

# **CITY OF DE PERE**

## **PROJECT 19-01**

### **SEWER AND WATER RELAY AND STREET RESURFACING**

**BID DATE:  
FEBRUARY 28, 2019  
@ 1:00 PM**

Bid documents, including plans and specifications, are available for download at [www.QuestCDN.com](http://www.QuestCDN.com). The QuestCDN website can also be accessed through the City website at [www.de-pere.org](http://www.de-pere.org). On the homepage, click on the City Departments tab at the top, then click on Public Works, then Engineering, then Construction Projects, then 2019 Construction Projects. Download cost is \$15 for each contract. Bidding documents may be viewed on the QuestCDN website or at the Municipal Service Center.

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.

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**SECTION 00 11 13**

**FEBRUARY 7, 2019 – FEBRUARY 14, 2019**

**CITY OF DE PERE**

**ADVERTISEMENT TO BID**

**PROJECT 19-01**

**SEWER AND WATER RELAY AND STREET RESURFACING**

Sealed proposals will be received by the Board of Public Works of the City of De Pere at the Municipal Service Center, 925 South Sixth Street, De Pere, Wisconsin 54115, until 1:00 PM. Thursday, February 28, 2019, at which time they will be publicly opened and read aloud.

Project 19-01 for which proposals are being sought includes the following approximate quantities:

- 3,200 LF New and Relay Storm Sewer (8-inch to 24-inch) and Associated Appurtenances
- 1,350 LF New and Relay Sanitary Sewer (8-inch to 12-inch) and Associated Appurtenances
- 8,650 LF New and Relay Water Main (8-inch) and Associated Appurtenances
- New Storm Lateral Installation (6-inch), New and Relay Sanitary Sewer Laterals (4-inch and 6-inch) and New and Relay Water Services (1-inch)
- 4,525 Tons Asphaltic Concrete Pavement Placement
- 25,180 SY Asphaltic Concrete Pavement Milling
- 1,750 SY Asphaltic Concrete Pavement Pulverizing
- Concrete Curb and Gutter, Sidewalk, Driveway and Concrete Pavement Replacement
- Restoration

Complete digital project bidding documents are available for viewing and or downloading at [www.QuestCDN.com](http://www.QuestCDN.com) or may be examined at the office of the Director of Public Works. Digital plan documents may be downloaded for \$15 by inputting Quest project #6128500 on Quest's Project Search page. The QuestCDN website can also be accessed through the City website at [www.de-pere.org](http://www.de-pere.org). On the homepage, click on the City Departments tab at the top, then click on Public Works, then Engineering, then Construction Projects, then 2019 Construction Projects.

Each proposal shall be accompanied by a certified check or 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 check or bid bond shall be forfeited to the City of De Pere as liquidated damages.



**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

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 P.M., Monday, February 25, 2019. Prospective bidders who have previously submitted such forms subsequent to January 1, 2019 will not be required to separately submit such form 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 7<sup>th</sup> day of February 2019.

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

Project 19-01

**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 or Invitation 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 1<sup>st</sup> 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. No reports of explorations or tests of subsurface conditions at or contiguous to the Site, or drawing of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.
- 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 submitted 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 drawing 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 5 percent 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.
- 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 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 office 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 enclosed in a plainly marked package with the Project title (and, if applicable, designated portion of the Project for which the Bid is submitted), name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on outside with the notation “BID ENCLOSED.” A mailed Bid shall be addressed to City of De Pere, Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115. Electronically transmitted Bids will not 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 at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

**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 10 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten 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 19-01**

This bid, submitted by the undersigned Bidder to the City of De Pere, in accordance with the Advertisement or Invitation to Bid, which will be received until 1:00 PM Thursday, February 28, 2019 is to furnish and deliver all materials, and to perform and do all work on the project designated, by September 30, 2019.

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 prices (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:** \$ \_\_\_\_\_

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

**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)
- B. 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)

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

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 venture 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).

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

**SECTION 00 41 43**

**CITY OF DE PERE**  
**PROJECT 19-01**  
**BID SCHEDULE**

| ITEM                  | ITEM DESCRIPTION  | UNIT | QUANTITY | UNIT PRICE | AMOUNT BID |
|-----------------------|---|------|----------|------------|------------|
| <b>SANITARY SEWER</b> |   |      |          |            |            |
| SS-01                 | Provide 8" PVC Sanitary Sewer (Natural Backfill)                      | LF   | 100      | \$         | \$         |
| SS-02                 | Provide 8" PVC Sanitary Sewer (Granular Backfill)                     | LF   | 250      | \$         | \$         |
| SS-03                 | Remove and Relay 6" or 4" PVC Sanitary Lateral                        | LF   | 2,600    | \$         | \$         |
| SS-04                 | Provide 4" PVC Sanitary Sewer Lateral                                 | LF   | 70       | \$         | \$         |
| SS-05                 | Provide 8"x4" Sanitary Wye  | EA   | 2        | \$         | \$         |
| SS-06                 | Provide 6" or 4" Saddle to Existing Sanitary Sewer                    | EA   | 85       | \$         | \$         |
| SS-07                 | Remove and Relay Sanitary Sewer Risers                                | LF   | 100      | \$         | \$         |
| SS-08                 | Remove and Relay or Line Sanitary Sewer Risers (Cook Street)          | LF   | 150      | \$         | \$         |
| SS-09                 | Provide 4' Diameter Sanitary Sewer Manhole                            | VF   | 20       | \$         | \$         |
| SS-10                 | Provide 4' Diameter Sanitary Sewer Manhole (115 N. Washington Street) | VF   | 10       | \$         | \$         |
| SS-11                 | Remove and Replace 4' Diameter Sanitary Sewer Manhole                 | VF   | 20       | \$         | \$         |
| SS-12                 | Retrofit Sanitary Sewer Inside Drop                                   | EA   | 3        | \$         | \$         |
| SS-13                 | Core Drill Sanitary Manhole   | EA   | 2        | \$         | \$         |
| SS-14                 | Reconnect to Existing Sanitary Sewer Pipe                             | EA   | 2        | \$         | \$         |

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

| ITEM                                 | ITEM DESCRIPTION   | UNIT | QUANTITY | UNIT PRICE | AMOUNT BID |
|--------------------------------------|--|------|----------|------------|------------|
| <b>SANITARY SEWER (CONTINUED...)</b> |  |      |          |            |            |
| SS-15                                | Connect to Existing Sanitary Sewer Manhole with Outside Drop (Parkview Road) | LS   | 1        | \$         | \$         |
| SS-16                                | Abandon Existing Sanitary Manhole (Parkview Road)                            | LS   | 1        | \$         | \$         |
| <b>STORM SEWER</b>                   |  |      |          |            |            |
| ST-01                                | Remove and Relay 18" PVC or RCP Class (Class III) Storm Sewer                | LF   | 20       | \$         | \$         |
| ST-02                                | Provide 12" PVC or RCP Class (Class III) Storm Sewer                         | LF   | 380      | \$         | \$         |
| ST-03                                | Remove and Relay 12" PVC, RCP Class (List Class), or PP Storm Sewer          | LF   | 70       | \$         | \$         |
| ST-04                                | Provide 8" PVC Storm Sewer   | LF   | 2,400    | \$         | \$         |
| ST-05                                | Provide 6" PVC Storm Sewer Lateral   | LF   | 2,100    | \$         | \$         |
| ST-06                                | Provide 12"x12" Storm Branch   | EA   | 1        | \$         | \$         |
| ST-07                                | Provide 8"x6" Storm Branch or Inserta Tee                                    | EA   | 50       | \$         | \$         |
| ST-08                                | Provide 4' Diameter Storm Manhole  | VF   | 75       | \$         | \$         |
| ST-09                                | Remove and Replace 4' Diameter Storm Manhole                                 | VF   | 5        | \$         | \$         |
| ST-10                                | Provide Type B Inlet   | EA   | 6        | \$         | \$         |
| ST-11                                | Remove and Replace Type B Inlet  | EA   | 11       | \$         | \$         |
| ST-12                                | Core Drill Existing Main with NPC Kor-N-Tee                                  | EA   | 6        | \$         | \$         |
| ST-13                                | Core Drill Existing Structure  | EA   | 4        | \$         | \$         |
| ST-14                                | Reconnect to Structure and/or Existing Pipe                                  | EA   | 20       | \$         | \$         |

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

| ITEM                              | ITEM DESCRIPTION   | UNIT | QUANTITY | UNIT PRICE | AMOUNT BID |
|-----------------------------------|--|------|----------|------------|------------|
| <b>STORM SEWER (CONTINUED...)</b> |  |      |          |            |            |
| ST-15                             | Storm Sewer Dig Down and Repair – 5 feet                               | EA   | 2        | \$         | \$         |
| ST-16                             | Storm Sewer Dig Down and Repair Offset Joint                           | EA   | 1        | \$         | \$         |
| ST-17                             | Abandon/Remove Existing Storm Sewer Appurtenances                      | LS   | 1        | \$         | \$         |
| <b>WATER MAIN</b>                 |  |      |          |            |            |
| W-01                              | Provide 10" PVC Water Main   | LF   | 60       | \$         | \$         |
| W-02                              | Provide 8" PVC Water Main  | LF   | 7,700    | \$         | \$         |
| W-03                              | Provide 6" PVC Water Service or Hydrant Lead                           | LF   | 300      | \$         | \$         |
| W-04                              | Provide 1" HDPE Water Service – Open Cut                               | LF   | 3,300    | \$         | \$         |
| W-05                              | Provide 1" Corporation and Curb Stop                                   | EA   | 110      | \$         | \$         |
| W-06                              | Provide 2" Corporation with Plug/Saddle with 2" HDPE                   | EA   | 7        | \$         | \$         |
| W-07                              | Provide Hydrant 6.5' Bury  | EA   | 15       | \$         | \$         |
| W-08                              | Provide 10" Gate Valve   | EA   | 1        | \$         | \$         |
| W-09                              | Provide 8" Gate Valve  | EA   | 30       | \$         | \$         |
| W-10                              | Provide 6" Gate Valve  | EA   | 10       | \$         | \$         |
| W-11                              | Provide Connection to Existing Water Main                              | EA   | 22       | \$         | \$         |
| W-12                              | Provide Connection to Existing Water Main 8"x 8" Tapping Tee and Valve | EA   | 1        | \$         | \$         |
| W-13                              | Provide Connection to Existing Water Main 6"x 6" Tapping Tee and Valve | EA   | 1        | \$         | \$         |

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

| ITEM                             | ITEM DESCRIPTION  | UNIT | QUANTITY | UNIT PRICE | AMOUNT BID |
|----------------------------------|---|------|----------|------------|------------|
| <b>WATER MAIN (CONTINUED...)</b> |   |      |          |            |            |
| W-14                             | Provide Temporary Water   | LS   | 1        | \$         | \$         |
| W-15                             | Abandon/Remove Water Main and Appurtenances                               | LS   | 1        | \$         | \$         |
| <b>STREET AND DRAINAGE</b>       |   |      |          |            |            |
| SD-01                            | Mill Asphaltic Concrete Pavement  | SY   | 25,500   | \$         | \$         |
| SD-02                            | Provide Asphaltic Concrete Pavement Type 4 LT 58-28 S, 1 3/4" Upper Layer | TON  | 3,100    | \$         | \$         |
| SD-03                            | Provide Asphaltic Concrete Pavement Type 3 LT 58-28 S, 2 1/4" Lower Layer | TON  | 1,100    | \$         | \$         |
| SD-04                            | Remove and Replace 24" Concrete Curb and Gutter                           | LF   | 3,500    | \$         | \$         |
| SD-05                            | Remove and Replace 6" Concrete Sidewalk, Ramp, and Driveway               | SY   | 320      | \$         | \$         |
| SD-06                            | Remove and Replace 4" Concrete Sidewalk                                   | SY   | 1,100    | \$         | \$         |
| SD-07                            | Provide #4 Reinforcement Bars for Curb and Sidewalk                       | LF   | 8,500    | \$         | \$         |
| SD-08                            | Drilled Tie Bars (Existing Sidewalk, Driveway, and Curb and Gutter)       | EA   | 1,400    | \$         | \$         |
| SD-09                            | Provide Detectable Warning Field (Natural)                                | EA   | 6        | \$         | \$         |
| SD-10                            | Landscaping - Topsoil, Seed, Fertilizer and Mulch -No. 40 Seed Mix        | SY   | 300      | \$         | \$         |



**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

| ITEM                        | ITEM DESCRIPTION             | UNIT | QUANTITY | UNIT PRICE | AMOUNT BID |
|-----------------------------|------------------------------|------|----------|------------|------------|
| <b>SPECIAL CONSTRUCTION</b> |                              |      |          |            |            |
| SC-01                       | Aggregate Slurry Backfill    | CY   | 50       | \$         | \$         |
| SC-02                       | Inlet Protection Type B      | EA   | 60       | \$         | \$         |
| SC-03                       | Adjust Inlet                 | EA   | 20       | \$         | \$         |
| SC-04                       | Adjust Manhole               | EA   | 25       | \$         | \$         |
| SC-05                       | Reconstruct Manhole          | VF   | 30       | \$         | \$         |
| SC-06                       | Polystyrene Insulation Board | LF   | 200      | \$         | \$         |
| SC-07                       | Remove Tree and Grind Stump  | ID   | 260      | \$         | \$         |
| <b>TOTAL</b>                |                              |      |          |            | \$         |

**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 19-01 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:

| <u>ITEM</u>           | <u>MATERIAL</u> | <u>SUPPLIER</u> |
|-----------------------|-----------------|-----------------|
| Water Main (PVC)      | <hr/>           | <hr/>           |
| Valves                | <hr/>           | <hr/>           |
| Hydrants              | <hr/>           | <hr/>           |
| Manholes              | <hr/>           | <hr/>           |
| Inlets                | <hr/>           | <hr/>           |
| Storm Sewer (PVC/RCP) | <hr/>           | <hr/>           |
| Sanitary Sewer (PVC)  | <hr/>           | <hr/>           |

**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.

| <u>PORTION OF WORK</u>         | <u>BUSINESS NAME</u> | <u>BUSINESS ADDRESS</u> |
|--------------------------------|----------------------|-------------------------|
| Concrete Pavement              |                      |                         |
| Asphaltic Concrete Pavement    |                      |                         |
| Concrete Driveway and Sidewalk |                      |                         |
| Concrete Curb and Gutter       |                      |                         |
| Utility Work                   |                      |                         |
| Landscaping Restoration        |                      |                         |
| Tree Removal                   |                      |                         |

**Project 19-01  
Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

**SECTION 00 51 00**

**NOTICE OF AWARD**

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

Project Description: 19-01 Sewer and Water Relay and Street Resurfacing

The City has considered the proposal submitted by you dated February 28, 2019 for the above-described project in response to its Advertisement for Bids dated February 7, 2019 and February 14, 2019.

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 \_\_\_\_ th day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
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 Number and Name, 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 (1<sup>st</sup> Advertising Date) and ( 2<sup>nd</sup> Advertising Date).
- (b) Drawings designated for Project Number and Name dated (1<sup>st</sup> Advertising Date).
- (c) City of De Pere 2019 Construction Specifications.
- (d) Special Provisions dated (1<sup>st</sup> Advertising Date)
- (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 22)(\$ ) 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 day 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 0052-13-2, 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).
    - 3) Proposed Products Form (Page 00 43 33-1)

**City of De Pere**

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

Approved as to Form By: \_\_\_\_\_ (City Attorney)

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

BY: \_\_\_\_\_ (MAYOR)

BY: \_\_\_\_\_ (CLERK-TREASURER)



**SECTION 00 55 00**

**NOTICE TO PROCEED**

Date: \_\_\_\_\_

(CONTRACTOR NAME)  
(ADDRESS)  
(ADDRESS)

PROJECT: (PROJECT NUMBER AND NAME)

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 owner, for the use and benefit of claimants as herein below defined in the amount (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 (PROJECT NUMBER), 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 sub-contractor 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

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

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:

|                    |                       |
|--------------------|-----------------------|
| _____<br>(WITNESS) | _____<br>(CONTRACTOR) |
| _____<br>(WITNESS) | _____<br>(SURETY)     |

**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 **(#)**, 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)

**Project 19-01**

**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

**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       |           |            | 1. ORIGINAL CONTRACT PRICE:.....   |        |
|------------------------------|-----------|------------|--|--------|
| Number                       | Additions | Deductions | 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 (5% up to 50% of Contract or 2.5% of 100% of Contract | \$0.00 |
| Total                        | \$0.00    | \$0.00     | 6. AMOUNT ELIGIBLE TO DATE (Line 4 minus 5):.....                                  | \$0.00 |
| NET CHANGE BY CHANGE ORDERS: |           |            | 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:

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\_\_\_\_\_  
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:

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Contractor's Amended Responsibilities:

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**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

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

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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
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, 2019 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. S. Adams Street from Charles Street to George Street
- b. Cook Street from S. Erie Street to Robin Street
- c. Hockers Street from S. Erie Street to Tanager Trail
- d. James Street from N. Broadway Street to termini west of Front Street
- e. Parkview Avenue from Ashwaubenon Creek to N. Ashland Avenue
- f. Robin Street from Hockers Street to Mayfair Street
- g. Silver Court from Silver Street to cul-de-sac
- h. Silver Street from Cardinal Street to Mayfair Street
- i. Star Street from Hockers Street to Cook Street
- j. S. Washington Street from Charles Street to George Street
- k. Watermain extension at 1091 N. Broadway Street
- l. Sanitary Manhole Construction at 115 N. Washington Street
- m. Storm Sewer Spot Repairs at 260 S. Clay Street

##### **2. Work will be performed under the following prime contract:**

- a. 19-01 Sewer and Water Relay and Street Resurfacing

#### **B. The Work includes:**

1. Water main and associated appurtenances relay and new.
2. Storm sewer and associated appurtenances relay and new, spot storm sewer, inlet lead and inlet repair and replacement.
3. Sanitary sewer and associated appurtenances relay and new and lateral replacement.
4. Manhole adjustment and repair.
5. Spot concrete curb and gutter repair and replacement and new curb and gutter.
6. Driveway and sidewalk removal and replacement.
7. Mill asphaltic concrete pavement.
8. Unclassified excavation.
9. Asphaltic concrete pavement.
10. Terrace restoration.
11. Erosion control.
12. Traffic control.

**1.4 WORK SEQUENCE**

- A. The City anticipates taking this contract to the Board of Public Works on Monday, March 11, 2019 and Common Council on Tuesday, March 19, 2019 for consideration of award of Contract 19-01 Sewer and Water Relay and Street Resurfacing.
- B. The anticipated start of construction is Monday, April 1, 2019.
- C. All work under this project shall be completed by Friday, September 30, 2019.
- D. All work on Parkview Avenue shall be completed by Tuesday, April 30, 2019.
- E. Conduct construction activities to maintain access to businesses and residences throughout construction.
- F. Topsoil, seed, and mulch shall be completed prior to asphaltic concrete pavement placement.
- G. All water main tracer wire is to be tested prior to paving.
- H. As utility work is completed on a given street, concrete restoration, milling and asphalt binder course and asphalt driveway wedging shall be completed immediately. Asphalt surface can be completed at the end of the project. This pertains to the work on Hockers Street, Robin Street, Cook Street, Star Street, Silver Street and Silver Court.
- I. The calendar days listed below are the allowed time for each location from the beginning of construction of a street to substantial completion of that area. Substantial completion is defined as having the street paved with surface course of asphaltic concrete pavement.

| <b>Location</b>  | <b>Calendar Days</b>    |
|--|-------------------------|
| Hockers Street, Robin Street, Cook Street, Star Street, Silver Street and Silver Court | Entire Project Duration |
| S. Adams Street and S. Washington Street   | 45                      |
| Parkview Road  | 10                      |
| James Street   | 23                      |
| 1091 N Broadway Street   | 10                      |

Please note that the allowed contract calendar days shown in the table above (270 calendar days) exceed the total project duration between the proposed start date of April 1, 2019 and the completion date of September 30, 2019 (182 calendar days). IT is expected that the contractor work on multiple streets concurrently to ensure the satisfactory completion of the project within the project duration. Failure to meet the interim contract dates listed above warrants the enforcement of liquidated damages outlined in the City of De Pere Standard Specifications.

**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. This contract includes the following:
  - 1. Project 19-03 – CIPP Sewer Lining
    - a. Sewer Lining on Cardinal Street from Hockers Street to Cook Street.

2. Project 19-04 – James Street Reconstruction
    - a. James Street from N. Broadway Street to Wisconsin Street
  3. Project 19-05 – Sidewalk, Curb and Concrete Pavement Repair, Project 19-19 Mudjacking and Project 19-19A Sidewalk Grinding
    - a. The replacement area in 2019 is the east side of the Fox River, bounded by the north City limits, Webster Avenue, Charles Street and the Fox River
  4. Project 19-13 – Crackfilling
    - a. Cardinal Street from O’Keefe Road to Cook Street
    - b. N. Washington Street from George Street to the North.
- C. 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](mailto:lsarau@newwater.us)) (920-438-1039)
- B. AT&T, Shea Gorzelanczyk, ([sg2528@att.com](mailto:sg2528@att.com)) (920-433-4250)
- C. Wisconsin Public Service, Bob Laskowski, ([rtlaskowski@wisconsinpublicservice.com](mailto:rtlaskowski@wisconsinpublicservice.com)) (920-617-2775)
- D. Charter, Vince Albin, ([vince.albin@charter.com](mailto:vince.albin@charter.com)) (920-378-0444)
- E. Nsight, Rick Vincent, ([rick.vincent@nsight.com](mailto:rick.vincent@nsight.com)) (920-617-7316)
- F. TDS Metrocom, Steve Jakubiec, ([steve.jakubiec@tdstelecom.com](mailto:steve.jakubiec@tdstelecom.com)) (920-882-4166)
- G. Net-Lec (Mi-Tech Services), Dennis Lafave, ([dlafave@mi-tech.us](mailto:dlafave@mi-tech.us)) (920-619-9774)
- H. Level3 (Mi-Tech Services), Chris Kraus, ([ckraus@mi-tech.us](mailto:ckraus@mi-tech.us)) (414-550-6201)

#### 1.9 MISCELLANEOUS PROVISIONS

- A. Notification to Residents – The Contractor shall individually notify 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 access to properties during construction, excluding time when utility work is occurring in front of the drive or when the curb and gutter and/or driveway are replaced.
- C. Maintain garbage pickup and mail service throughout construction.
- D. Provide a traffic control plan for the following locations:

**Project 19-01**  
**Sewer and Water Relay and Street Resurfacing**

**City of De Pere**

1. Any anticipated lane closures on George Street to accommodate water main relay on S. Adams Street and/or S. Washington Street.
  2. Any anticipated lane closures on N. Broadway Street to accommodate water main relay on James Street.
  3. Any anticipated lane closures on Broadway Street to accommodate the water main extension at 1091 N. Broadway Street.
- E. Saw cut or mill all utility trenches. If utility trenches are milled, salvage millings and place on trenches with roller.
- F. All water mains will be a minimum of 6.0' bury and water services of 7.0' bury unless otherwise noted on plans.
- G. No work may occur on James Street or 1091 N. Broadway Street until after Memorial Day, Monday, May 27, 2019 to accommodate the Kiwanis Memorial Day Parade.
- H. The closure required for water crossing of the Fox Point Boat Launch entrance shall be completed in four hours maximum with the trench restored and backfilled with gravel backfill at the conclusion of the four hours. Asphalt paving must be staged to allow one lane of traffic at all times to enter and exit the boat launch.
- I. 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:

| <b>Location</b>  | <b>Route</b>   |
|--|--|
| Hockers Street, Robin Street, Cook Street, Star Street, Silver Street and Silver Court | Cook or Hockers Street via S. Erie Street via Merrill Street or O'Keefe Road |
| S. Adams Street and S. Washington Street   | George Street  |
| Parkview Road  | Ashland Avenue   |
| James Street   | N. Broadway Street   |
| 1091 N Broadway Street   | N. Broadway 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 #           |
| 1. Sanitary Sewer Mains (Granular Backfill)                      | SS-01                |
| 2. Sanitary Sewer Mains (Natural Backfill)                       | SS-02                |
| 3. Sanitary Sewer Laterals                                       | SS-03 & SS-04        |
| 4. Sanitary Sewer Service Branches                               | SS-05 & SS-06        |
| 5. Sanitary Sewer Risers   | SS-07 & SS-08        |
| 6. Sanitary Sewer Manholes                                       | SS-09, SS-10 & SS-11 |
| 7. Retrofit Sanitary Sewer Inside Drop                           | SS-12                |
| 8. Core Drilling to Existing Sanitary Manhole                    | SS-13                |
| 9. Connect to Existing Sanitary Sewer Pipe                       | SS-14                |
| 10. Connect to Existing Sanitary Sewer Manhole with Outside Drop | SS-15                |
| 11. Abandon/Remove Existing Sanitary Sewer Appurtenances         | SS-16                |
- 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 provide 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.
- 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 MAINS (NATURAL BACKFILL)**

- A. The unit price for Sanitary Sewer Main (Natural 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
- 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 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.

#### **1.6 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.

#### **1.7 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 right of way.
  4. Installation of the liner.
  5. Dispose of material from sewer pipe.
  6. Tracer wire.
- B. Measurement for payment will be the actual length of pipe along the centerline of the installed sewer service riser pipe from centerline of fitting to centerline of fitting having a vertical rise of 45 degrees or greater with no deductions for fittings.
- C. The unit of measurement for payment is linear feet.

#### **1.8 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.

**1.9 RETROFIT SANITARY SEWER INSIDE DROP**

- A. The unit price for Retrofit Sanitary Sewer Inside Drop work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Connection to existing sanitary sewer lateral including transition coupling.
  - 3. 2-inch stainless steel strap.
  - 4. ½-inch by 4-inch stainless steel lag screws.
  - 5. 4-inch by 12-inch concrete or masonry saddle block.
  - 6. Mortar blocking behind 90 degree bend.
  - 7. Polyvinyl Chloride (PVC) pipe and appurtenances to extend flowline of drop to manhole trough.
- B. Measurement for payment will be the actual number complete.
- C. The unit of measurement for payment is each.

**1.10 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.

**1.11 CONNECT TO EXISTING SANITARY SEWER PIPE**

- A. The unit price for Connect to Existing Sanitary Sewer Pipe 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 compaction.
- B. Measurement for payment will be the actual number complete.

C. The unit of measurement for payment is each.

**1.12 CONNECT TO EXISTING SANITARY SEWER MANHOLE WITH OUTSIDE DROP**

A. The unit price for Connect to Existing Sanitary Sewer Manhole with Outside Drop work includes:

1. General Work Items of Article 1.2.
2. Install outside drop.
3. Install A-Lok boot.
4. Backfilling and compaction.

B. Measurement for payment will not be made.

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

**1.13 ABANDON/REMOVE EXISTING SANITARY SEWER APPURTENANCES**

A. The unit price for Abandon/Remove Existing Sanitary Sewer Appurtenances work includes:

1. General Work Items of Article 1.2.
2. Excavating.
3. Install bulkheads and abandon sewer.
4. Breaking the bottom or removal of the existing manhole.
5. Provide and placing flowable fill.
6. Backfilling and compacting.

B. Measurement for payment will not be made.

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

END OF SECTION

**SECTION 01 22 02**  
**MEASUREMENT AND PAYMENT STORM SEWER**

**PART 1 – GENERAL**

**1.1 SUMMARY**

**A. Section includes:**

- |  |                             |
|--|-----------------------------|
| 1. Storm Sewer Mains (Granular Backfill)             | ST-01, ST-02, ST-03 & ST-04 |
| 2. Storm Sewer Laterals                              | ST-05                       |
| 3. Storm Sewer Branches                              | ST-06 & ST-07               |
| 4. Storm Sewer Manholes                              | ST-08 & ST-09               |
| 5. Catch Basin/Inlets                                | ST-10 & ST-11               |
| 6. Core Drill Existing Structure or Pipe             | ST-12 & ST-13               |
| 7. Reconnect to Existing Storm Sewer Pipe or Manhole | ST-14                       |
| 8. Storm Sewer Dig Down and Repair                   | ST-15 & ST-16               |
| 9. Abandon/Remove Storm Sewer and Appurtenances      | ST-17                       |

**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 abandoned 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 provide 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 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. Installed 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.

**1.5 STORM SEWER BRANCHES/INSERTA TEES**

- A. The unit price for Storm Sewer 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.

**1.6 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.

#### **1.7 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.

#### **1.8 CORE DRILL EXISTING STRUCTURE OR PIPE**

- A. The unit price for Core Drill Existing Structure or Pipe work includes:
1. General Work Items of Article 1.2.
  2. Core drilling into existing storm sewer structure or pipe.
  3. Install A-lok boot (at manholes) or mortar.
  4. Reform flow line in existing storm structures.
- B. Measurement for payment will be the actual number completed.
- C. The unit of measurement for payment is each.

**1.9 RECONNECT TO EXISTING STORM SEWER PIPE OR MANHOLE**

- A. The unit price for Reconnect to Existing Storm Sewer Pipe or Manhole work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Sawing existing storm sewer.
  - 3. Connection to existing storm pipe or manhole.
- B. Measurement for payment will be the actual number completed.
- C. The unit of measurement for payment is each.

**1.10 STORM SEWER DIG DOWN AND REPAIR**

- A. The unit price for Storm Sewer Dig Down and Repair work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Excavating.
  - 3. Exposing storm sewer line for repairs.
  - 4. Sawing existing storm sewer.
  - 5. Remove and replace pipe (if applicable).
  - 6. Connection to existing storm sewer (if applicable).
  - 7. Repairing offset joints where present.
- B. Measurement for payment will be the actual number complete.
- C. The unit of measurement for payment is each.

**1.11 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 sewer.
  - 4. Provide and placing flowable fill.
  - 5. Backfilling and compacting.
- B. Measurement for payment will not be made.
- 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:**

- |   |                   |
|---|-------------------|
| 1. Water Mains (Granular Backfill)                      | W-01, W-02        |
| 2. 6-Inch Water Main Services or Hydrant Leads          | W-03              |
| 3. Water Services                                       | W-04              |
| 4. Corporation and Curb Stop                            | W-05              |
| 5. 2-Inch Corporation with Plug or Saddle and HDPE Pipe | W-06              |
| 6. Fire Hydrants  | W-07              |
| 7. Valves   | W-08, W-09 & W-10 |
| 8. Connection to Existing Water Mains                   | W-11, W-12 & W-13 |
| 9. Provide Temporary Water                              | W-14              |
| 10. Abandon/Remove Water Main and Appurtenances         | W-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 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 provide 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 6-INCH WATER MAIN SERVICES OR HYDRANT LEAD**

- A. The unit price for 6-inch Water Main Services or Hydrant Lead 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. Blocking and joint restraints.
  - 5. Tracer wire.
  - 6. Disinfection of pipeline.
  - 7. Polyethylene encasement of ductile iron or cast iron pipe and fittings.
- 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.

**1.5 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. Installed 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.

**1.6 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.

**1.7 2-INCH CORPORATION WITH PLUG OR SADDLE AND HDPE PIPE**

A. The unit price for 2-inch Corporation with Plug or Saddle and HDPE Pipe work includes:

1. General Work Items of Article 1.2.
2. Provide and install 2-inch corporation with plug (where required) with 2-inch HDPE pipe.
3. Provide and install 2-inch corporation with saddle (where required) with 2-inch HDPE pipe.
4. 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.

**1.8 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.

**1.9 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.

#### **1.10 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.

#### **1.11 PROVIDE TEMPORARY WATER**

A. The unit price for Provide Temporary Water work includes:

1. General Work Items of Article 1.2.
2. 4-Inch PVC Temporary Water Main.
3. 1-inch HDPE Temporary Water Service provided to each property controlled with a 1-inch valve at the property connection.
4. Safe Sample and pressure testing prior to temporary water connection to private property.
5. Connection to hydrant to feed temporary system with valve.

B. Measurement of payment will not be made.

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

#### **1.12 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.

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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:**

- |  |               |
|--|---------------|
| 1. Mill Asphaltic Concrete Pavement                  | SD-01         |
| 2. Asphaltic Concrete Pavement                       | SD-02 & SD-03 |
| 3. Portland Cement Concrete Curb and Gutter          | SD-04         |
| 4. Portland Cement Concrete Driveway and Sidewalk    | SD-05 & SD-06 |
| 5. Deformed Reinforcement Bars                       | SD-07         |
| 6. Drilling Tie Bars and Dowel Bars                  | SD-08         |
| 7. Detectable Warning Field Natural                  | SD-09         |
| 8. Landscaping – Topsoil, Seed, Fertilize, and Mulch | SD-10         |

**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 provide by the Owner.
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 MILL ASPHALTIC CONCRETE PAVEMENT**

- A. The unit price for Mill Asphaltic Concrete Pavement work includes:
  1. General Work Items of Article 1.2.
  2. Milling to length, width and depth as shown on Drawings or specified elsewhere.
  3. Hauling and disposing of millings.
  4. Cleaning of area milled.
- B. Measurement for payment will be the average horizontal length and width of roadway.
- C. The unit of measurement for payment is square yards.

**1.4 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<br>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.

**1.5 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.

**1.6 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.

**1.7 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 2 number 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.

**1.8 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.

**1.9 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 2 feet by 4 feet.

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

C. The unit of measurement for payment is each.

**1.10 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 15 feet beyond the top of either side of ditches outside the right of way.

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:**

- |   |               |
|---|---------------|
| 1. Aggregate Slurry Backfill                      | SC-01         |
| 2. Inlet Protection Erosion Control               | SC-02         |
| 3. Adjusting Existing Structure Frame and Casting | SC-03 & SC-04 |
| 4. Manhole Reconstruct                            | SC-05         |
| 5. Polystyrene Insulation Board                   | SC-06         |
| 6. Remove Tree and Grind Stump                    | SC-07         |

**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 provide by the Engineer.
7. Regulatory requirements.
8. Quality assurance and quality control testing and inspections.
9. Shop drawings and other submittals.

**1.3 AGGREGATE SLURRY BACKFILL**

- A. The unit price for Aggregate Slurry Backfill work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Provide aggregate slurry backfill mix per section 31 23 33 of the City Standard Specifications.
  - 3. All items of work to protect existing underground utilities.
- B. Measurement of payment will be the actual volume of slurry backfill installed.
- C. The unit of measurement for payment is cubic yards.

**1.4 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.

**1.5 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. City of De Pere will provide structure castings. Contractor will pick up castings at 925 South Sixth Street.
  - 3. Removal of the casting and existing adjusting rings from the structure as required.
  - 4. Providing concrete adjusting rings and a 2 inch rubber riser ring from the WisDOT approved product list.
  - 5. Bituminous plastic cement sealing the exterior of the adjusting rings and casting.
  - 6. The ring will be secured to the precast section with a 3 ½" wide Kent Seal or equal.
  - 7. 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.

