

# **CITY OF DE PERE**

## **PROJECT 19-05**

### **SIDEWALK, CURB & CONCRETE PAVEMENT REPAIR**

**BID DATE:  
MAY 2, 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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**APRIL 11, 2019 – APRIL 18, 2019**

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**ADVERTISEMENT TO BID**

**PROJECT 19-05**

**SIDEWALK, CURB AND CONCRETE PAVEMENT REPAIR**

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, May 2, 2019, at which time they will be publicly opened and read aloud.

Project 19-05 for which proposals are being sought includes the following approximate quantities:

- 1,500 SY of 4-inch and 6-inch Concrete Sidewalk New and Replacement
- 80 SY of 4-inch New Colored Concrete
- 600 SY of Concrete Pavement Replacement (Full and Partial Depth)
- 600 LF of Concrete Curb and Gutter Replacement
- 50 EA of Cross-stitching Longitudinal Joints and Cracks
- 50,000 SF of Colored Concrete Sealing
- 6 EA Rectangular Rapid Flash Beacons (RRFB) Installation
- Construction of 11 Planter Beds ranging in size from 48 SF to 130 SF including:
  - Remove and salvage existing paver bricks
  - Concrete and Gravel removal
  - Stamped, colored concrete installation
  - Installation of wrought iron decorative fencing
  - Topsoil placement
- Repair Approximately 120 SF of vertical face of concrete ramp including:
  - Inspect and test concrete for soundness
  - Remove loose, honeycombed, and spalled concrete
  - Treat exposed reinforcing steel
  - Patch with waterproof Portland Cement
  - Apply parge coat to existing damaged or removed coat
  - Install two coats of Thorocoat Waterproofing
  - Remove 125 LF of hand railing
  - Install 125 LF of 304 stainless steel decorative hand railing
- Pavement Marking

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 #6281240 on Quest's

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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.

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, April 29, 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 11<sup>th</sup> day of April, 2019.

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

Project 19-05

**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 drawings 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 submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
- B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

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- 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.

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

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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.

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- 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

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SECTION 00 41 13**

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**BID FORM**

**PROJECT 19-05**

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, May 2, 2019 is to furnish and deliver all materials, and to perform and do all work on the project designated, by Friday, November 1, 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:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____

**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: \$ \_\_\_\_\_**

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**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)

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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 19-05**  
**Sidewalk, Curb and Concrete Pavement Repair**  
**SECTION 00 41 43**

**City of De Pere**

**CITY OF DE PERE**  
**PROJECT 19-05**  
**BID SCHEDULE – UNIT PRICE**

<b>ITEM</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT BID</b>
<b>STREET AND DRAINAGE (VARIOUS LOCATIONS)</b>					
SD-01	Provide 1 1/4" Crushed Aggregate Base Course	TON	10	\$	\$
SD-02	Remove and Replace 24" Concrete Curb and Gutter	LF	40	\$	\$
SD-03	Remove and Replace Doweled 8" Concrete Pavement	SY	10	\$	\$
SD-04	Remove and Replace 8" Doweled Concrete Pavement (HES-3DAY)	SY	10	\$	\$
SD-05	Install New 4" Concrete Sidewalk (VFW Park Playground)	SY	130	\$	\$
SD-06	Remove and Replace 4" Concrete Sidewalk	SY	75	\$	\$
SD-07	Remove and Replace 6" Concrete Sidewalk, Driveway and Ramp	SY	50	\$	\$
SD-08	Drilled Tie Bars (Existing Sidewalk, Driveways, Pavement, Curb and Gutter)	EA	40	\$	\$
SD-09	Drilled Dowel Bars	EA	20	\$	\$
SD-10	Provide Detectable Warning Field (Natural)	EA	4	\$	\$
<b>STREET AND DRAINAGE (SIDEWALK REPAIR AREA)</b>					
SD-11	Remove and Replace 4" Concrete Sidewalk	SY	1,300	\$	\$
SD-12	Remove and Replace 6" Concrete Sidewalk, Ramp and Driveway	SY	300	\$	\$
SD-13	Drilled Tie Bars (Existing Sidewalk, Driveways, Pavement, Curb and Gutter)	EA	1,300	\$	\$
SD-14	Provide #4 Reinforcement Bars for Curb and Sidewalk	LF	100	\$	\$

