN		
DESIGNED		
CHECKED	EPR	01-2025

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. **C508**



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABILE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
PHNR.	

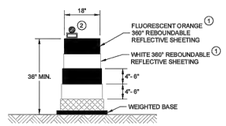
SDD 15C11 - 10a

6

GENERAL NOTES

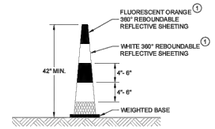
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

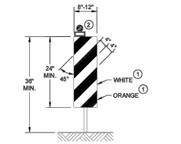
BALLAST WIDTHS RANGE FROM 24"-36"



42" CONE

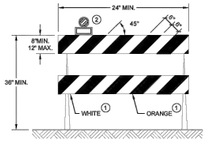
DO NOT USE IN TAPERS
⅓ SPACING OF DRUMS

BALLAST WIDTHS RANGE FROM 14"-20"



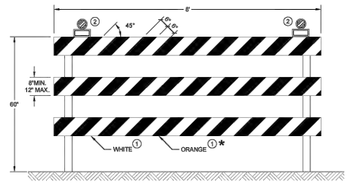
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

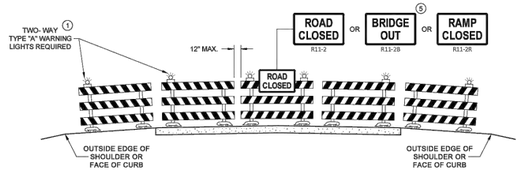
★ IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
PHNR.	

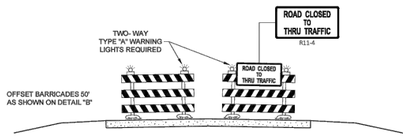
SDD 15C11 - 10b

6

SDD 15C02-b Barricades and Sign for Various Closures



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO6 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
PHNR.	

SDD 15C02 - 08b

6

CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25–01

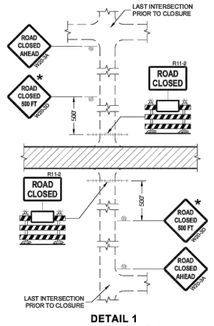
	BY	DATE
SURVEYED		
DRAWN	KAD	01–2025
DESIGNED		
CHECKED	EPR	01–2025

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

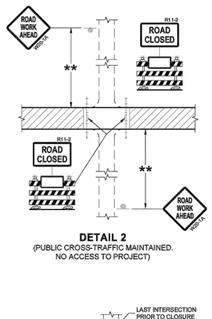
PAGE NO. **C509**

X:\ENG\Projects\City Projects\2025\Project 25-01-Sewer_&_Water_Relay_&_Street\1200-CAD\TRAFFIC CONTROL DETAILS.dwg

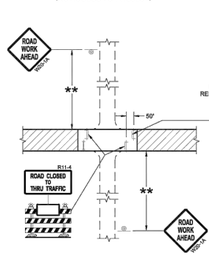
SDD 15C03 Barricades and Signs for Sideroad Closures



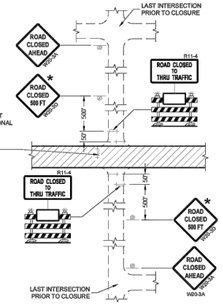
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW.
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

★ OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

★★ 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 — /S/ Andrew Heldtke
DATE — WORK ZONE ENGINEER

FHWA

SDD 15C03 - 05

SDD 15C12-a Traffic Control for Lane Closure With Flagging Operation

LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TEMPORARY PORTABLE RUMBLE STRIP ARRAY
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

USE OF W03-4 SIGN IS OPTIONAL WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — /S/ Andrew Heldtke
DATE — WORK ZONE ENGINEER

FHWA

SDD 15C12 - 09a

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CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

TRAFFIC CONTROL DETAILS

NAME: SEWER AND WATER RELAY AND STREET RESURFACING
PROJECT 25-01

	BY	DATE
SURVEYED		
DRAWN	KAD	01-2025
DESIGNED		
CHECKED	EPR	01-2025

REVISIONS / ISSUES NO.	DATE	BY	REMARKS

PAGE NO. **C510**