8. Initial and final adjustment.
  9. 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.

**1.6 MANHOLE RECONSTRUCT**

- A. The unit price for Manhole Reconstruct work includes:
1. General Work Items of Article 1.2.
  2. City of De Pere will provide structure castings. Contractor will pick up castings at 925 South Sixth Street.
  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" 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 lowest section reconstructed to the top of the frame and cover as set.
- C. The unit of measurement for payment is vertical feet.

**1.7 POLYSTYRENE INSULATION BOARDS**

- A. The unit price for Polystyrene Insulation Boards work includes:
1. General Work Items of Article 1.2.
  2. Supply and install a 2-inch thick insulation board per the Standard Specifications along the top of the water main and/or service and 6-inch above the water main and/or service with pipe bedding in between the polystyrene board and pipe.
- B. Measurement and payment will be the horizontal length installed.
- C. The unit of measurement for payment is linear feet.

**1.8 REMOVE TREE AND GRIND STUMP**

- A. The unit price for Remove Tree and Grind Roots work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Cutting and dispose of trees.
  - 3. Removing and disposing of stump.
- B. Measurement and payment will be the will be the inch diameter of trees removed.
- C. The unit of measurement for payment is inch diameter.

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 Tuesday 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 4<sup>th</sup> 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. Mail boxes.
  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 4 by 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 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 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 four (4) hard copies or electronic copies 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 preliminary submittal schedule, print and distribute copies of the revised submittal schedule to the Engineer, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the field office.
  - 1. When revisions are made, distribute to the same parties and post in the same locations. 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 four (4) copies of each required submittal. The Engineer will retain two copies, and return the others 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

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“Rejected and Resubmit” at the Project Site or elsewhere where work is in progress.

- B. Unsolicited Submittals: the Engineer/Architect 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 USDOT 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. WDNR – Water Main Extension
  - 2. WDNR – WRAPP (Storm Water Notice of Intent)
  - 3. WDNR – Sanitary Sewer Extension



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

PART 2 – PRODUCTS

PART 3 – EXECUTION

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

**PART 2 – PRODUCTS**

**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 working days advance notification when ready for engineering surveys for construction to be provided by the Engineer.

**3.2 ENGINEERING SURVEYS TO BE PROVIDE 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 72 hours before the related work begins.
  - 2. Provide construction reference stakes for subgrade at a minimum of 50 foot intervals and maximum of 100 foot intervals on tangents. Provide construction reference stakes for subgrade at 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 at a minimum of 50 foot intervals and maximum of 100 foot intervals on tangents. Provide construction reference stakes for top of crushed aggregate at 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 01 30**  
**CURED IN PLACE PIPE (CIPP)**

**PART 1 – GENERAL**

**1.1 SUMMARY**

**A. Section Includes**

1. Section includes lining processes for the rehabilitation of existing sanitary sewer mains using cured-in-place pipe.

**1.2 REFERENCES**

**A. American Society for Testing and Materials (ASTM):**

1. ASTM D543 Test Method for Resistance of Plastics to Chemical Reagents
2. ASTM D638 Test Method for Tensile Properties of Plastics
3. ASTM 790 Test Method for Tensile Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
4. ASTM 903 Standard Test for Delamination of Plastic Composites
5. ASTM F1216 Rehabilitation of Existing Pipelines and Conduits by Inversion and Curing of a Resin-Impregnated Tube
6. ASTM D2990 Standard Test Methods for Flexural Properties of Unreinforced Plastics and Electrical Insulating Materials
7. ASTM 3034 Type PSM Poly (Vinyl/chloride)(PVC) Sewer Pipe and Fittings
8. ASTM D1248 Specification for Polyethylene Plastics molding and Extrusion Materials.
9. ASTM F1504 Standard Specification for Folded Poly (Vinyl/Chloride) (PVC) Pipe for Existing Sewer and Condit Rehabilitation
10. ASTM F1533 Standard Specification for Deformed Polyethylene (PE) Liner
11. ASTM D1784 Standard Specification for Rigid Poly (Vinyl/Chloride) and Chlorinated Poly (Vinyl/Chloride) Components
12. ASTM D2122 Method for Determining Dimensions of Thermoplastic Pipe and Fittings
13. ASTM D3350 Specifications for Polyethylene Plastics Pipe and Fittings Material

**1.3 SUBMITTALS**

**A. Product Data.**

1. Manufacturer's product literature and application and installation requirement for materials used in liner.
2. Manufacturer's product certification for materials used in liner.
3. Liner Pipe Thickness Design (Cured-in-Place).

4. Liner Pipe Thickness Design shall be in accordance with Appendix XI of ASTM F1216. In the liner thickness calculations shall be based on the following.
    - a. Fully deteriorated Pipe (No structure support from existing pipe).
    - b. Minimum ovality of Host Pipe shall be 2%.
    - c. Height of Groundwater shall be 50% of Pipe Depth.
    - d. The Enhancement Factor (K) shall not be greater than 7.0.
    - e. The Minimum Safety Factor shall be 2.0.
    - f. The Flexural Modulus of Elasticity shall be reduced 50% to account for long term effects and used in the design equation EL.
  5. No liner shall be installed until it has been approved for installation.
  6. No liner will be approved for installation until liner thickness calculations have been submitted and reviewed for conformance with the specifications and installation requirements.
- B. Miscellaneous Submittals
1. Copies of video DVD (MPEG 2 format) of pre-lining and post-lining.
  2. Test results required under Part 3.
  3. Proposed plan for bypassing sewage during liner installation.
  4. Documentation of when liner is impregnated and the potential life of impregnated liner.
  5. Provide photographs of existing ground conditions prior to performing sanitary sewer lining.

#### 1.4 QUALITY ASSURANCE

- A. Corrosion
1. Fabricate finished liner from materials which, when cured, will be chemically resistant to withstand internal exposure to domestic sewage.
- B. Manhole Connections
1. All manhole connections shall be watertight and approved by the Engineer.
- C. Testing
1. Test finished pipe liner in accordance with this section.

### PART 2 – PRODUCTS

#### 2.1 CURED – IN – PLACE PIPE LINER (CIPP LINER)

- A. Resin
1. Liner Bag: Polyester resin for general chemical applications.

- a. Resin shall not contain fillers, except those required for viscosity control or fire retardance. Up to 5% by mass thixotropic agent which will not interfere with visual inspection may be added for viscosity control.
- b. Resins may contain pigments, dyes or colorants which will not interfere with visual inspection of cured liner.
2. Epoxy resin may be required by contractor, if conditions are deemed to warrant their use.
  - a. Use of up to 40% by mass of suitable fillers may be permitted.

**B. Reinforcing Material**

1. Non-woven needle interlocked polyester felt formed into sheets of required thickness.
2. Felt tubes may be made of single or multiple layer construction with any layer not less than 1.5 mm thick.
3. Mechanical strengthener membrane or strips may be sandwiched in between layers where required to control longitudinal stretching.
4. Polyurethane membrane used during inversion of tube may be left on internal surface of liner after curing.
5. Minimum thickness of bonded polyurethane membrane and inner liner, if used shall be 0.30 mm, +5% and shall not affect structural dimension requirements of cured liner.
6. Minimum liner thickness shall be 6 millimeters, with an allowable spot variation of 10%.

**C. Felt Content**

1. Content shall ensure cured thickness of liner as specified.
2. Thickness of cured liner to be as specified (+10%-4%) and shall not include thickness of polyurethane inner liner.

**D. Resin Content**

1. 10% to 15% by volume greater than volume of felt in liner bag.

**E. Cured liner shall conform to minimal structure standards listed:**

|                                |           |             |
|--------------------------------|-----------|-------------|
| Tensile Strength               | ASTM D638 | 3,000 psi   |
| Flexural Modulus of Elasticity | ASTM D790 | 250,000 psi |
| Flexural                       | ASTM D790 | 4,500 psi   |

- F. Fabricate liner to size when installed, will fit internal circumference of pipe, allowance shall be made for circumferential stretching during insertion.

**G. Meet requirements of ASTM F1216.**

**PART 3 – INSTALLATION**

**3.1 EXAMINATION**

- A. Examine videos for condition of pipe interior before starting work.

**3.2 PREPARATION**

- A. Prior to liner installation, sufficiently clean roots, encrustations of cast iron pipe, mineral deposits, and other debris from sewer line to provide for proper installation of product. Sewer liner to be televised after cleaning.
- B. Remove or repair offset joints, protruding services or collapsed pipe that will prevent insertion of liner.
  - 1. Excavation to make repairs or due to bends in the pipe that are required due to a pre-existing condition will be completed by the City under a separate contract. The City shall be notified of repairs in a timely fashion to facilitate the repair prior to lining.
- C. If Contractor or Engineer determines that existing pipe is 15% or more out of roundness, Contractor shall redesign liner.
  - 1. Notify Engineer of condition of pipe.
- D. Any visible leaks prior to sewer lining that will prevent proper installation of the liner shall be grouted prior to lining.
- E. Field verify all active sanitary sewer laterals prior to lining.
- F. Sewage Bypassing
  - 1. Provide for flow of sewage around section of pipe to be lined.
    - a. Pump or bypass lines shall be adequate size and capacity to handle flow.
    - b. Coordinate bypassing operations with Engineer.

**3.3 INSTALLATION**

- A. CIPP Liner
  - 1. Preparation of liner:
    - a. Designate location where uncured resin in original containers and unimpregnated liner will be vacuum impregnated prior to installation. Contractor shall allow Engineer to inspect materials and “wet out” procedure.

- b. Resin and catalyst system compatible with requirement of this method shall be used. Quantities of liquid thermosetting materials shall be to manufacturer's standards to provide lining thickness required.
  - c. Liner tube shall be impregnated with resin not more than seven days before proposed time for installation and stored out of direct sunlight at temperature less than 40°F(4°C).
  - d. Transport resin impregnated liner to site immediately prior to inversion in suitable light-proof container with temperature maintained below 40°F (4°C).
2. Insertion of liner:
- a. Insert liner through an existing manhole or other access by means of an inversion process and application of hydrostatic head or air insertion sufficient to fully extend liner to next designated manhole or termination point or by means of winching the liner through the last pipe to the next designated manhole or termination point. Lubricant may be used.
3. Curing liner:
- a. After inversion is complete, provide heat source and water or steam recirculation equipment. Equipment shall be capable of delivering hot water or steam throughout section to uniformly raise water temperature above temperature required to effect cure of resin.
  - b. Provide heat source with suitable monitors to gauge temperature of incoming and outgoing water or steam supply. Place second gauge between impregnated liner and pipe invert at remote manhole to determine temperatures during cure. Water or steam temperature in line during cure period shall be as recommended by resin manufacturer.
  - c. Initial cure shall be complete when inspection of exposed portions of liner are hard and sound and remote temperature sensor indicates that temperature is of magnitude to realize an exotherm. Cure period shall be of duration recommended by resin manufacturer.
  - d. Cool hardened liner to temperature below 100°F before relieving static head in inversion standpipe or before relieving steam pressure. Cool down by introduction of cool water or air into CIPP to replace water or steam being drained from downstream end. Care shall be taken in release of static head or steam so that a vacuum will not be developed that could damage newly installed liner.
4. Lateral reinstatement:
- a. Reinstall all active sanitary laterals after pipe has been cured by using a remote cutting device with a camera.
  - b. After reinstatement all lateral connections shall be brushed/cleaned to remove jagged edges and to smooth the cut edge.



### **3.4 FIELD QUALITY CONTROL**

#### **A. CIPP Liners**

##### **1. Finished Liner:**

- a. Liner shall be continuous over entire length of insertion run and be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, pinholes, lifts, and delamination.
- b. During curing process, gauge water tightness under positive head.
- c. Liner shall conform to shape of existing pipe before installation and not be out of round by more than 15%.

##### **2. Liner Thickness:**

- a. Cured liner shall be accurately measured and shall not be more than 5% thickness specified.

##### **3. Felt and Resin Content of Liner:**

- a. Visually inspect liner to ensure number of layers of felt conform to specified number of layers and thickness.
- b. Calculate resin to felt ration by weight.
- c. Ratio shall fall in range 1.0.1 to 1.15.1

##### **4. Testing:**

- a. Tensile Strength for Force Main Lined Pipe
  - 1) Test in accordance with ASTM D638
  - 2) Specimens tested shall be actual thickness of fabricated liner.
  - 3) Do not machine specimen on surface.
  - 4) Tensile strength shall be average of 5 specimens tested.
- b. Flexural Strength and Modulus of Elasticity.
  - 1) Test in accordance with ASTM D790.
  - 2) Specimens tested shall be actual thickness of fabricated liner.
  - 3) Do not machine specimen on surface.
  - 4) Make test with smooth (inner) face in compression using 5 specimens.

##### **5. Examination:**

- a. Televis interior of pipe after completion of work but before introducing wastewater flow and provide DVD (MPEG 2) to Engineer.
- b. Naming convention of the televising inspection report shall follow what is on the Drawings or in the Exhibits.
- c. Use pan and tilt color 3 lux camera to view the sewer service lateral connection reinstatement.

### **3.5 CLEANING AND RESTORATION**

- A. At completion of work, remove rubbish, debris, dirt, equipment and excess material from site. Clean adjacent surfaces soiled by and during course of work.

- B. Restore areas disturbed to original condition.
- C. Repair any surface damage that may occur during the heating of the liner caused by frost heave.

### 3.6 ACCEPTANCE

- A. Grounds for rejection or repair of CIPP shall be:
  - 1. Excessive bending or flattening of CIPP not related to the existing pipe condition.
  - 2. Visible infiltration.
  - 3. Visible damage from the lining procedure.
  - 4. Bulges/intrusions in the invert of the liner that impede flow and not related to the shape of the existing pipe.
  - 5. Bulges/intrusions above the invert that extend into the pipe by greater than 10% of the pipe diameter and not related to the shape of the existing pipe.

END OF SECTION

**PROJECT 19-01**  
**SEWER AND WATER RELAY AND STREET RESURFACING**  
**EXHIBITS**  
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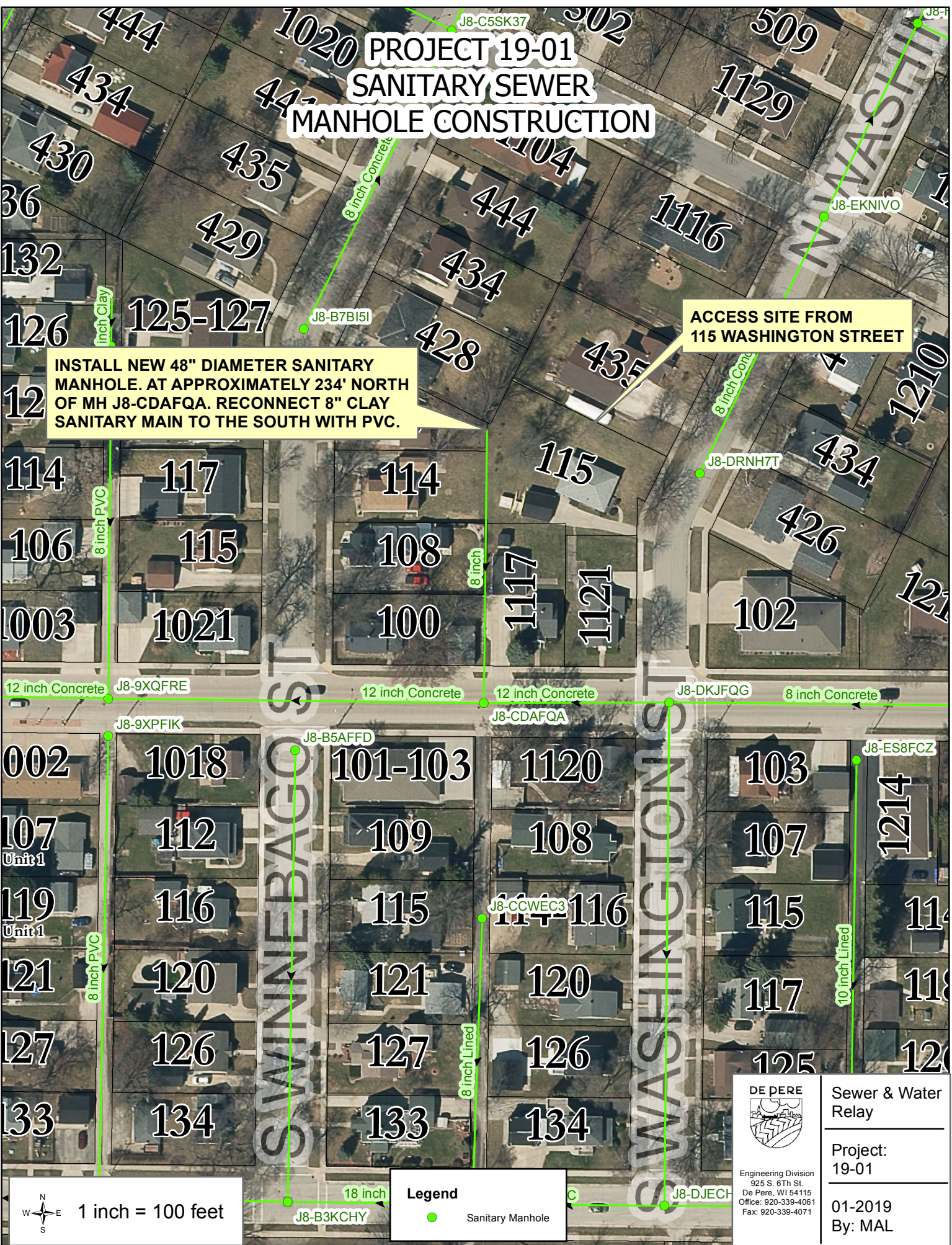
|           |   |          |
|-----------|---|----------|
| Exhibit 1 | Repair List   | 1 Sheet  |
| Exhibit   | Worksheets  | 4 Sheets |
|           | 1. 115 N. Washington Street Sanitary Manhole Installation             |          |
|           | 2. 260 S. Clay Street Storm Sewer Spot Repairs                        |          |
|           | 3. Ashwaubenon Creek Interceptor Manhole Abandonment on Parkview Road |          |
|           | 4. James Street Resurfacing from Front Street to the West             |          |



# PROJECT 19-01 SANITARY SEWER MANHOLE CONSTRUCTION

ACCESS SITE FROM  
115 WASHINGTON STREET

INSTALL NEW 48" DIAMETER SANITARY  
MANHOLE. AT APPROXIMATELY 234' NORTH  
OF MH J8-CDAFQA. RECONNECT 8" CLAY  
SANITARY MAIN TO THE SOUTH WITH PVC.



1 inch = 100 feet

**Legend**

● Sanitary Manhole

DE PERE

Engineering Division  
925 S. 6TH ST.  
De Pere, WI 54115  
Office: 920-339-4061  
Fax: 920-339-4071

Sewer & Water  
Relay

---

Project:  
19-01

---

01-2019  
By: MAL



PROJECT 19-01  
STORM SEWER  
DIG DOWN AND REPAIR  
AT 260 S. CLAY STREET

S. CLAY ST

243

244

237

251

252

245

57

301

24

260

252

J8-JY65HE

8' SPOT REPAIR  
CONNECTION TO MH

6' SPOT REPAIR  
127' DOWN STREAM  
OF MH J8-JY65HE

J8-J4G3UI

Legend

- Storm Manhole
- ⊕ Storm Catch Basin
- Collectors
- Culvert
- - - Open Channel

1 inch = 60 feet

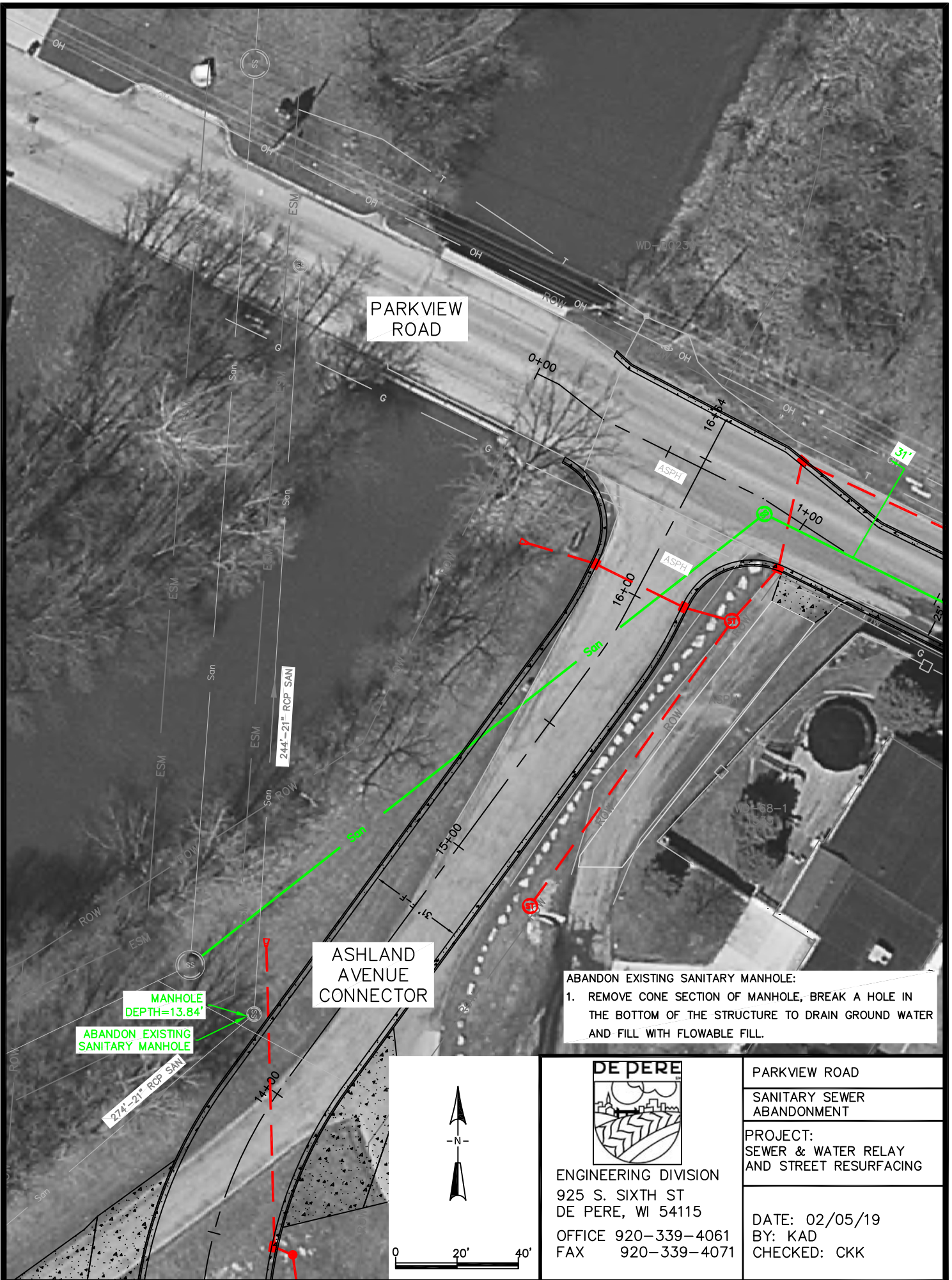
DE PERE  
Engineering Division  
925 S. 6Th St.  
De Pere, WI 54115  
Office: 920-339-4061  
Fax: 920-339-4071

Sewer & Water  
Relay

Project:  
19-01

01-2019  
By: MAL





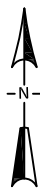
PARKVIEW ROAD

ASHLAND AVENUE CONNECTOR

MANHOLE DEPTH=13.84'

ABANDON EXISTING SANITARY MANHOLE

ABANDON EXISTING SANITARY MANHOLE:  
1. REMOVE CONE SECTION OF MANHOLE, BREAK A HOLE IN THE BOTTOM OF THE STRUCTURE TO DRAIN GROUND WATER AND FILL WITH FLOWABLE FILL.



0 20' 40'



ENGINEERING DIVISION  
925 S. SIXTH ST  
DE PERE, WI 54115  
OFFICE 920-339-4061  
FAX 920-339-4071

PARKVIEW ROAD

SANITARY SEWER ABANDONMENT

PROJECT:  
SEWER & WATER RELAY  
AND STREET RESURFACING

DATE: 02/05/19  
BY: KAD  
CHECKED: CKK



**PROJECT 19-01**  
**10 JAMES STREET**  
**ASPHALT RESURFACING**



1 inch = 100 feet



Engineering Division  
 925 S. 6Th St.  
 De Pere, WI 54115  
 Office: 920-339-4061  
 Fax: 920-339-4071

Sewer & Water Relay

Project:  
 19-01

02-2019  
 By: MAL

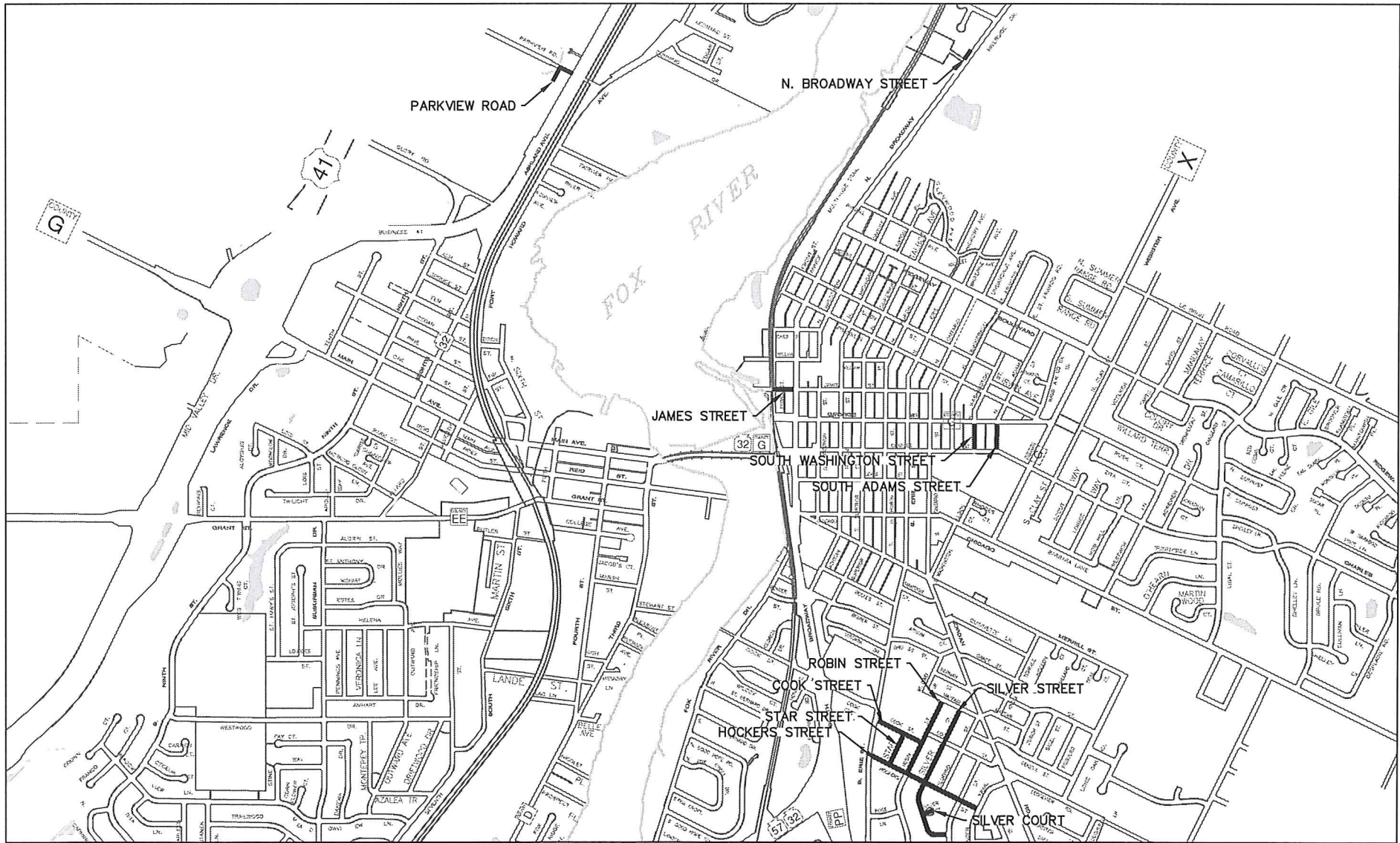


PROJECT# 19-01  
SEWER & WATER RELAY  
AND STREET RESURFACING

CITY OF 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      | TYPICAL SECTIONS                               |
| C101      | S. ADAMS STREET PLAN AND PROFILE SHEET         |
| C102-C103 | COOK STREET PLAN AND PROFILE SHEETS            |
| C104-C106 | HOCKERS STREET PLAN AND PROFILE SHEETS         |
| C107      | JAMES STREET PLAN AND PROFILE SHEET            |
| C108-C109 | PARKVIEW ROAD PLAN AND PROFILE SHEETS          |
| C110-C111 | ROBIN STREET PLAN AND PROFILE SHEETS           |
| C112      | SILVER COURT PLAN AND PROFILE SHEET            |
| C113-C118 | SILVER STREET PLAN AND PROFILE SHEETS          |
| C119      | STAR STREET PLAN AND PROFILE SHEET             |
| C120      | S. WASHINGTON STREET PLAN AND PROFILE SHEETS   |
| C121      | 1091 N. BROADWAY STREET PLAN AND PROFILE SHEET |
| C401-C409 | BENCHMARK AND CONTROL POINT SHEETS             |
| C501      | PROJECT DETAILS                                |
| C502-C503 | CURB RAMP DETAILS                              |
| C504      | EROSION CONTROL DETAILS                        |

CITY OF DE PERE  
BOARD OF PUBLIC WORKS

2/12/19 *E.P. Rakers*  
DATE CITY ENGINEER  
2/13/19 *Michael J. Walsh*  
DATE CITY ADMINISTRATOR  
2/13/19 *Michael J. Walsh*  
DATE MAYOR

STAMPS:





LIST OF STANDARD ABBREVIATIONS

|           |                                      |        |                                       |
|-----------|--------------------------------------|--------|---------------------------------------|
| ADT       | AVERAGE DAILY TRAFFIC                | N      | NORTH                                 |
| AGGR      | AGGREGATE                            | NB     | NORTHBOUND                            |
| AH        | AHEAD                                | NC     | NORMAL CROWN                          |
| ASPH      | ASPHALT                              | NE     | NORTHEAST                             |
| B/B       | BACK TO BACK                         | NO     | NUMBER                                |
| BARR      | BARRICADE                            | NTS    | NOT TO SCALE                          |
| BC        | BACK OF CURB                         | NW     | NORTHWEST                             |
| BK        | BACK                                 | O      | OIL                                   |
| BL        | BASELINE                             | O&C    | OIL AND CHIP                          |
| BLDG      | BUILDING                             | OBLIT  | OBLITERATE                            |
| BM        | BENCHMARK                            | OD     | OUTSIDE DIAMETER                      |
| BOW       | BACK OF SIDEWALK                     | PC     | POINT OF CURVATURE                    |
| BSMT      | BASEMENT                             | PCC    | POINT OF COMPOUND CURVE               |
| C         | CUT                                  | PCC    | PORTLAND CEMENT CONCRETE              |
| C&G       | CURB AND GUTTER                      | PED    | PEDESTAL                              |
| C/C       | CENTER TO CENTER                     | PLE    | PERMANENT LIMITED EASEMENT            |
| CABC      | CRUSHED AGGREGATE BASE COURSE        | PVMT   | PAVEMENT                              |
| CB        | CATCH BASIN                          | PE     | PRIVATE ENTRANCE                      |
| CE        | CONSTRUCTION ENTRANCE                | PI     | POINT OF INTERSECTION                 |
| CI        | CAST IRON PIPE                       | PJF    | PRE-FORMED JOINT FILLER               |
| CL        | CENTERLINE                           | PL     | PROPERTY LINE                         |
| CMP       | CORRUGATED METAL PIPE                | POC    | POINT OF CURVE                        |
| CNTY      | COUNTY                               | POT    | POINT ON TANGENT                      |
| CO        | CLEANOUT                             | PP     | POLYETHYLENE                          |
| CONC      | CONCRETE                             | PRC    | POINT OF REVERSE CURVATURE            |
| CONSTR    | CONSTRUCTION                         | PROJ   | PROJECT                               |
| CONSTR JT | CONSTRUCTION JOINT                   | PROP   | PROPOSED                              |
| CP        | CONTROL POINT                        | PSI    | POUND PER SQUARE INCH                 |
| CTH       | COUNTY TRUNK HIGHWAY                 | PT     | POINT OF TANGENCY                     |
| CTRL JT   | CONTROL JOINT                        | PVC    | POLYVINYL CHLORIDE                    |
| CTV       | CABLE TV                             | R      | RANGE OR RADIUS                       |
| CY        | CUBIC YARD                           | RCP    | REINFORCED CONCRETE PIPE              |
| D         | DEPTH                                | REBAR  | REINFORCEMENT BAR                     |
| DIA       | DIAMETER                             | REL    | RELOCATE                              |
| DI        | DUCTILE IRON PIPE                    | REM    | REMAINING                             |
| DISCH     | DISCHARGE                            | REQD   | REQUIRED                              |
| DW        | DRIVEWAY                             | RL     | REFERENCE LINE                        |
| E         | EAST (SEE ELEC BELOW)                | ROW    | RIGHT OF WAY                          |
| EA        | EACH                                 | RP     | REFERENCE POINT                       |
| EB        | EASTBOUND                            | RR     | RAILROAD                              |
| EBS       | EXCAVATION BELOW SUBGRADE            | RT     | RIGHT                                 |
| ECS       | EXTERNAL CHIMNEY SEAL                | RW     | RETAINING WALL                        |
| EL        | ELEVATION                            | S      | SOUTH                                 |
| ELEC      | ELECTRIC (E WHEN USED IN LINE STYLE) | SALV   | SALVAGE                               |
| EMB       | EMBANKMENT                           | SAN    | SANITARY                              |
| ENTR      | ENTRANCE                             | SB     | SOUTHBOUND                            |
| EP        | EDGE OF PAVEMENT                     | SDWK   | SIDEWALK                              |
| EW        | ENDWALL                              | SE     | SOUTHEAST                             |
| EXC       | EXCAVATION                           | SE     | SOUTHEAST                             |
| EXIST     | EXISTING                             | SF     | SQUARE FEET                           |
| F         | FILL                                 | SHLDR  | SHOULDER                              |
| F/F       | FACE TO FACE                         | SY     | SQUARE YARD                           |
| FDN       | FOUNDATION                           | SS     | STORM SEWER                           |
| FE        | FIELD ENTRANCE                       | SSD    | STOPPING SIGHT DISTANCE               |
| FERT      | FERTILIZER                           | STA    | STATION                               |
| FIN GR    | FINISHED GRADE                       | STD    | STANDARD                              |
| FL        | FLOWLINE                             | STH    | STATE HIGHWAY TRUNK                   |
| FO        | FIBER OPTIC                          | STM    | STORM                                 |
| FOW       | FRONT OF SIDEWALK                    | STP    | SEWAGE TREATMENT PLANT                |
| FT        | FOOT                                 | STRUCT | STRUCTURE OR STRUCTURAL               |
| FTG       | FOOTING                              | SW     | SOUTHWEST                             |
| G         | GAS                                  | TAN    | TANGENT                               |
| GV        | GAS VALVE                            | T      | TOWN (T WHEN USED FOR TELEPHONE LINE) |
| GW        | GUY WIRE                             | TEL    | TELEPHONE                             |
| HDPE      | HIGH DENSITY POLYETHYLENE            | TEMP   | TEMPORARY                             |
| HR        | HANDICAP RAMP                        | TLE    | TEMPORARY LIMITED EASEMENT            |
| HSE       | HOUSE                                | TOC    | TOP OF CURB                           |
| HT        | HEIGHT                               | TOW    | TOP OF WATER                          |
| HYD       | HYDRANT                              | TRANS  | TRANSITION                            |
| I         | INTERSECTION ANGLE                   | TYP    | TYPICAL                               |
| ICS       | INTERNAL CHIMNEY SEAL                | UG     | UNDERGROUND                           |
| ID        | INSIDE DIAMETER                      | USH    | US HIGHWAY                            |
| IN        | INCH                                 | VC     | VERTICAL CURVE                        |
| INL       | INLET                                | VERT   | VERTICAL                              |
| INTERS    | INTERSECTION                         | VOL    | VOLUME                                |
| INV       | INVERT                               | VPC    | VERTICAL POINT OF CURVATURE           |
| IP        | IRON PIPE OR PIN                     | VPI    | VERTICAL POINT OF INTERSECTION        |
| JCT       | JUNCTION                             | VPRC   | VERTICAL POINT OF REVERSE CURVE       |
| L         | LENGTH (OF CURVE)                    | VPT    | VERTICAL POINT OF TANGENCY            |
| LC        | LONG CHORD OF CURVE                  | W      | WEST                                  |
| LP        | LIGHTPOLE                            | WB     | WESTBOUND                             |
| LS        | LIFT STATION OR LUMP SUM             | WM     | WATERMAIN                             |
| LT        | LEFT                                 | WSO    | WATER SHUTOFF VALVE                   |
| MAINT     | MAINTENANCE                          | WTP    | WATER TREATMENT PLANT                 |
| MATL      | MATERIAL                             | WV     | WATER VALVE                           |
| MB        | MAILBOX                              | WWTP   | WASTE WATER TREATMENT PLANT           |
| MH        | MANHOLE                              | YD     | YARD                                  |
| MP        | MARKER POST                          |        |                                       |