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

<b>ITEM</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT BID</b>
<b>STREET AND DRAINAGE (SIDEWALK REPAIR AREA) CONTINUED...</b>					
SD-15	Provide Detectable Warning Field (Natural)	EA	10	\$	\$
<b>STREET AND DRAINAGE (THIRD STREET)</b>					
SD-16	Remove and Replace Doweled 8" Concrete Pavement	SY	570	\$	\$
SD-17	Remove and Replace Doweled 8" Concrete Pavement (HES-3DAY)	SY	10	\$	\$
SD-18	Remove and Replace 24" Concrete Curb and Gutter Integral	LF	320	\$	\$
SD-19	Remove and Replace 24" Concrete Curb and Gutter	LF	50	\$	\$
SD-20	Drilled Tie Bars (Existing Sidewalk, Driveways, Pavement, Curb and Gutter)	EA	250	\$	\$
SD-21	Drilled Dowel Bars	EA	310	\$	\$
SD-22	Cross-Stitching Longitudinal Joints and Cracks - 3/4" Bars	EA	10	\$	\$
SD-23	Concrete Pavement Partial Depth Repair - Joint Repair	LF	280	\$	\$
SD-24	Pavement Marking Epoxy 4-Inch White	LF	180	\$	\$
SD-25	Pavement Marking Epoxy 4-Inch Yellow	LF	70	\$	\$
SD-26	Pavement Marking Epoxy 18-Inch Stop Bar	LF	10	\$	\$
<b>STREET AND DRAINAGE (MAIN AVENUE BUMP-OUTS)</b>					
SD-27	Provide 1 1/4" Crushed Aggregate Base Course	TON	35	\$	\$
SD-28	Remove Concrete Pavement	SY	160	\$	\$
SD-29	Remove 24" Concrete Curb and Gutter	LF	150	\$	\$

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

<b>ITEM</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT BID</b>
<b>STREET AND DRAINAGE (MAIN AVENUE BUMP-OUTS) CONTINUED...</b>					
SD-30	Remove and Salvage Brick Pavers	SF	110	\$	\$
SD-31	Remove and Replace 4" Concrete Sidewalk	SY	15	\$	\$
SD-32	Provide 4" Colored Stamped Concrete Sidewalk	SY	75	\$	\$
SD-33	Provide 6" Concrete Sidewalk or Ramp	SY	20	\$	\$
SD-34	Provide 9" Doweled Concrete Pavement	SY	90	\$	\$
SD-35	Provide 9" Doweled Concrete Pavement (HES 3-DAY)	SY	10	\$	\$
SD-36	Provide 24" Concrete Curb and Gutter	LF	160	\$	\$
SD-37	Reinstall Brick Pavers	SF	55	\$	\$
SD-38	Drilled Tie Bars (Existing Sidewalk, Pavement, Curb and Gutter)	EA	50	\$	\$
SD-39	Drilled Dowel Bars	EA	30	\$	\$
SD-40	Provide Detectable Warning Field (Natural)	EA	2	\$	\$
SD-41	Pavement Marking Epoxy 4-Inch White	LF	80	\$	\$
SD-42	Pavement Marking Epoxy 6-Inch White	LF	80	\$	\$
SD-43	Pavement Marking Epoxy 24-Inch White	LF	80	\$	\$

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

<b>ITEM</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT BID</b>
<b>STREET AND DRAINAGE (PLANTERS)</b>					
SD-44	Unclassified Excavation	CY	70	\$	\$
SD-45	Remove Concrete Sidewalk	SY	170	\$	\$
SD-46	Provide 3/4" Crushed Aggregate Base Course	TON	20	\$	\$
SD-47	Remove and Salvage Brick Pavers	SF	400	\$	\$
SD-48	Reinstall Brick Pavers	SF	210	\$	\$
SD-49	Provide 4" Concrete Sidewalk	SY	100	\$	\$
SD-50	Provide 6"x18" Reinforced Concrete Planter Box with Fence Post Anchors	LF	170	\$	\$
SD-51	Provide and Install Decorative Fencing	LF	170	\$	\$
SD-52	Provide 18" Landscaping Topsoil - Planting Bed	SY	110	\$	\$
<b>SPECIAL CONSTRUCTION</b>					
SC-01	Colored Concrete Sealing	SF	40,500	\$	\$
SC-02	Inlet Protection Type D	EA	16	\$	\$
SC-03	Traffic Control (Third Street)	LS	1	\$	\$
SC-04	Remove Tree and Grind Stump	ID	10	\$	\$
SC-05	Rectangular Rapid-Flash Beacon Installation	EA	10	\$	\$