MAPPING & TOPOGRAPHY SYMBOLOLOGY

| DESCRIPTION   | SYMBOL   |          |
|---|----------|----------|
|   | EXISTING | PROPOSED |
| BENCHMARK   |          |          |
| BUSH  |          |          |
| CATCH BASIN   |          |          |
| CABLE TV BOX  |          |          |
| CONTROL POINT                                       |          |          |
| ELECTRICAL BOX                                      |          |          |
| EROSION CONTROL – INELT                             |          |          |
| FIELD INLET   |          |          |
| GAS VALVE   |          |          |
| HEDGE   |          |          |
| HYDRANT   |          |          |
| IRON PIPE   |          |          |
| LIGHTPOLE   |          |          |
| MAILBOX   |          |          |
| MANHOLE ELECTRIC                                    |          |          |
| MANHOLE SANITARY                                    |          |          |
| MANHOLE STORM                                       |          |          |
| MONITORING WELL                                     |          |          |
| POWER POLE  |          |          |
| SIGN BASE   |          |          |
| SIGN  |          |          |
| SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE |          |          |
| SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE  |          |          |
| STUMP   |          |          |
| TELEPHONE MANHOLE                                   |          |          |
| TELEPHONE PEDESTAL                                  |          |          |
| TREE  |          |          |
| WELL  |          |          |
| WATER SERVICE VALVE                                 |          |          |
| BUTTERFLY WATER VALVE                               |          |          |
| WATER VALVE   |          |          |

MAPPING & TOPOGRAPHY SYMBOLOLOGY

| DESCRIPTION                  | SYMBOL                         |  |
|------------------------------|--------------------------------|--|
|                              | PLAN                           |  |
| EXISTING SANITARY SEWER LINE | (SIZE AND MATERIAL)<br>San     |  |
| PROPOSED SANITARY SEWER LINE | 100'–8" PVC SAN<br>San         |  |
| EXISTING STORM SEWER LINE    | (SIZE AND MATERIAL)<br>ST      |  |
| PROPOSED STORM SEWER LINE    | 100'–8" PVC STM<br>ST          |  |
| EXISTING WATER MAIN LINE     | (SIZE AND MATERIAL)<br>W       |  |
| PROPOSED WATER MAIN LINE     | 100'–8" PVC WM (TEE–BEND)<br>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                             |  |
| SILT FENCE EROSION CONTROL   |                                |  |
| EXISTING FIBER OPTIC         | FO                             |  |
| EXISTING MAJOR CONTOUR       | 615                            |  |
| EXISTING MINOR CONTOUR       | 612                            |  |
| PROPOSED MAJOR CONTOUR       | 615                            |  |
| PROPOSED MINOR CONTOUR       | 612                            |  |

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    |  |                               |  |

GENERAL CONSTRUCTION NOTES:

- ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
- 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.
- 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.
- 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.

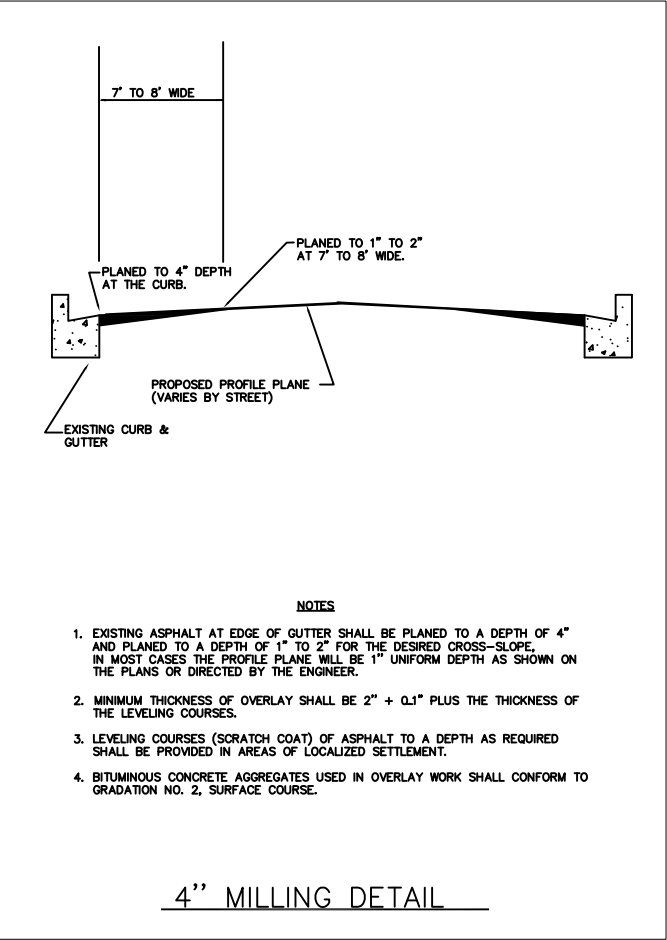
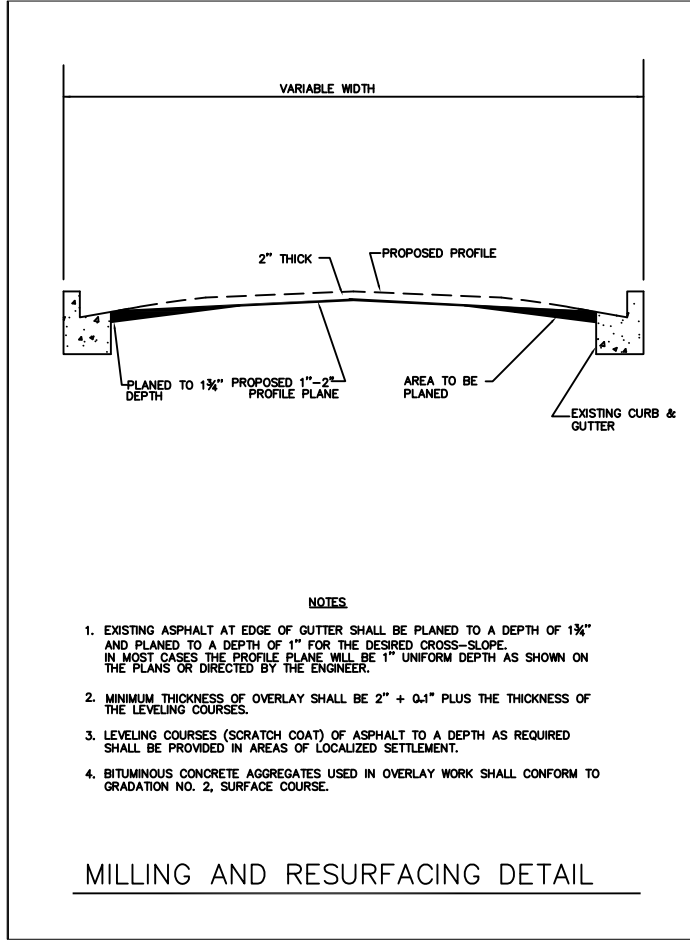
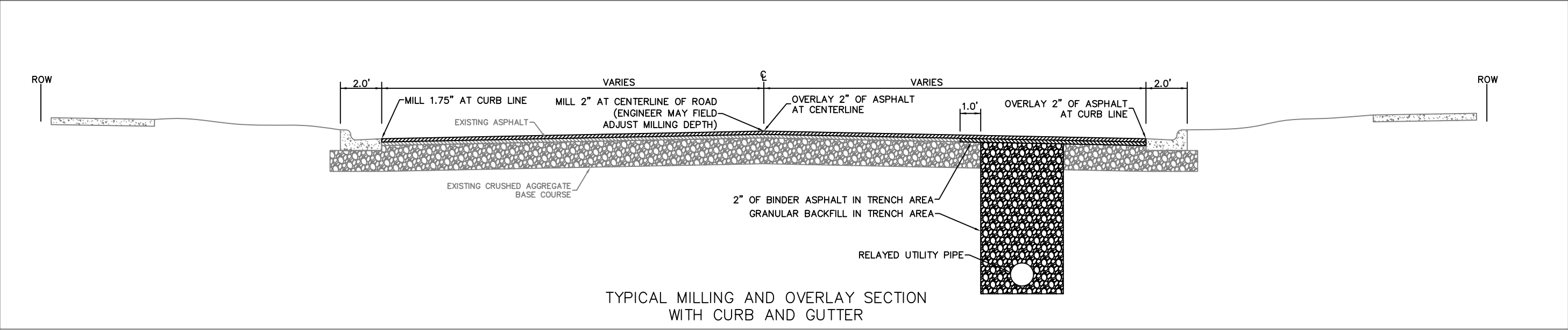


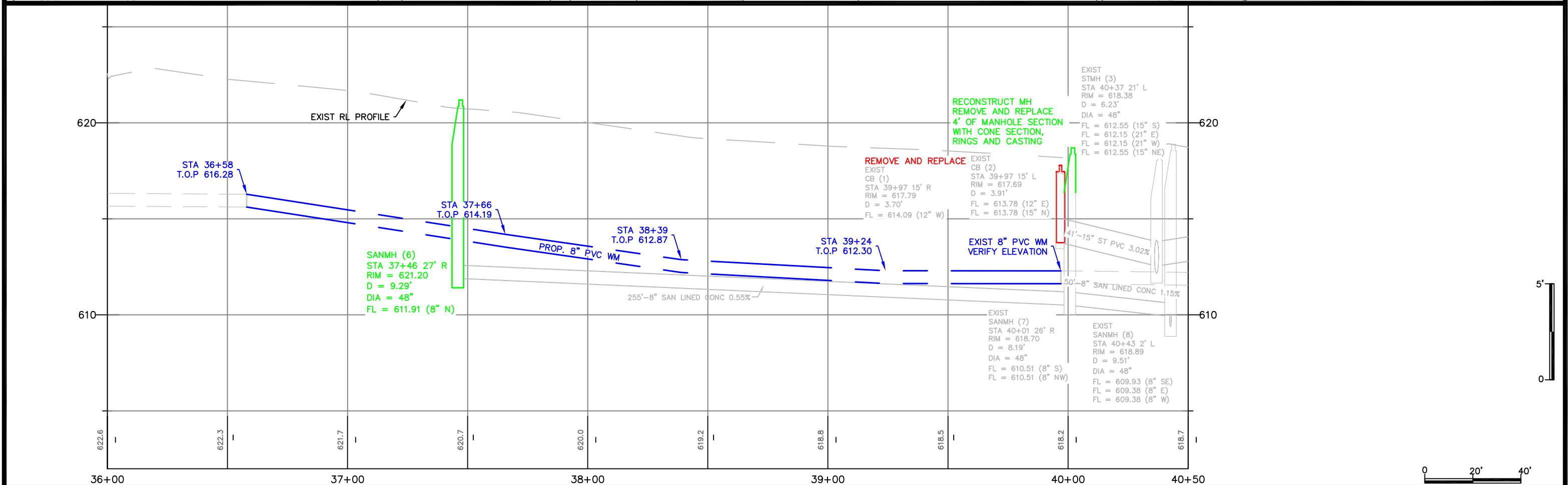
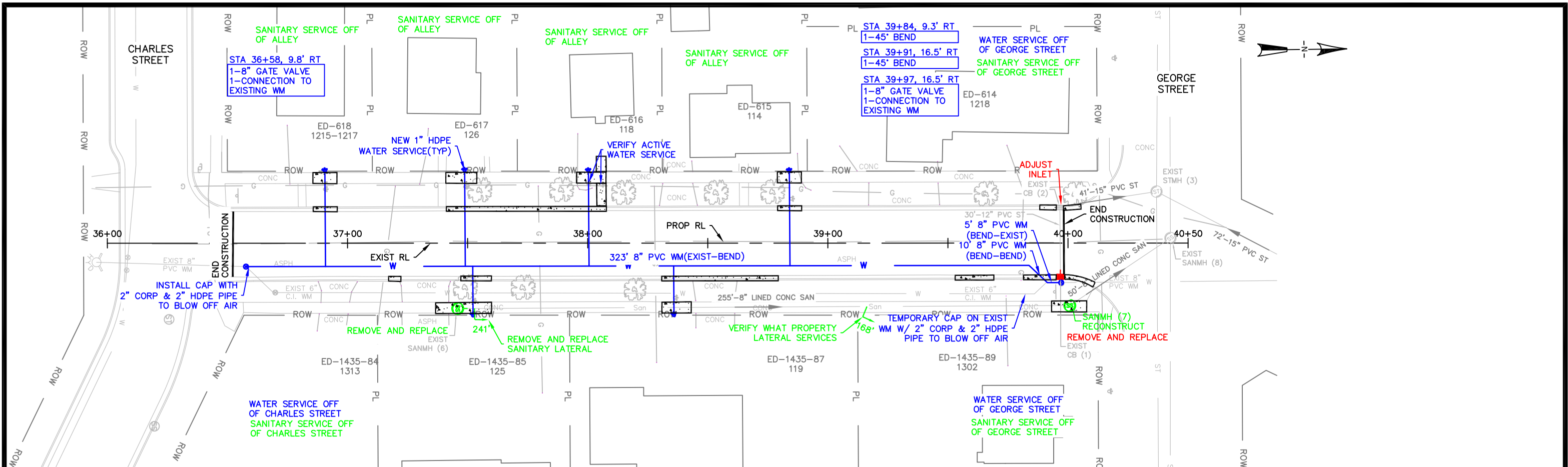
CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
OFFICE 920–339–4060 FAX 920–339–4071

STANDARD ABBREVIATIONS  
AND SYMBOLS

|  |                    |         |         |                     |                            |
|--|--------------------|---------|---------|---------------------|----------------------------|
| NAME:<br>SEWER & WATER RELAY<br>AND STREET RESURFACING | REVISIONS / ISSUES |         |         |                     | PAGE<br>NO.<br><b>G002</b> |
|  | SURVEYED           | BY      | DATE    | NO. DATE BY REMARKS |                            |
|  | DRAWN              | KAD     | 10–2018 |                     |                            |
|  | DESIGNED           |         |         |                     |                            |
| PROJECT # 19–01  |                    | CHECKED |         |                     |                            |





**CITY OF DE PERE**

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
OFFICE 920-339-4061 FAX 920-339-4071

**SOUTH ADAMS STREET  
CHARLES STREET TO GEORGE STREET**

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

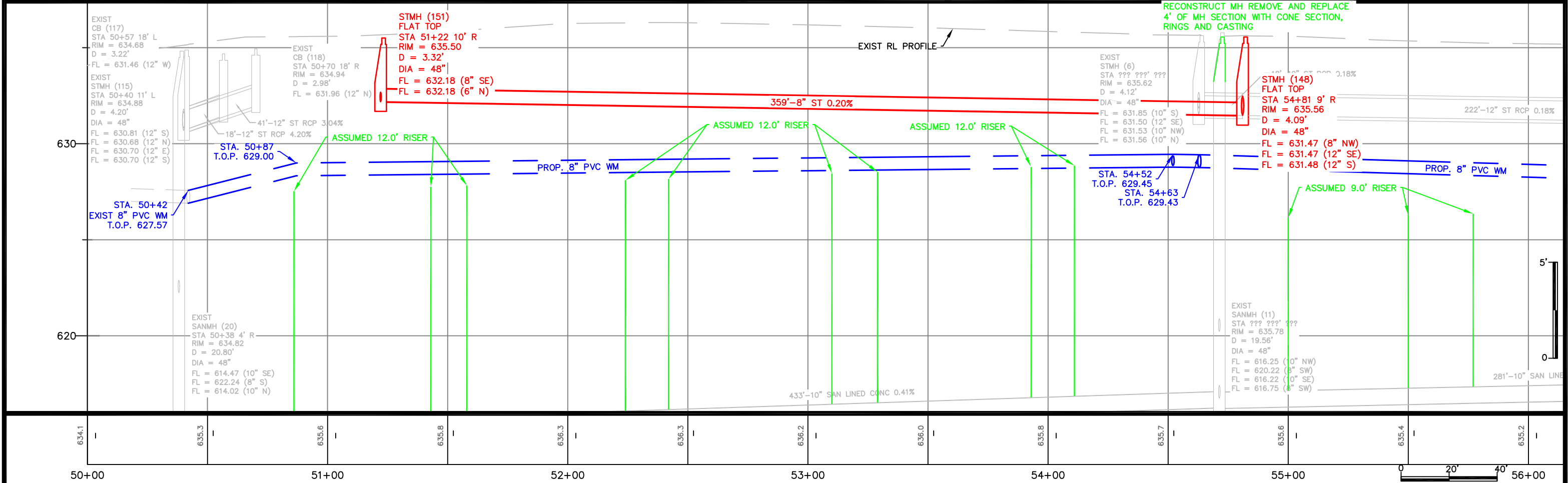
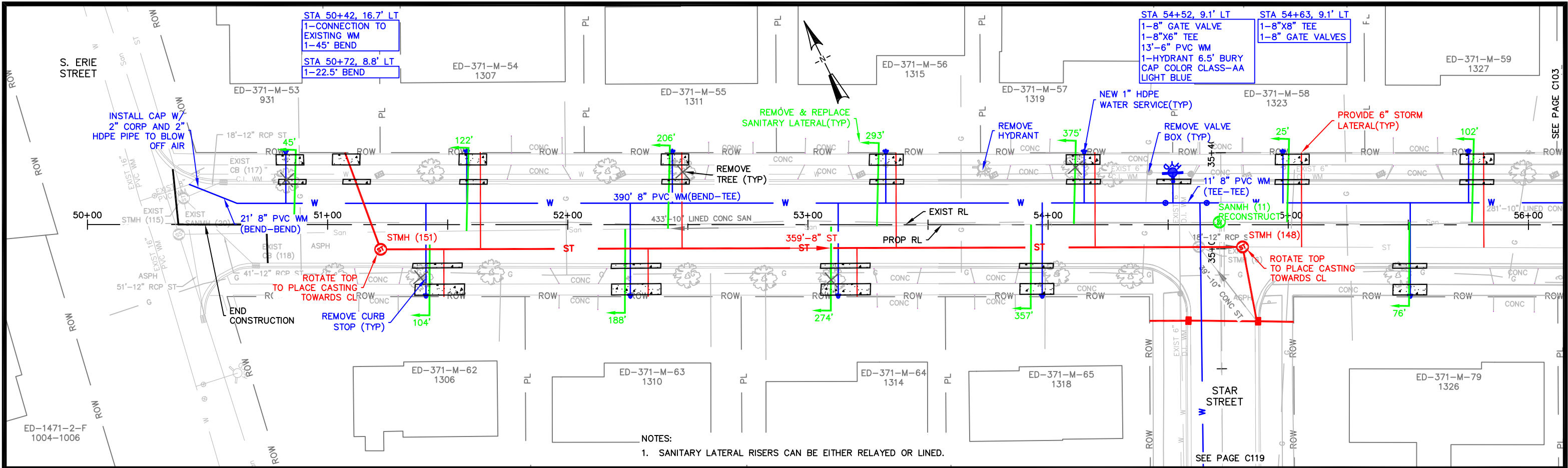
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|----------|---------|-----|---------|
| SURVEYED | 12-2014 | KAD |         |
| DRAWN    | 01-2019 | KAD |         |
| DESIGNED | 01-2019 | KAD |         |
| CHECKED  | 01-2019 | CHK |         |

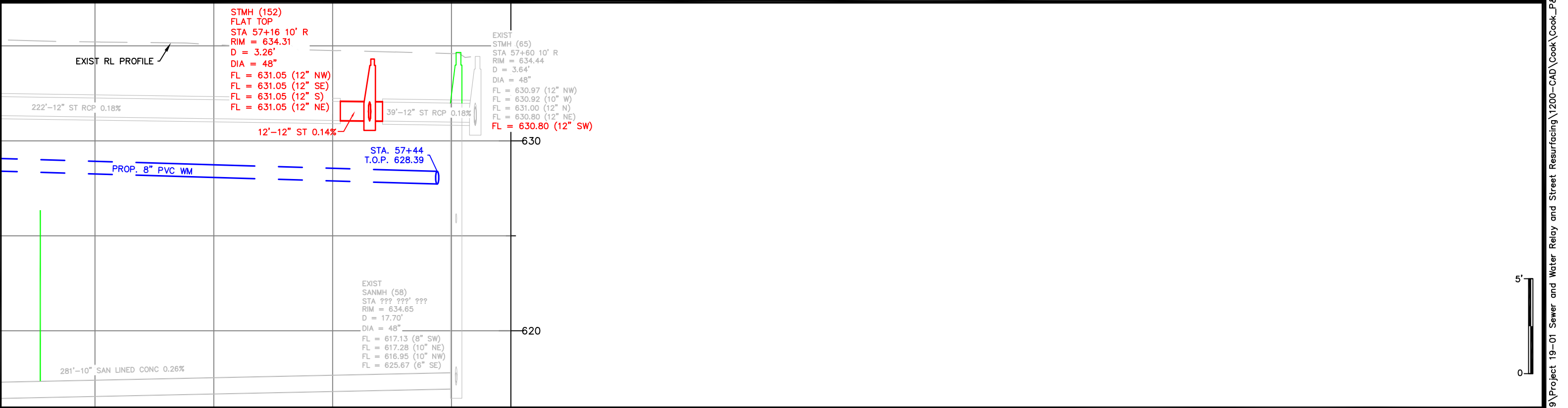
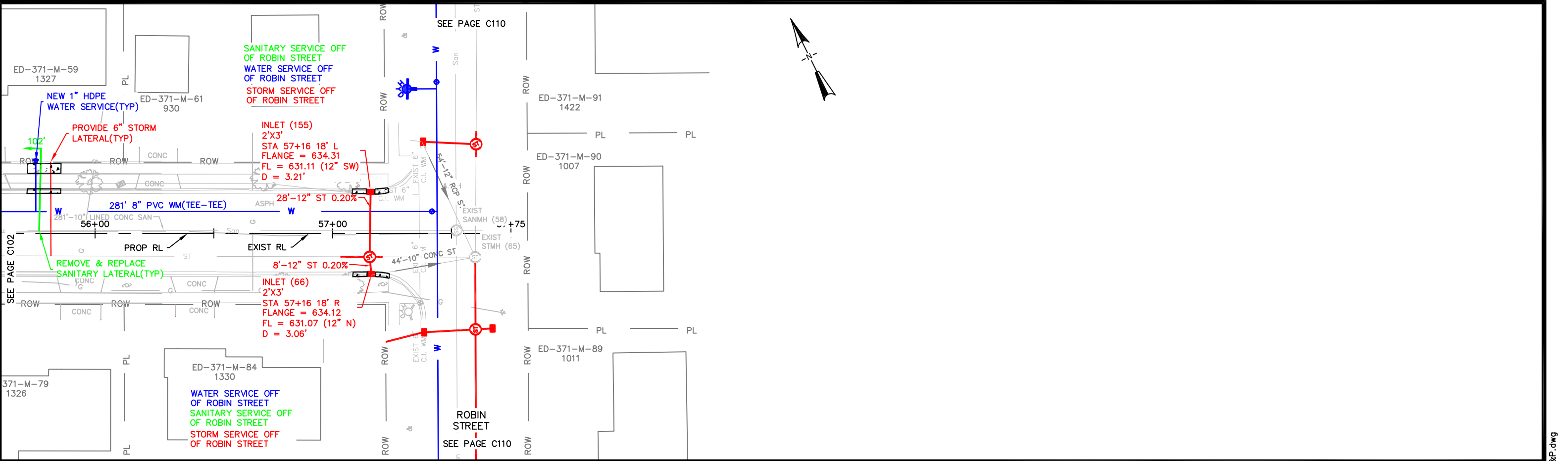
REVISIONS / ISSUES


| NO. | DATE | BY | REMARKS |
|-----|------|----|---------|
|     |      |    |         |
|     |      |    |         |
|     |      |    |         |

PAGE NO.  
**C101**

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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

COOK STREET

100' EAST OF STAR STREET TO ROBIN STREET

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING

PROJECT #  
19-01

| REVISIONS / ISSUES |         |         |         |
|--------------------|---------|---------|---------|
| NO.                | DATE    | BY      | REMARKS |
| SURVEYED           | KAD     | 05-2015 |         |
| DRAWN              | KAD     | 01-2019 |         |
| DESIGNED           | KAD/CHK | 01-2019 |         |
| CHECKED            | CHK     | 01-2019 |         |

PAGE NO.

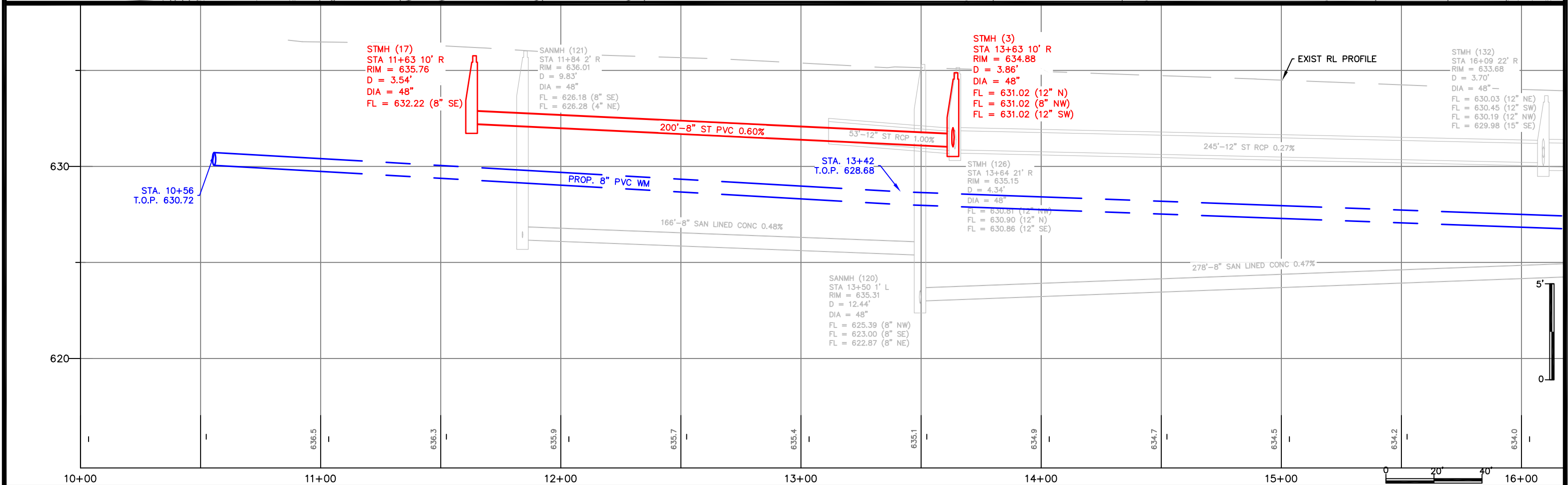
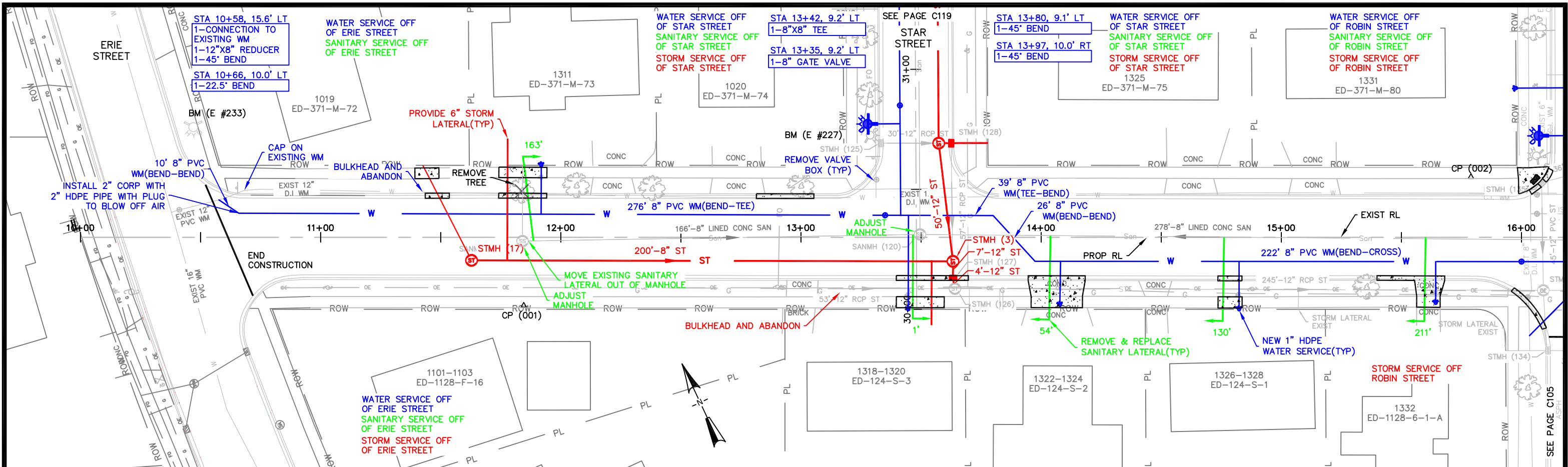
C103

020'40'

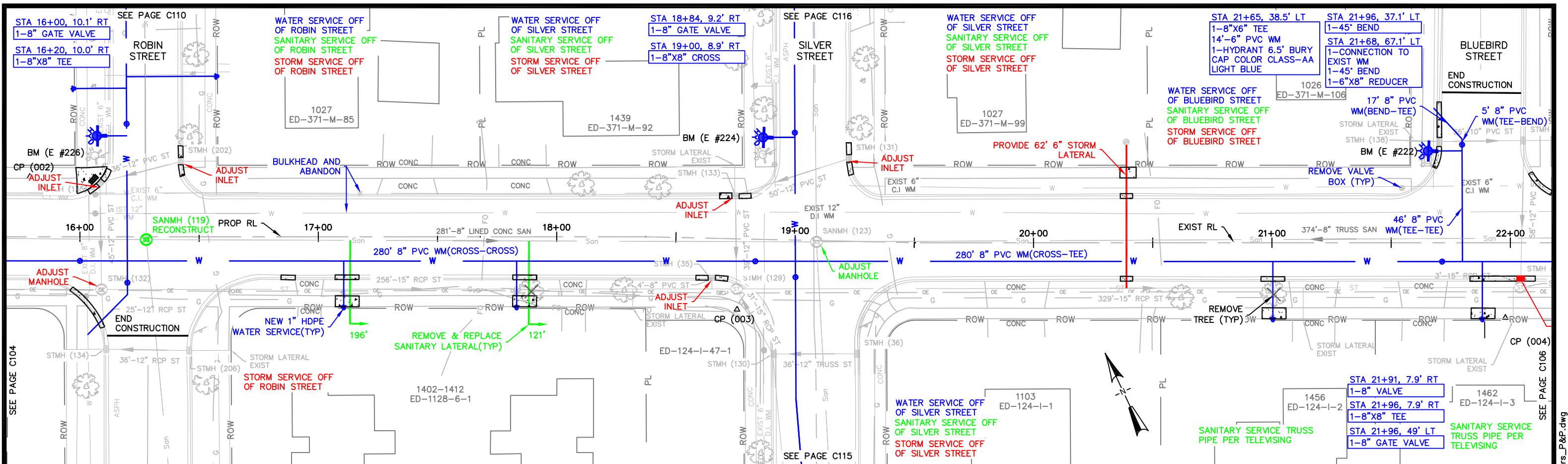
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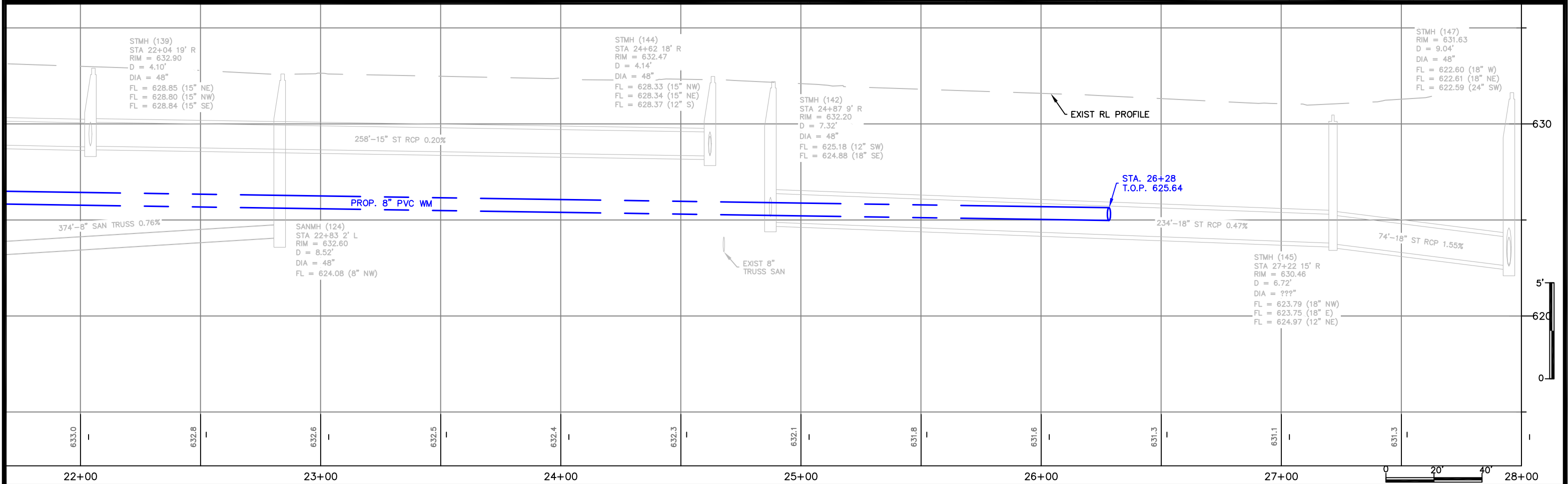
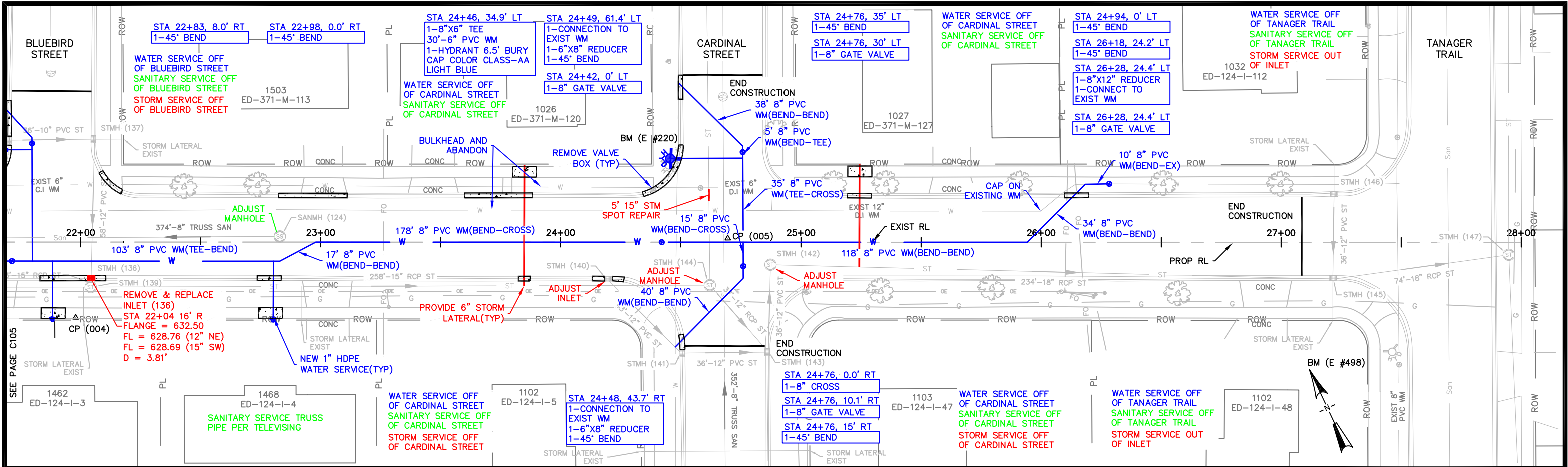




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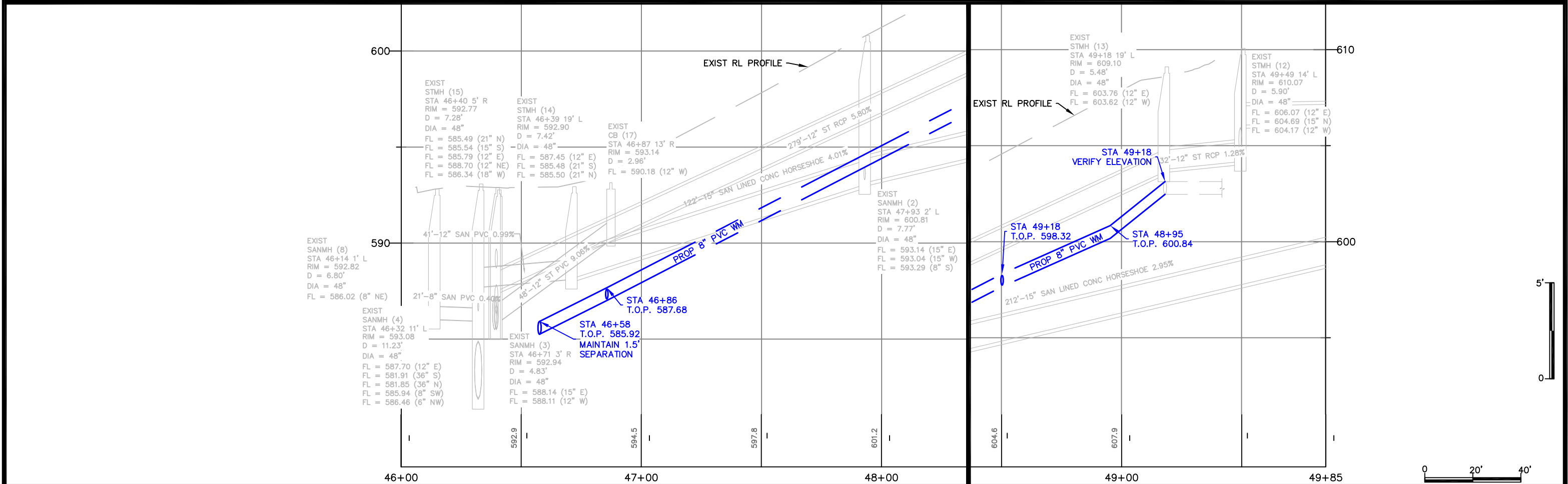
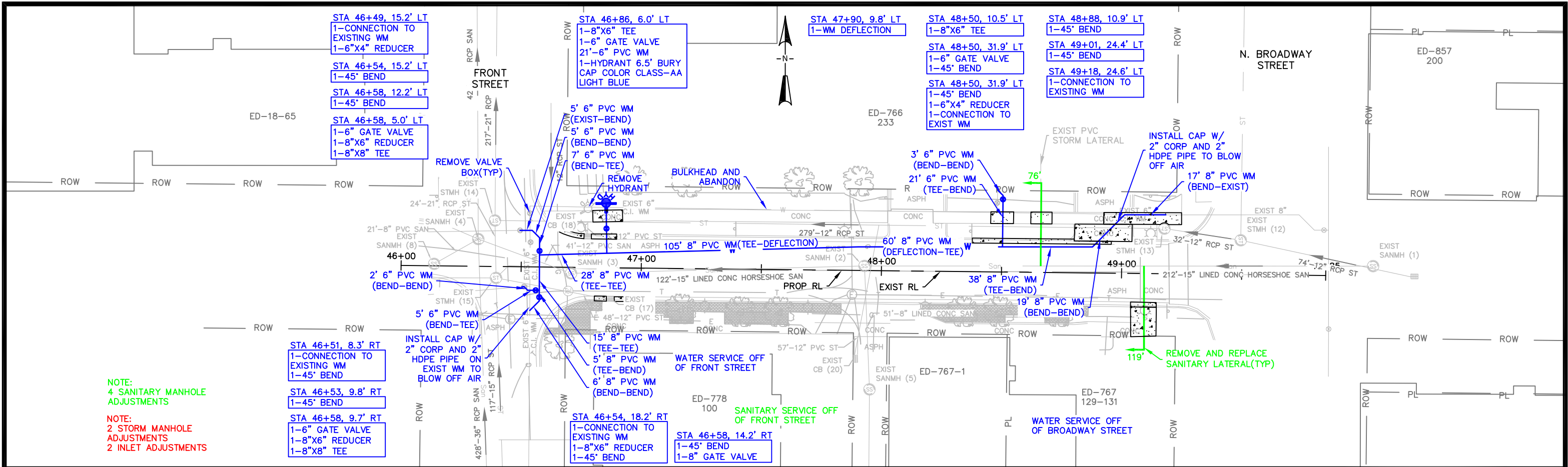


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# CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
OFFICE 920-339-4061 FAX 920-339-4071

## JAMES STREET

FRONT STREET TO N. BROADWAY STREET

NAME: SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

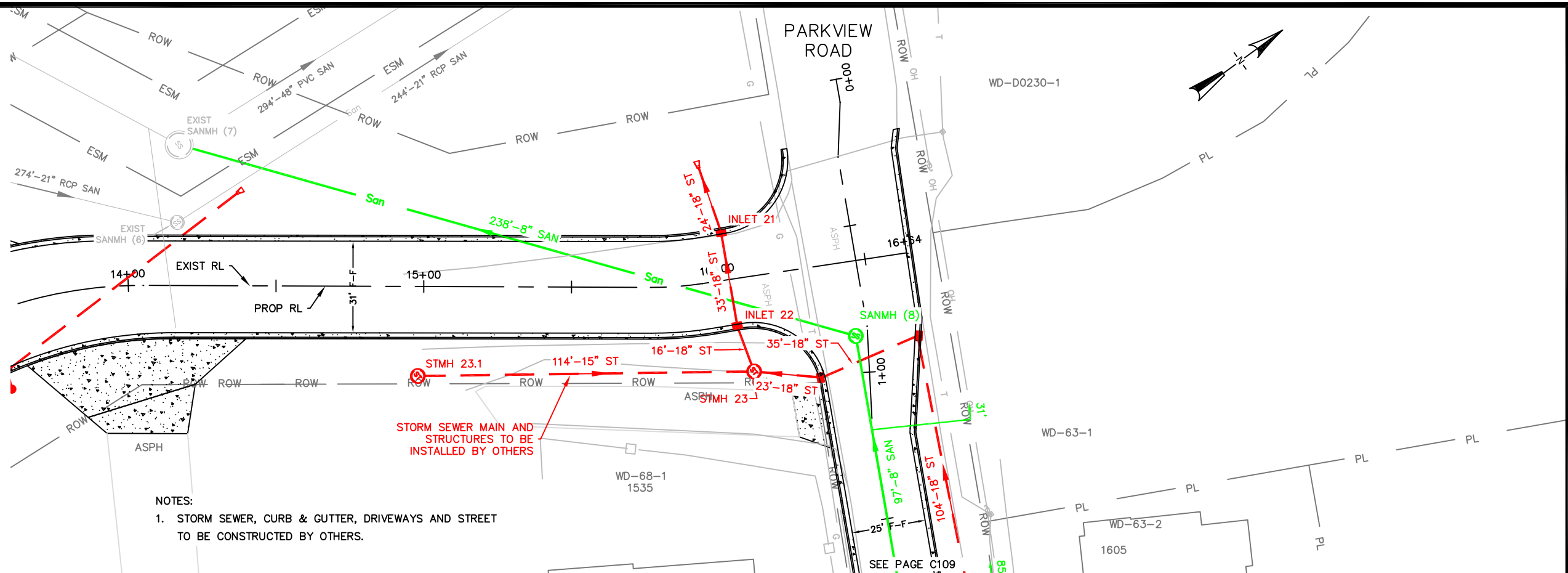
| BY       | DATE        |
|----------|-------------|
| SURVEYED | KAD 01-2019 |
| DRAWN    | KAD 01-2019 |
| DESIGNED | KAD 01-2019 |
| CHECKED  | CHK 01-2019 |

### REVISIONS / ISSUES

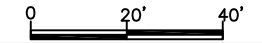
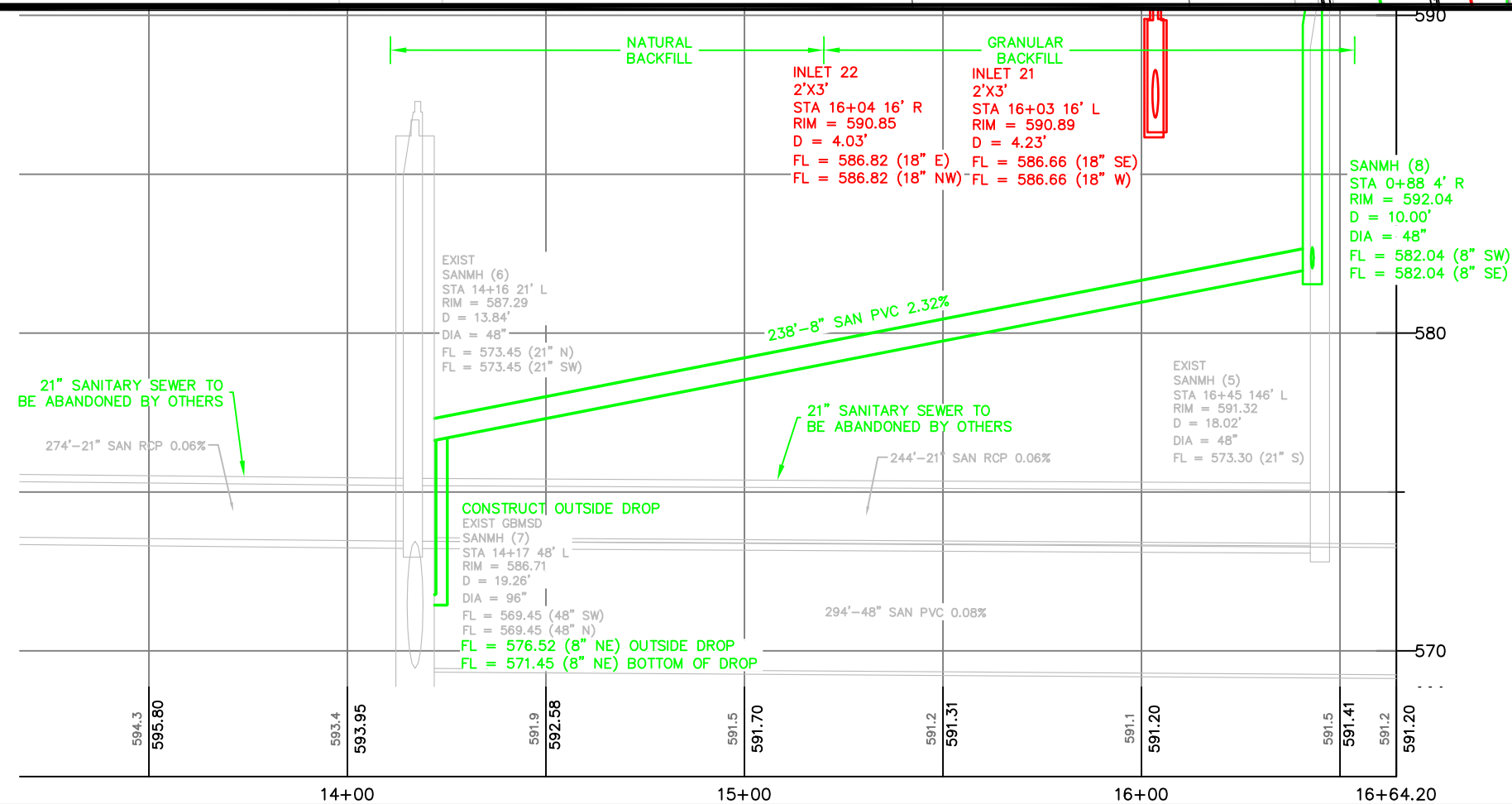
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NOTES:  
1. STORM SEWER, CURB & GUTTER, DRIVEWAYS AND STREET  
TO BE CONSTRUCTED BY OTHERS.



**CITY OF DE PERE**  
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**ASHLAND AVENUE CONNECTOR**  
**250' WEST OF ASHLAND AVE TO PARKVIEW ROAD**

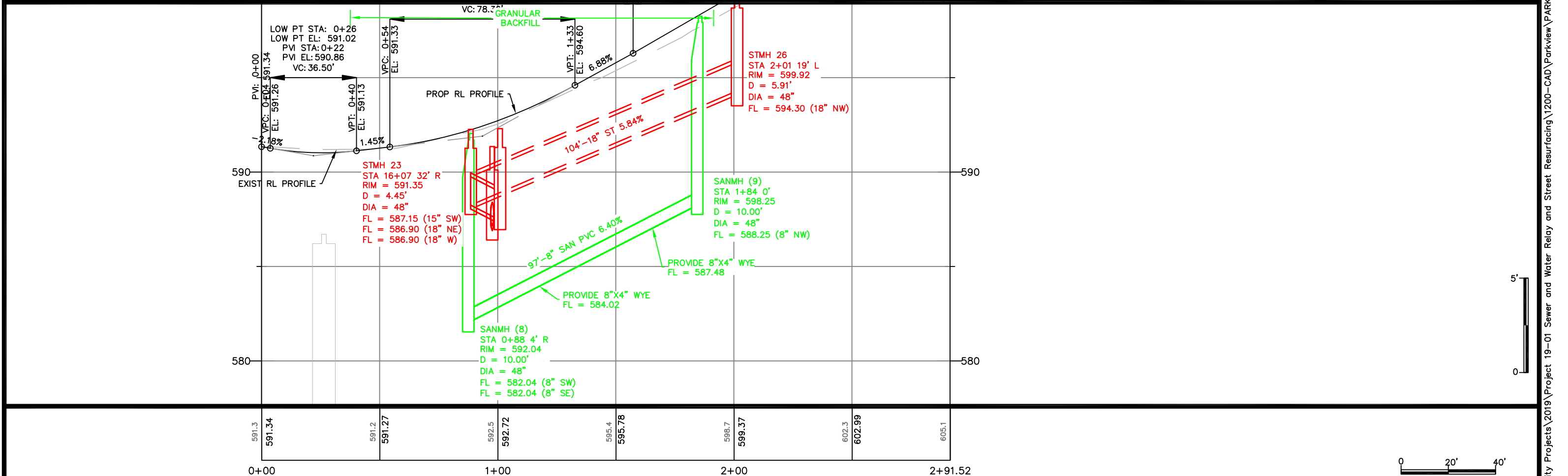
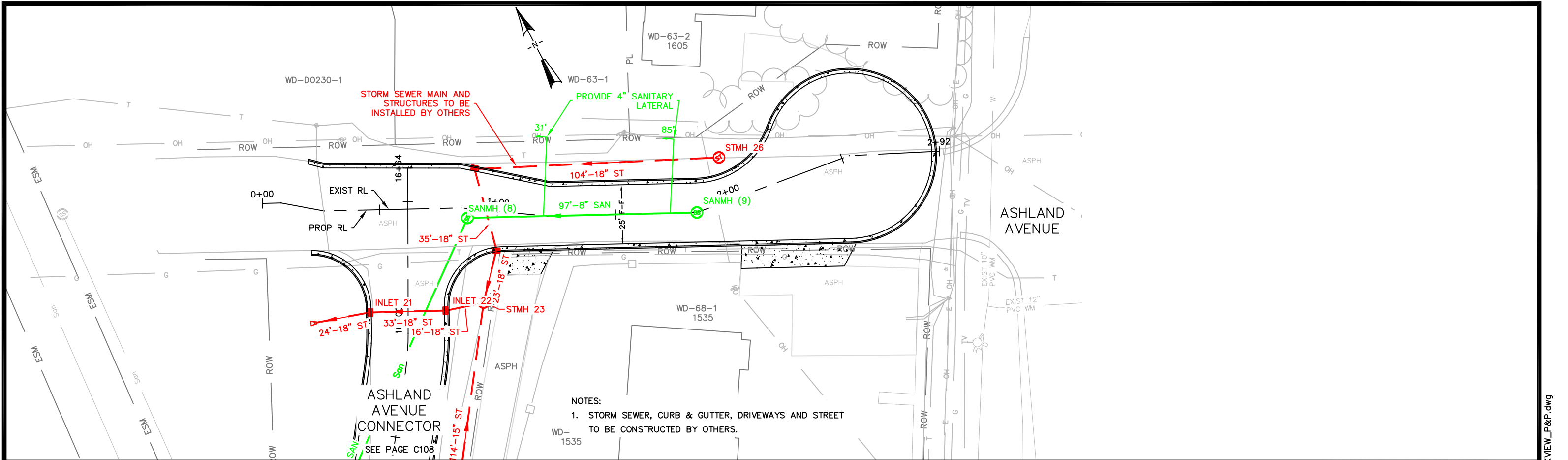
NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

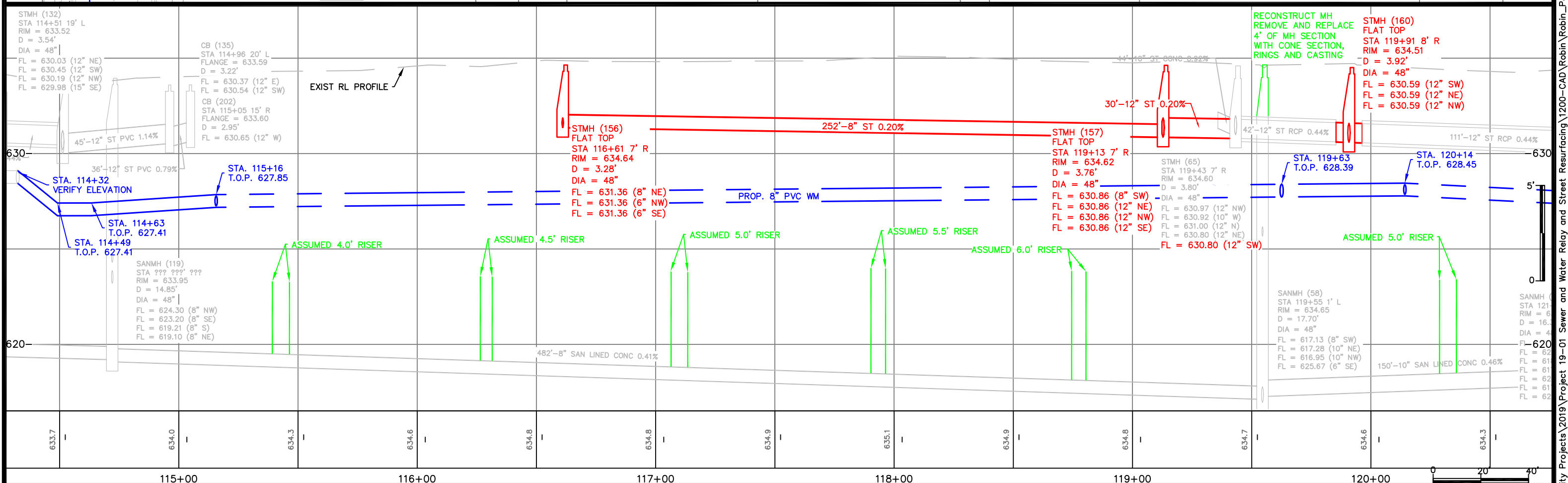
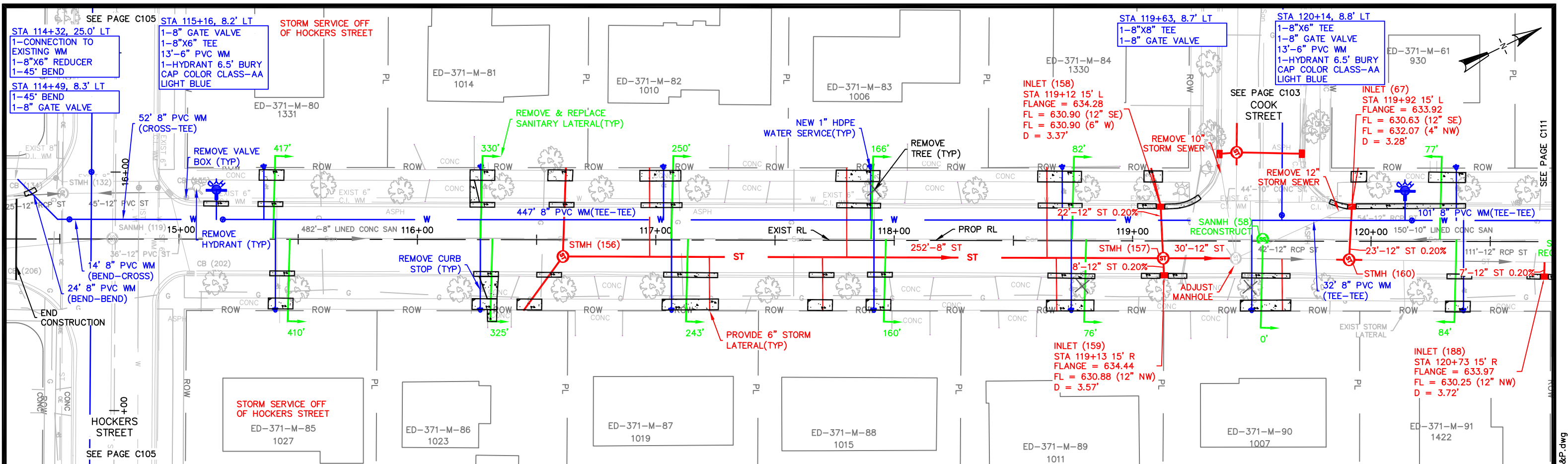
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| SURVEYED | BY    | DATE    |
| DRAWN    | WsdOT | 2017    |
| DESIGNED | KAD   | 12-2018 |
| CHECKED  | CKK   | 01-2019 |

| REVISIONS / ISSUES |      |    |         |
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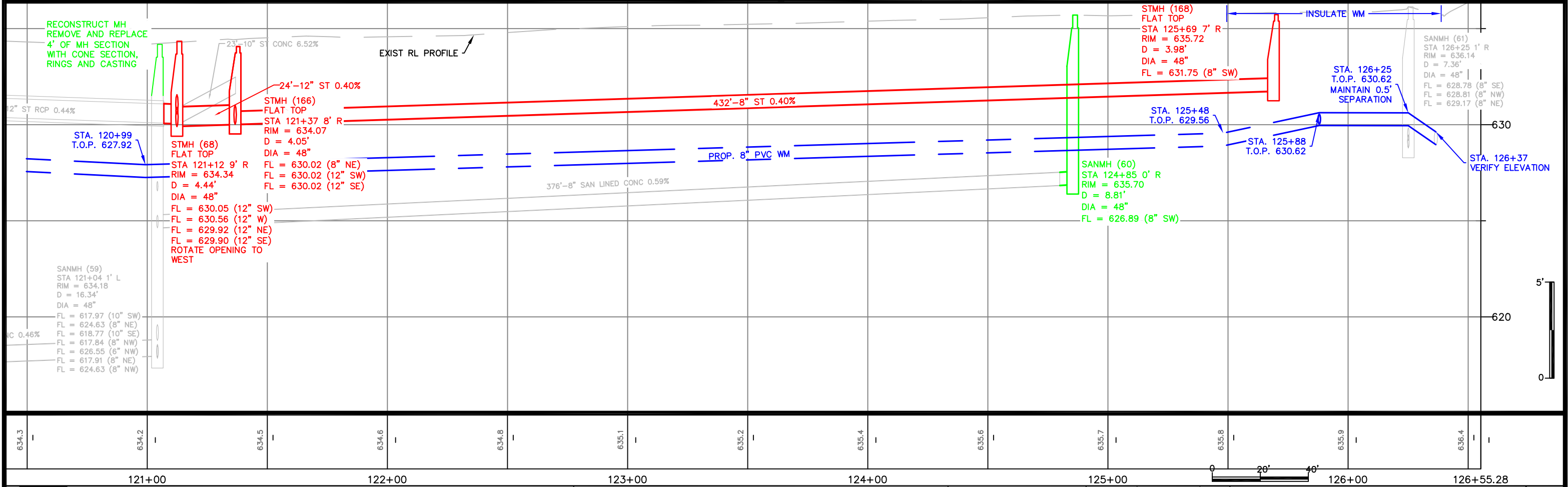
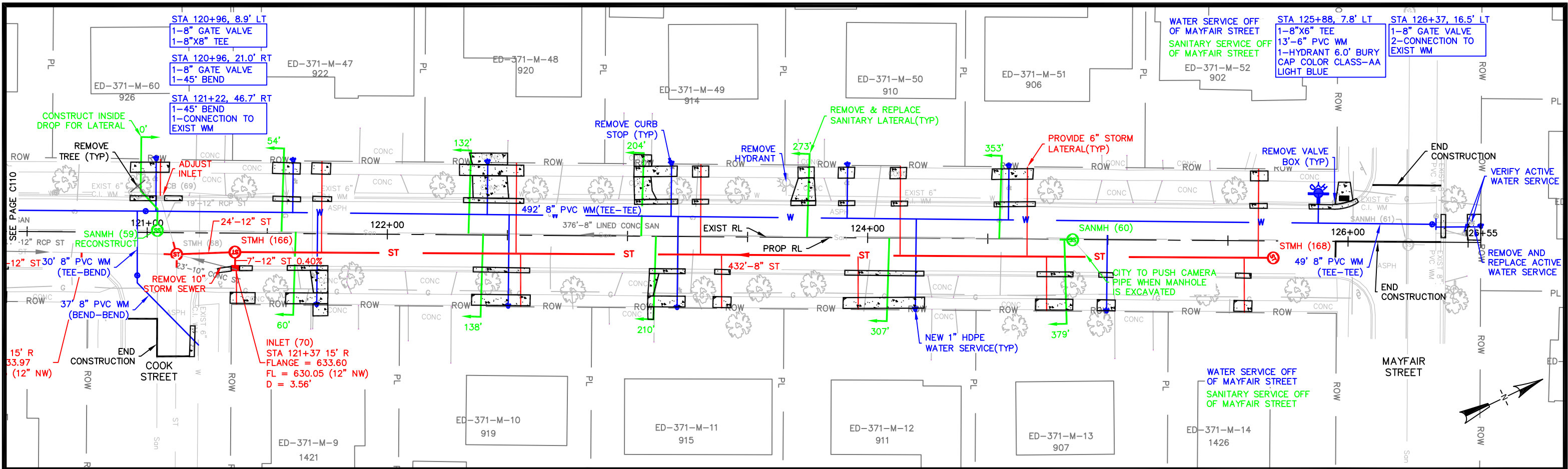
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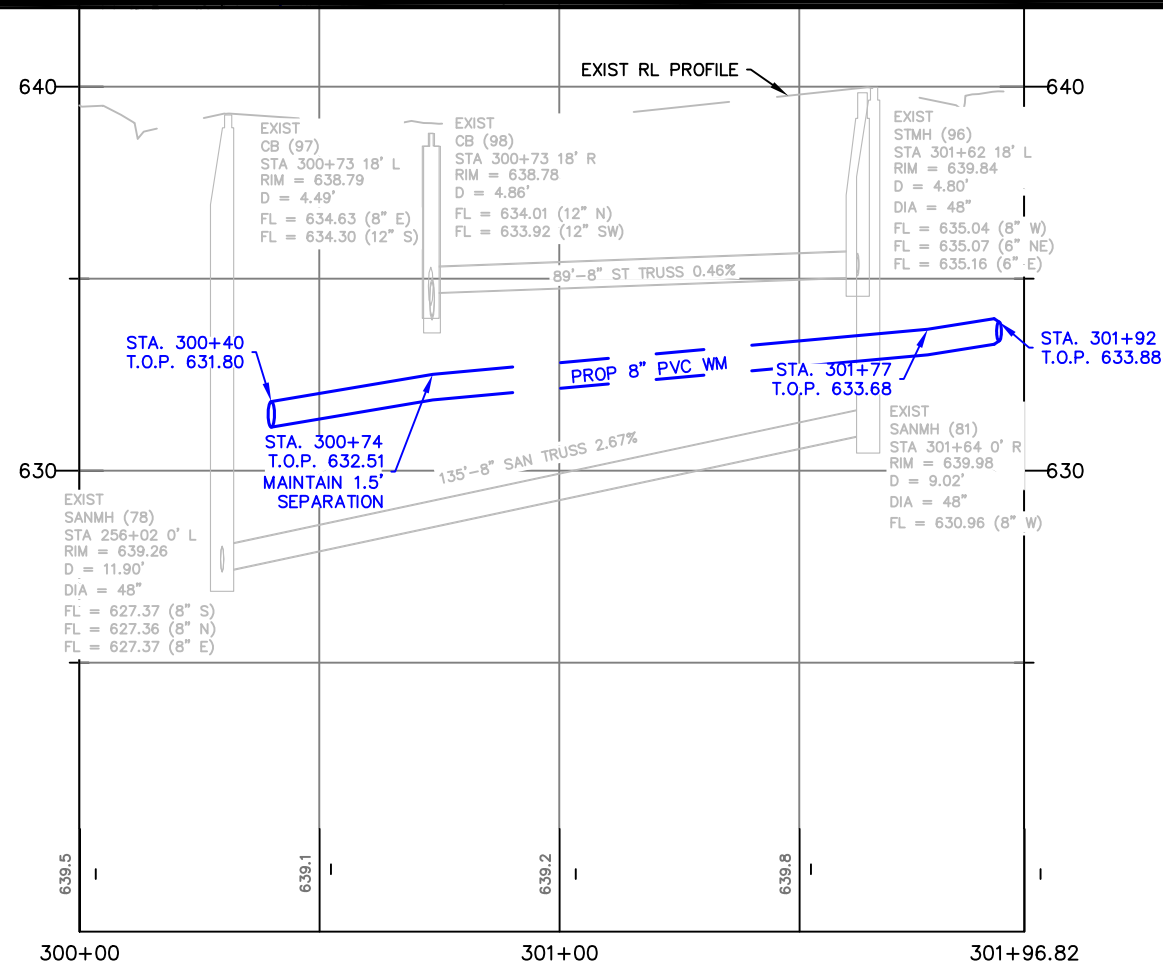
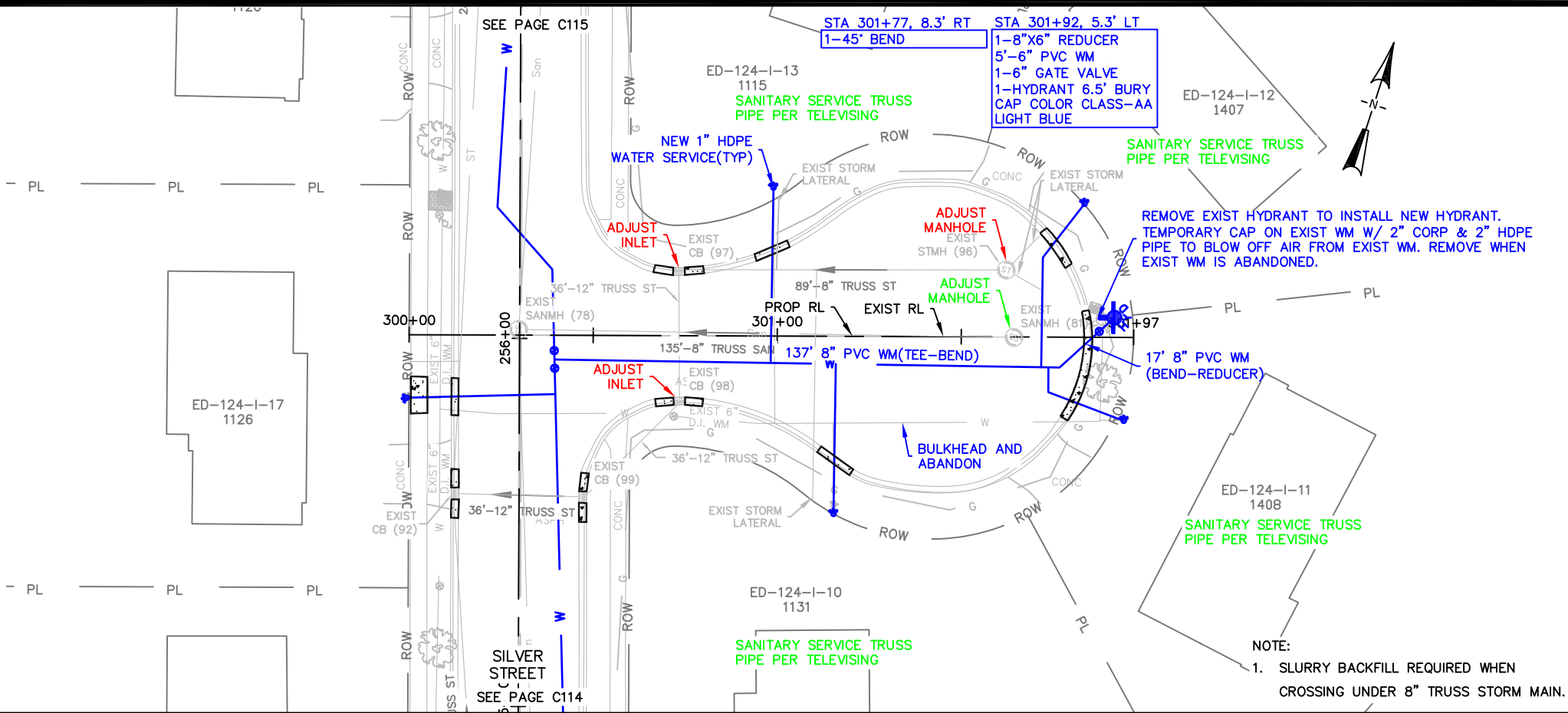