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

<b>ITEM</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT BID</b>
<b>SPECIAL CONSTRUCTION (CITY HALL RAMP &amp; RAILING)</b>					
SC-06	City Hall Ramp Masonry Repair	LS	1	\$	\$
SC-07	Build, Weld and Finish 304 Stainless Steel Hand Railing	LS	1	\$	\$
SC-08	Remove and Dispose of Existing Railing	LS	1	\$	\$
SC-09	Install New Railing	LS	1	\$	\$
<b>TOTAL</b>					\$

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair  
SECTION 00 43 13**

**City of De Pere**

**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 19-05 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)

**PROPOSED PRODUCTS FORM**

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

ITEM	MATERIAL	SUPPLIER
Base Aggregate	_____	_____
Concrete	_____	_____
Concrete Sealant	_____	_____
Dowel Bars	<u>Not Applicable</u>	_____
Hand Rail	<u>304 Stainless Steel</u>	_____
Rectangular Rapid Flash Beacons	<u>Not Applicable</u>	_____
Tie Bars	<u>Not Applicable</u>	_____
Decorative Wrought Iron Fencing	<u>Not Applicable</u>	_____

**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>
City Hall Ramp Repairs	_____	_____
Concrete Pavement	_____	_____
Concrete Sealing	_____	_____
Fence/Rail Installation	_____	_____
Landscaping	_____	_____
Rectangular Rapid Flash Beacon Installation	_____	_____

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair  
SECTION 00 51 00**

**City of De Pere**

**NOTICE OF AWARD**

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

Project Description: 19-05 – Sidewalk, Curb and Concrete Pavement Repair

The City has considered the proposal submitted by you dated May 2, 2019 for the above-described project in response to its Advertisement for Bids dated April 11, 2019 and April 18, 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 19-05 – Sidewalk, Curb and Concrete Pavement Repair, 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 April 11, 2019 and April 18, 2019.
- (b) Drawings designated for Project 19-05 – Sidewalk, Curb and Concrete Pavement Repair dated April 11, 2019.
- (c) City of De Pere 2019 Construction Specifications.
- (d) Special Provisions dated April 11, 2019.
- (e) Proposal submitted by (Contractor Name) dated May 2, 2019.
- (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

**Project 19-05**  
**Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

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)
    - 4) Tabulation of Subcontractors (page 00 43 36-1).
    - 5) Documentation submitted by Contractor prior to Notice of Award (00 51 00-1 )



**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair  
SECTION 00 55 00**

**City of De Pere**

**NOTICE TO PROCEED**

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

(CONTRACTOR NAME)  
(ADDRESS)  
(ADDRESS)

PROJECT: 19-05 – Sidewalk, Curb and Concrete Pavement Repair

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 19-05, 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 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.

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

- c. Other than in a state court of competent jurisdiction in and for the County or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
  
- 4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens, which may be filed or recorded against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

SIGNED AND SEALED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_.

In Presence of:

_____	_____
(WITNESS)	(CONTRACTOR)
_____	_____
(WITNESS)	(SURETY)

**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**City of De Pere**

**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 19-05, 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)
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**Project 19-05  
Sidewalk, Curb and Concrete Pavement Repair**

**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				
Number	Additions	Deductions		
			1. ORIGINAL CONTRACT PRICE:.....	
			2. Net change by Change Orders and Written Amendments (+ or -):.....	\$0.00
			3. CURRENT CONTRACT PRICE (Line 1 plus Line 2):.....	\$0.00
			4. Total completed and stored to date Column H on Progress Estimate:....	\$0.00
			5. Retainage (per Agreement):	
			a. Work Completed - Column H (5% up to 50% of Contract or 2.5% of 100% of Contract)	\$0.00
			6. AMOUNT ELIGIBLE TO DATE (Line 4 minus 5):.....	\$0.00
			7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$0.00
			8. AMOUNT DUE THIS APPLICATION (Line 6 minus Line 7):.....	\$0.00
Total	\$0.00	\$0.00		
NET CHANGE BY CHANGE ORDERS:			\$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 19-05  
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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