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# CITY OF DE PERE

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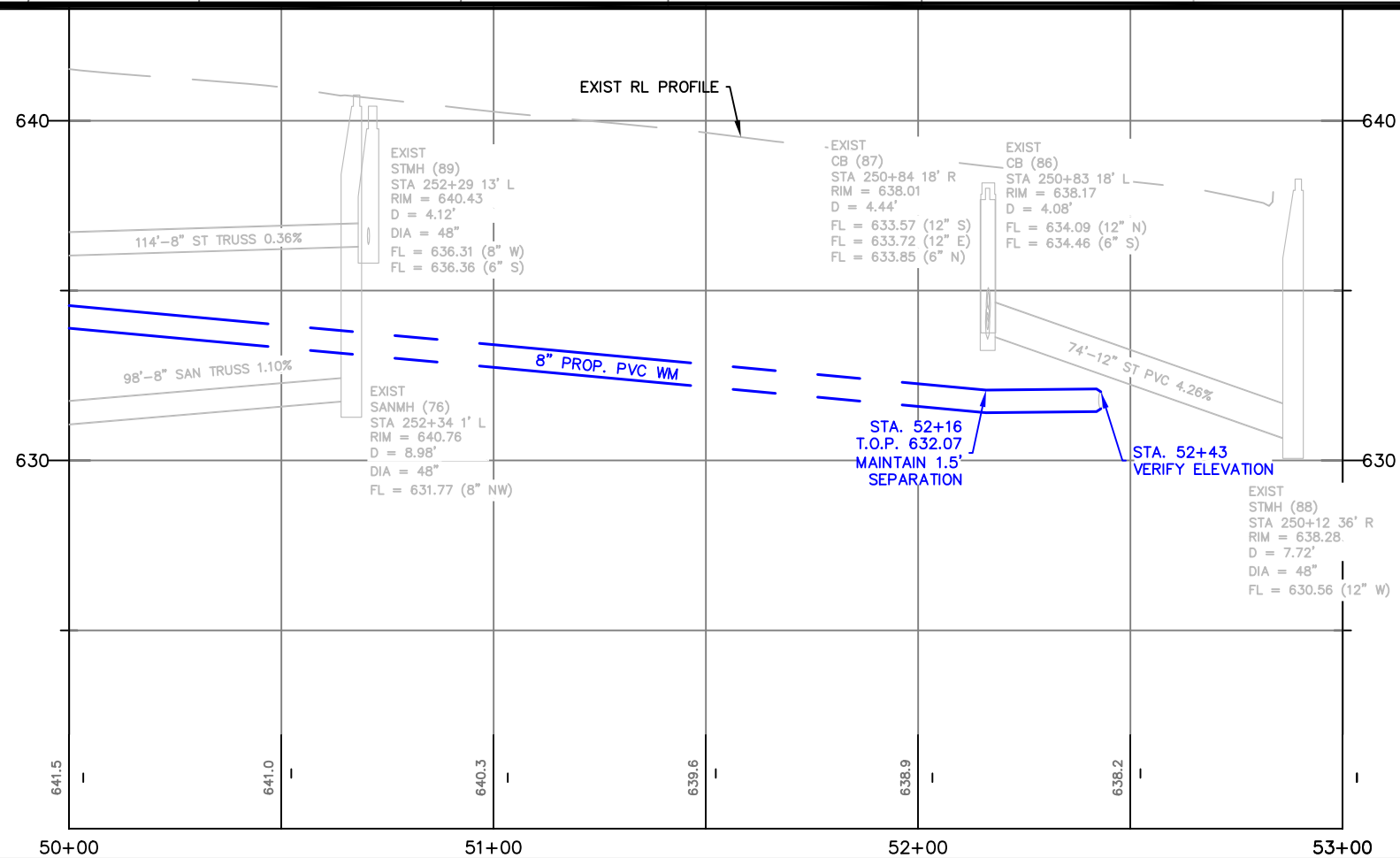
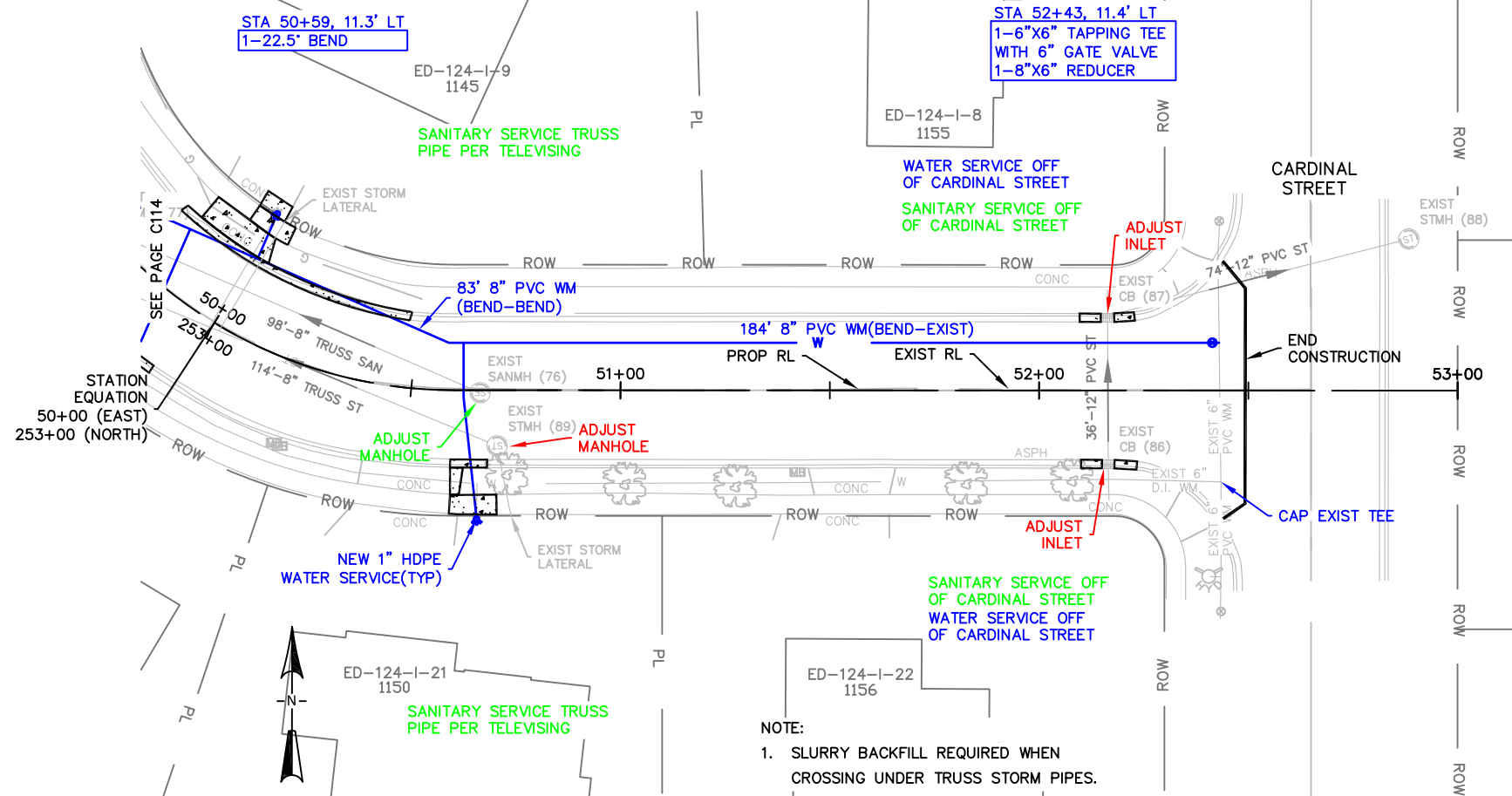
## SILVER COURT SILVER STREET TO TERMINI

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

| BY      | DATE    |
|---------|---------|
| KAD/JML | 12-2018 |
| JML     | 12-2018 |
| KAD     | 01-2019 |
| CHK     | 01-2019 |

| REVISIONS / ISSUES |      |    |         |
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| NO.                | DATE | BY | REMARKS |
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# CITY OF DE PERE

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## SILVER STREET 300' W. OF CARDINAL STREET TO CARDINAL STREET

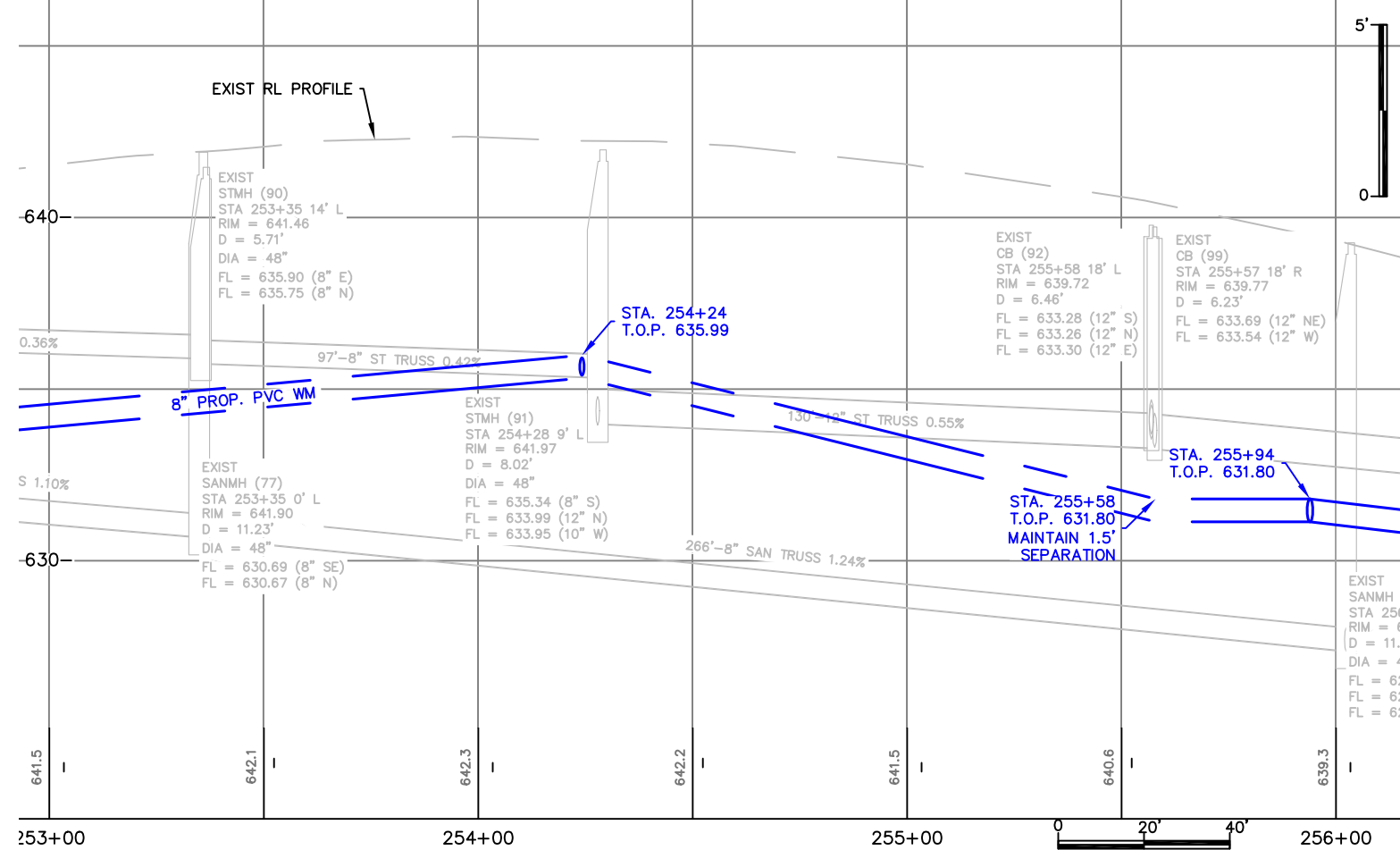
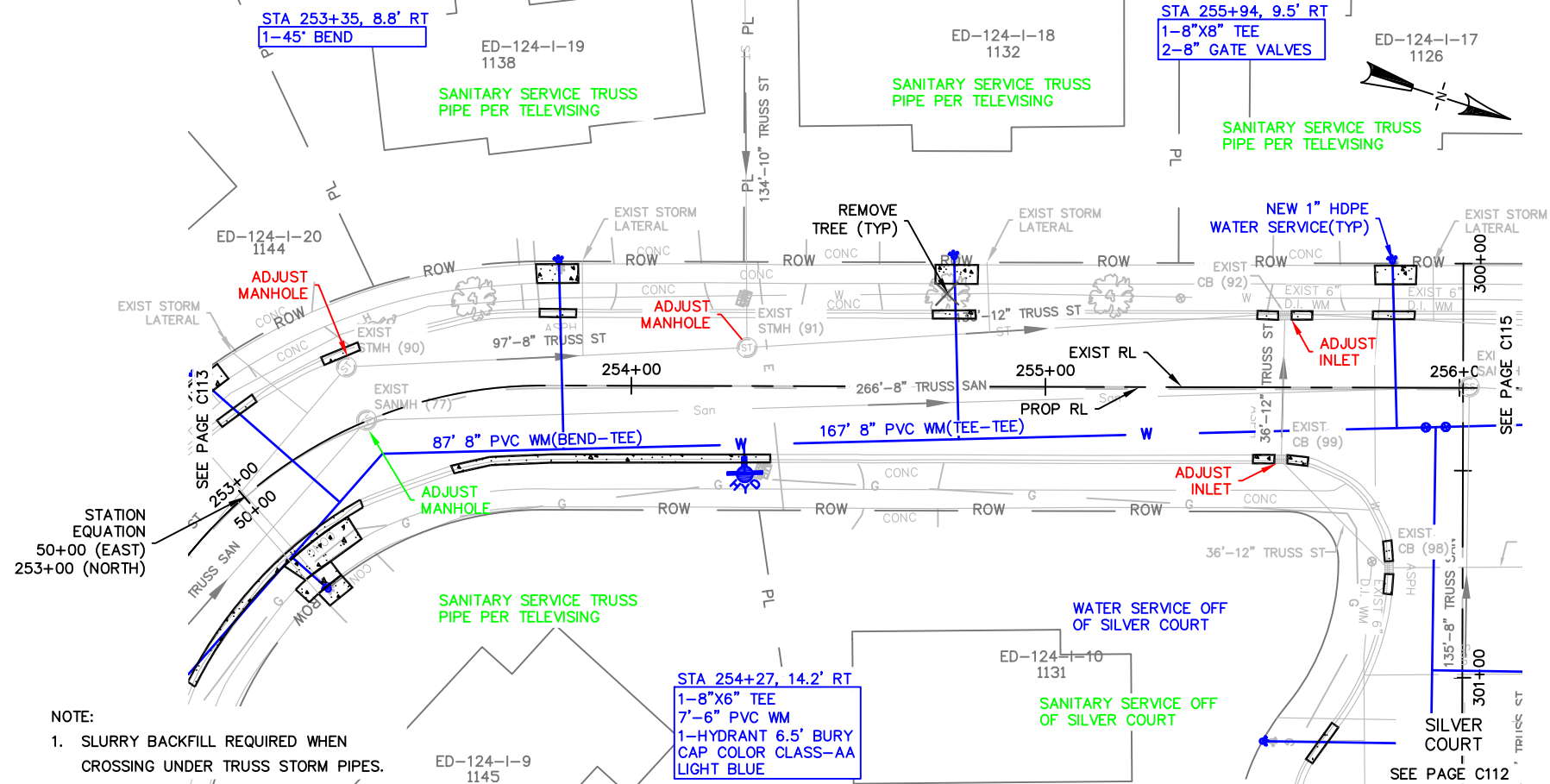
NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

| BY       | DATE            |
|----------|-----------------|
| SURVEYED | KAD/JML 12-2018 |
| DRAWN    | JML 12-2018     |
| DESIGNED | KAD 01-2019     |
| CHECKED  | CHK 01-2019     |

| REVISIONS / ISSUES |      |    |         |
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## SILVER STREET

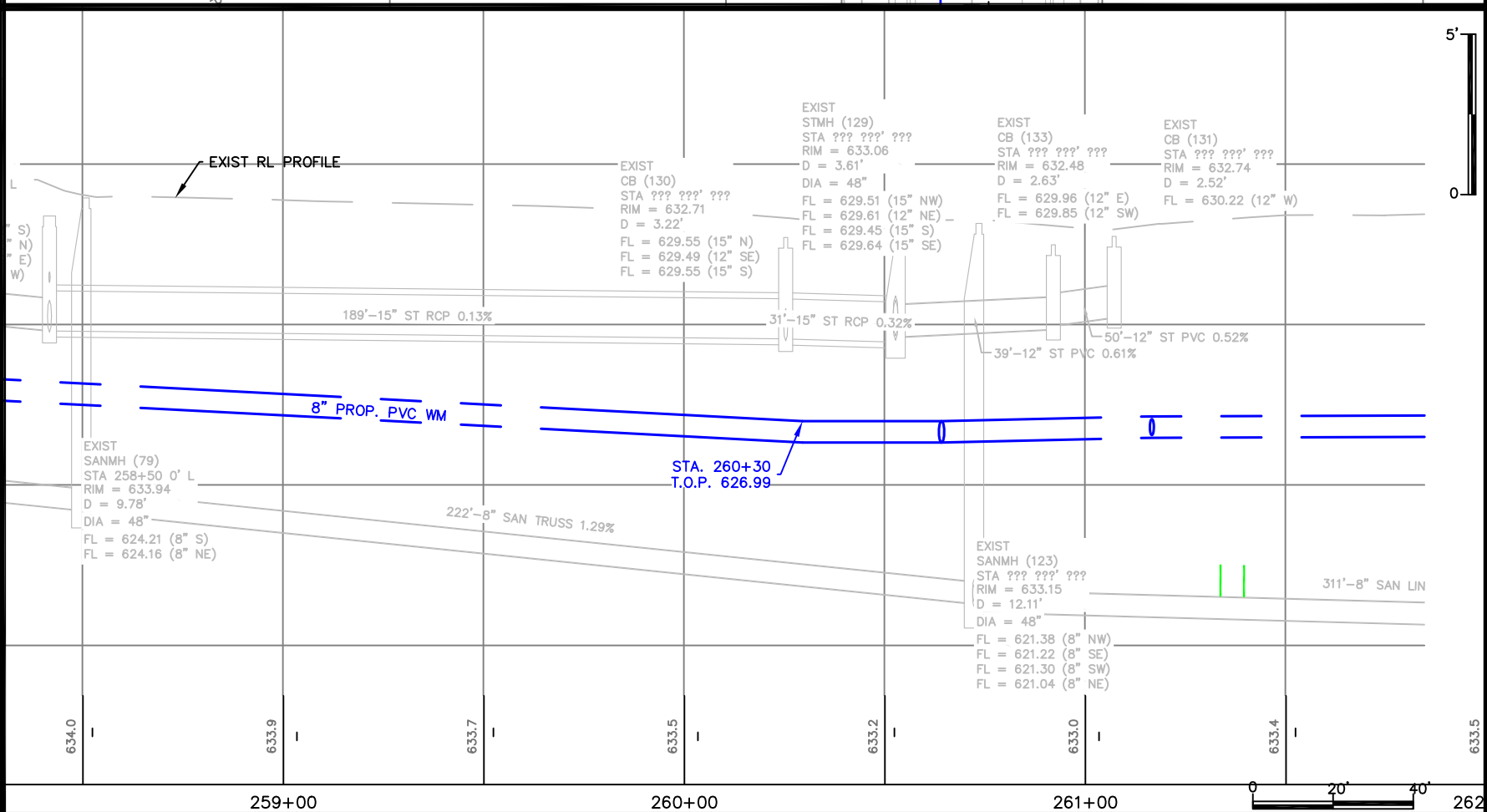
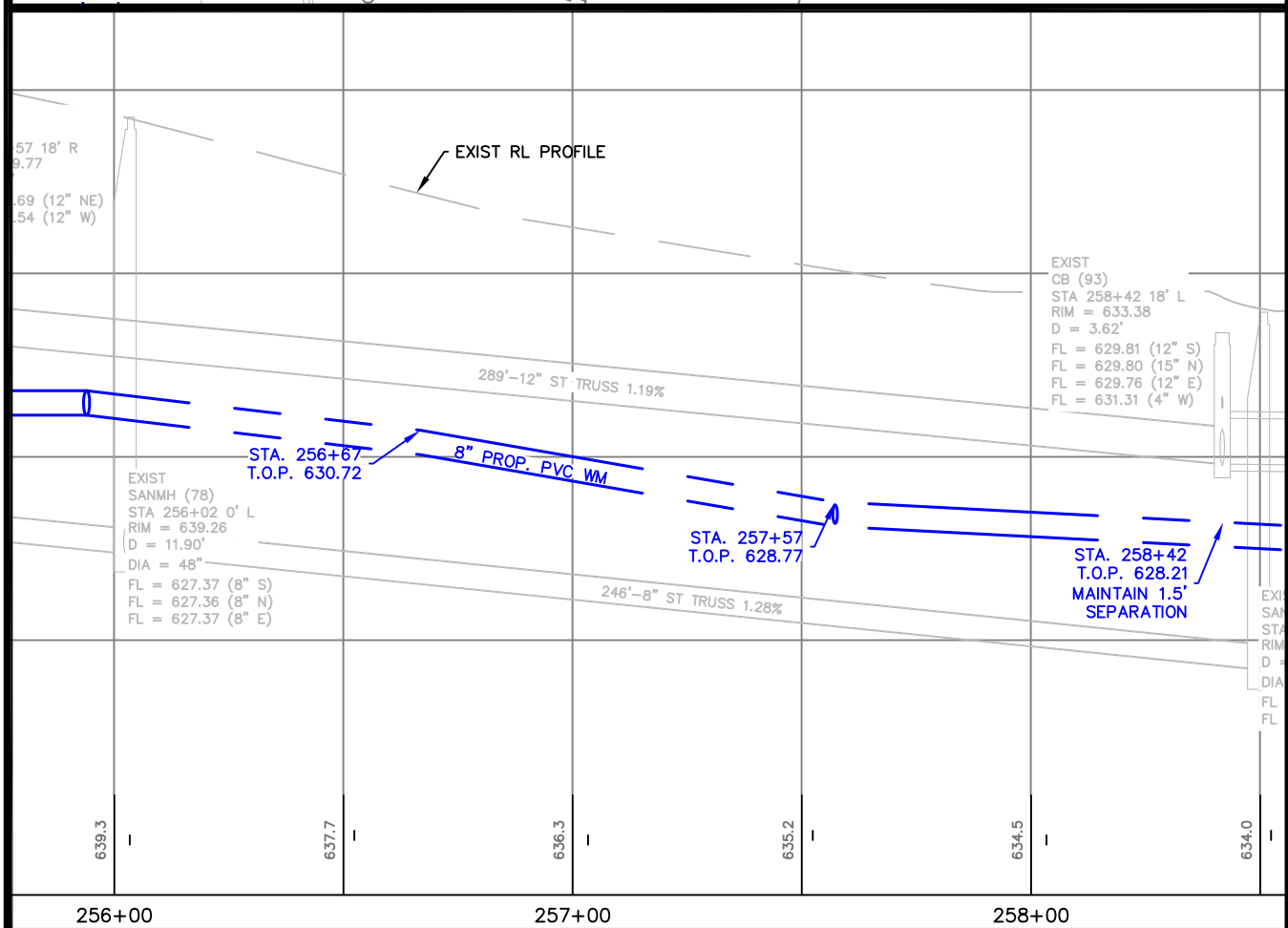
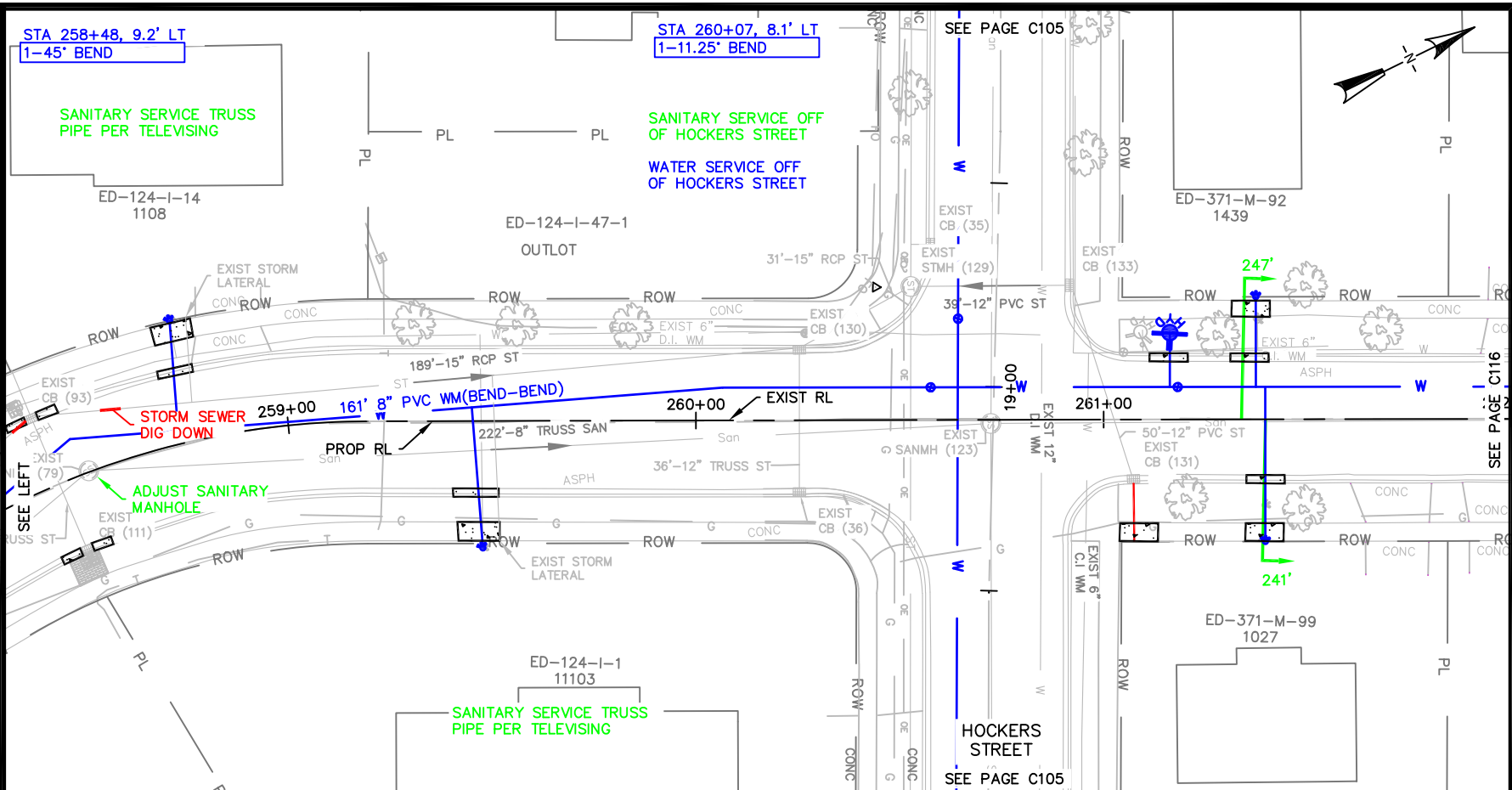
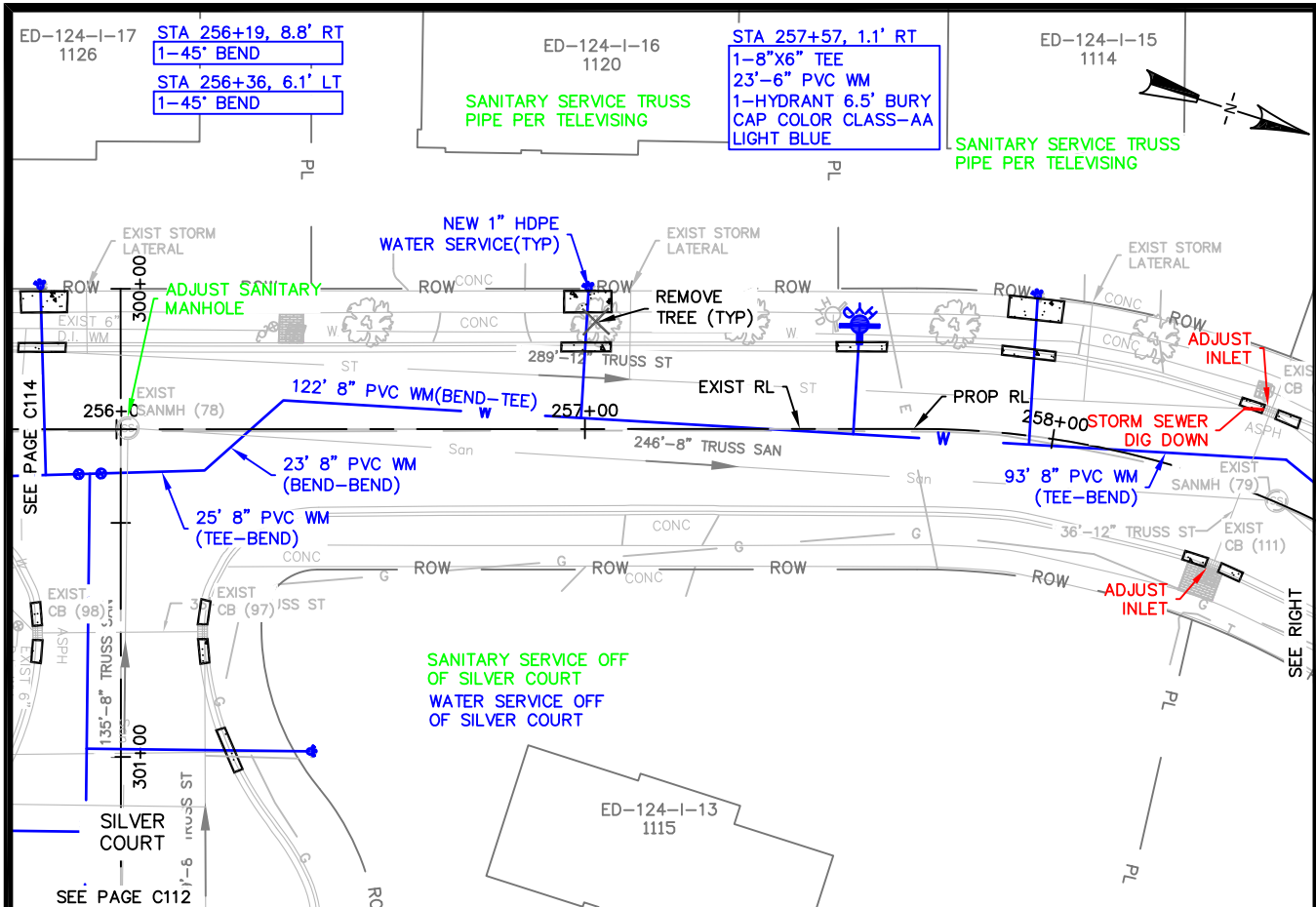
300' W. OF CARDINAL STREET TO SILVER COURT

NAME: SEWER & WATER RELAY AND STREET RESURFACING  
PROJECT # 19-01

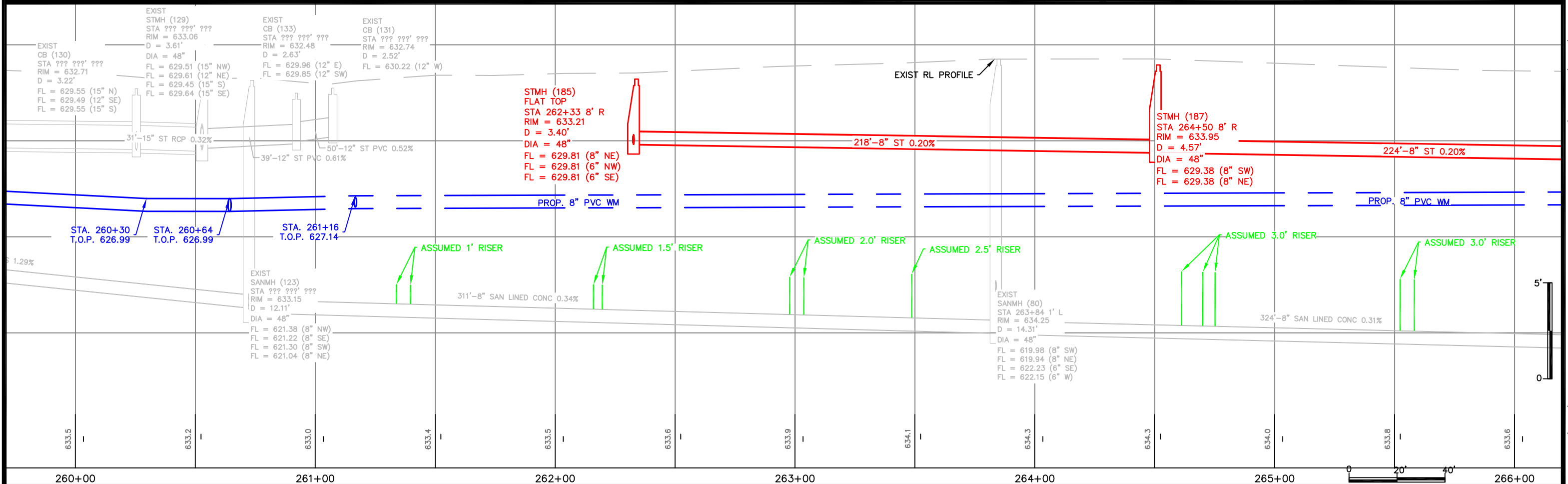
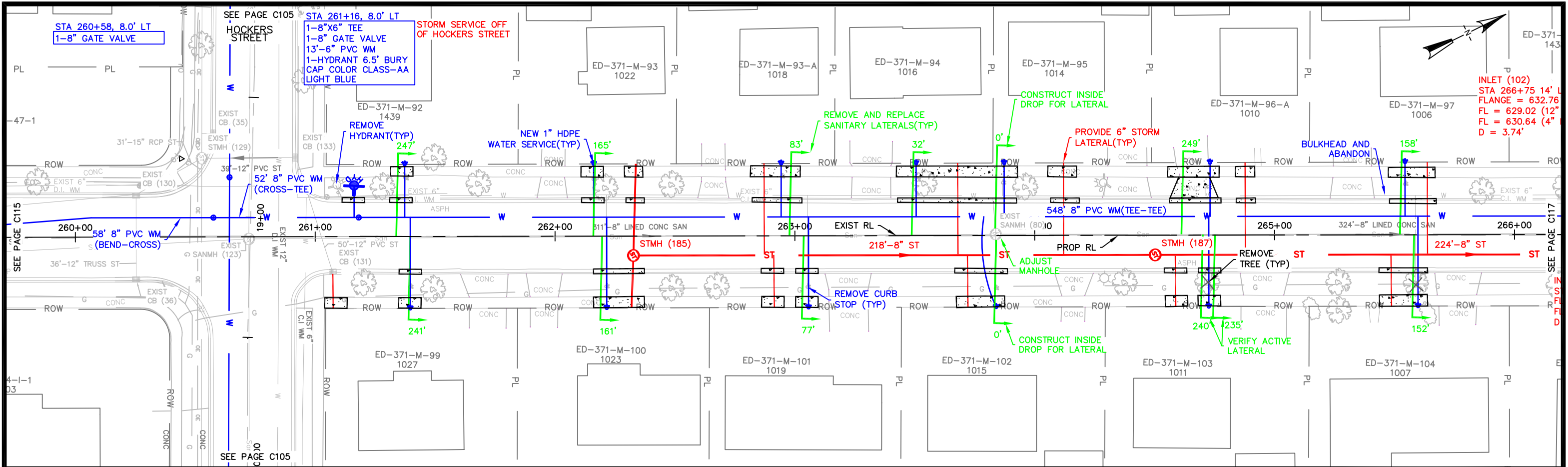
| BY               | DATE    |
|------------------|---------|
| SURVEYED KAD/JML | 12-2018 |
| DRAWN JML        | 12-2018 |
| DESIGNED KAD     | 01-2019 |
| CHECKED CHK      | 01-2019 |

| REVISIONS / ISSUES |      |    |         |
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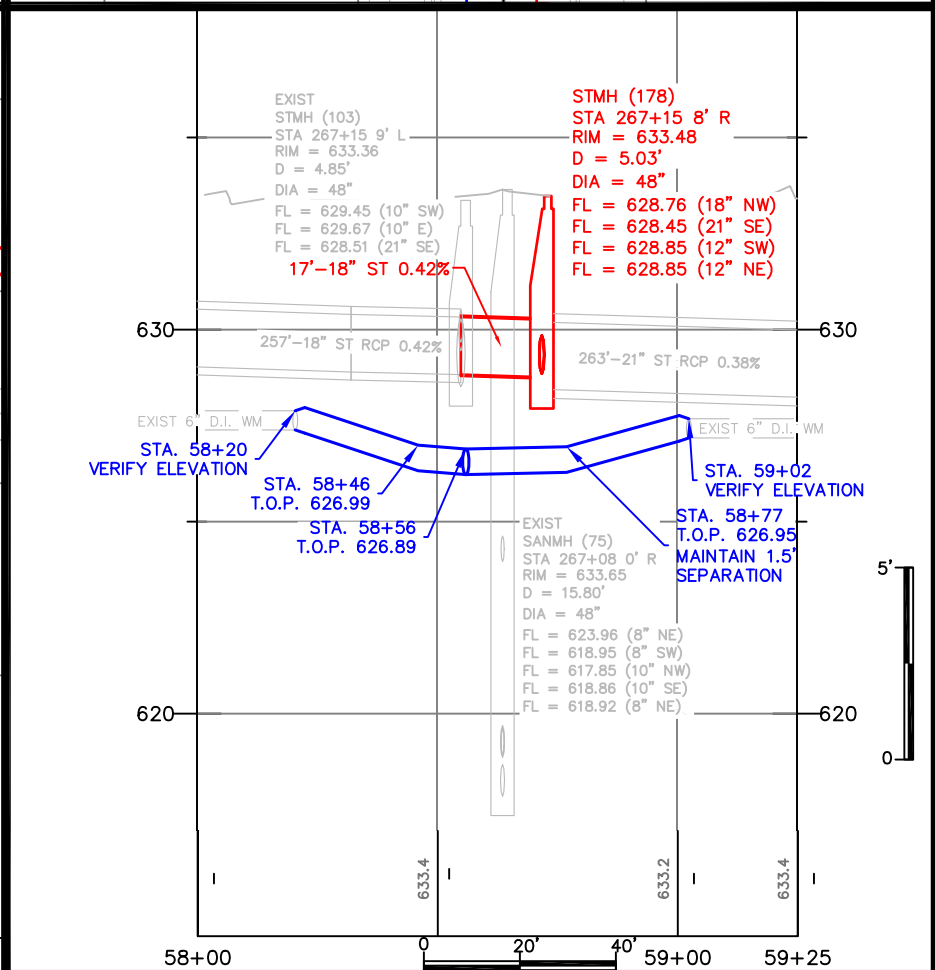
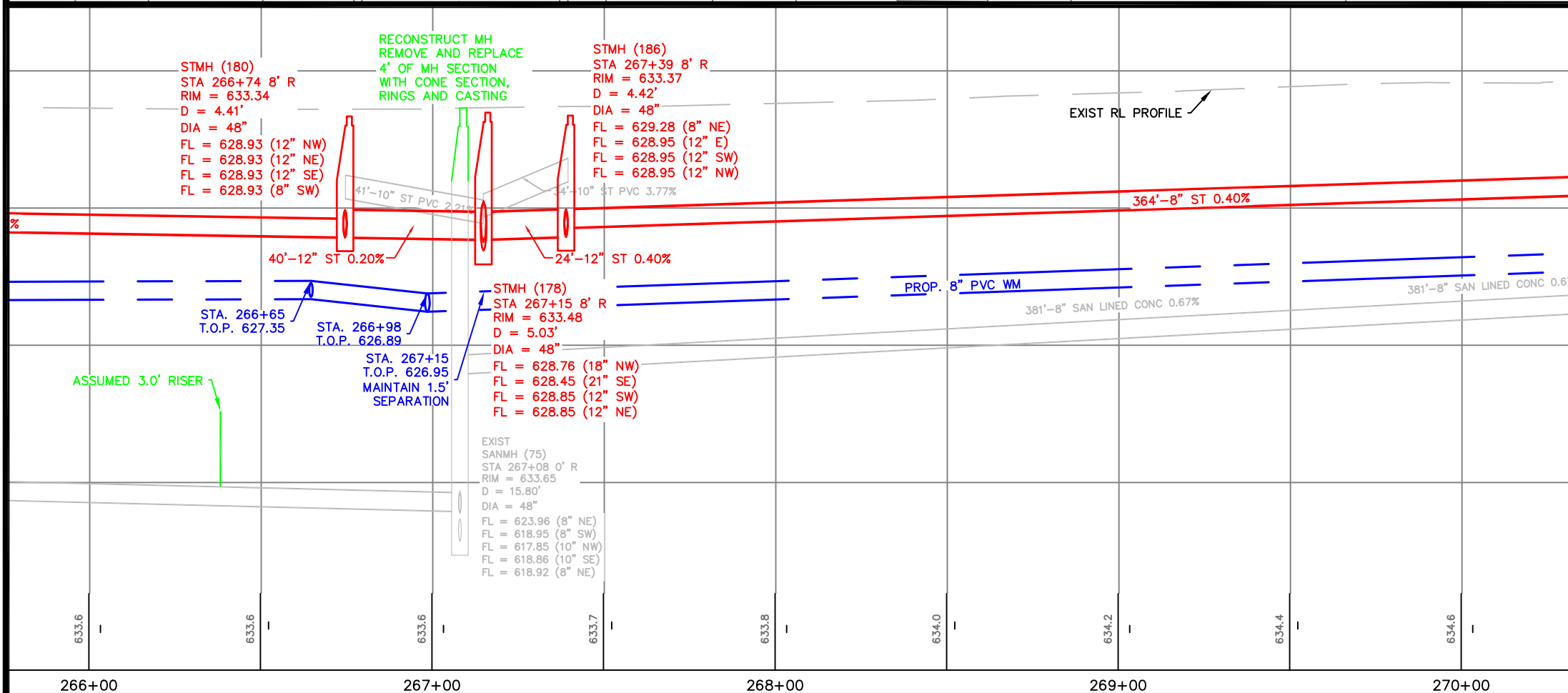
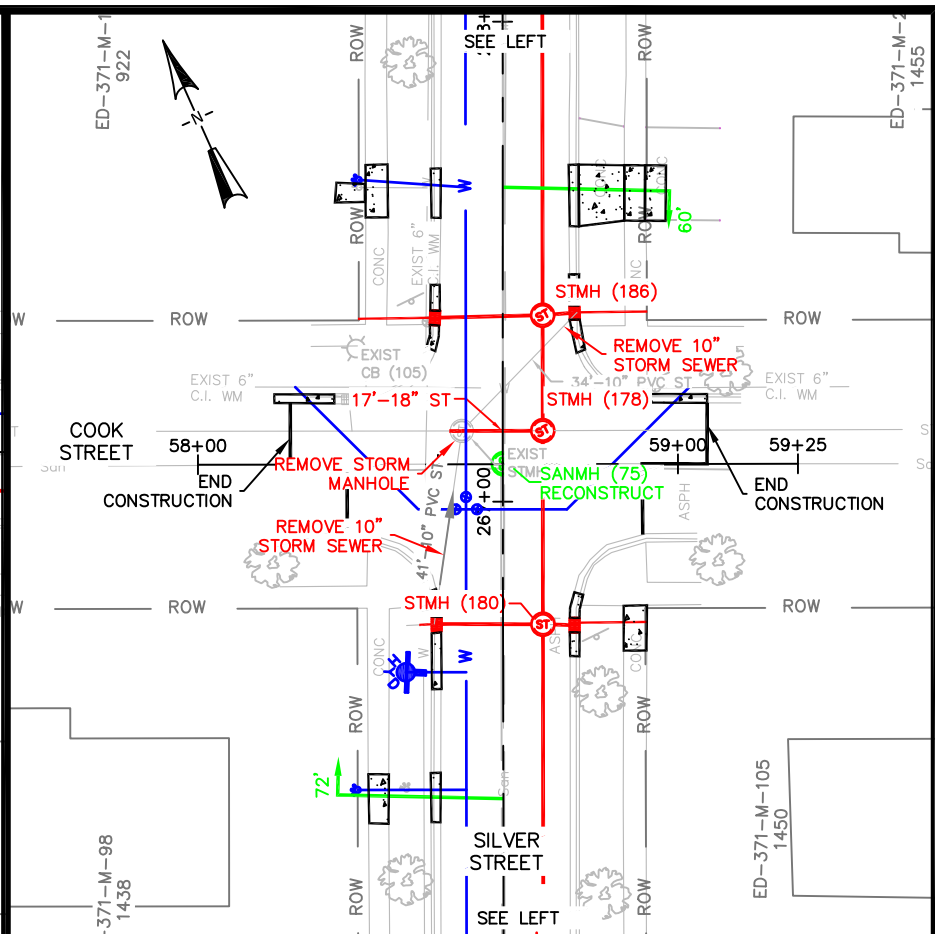
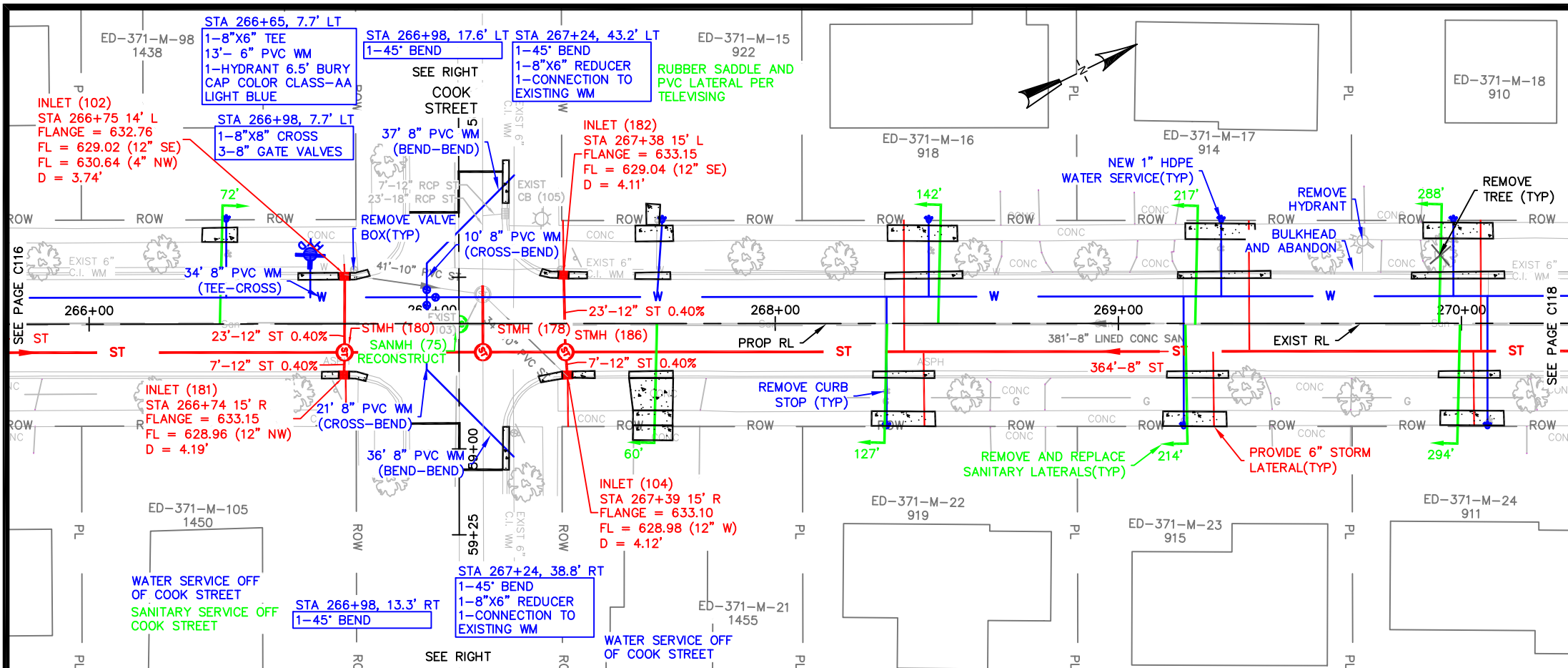




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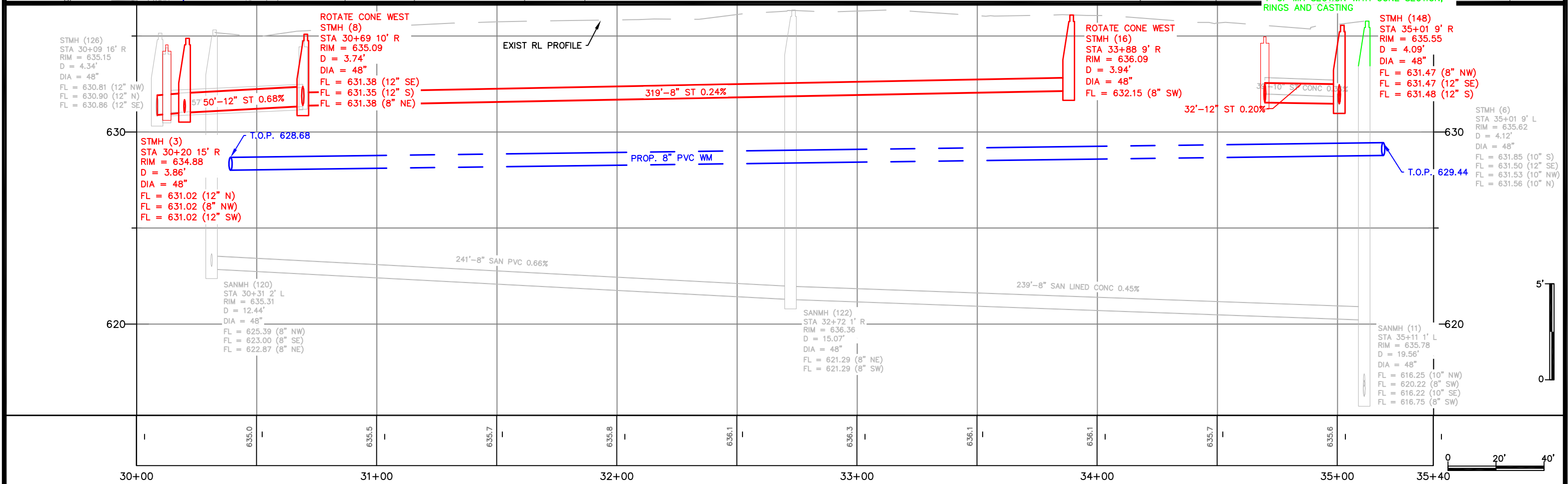
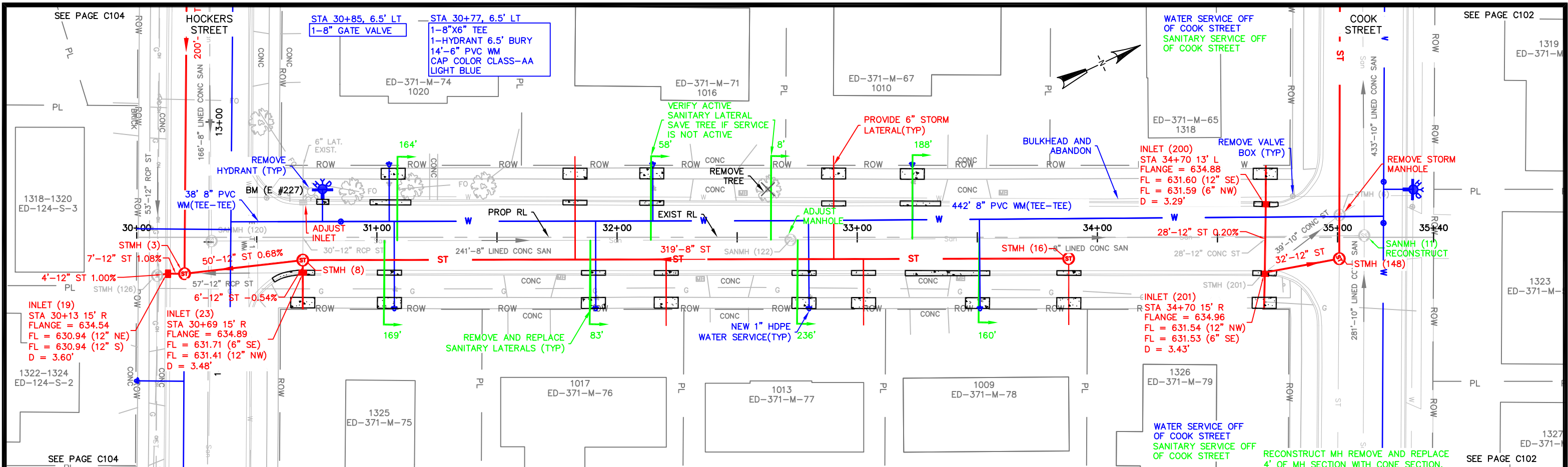
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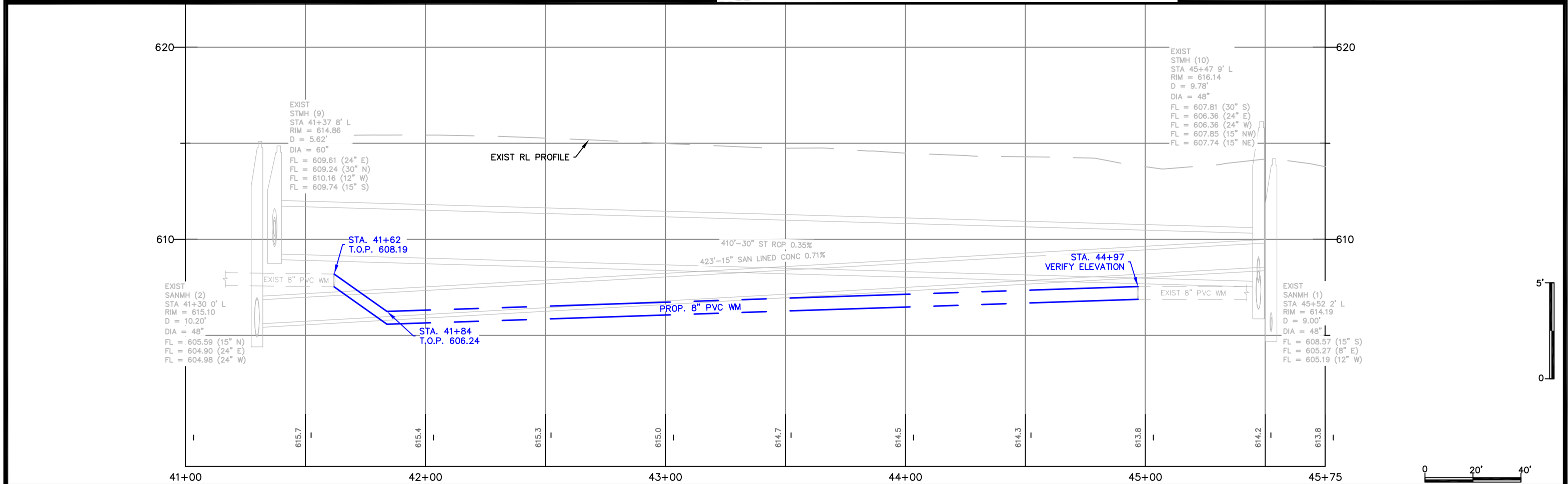
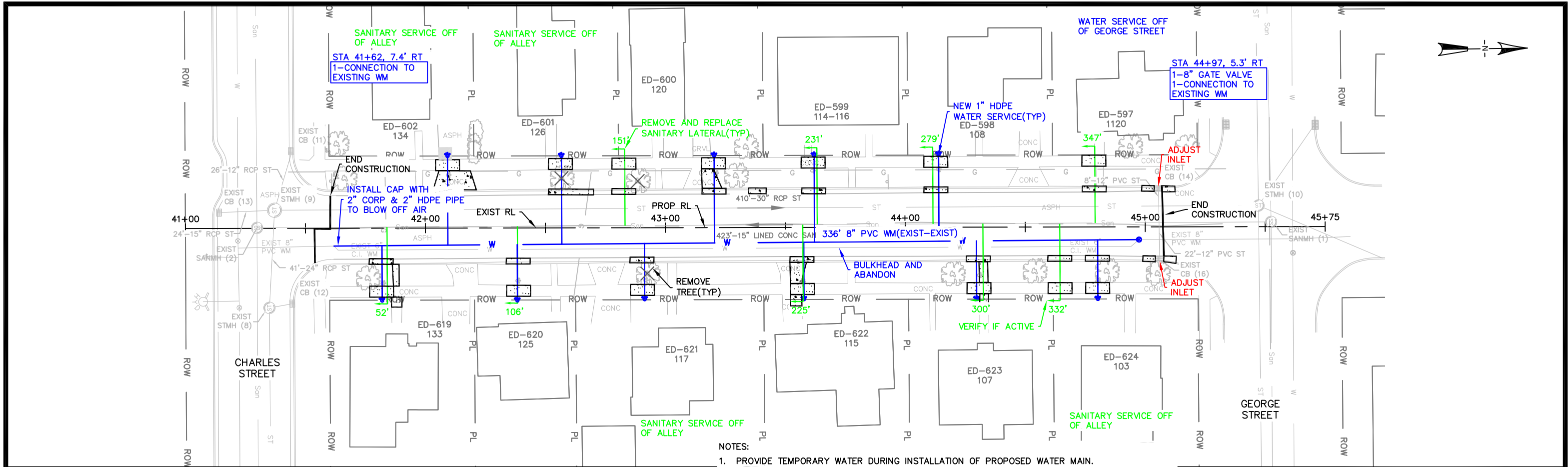
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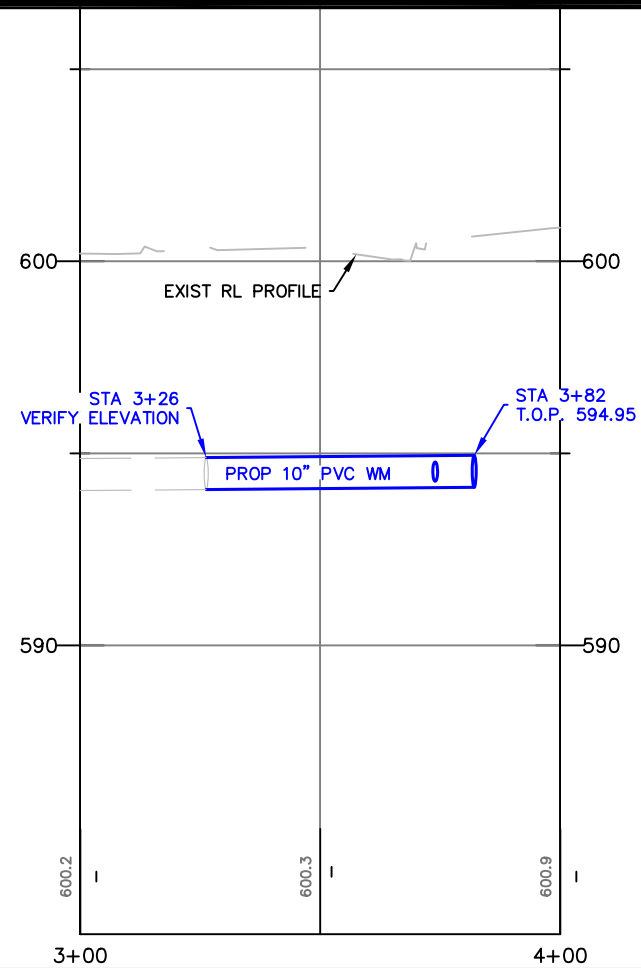
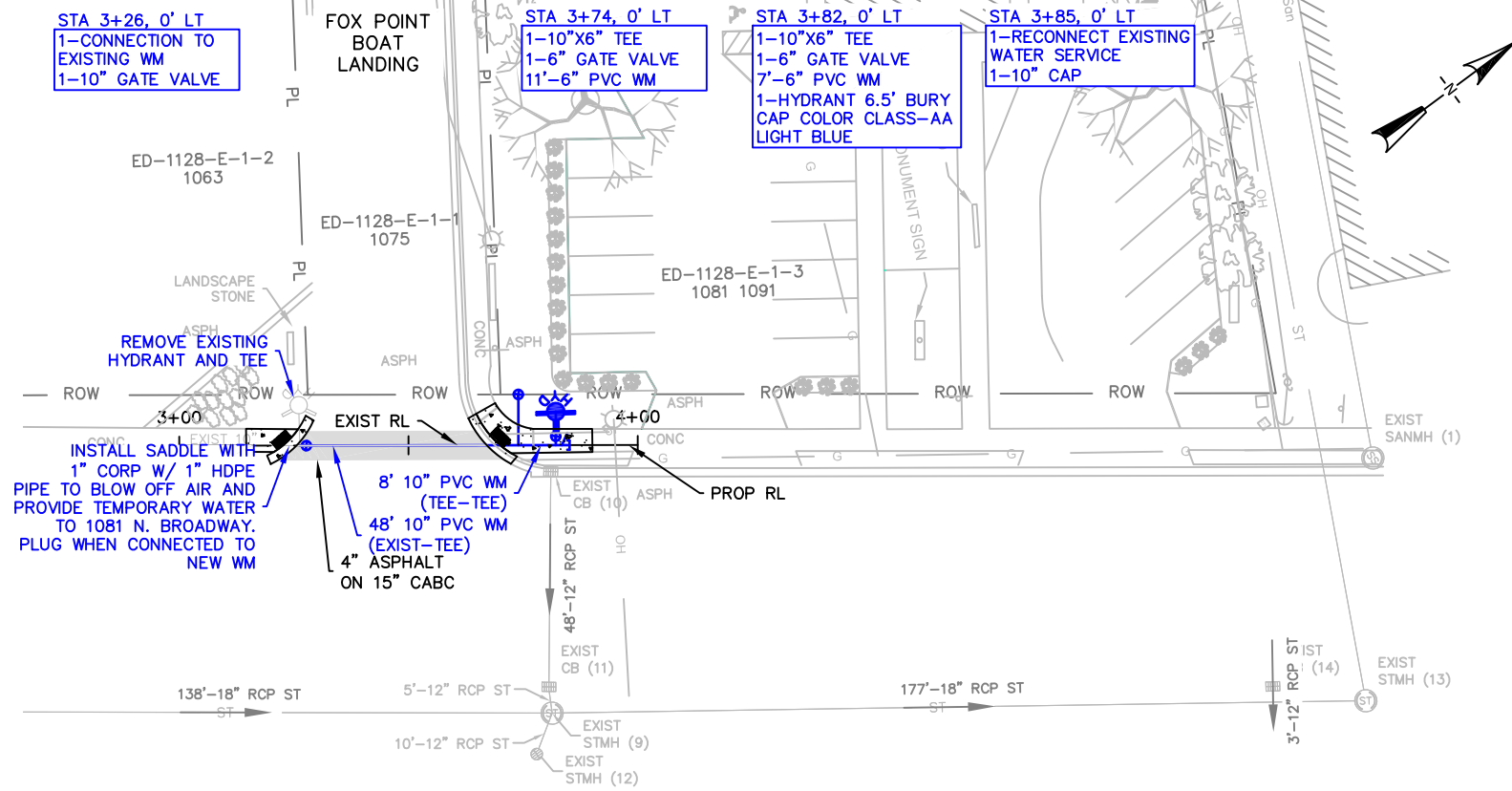






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# **CITY OF DE PERE**

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
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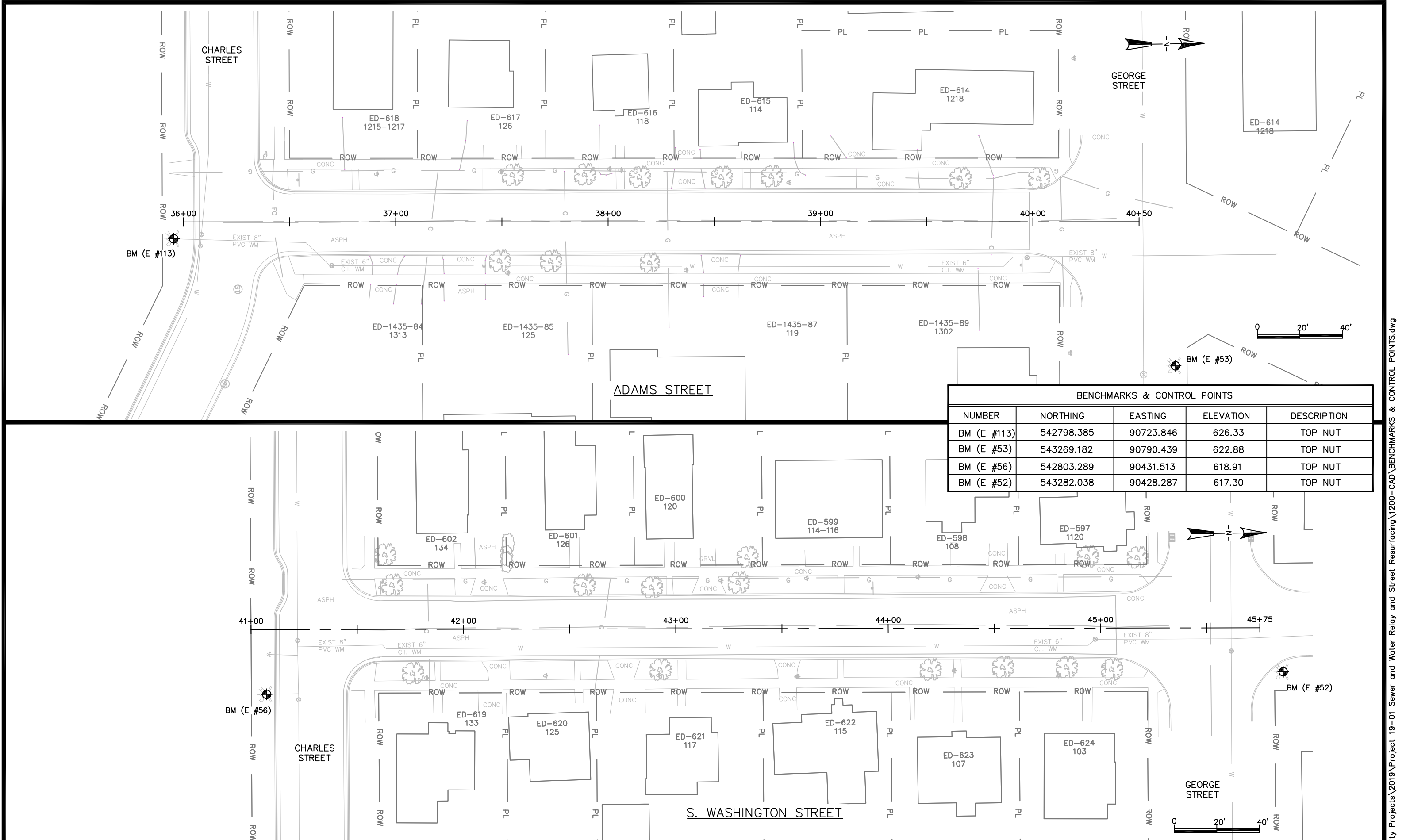
## **NORTH BROADWAY STREET WATER MAIN EXTENSION 1091 N. BROADWAY STREET**