**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.

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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. Sidewalk Repair Area: Area on the east side of the Fox River bounded by the Fox River, the northern City limits, Charles Street and Webster Street
  - b. Various locations of spot repairs on sidewalk, curb and gutter, concrete pavement patches and colored concrete sealing.
  - c. Third Street rehabilitation from Marsh Street to Riverview Avenue.
  - d. Pedestrian crossing bump-out construction, Rectangular Rapid Flash Beacons installation and decorative planting bed construction on Main Avenue between 3<sup>rd</sup> Street and 4<sup>th</sup> Street.
  - e. Decorative planting bed construction on George Street between Michigan Street and Superior Street.
  - f. Rectangular Rapid Flash Beacons installation on N. Broadway Street at the intersections with Randall Avenue and Cass Street.
  - g. Ramp Repairs at De Pere City Hall – 335 S. Broadway Street
  - h. New sidewalk at VFW Park.
  - i. Concrete Replacement at Kelly Danen Park.
  - j. Colored concrete sealing on George Street east to the roundabout at the intersection of the Claude Allouez Bridge and Broadway Street.
2. Work will be performed under the following prime contract:
  - a. Project Number 19-05 – Sidewalk, Curb and Concrete Pavement Repair

**B. The Work includes:**

1. Unclassified excavation.
2. Crushed aggregate base course.
3. Doweled concrete curb and gutter and concrete pavement.
4. Remove and replace concrete pavement.
5. Remove and replace sidewalk, sidewalk ramps, driveways and curb and gutter.
6. New concrete sidewalk.
7. Cross-stitching.
8. Concrete pavement partial depth pavement repair – joint repair.
9. Terrace restoration.
10. Traffic control.
11. Erosion control.
12. Colored concrete sealing.
13. Brick paver salvaging, cutting and replacement.
14. Installation of Rectangular Rapid Flash Beacons, associated footings and appurtenances.
15. City Hall Ramp Repairs:
  - a. Inspection and testing of ramp landing and vertical wall for soundness.
  - b. Loose, honeycombed or spalled concrete to be removed to a sound base.
  - c. Exposed reinforcing steel to be treated and rust protected.

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- d. Areas then patched with waterproof Portland cement, reinforced as necessary and finished to match existing surface.
- e. Removed or damaged parge coat on existing wall to be recoated to achieve a uniform finish.
- f. Routing all horizontal and vertical expansion joints to ¼-inch width and ½-inch depth. Joints are to be cleaned with solvent and sealed.
- g. Apply two coats of Thorocoat waterproofing to entire vertical wall.
- h. Saw cut joint between ramp way slab and vertical concrete wall to a depth of two-inches and install a stainless steel drip flashing to protect vertical wall.
- i. Apply urethane caulking to the top side of the drip edge.
- j. Fabricate and weld 304 stainless steel hand railing, in compliance with ADA regulations.
- k. Utilize the bead blasting method to achieve a smooth, medium finish on the entire hand railing surface.
- l. Provide an example of the finish on the stainless steel material to be used. Finish must be approved by the Project Engineer prior to hand rail production.
- m. Remove and dispose of existing hand railing.
- n. Install new railing, including any field welding and finishing necessary.

**1.4 WORK SEQUENCE**

- A. This project will go to the Board of Public Works on Monday, May 13, 2019 and Common Council on Tuesday, May 21, 2019 for consideration of award.
- B. Conduct construction activities to maintain access to businesses and residences throughout construction.
- C. Complete all work by Friday, November 1, 2019. The City reserves the right to request one additional mobilization to complete unexpected repairs if work is substantially completed prior to this date.
- D. The sidewalk repair area will begin after July 5, 2019 and shall be completed by August 30, 2019.
- E. All work for the pedestrian crossing bump outs, rectangular rapid flash beacon installation, and planting beds on Main Avenue and the planting beds shall be completed by September 13, 2019. Work or staging within the vehicular travel lanes is restricted to occur between 9:00 AM and 2:00 PM. The concrete bases for the RRFB units shall be installed prior to any other concrete paving occurring at this location.
- F. All work on Third Street will begin after June 3, 2019 and shall be completed by August 16, 2019 to accommodate St. Norbert College.
- G. All work for the George Street planting beds shall be completed by June 28, 2019.
- H. The City Hall masonry ramp repairs shall take place first followed by the installation of hand railing. Work must be continuous to ensure building access is limited to one single duration of time. Remove existing metal hand railing no earlier than one day before masonry work is to begin. The ramp and railing area shall be clearly indicated as closed throughout

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construction to keep people from accessing the site. The contractor is responsible for ensuring proper barricades or flagging/ribbon exists to create a barrier to access.

- I. Complete the sealing of the colored concrete on George Street after the new planters are installed.
- J. The Cellcom Marathon occurs on Sunday, May 19, 2019. No work shall occur prior to this date.
- K. All work on the VFW Park Playground sidewalk will begin after June 17, 2019 and shall be completed by July 5, 2019.
- L. The calendar days listed below are the allowed time for each location from the beginning of construction of the street or site to the substantial completion of the area. Substantial completion is defined as having the street or site paved and painted. The start and end dates for each location are also listed to better illustrate the window to complete work.

	<b>Location</b>	<b>Start Date</b>	<b>End Date</b>	<b>Calendar Days</b>
1.	Sidewalk Repair Area	7-5-2019	8-30-2019	56
2.	Third Street Rehab	6-3-2019	8-16-2019	50
3.	Main Avenue Bump Outs	Notice to Proceed Date	9-13-2019	30
4.	Main Avenue Planters	Notice to Proceed Date	9-13-2019	30
5.	George Street Planters	Notice to Proceed Date	6-28-2019	15
6.	City Hall Ramp	Notice to Proceed Date	11-1-2019	30
7.	VFW Park Playground	6-17-2019	7-5-2019	7

**1.5 USE OF PREMISES**

- A. Contractor shall have full use of the premises for construction operations, including use of the Project Site, as allowed by law, ordinances, permits, easement agreements and the Contract documents.
- B. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of the Project.
- C. The Project Site is limited to property boundaries, rights-of-way, easements, and other areas designated in the Contract Documents.
- D. Provide protection and safekeeping of material and products stored on or off the premises.
- E. Move any stored material or products which interfere with operations of Owner or other Contractors.

**1.6 WARRANTY**

- A. The Contractor warrants and guarantees to the City that all work shall be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects will be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this proposal.
  
- B. If within one (1) year after the date of contract work completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents or by a special provision of the Contract Documents, any work is found to be defective, the Contractor shall comply in accordance with the City's written instructions. These written instructions will include either correcting such defective work or, if it has been rejected by the City, removing it from the site and replacing it with non-defective work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk or loss or damage, the City may have the defective work corrected or the rejected work removed and replaced. All direct and indirect costs of correction or removal and replacement of defective work, including compensation for additional professional services, shall be paid by the Contractor.

**1.7 WORK BY OTHERS**

- A. The City of De Pere Park Department will trim trees in conflict with construction if the City receives advanced notification. Questions regarding trees or landscaping that is bid as part of this contract can be directed to the Engineer.
  
- B. Owner has awarded a separate contract for performance of certain construction operations which will be conducted at the Project site simultaneously with work under this Contract. This contract includes the following:
  - 1. Project 19-01 – Sewer and Water Relay and Street Resurfacing
    - a. All work under this project is to be completed by Friday, September 30, 2019.
    - b. Concrete spot repairs are occurring at the alley to the south of the pedestrian crossing bump outs to be constructed on Main Avenue. Work is to be completed on these bump outs by May 24, 2019.
    - c. The water main is being extended in the terrace at 1081 N. Broadway Street.
    - d. The water main is to be relayed and the street resurfaced on S. Washington Street and S. Adams Street from Charles Street to George Street.
    - e. The water main is to be relayed and the street resurfaced on James Street from N. Broadway Street to the termini west of Front Street.
  - 2. Project 19-04 – James Street Reconstruction
    - a. James Street from N. Broadway Street to N. Wisconsin Street is to be reconstructed. All work under this project is to be completed by Thursday, October 31, 2019.
  - 3. Project 19-07 – Asphalt, Curb and Sewer Repair
    - a. All work under this project is to be completed by Friday, November 1, 2019.
    - b. Resurfacing of an asphalt path at VFW Park.
  
- 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.