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | MACH IV/KAD | 11-2018 |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
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| NO.                | DATE | BY | REMARKS |
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CITY OF DE PERE

ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
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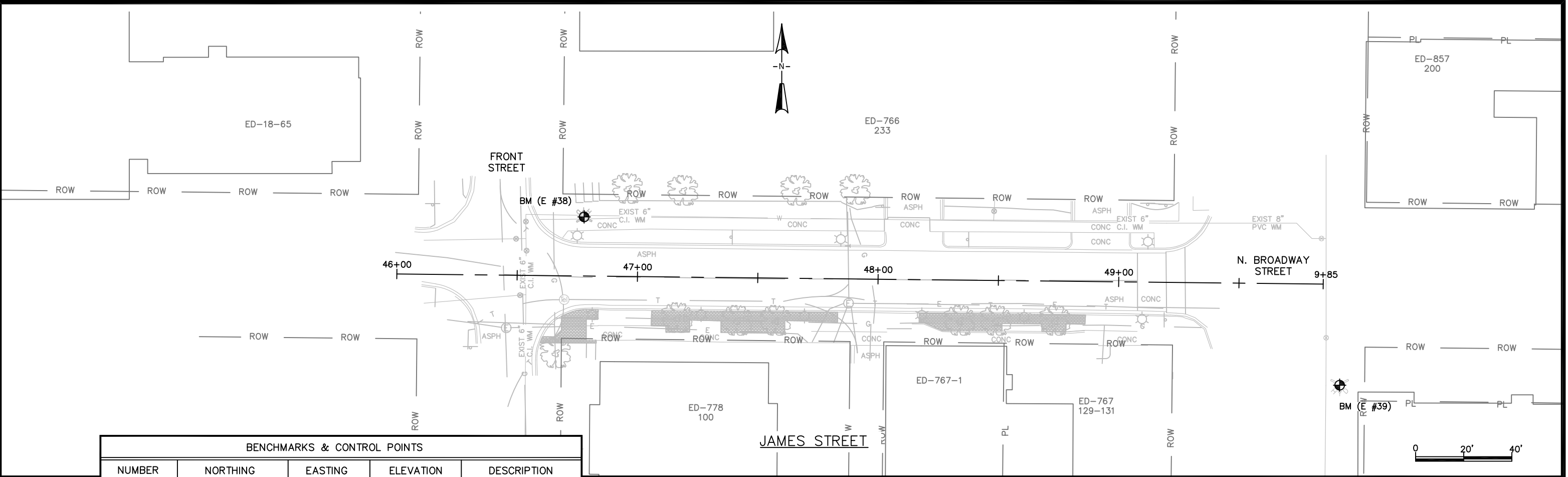
BENCHMARKS & CONTROL POINTS

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

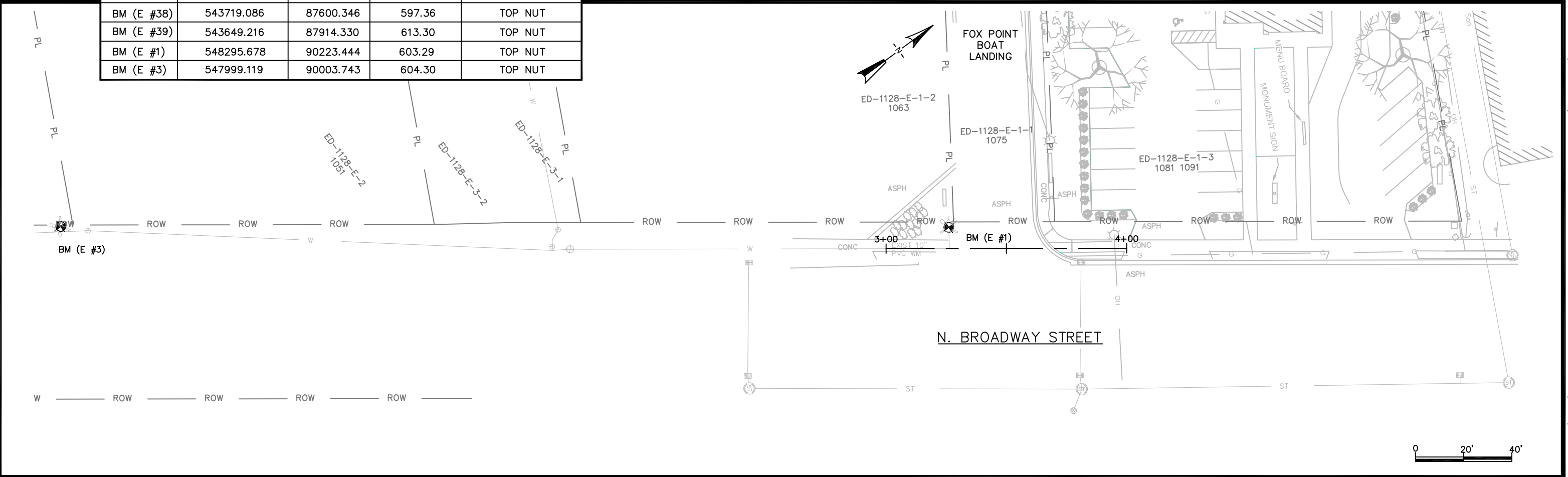
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| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
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| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #38)                  | 543719.086 | 87600.346 | 597.36    | TOP NUT     |
| BM (E #39)                  | 543649.216 | 87914.330 | 613.30    | TOP NUT     |
| BM (E #1)                   | 548295.678 | 90223.444 | 603.29    | TOP NUT     |
| BM (E #3)                   | 547999.119 | 90003.743 | 604.30    | TOP NUT     |



CITY OF DE PERE

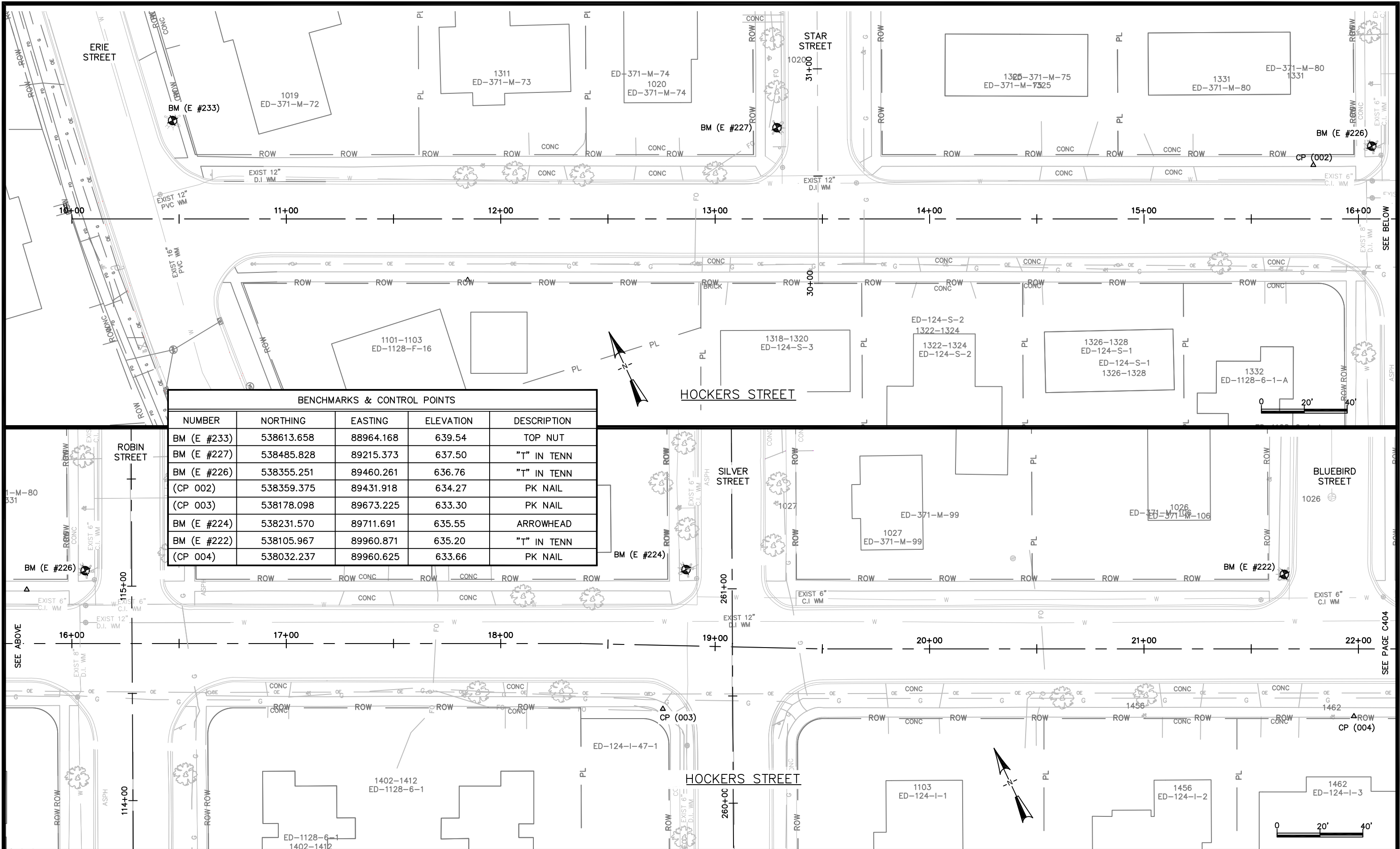
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
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BENCHMARKS & CONTROL POINTS

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
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| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #233)                 | 538613.658 | 88964.168 | 639.54    | TOP NUT     |
| BM (E #227)                 | 538485.828 | 89215.373 | 637.50    | "T" IN TENN |
| BM (E #226)                 | 538355.251 | 89460.261 | 636.76    | "T" IN TENN |
| (CP 002)                    | 538359.375 | 89431.918 | 634.27    | PK NAIL     |
| (CP 003)                    | 538178.098 | 89673.225 | 633.30    | PK NAIL     |
| BM (E #224)                 | 538231.570 | 89711.691 | 635.55    | ARROWHEAD   |
| BM (E #222)                 | 538105.967 | 89960.871 | 635.20    | "T" IN TENN |
| (CP 004)                    | 538032.237 | 89960.625 | 633.66    | PK NAIL     |



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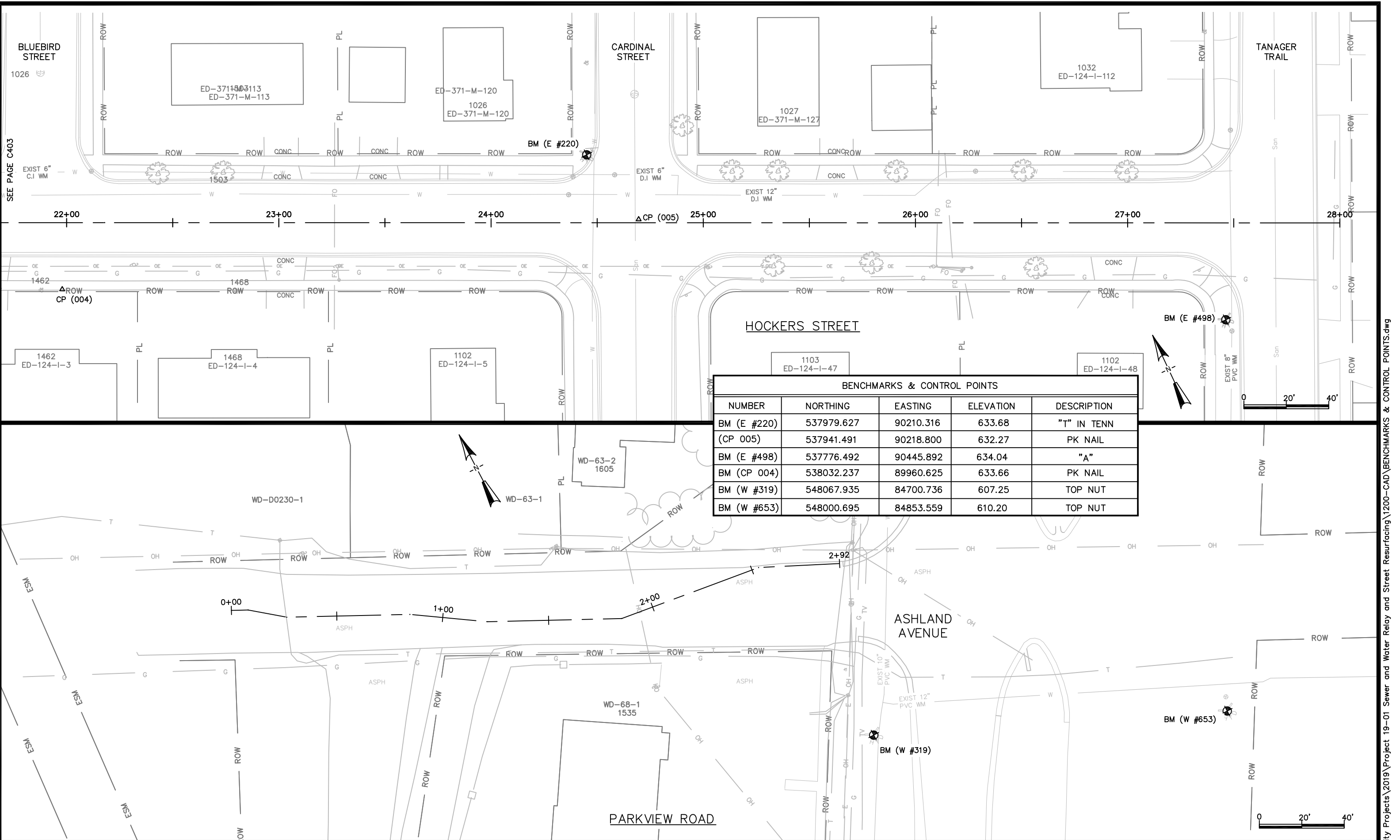
**BENCHMARKS & CONTROL POINTS**

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
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| NO.                | DATE | BY | REMARKS |
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| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #220)                 | 537979.627 | 90210.316 | 633.68    | "T" IN TENN |
| (CP 005)                    | 537941.491 | 90218.800 | 632.27    | PK NAIL     |
| BM (E #498)                 | 537776.492 | 90445.892 | 634.04    | "A"         |
| BM (CP 004)                 | 538032.237 | 89960.625 | 633.66    | PK NAIL     |
| BM (W #319)                 | 548067.935 | 84700.736 | 607.25    | TOP NUT     |
| BM (W #653)                 | 548000.695 | 84853.559 | 610.20    | TOP NUT     |



CITY OF DE PERE

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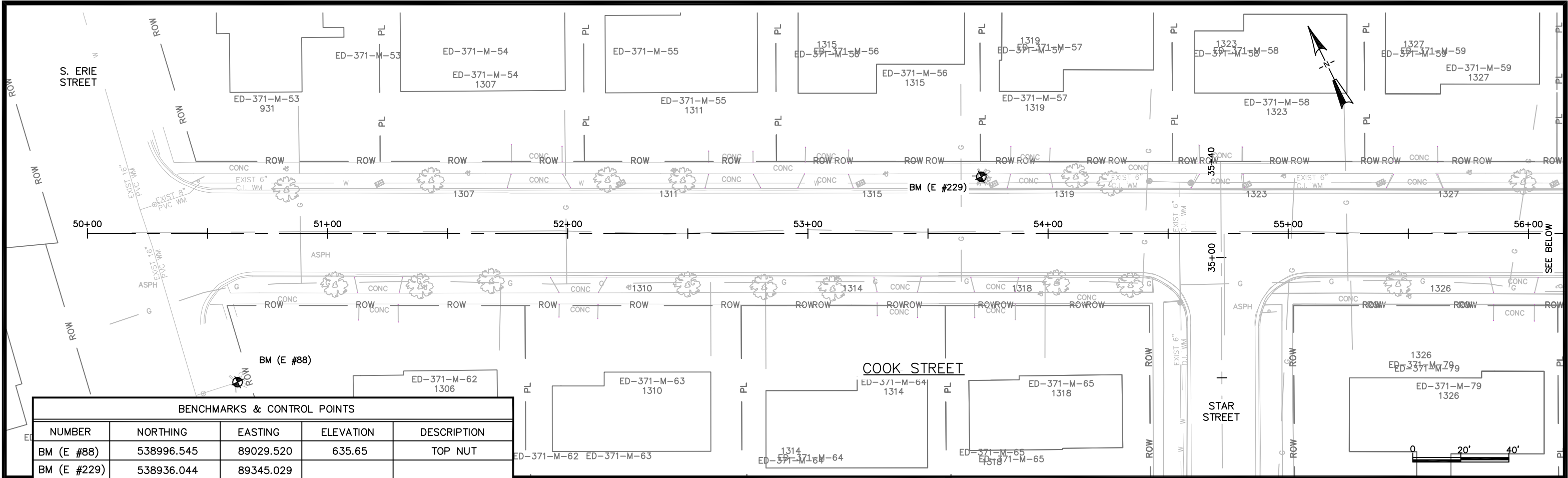
BENCHMARKS & CONTROL POINTS

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

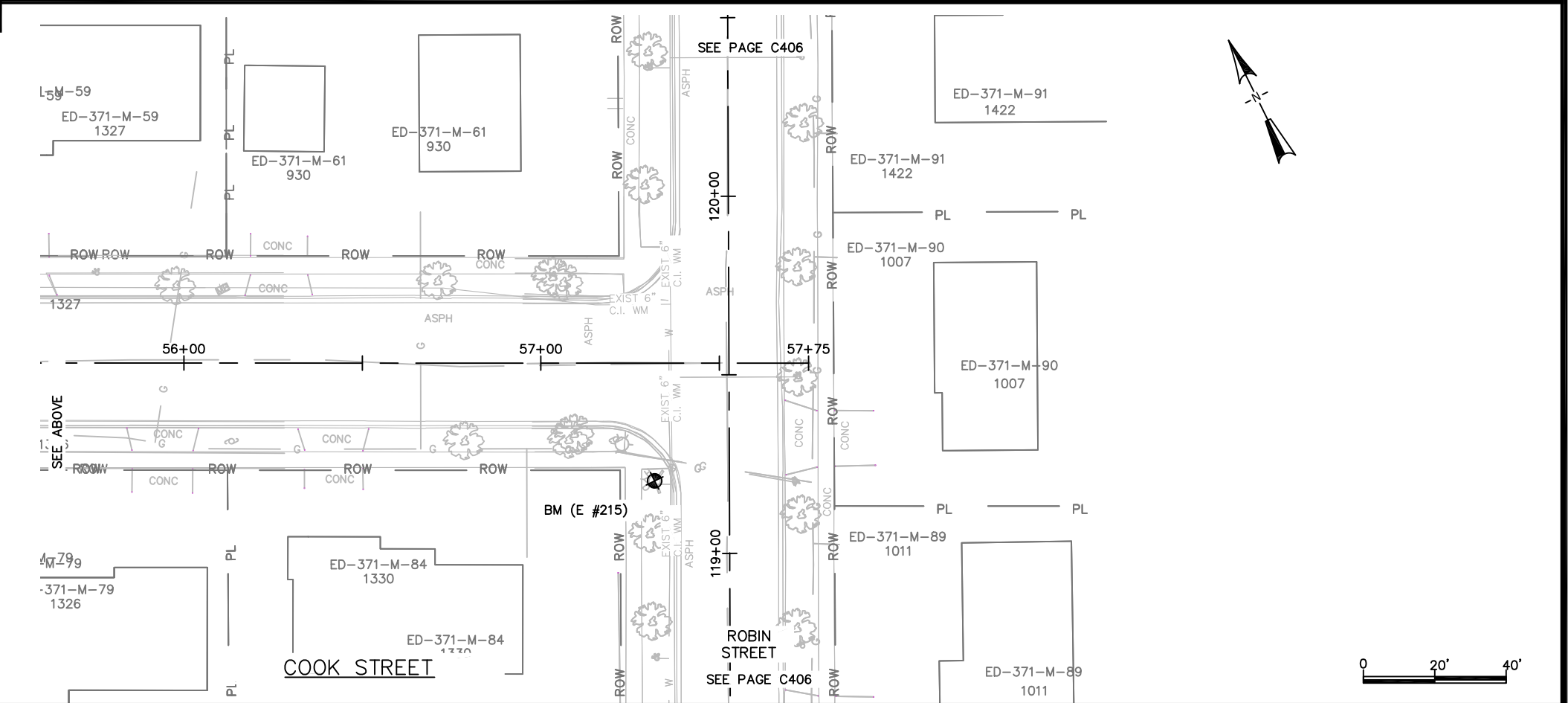
|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
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| NO.                | DATE | BY | REMARKS |
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| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #88)                  | 538996.545 | 89029.520 | 635.65    | TOP NUT     |
| BM (E #229)                 | 538936.044 | 89345.029 |           |             |
| BM (E #215)                 | 538725.954 | 89642.407 |           |             |



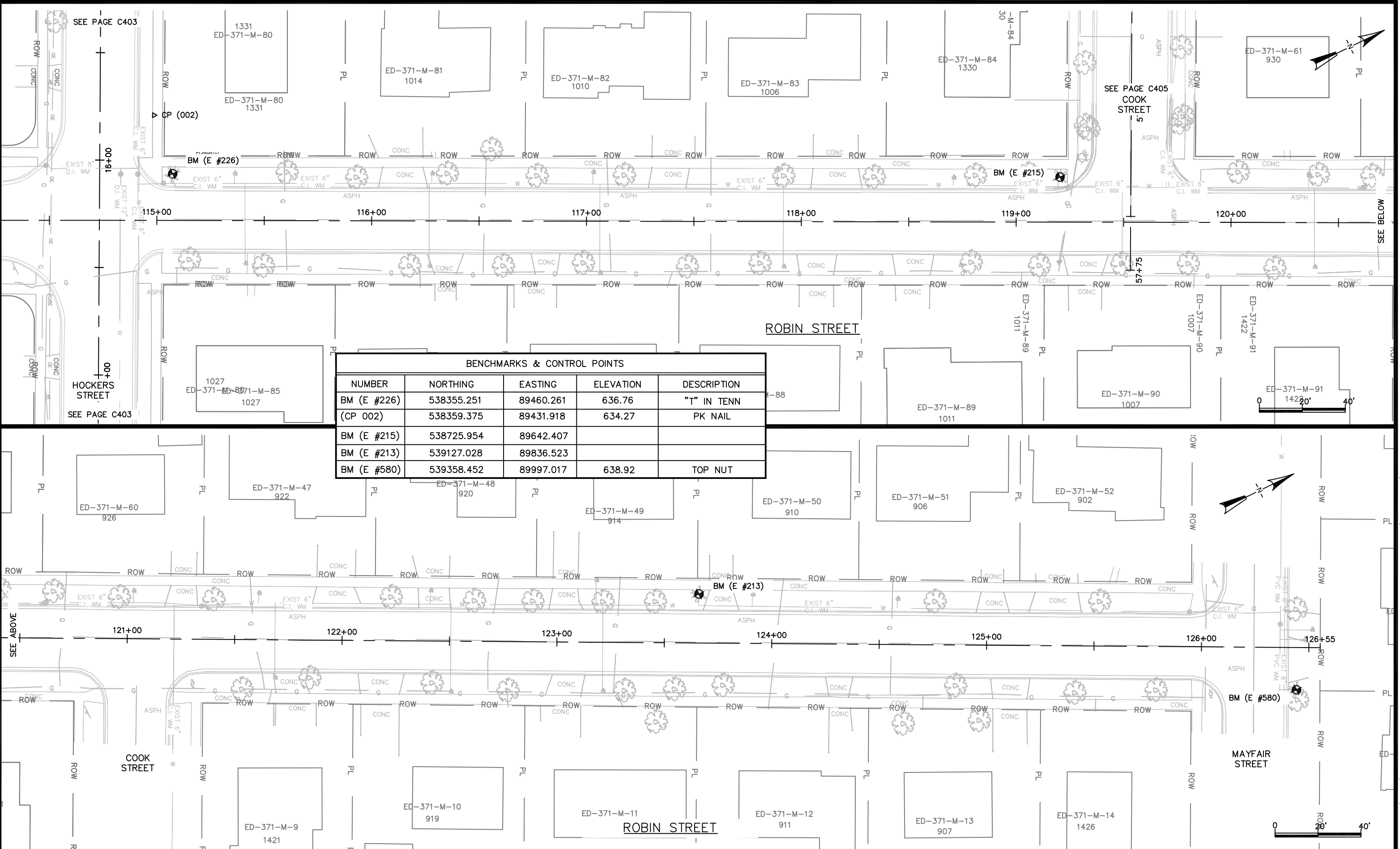
**BENCHMARKS & CONTROL POINTS**

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
|--------------------|------|----|---------|
| NO.                | DATE | BY | REMARKS |
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|                    |      |    |         |
|                    |      |    |         |





| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #226)                 | 538355.251 | 89460.261 | 636.76    | "T" IN TENN |
| (CP 002)                    | 538359.375 | 89431.918 | 634.27    | PK NAIL     |
| BM (E #215)                 | 538725.954 | 89642.407 |           |             |
| BM (E #213)                 | 539127.028 | 89836.523 |           |             |
| BM (E #580)                 | 539358.452 | 89997.017 | 638.92    | TOP NUT     |



**CITY OF DE PERE**

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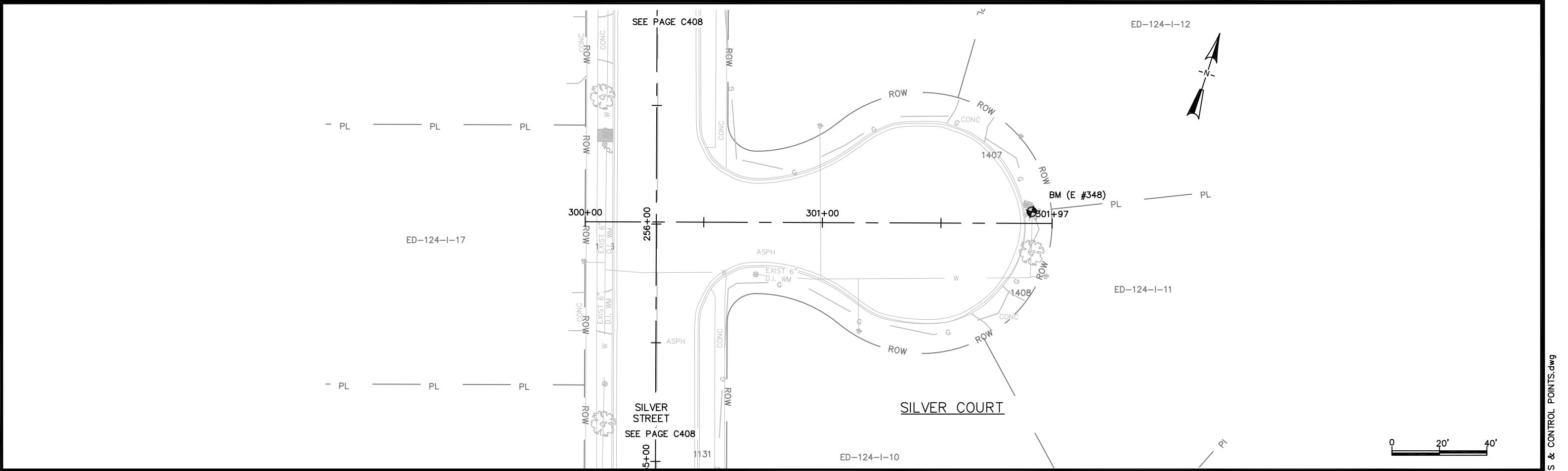
**BENCHMARKS & CONTROL POINTS**

NAME: SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT # 19-01

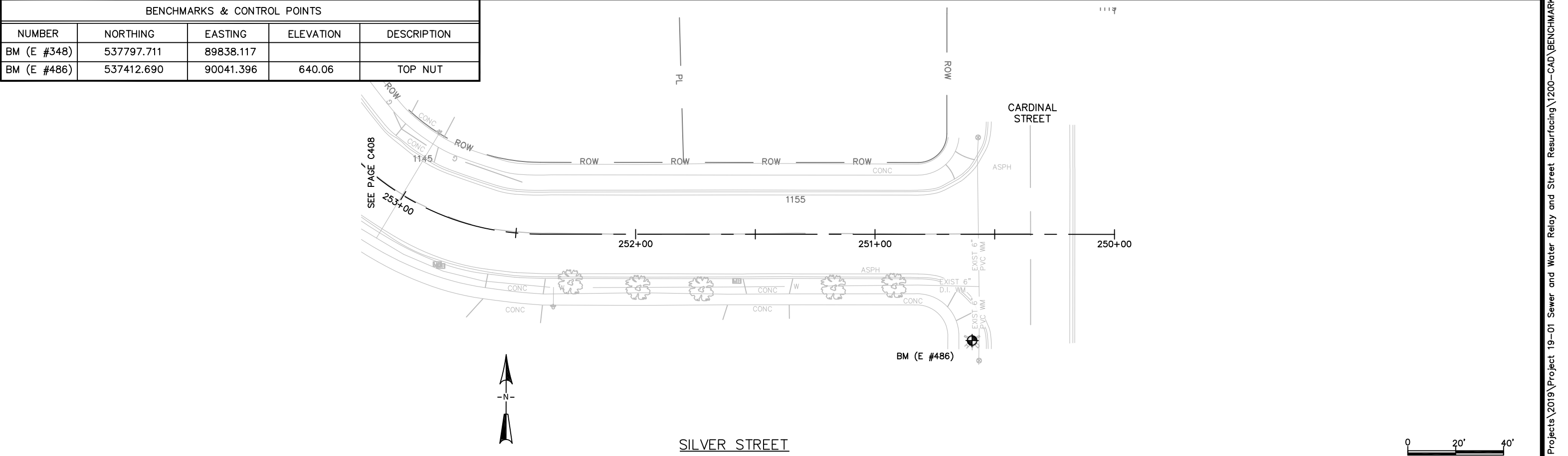
|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
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| NO.                | DATE | BY | REMARKS |
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| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #348)                 | 537797.711 | 89838.117 |           |             |
| BM (E #486)                 | 537412.690 | 90041.396 | 640.06    | TOP NUT     |

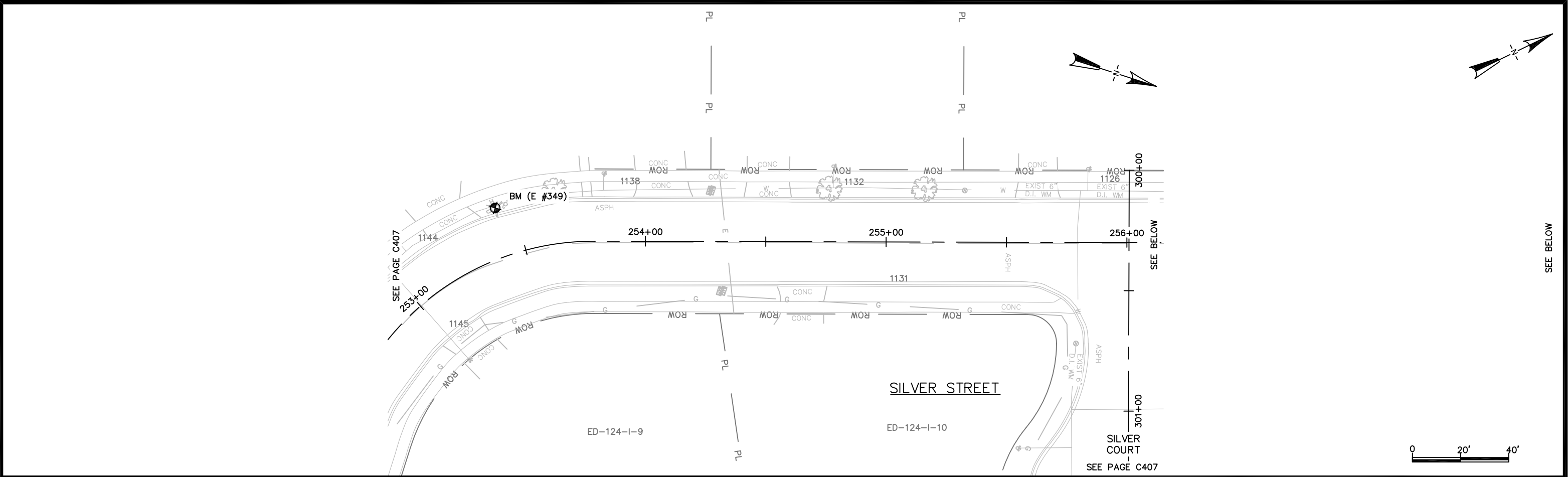


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ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
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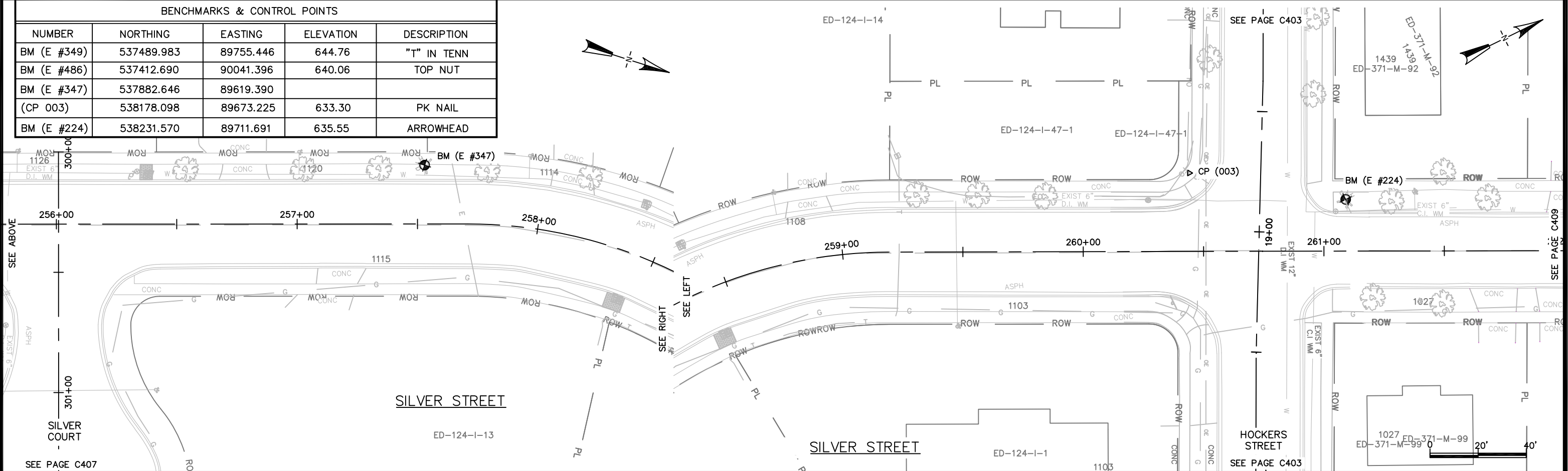
**BENCHMARKS & CONTROL POINTS**

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          |             |         | REVISIONS / ISSUES |      |    |         |
|----------|-------------|---------|--------------------|------|----|---------|
|          |             |         | NO.                | DATE | BY | REMARKS |
| SURVEYED | KAD,JML,MAL | 2018    |                    |      |    |         |
| DRAWN    | KAD         | 02-2019 |                    |      |    |         |
| DESIGNED | KAD         | 02-2019 |                    |      |    |         |
| CHECKED  | CHK         | 02-2019 |                    |      |    |         |



| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #349)                 | 537489.983 | 89755.446 | 644.76    | "T" IN TENN |
| BM (E #486)                 | 537412.690 | 90041.396 | 640.06    | TOP NUT     |
| BM (E #347)                 | 537882.646 | 89619.390 |           |             |
| (CP 003)                    | 538178.098 | 89673.225 | 633.30    | PK NAIL     |
| BM (E #224)                 | 538231.570 | 89711.691 | 635.55    | ARROWHEAD   |

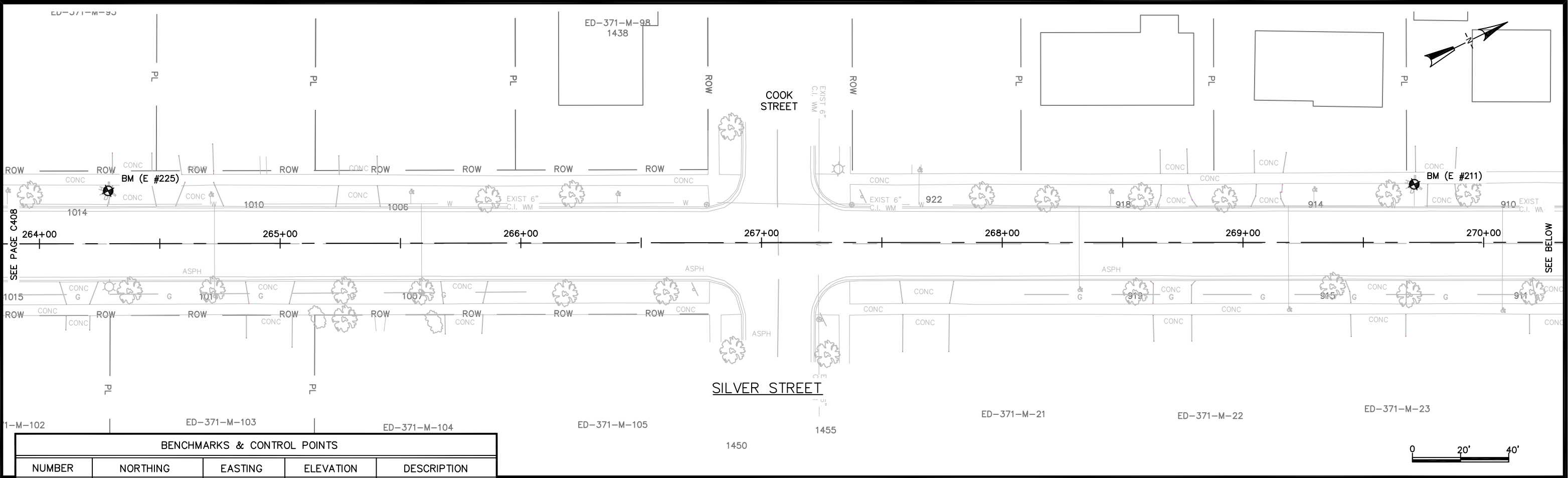


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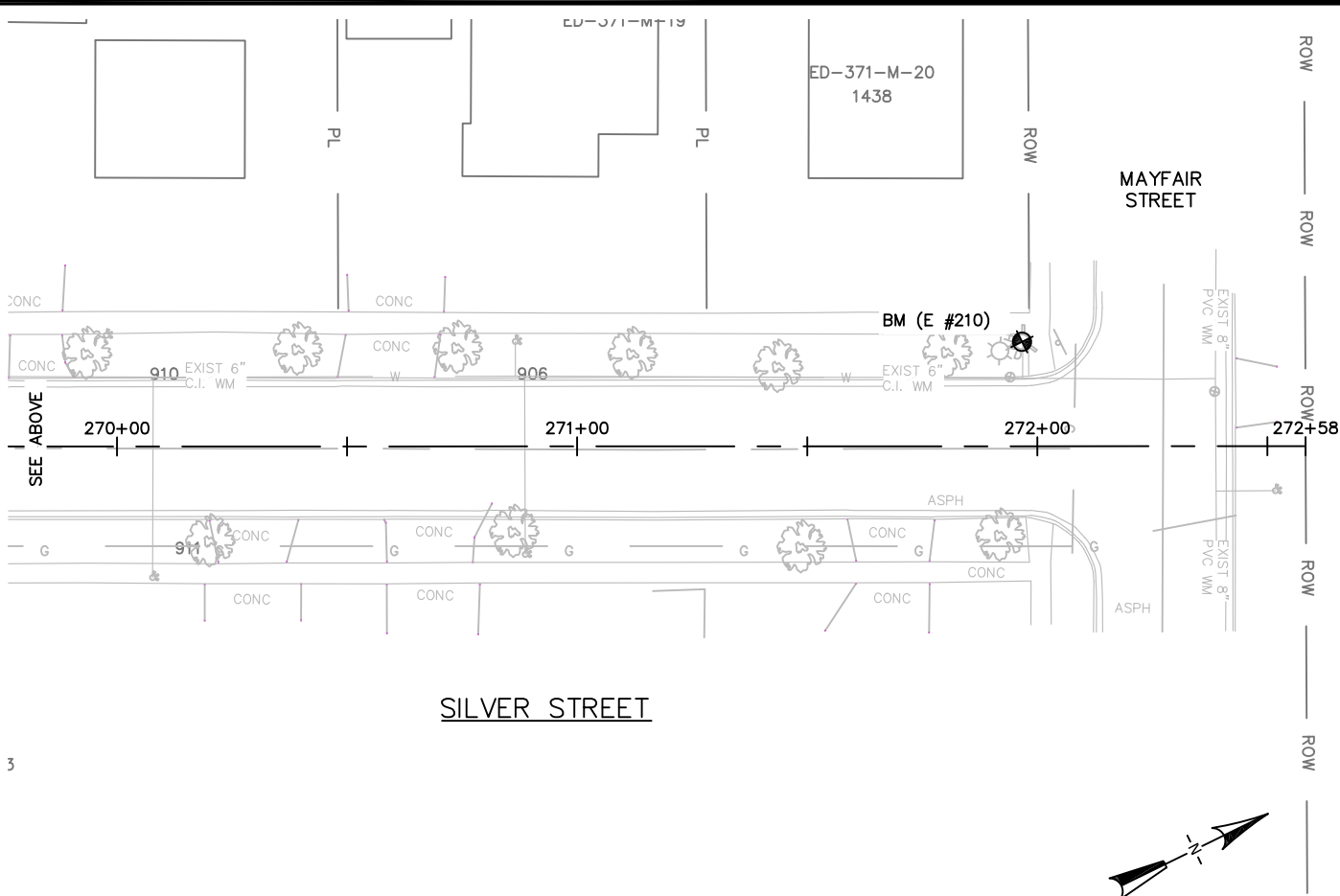
**BENCHMARKS & CONTROL POINTS**

| NAME:<br>SEWER & WATER RELAY<br>AND STREET RESURFACING |  | BY       | DATE        | REVISIONS / ISSUES |      |    |         | PAGE<br>NO. |
|--|--|----------|-------------|--------------------|------|----|---------|-------------|
|  |  |          |             | NO.                | DATE | BY | REMARKS |             |
| PROJECT #<br>19-01                                     |  | SURVEYED | KAD,JML,MAL | 2018               |      |    |         | C408        |
|  |  | DRAWN    | KAD         | 02-2019            |      |    |         |             |
|  |  | DESIGNED | KAD         | 02-2019            |      |    |         |             |
|  |  | CHECKED  | CHK         | 02-2019            |      |    |         |             |

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| BENCHMARKS & CONTROL POINTS |            |           |           |             |
|-----------------------------|------------|-----------|-----------|-------------|
| NUMBER                      | NORTHING   | EASTING   | ELEVATION | DESCRIPTION |
| BM (E #225)                 | 538518.939 | 89851.422 |           |             |
| BM (E #211)                 | 539007.356 | 90087.867 |           |             |
| BM (E #210)                 | 539209.220 | 90188.377 | 637.27    | TOP NUT     |



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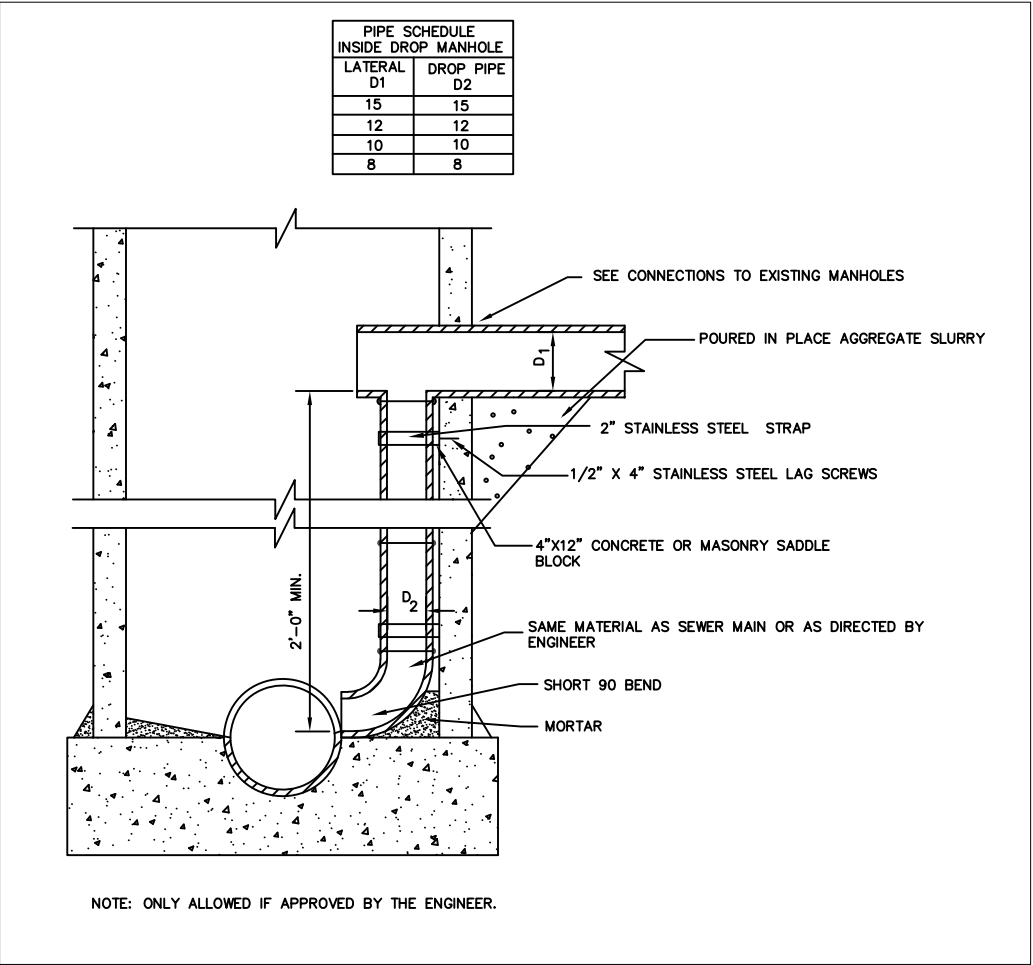
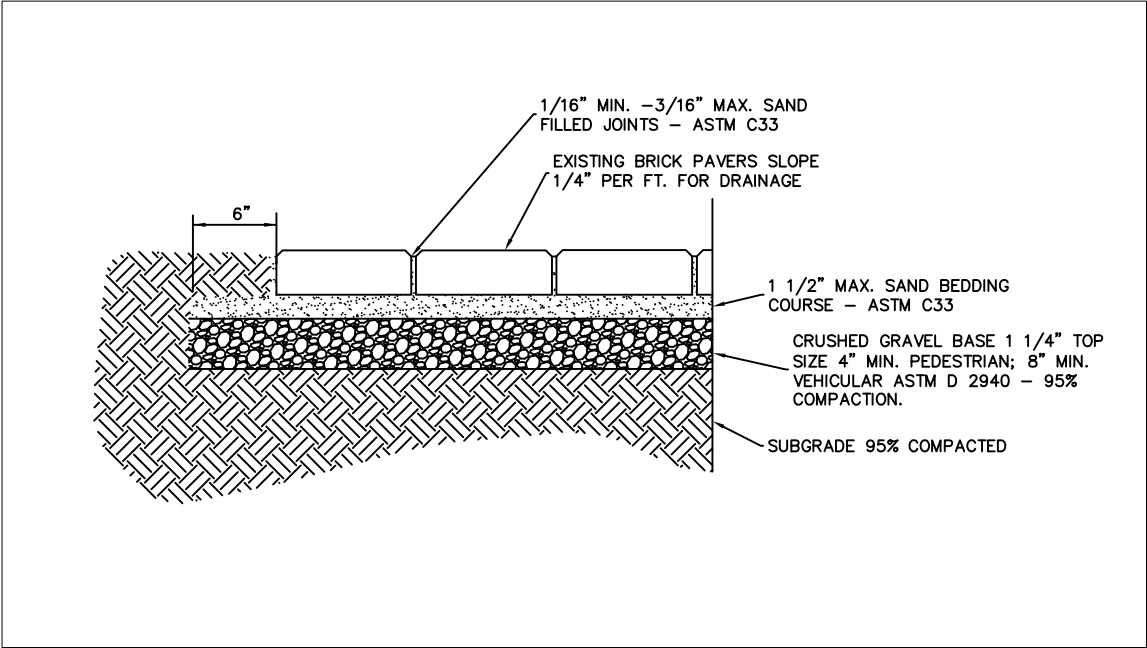
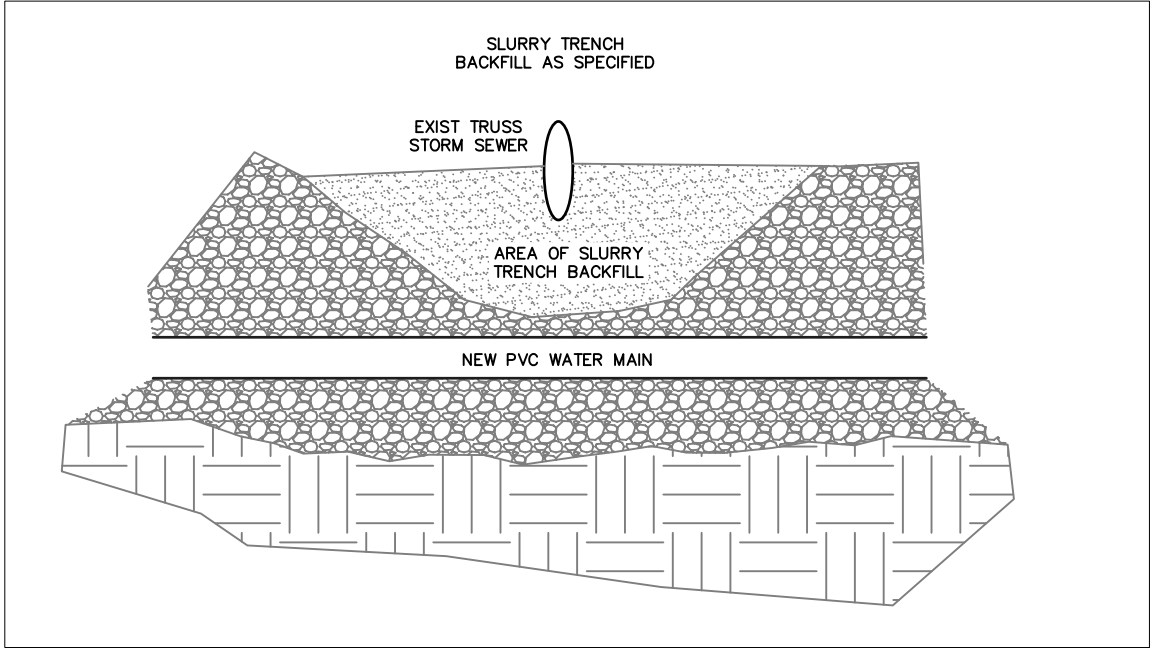
**BENCHMARKS & CONTROL POINTS**

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          | BY          | DATE    |
|----------|-------------|---------|
| SURVEYED | KAD,JML,MAL | 2018    |
| DRAWN    | KAD         | 02-2019 |
| DESIGNED | KAD         | 02-2019 |
| CHECKED  | CHK         | 02-2019 |

| REVISIONS / ISSUES |      |    |         |
|--------------------|------|----|---------|
| NO.                | DATE | BY | REMARKS |
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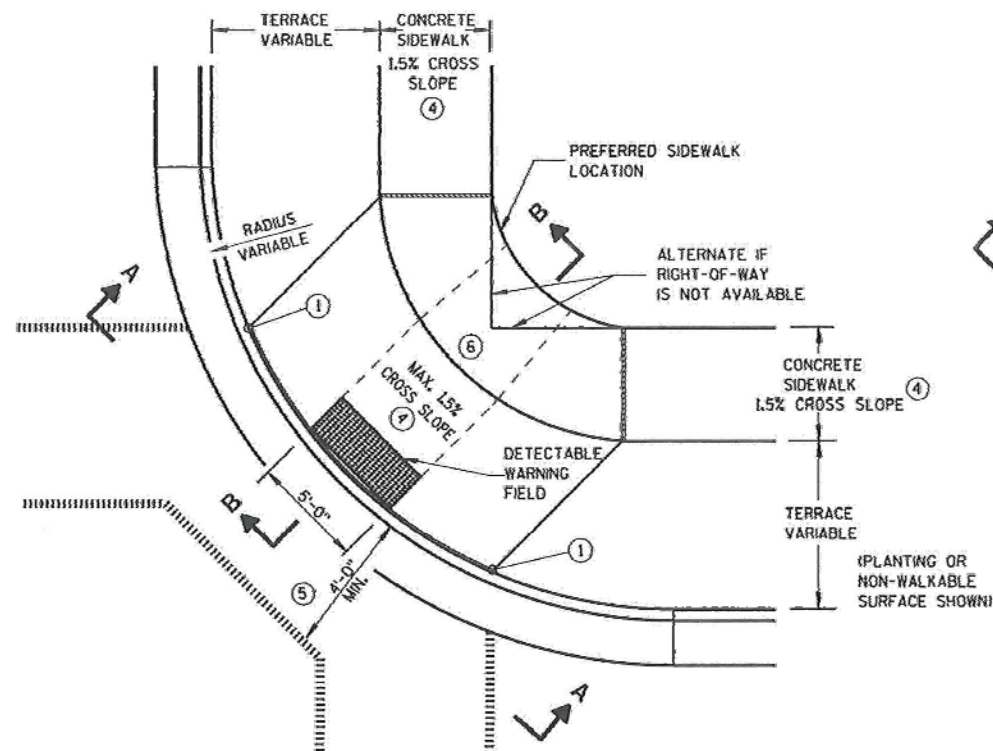
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**CITY OF DE PERE**  
**PROJECT DETAILS**

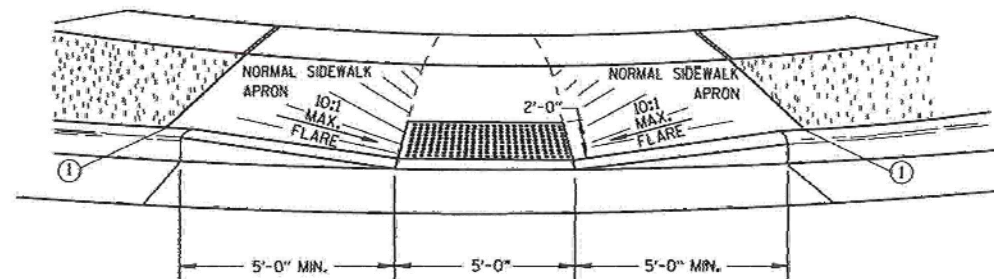
NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          | BY  | DATE    | REVISIONS / ISSUES |      |    |         |
|----------|-----|---------|--------------------|------|----|---------|
|          |     |         | NO.                | DATE | BY | REMARKS |
| SURVEYED |     |         |                    |      |    |         |
| DRAWN    | KAD | 02-2019 |                    |      |    |         |
| DESIGNED | KAD | 02-2019 |                    |      |    |         |
| CHECKED  | CKK | 02-2019 |                    |      |    |         |

# SDD 8d5-a Curb Ramps Types 1 and 1-A

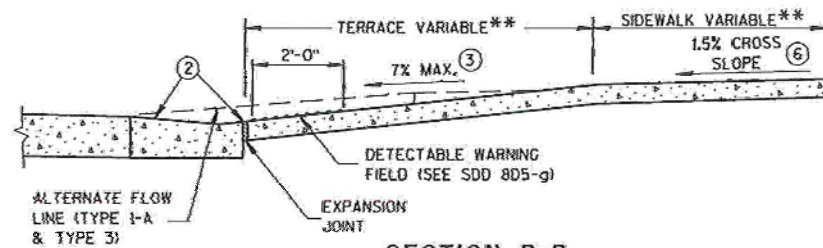


PLAN VIEW  
TYPE 1 RAMP  
(CENTER OF CORNER RADIUS)

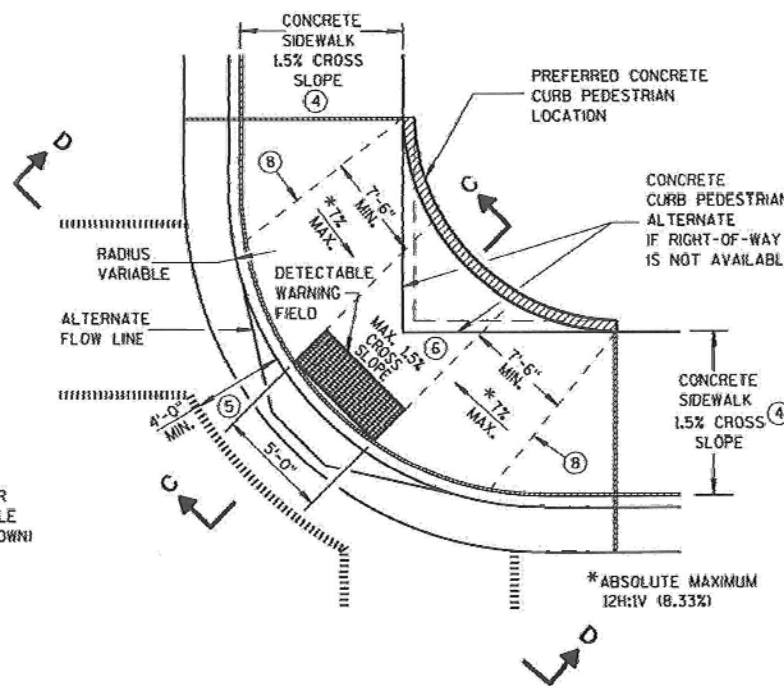


VIEW A-A

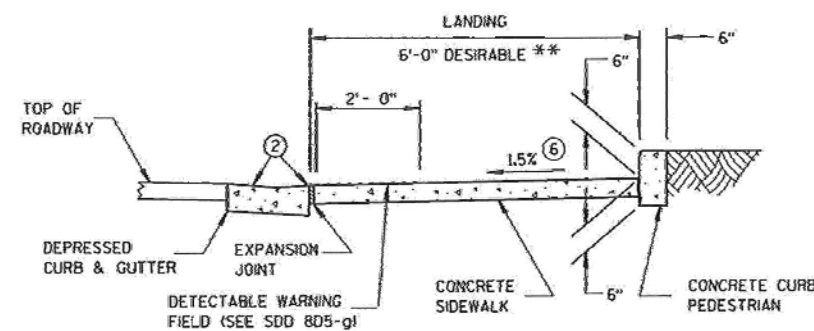
\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



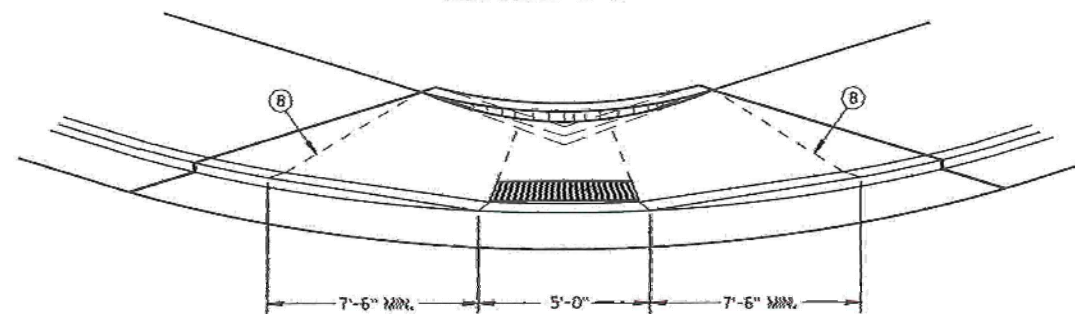
SECTION B-B



PLAN VIEW  
TYPE 1-A RAMP  
(NO TERRACE)



SECTION C-C



VIEW D-D

## 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 RAMP SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD 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 LINEAL 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 1/4-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 ABSOLUTE MAXIMUM 12H:1V (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 LANDING SIZE IS 5 FEET X 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

## LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS  
TYPES 1 AND 1-A



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CONSTRUCTION DETAILS

CURB RAMPS

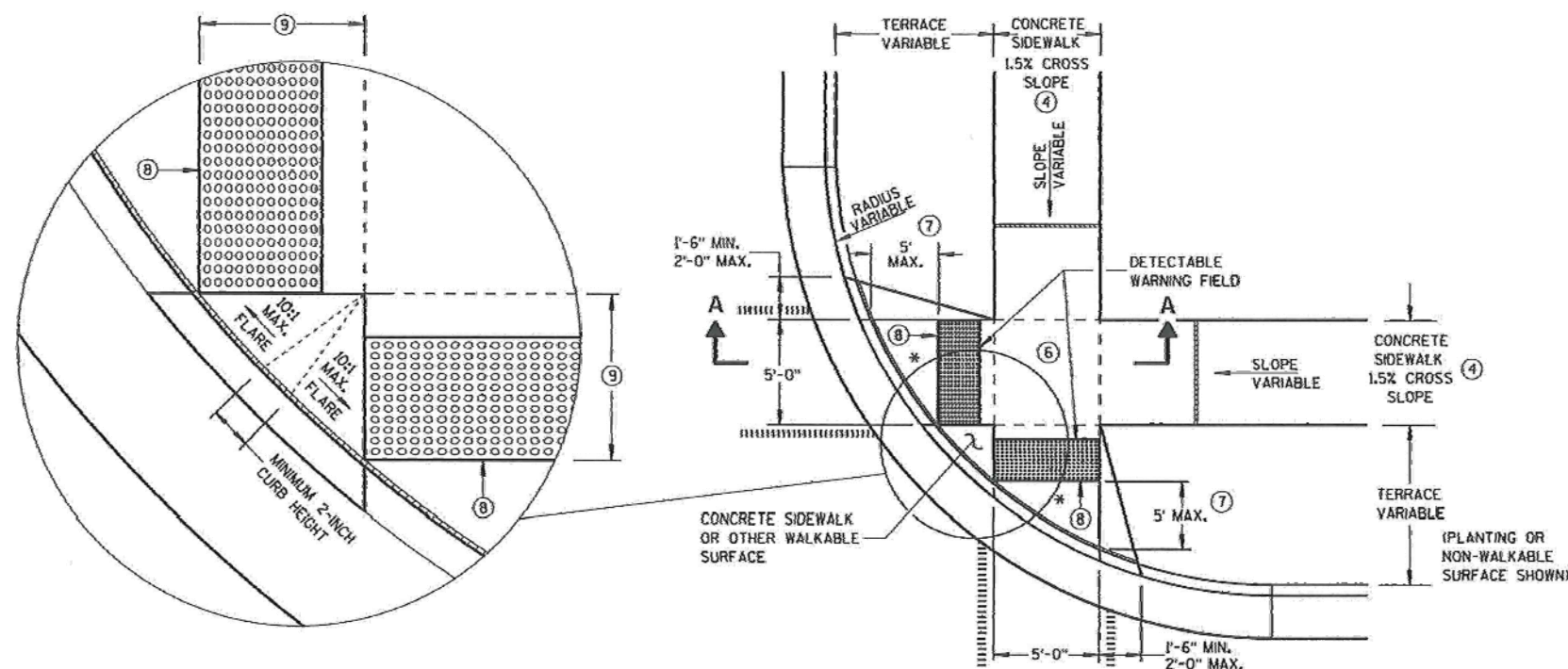
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SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

|          |      | REVISIONS / ISSUES |         | PAGE NO. |
|----------|------|--------------------|---------|----------|
| NO.      | DATE | BY                 | REMARKS |          |
| SURVEYED |      |                    |         | C502     |
| DRAWN    | KAD  | 02-2019            |         |          |
| DESIGNED | KAD  | 02-2019            |         |          |
| CHECKED  | CKK  | 02-2019            |         |          |

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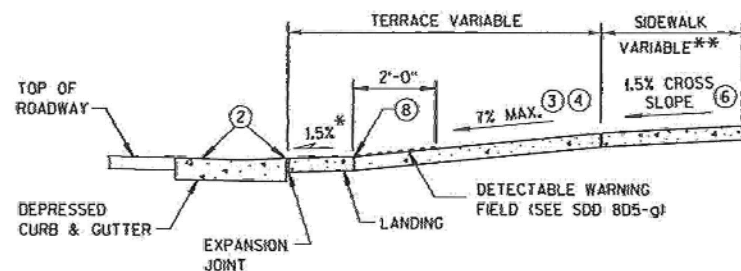


# SDD 8d5-b Curb Ramps Types 2 and 3



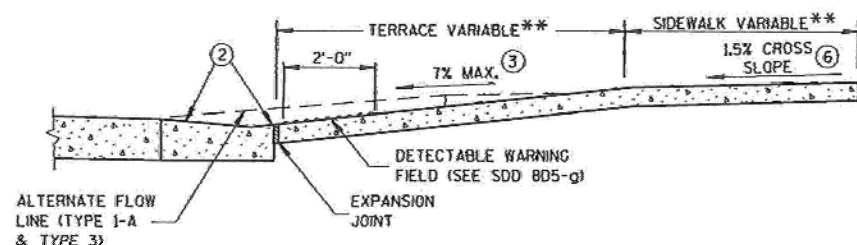
PLAN VIEW  
TYPE 2 RAMP  
(ON LINE WITH SIDEWALK)

\* MAXIMUM 2.0% SLOPE  
IN ALL DIRECTIONS IN  
FRONT OF GRADE BREAK



SECTION A-A

\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



SECTION B-B

## GENERAL NOTES

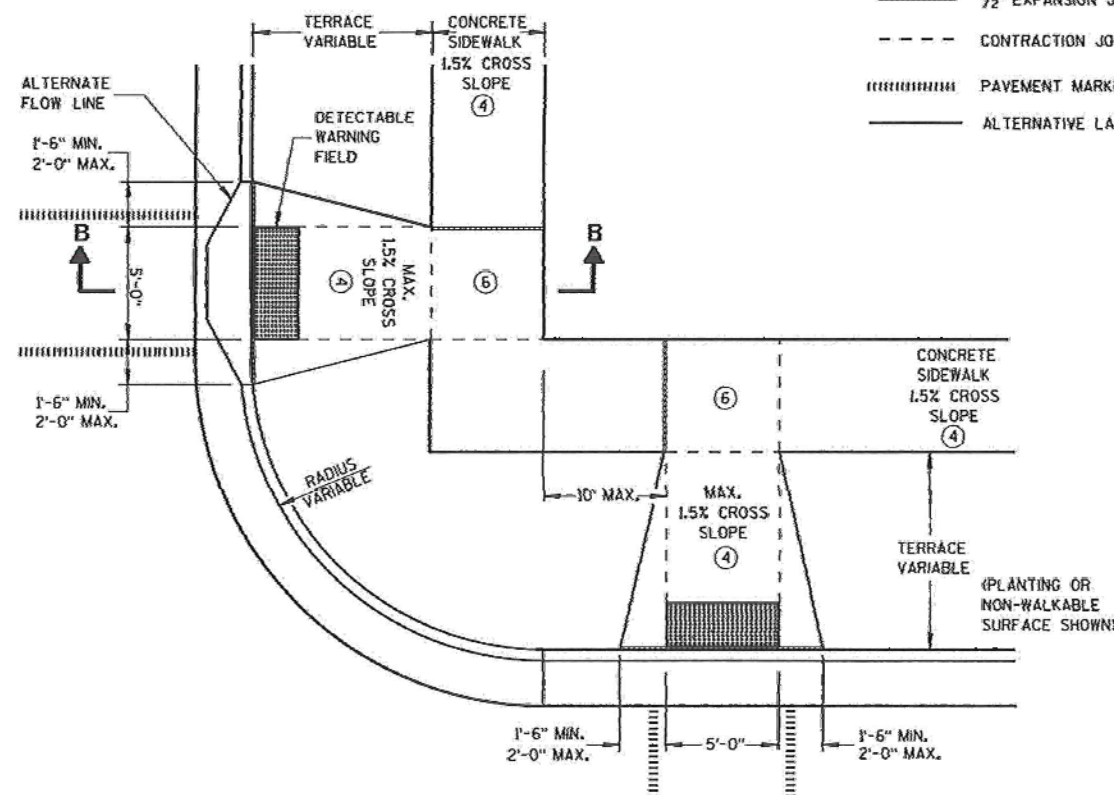
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 1/4-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 ABSOLUTE MAXIMUM 12H:1V (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.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS 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 THIS 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 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

## LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW  
TYPE 3 RAMP  
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS  
TYPES 2 AND 3



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## CONSTRUCTION DETAILS

### CURB RAMPS

NAME:  
SEWER & WATER RELAY  
AND STREET RESURFACING  
PROJECT #  
19-01

| NO.      | DATE | BY      | REMARKS |
|----------|------|---------|---------|
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| DRAWN    | KAD  | 02-2019 |         |
| DESIGNED | KAD  | 02-2019 |         |
| CHECKED  | CKK  | 02-2019 |         |

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