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

**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. Ensure access is maintained to City hall via an existing door near the project area. At no time during construction can this exit be closed or obstructed.
- C. 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>
Sidewalk Repair Area	Access repair area locations via the most direct route off of N. Broadway Street, George Street, or N Webster Avenue
Third Street Rehabilitation	Reid Street or Lost Dauphin Road
Main Avenue Bump Outs, Planters & RRFBs	Main Avenue and Reid Street
George Street Planters	George Street
N. Broadway Street RRFBs	N. Broadway Street
City Hall	S. Broadway Street
VFW Park Playground	Grant Street

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D. Provide a traffic control plan for the following locations:

1. Any anticipated lane closures on George Street to accommodate the planter construction. Lane closures would be limited to between 9:00 AM and 2:00 PM.
2. Any anticipated lane closures on Main Avenue to accommodate the bump out or planter construction or RRFB installation. Ideally, work would be staged within the adjacent parking lanes. If a lane closure is needed within the travel lane, work or staging within that travel lane will be restricted to between 9:00 AM and 2:00 PM.
3. Any anticipated lane closures on N. Broadway Street to accommodate sidewalk replacement or the RRFB installation. Lane closures would be limited to between 9:00 AM and 2:00 PM.
4. The restriction of Third Street to maintain northbound only traffic between Riverview Avenue and Marsh Street. Work on Third Street shall be conducted in two stages to minimize the impact to traffic. The intersection of Marsh Street and Third Street shall have work staged such that all directions of travel are maintained as work progresses.
5. Maintaining pedestrian access on Main Avenue, George Street and N. Broadway Street during construction.
6. Any lane closures Webster Avenue to accommodate sidewalk replacements. Lane Closures will need to be permitted through Brown County.
7. Colored concrete sealing around the Claude Allouez Bridge and Broadway Street Roundabout. Traffic can be narrowed down to a single lane to accommodate colored concrete sealing. However, lane closures will be restricted to between 9:00 AM and 2:00 PM.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

**Project 19-05**  
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**SECTION 01 22 04**

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**MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION**

**PART 1 – GENERAL**

**1.1 SUMMARY**

A. Section includes:	Bid Item No.
1. Crushed Aggregate Base & Surface Course	SD-01, SD-27 & SD-46
2. Portland Cement Concrete Curb & Gutter	SD-02, SD-18, SD-19 & SD-36
3. Portland Cement Concrete Pavement	SD-03, SD-04, SD-16, SD-17, SD-34 & SD-35
4. Portland Cement Concrete Driveway & Sidewalk	SD-05, SD-06, SD-07, SD-11, SD-12, SD-31, SD-32, SD-33 & SD-49
5. Drilling Tie Bars & Dowel Bars	SD-08, SD-09, SD-13, SD-20, SD-21, SD-38 & SD-39
6. Detectable Warning Field Natural	SD-10, SD-15 & SD-40
7. Deformed Reinforcement Bars	SD-14
8. Cross-Stitching Concrete Pavement	SD-22
9. Concrete Pavement Partial Depth Repair	SD-23
10. Pavement Marking Epoxy Lines	SD-24, SD-25, SD-26, SD-41, SD-42 & SD-43
11. Remove Pavement and Sidewalk	SD-28 & SD-45
12. Remove Curb & Gutter	SD-29
13. Remove & Salvage Brick Pavers	SD-30 & SD-47
14. Reinstall Brick Pavers	SD-37 & SD-48
15. Unclassified Excavation	SD-44
16. Planter Box	SD-50
17. Decorative Fencing	SD-51
18. Topsoil Landscaping	SD-52

**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.

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- 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 CRUSHED AGGREGATE BASE AND SURFACE COURSE**

- A. The unit price for Crushed Aggregate Base and Surface Course work includes:
1. General Work Items of Article 1.2.
  2. Aggregate material.
  3. Preparation of foundation.
  4. Placing and compacting to thickness and width shown on the Drawings or specified elsewhere.
  5. Maintenance until surface pavement is constructed.
  6. Preparation of crushed aggregate base for paving.
  7. Adjustment of manholes and valve boxes to proposed finish road grade.
- B. Measurement of payment will be the actual amount of material required and incorporated in the work verified by submitting to the Engineer delivery tickets provide with each load showing the weight measured on a certified scale, type of material, the date delivered and the project name. Aggregates in excess of seven (7) percent total moisture determined based on the dry mass of the aggregates will have moisture content in excess of seven (7) percent deducted from the measured weight.
- C. The unit of measurement for payment is tons.

**1.4 PORTLAND CEMENT CONCRETE CURB AND GUTTER**

- A. The unit price for Portland Cement Concrete Curb and Gutter work includes:

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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.

**1.5 PORTLAND CEMENT CONCRETE PAVEMENT**

A. The unit price for Portland Cement Concrete Pavement work includes:

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

B. Measurement for payment will be length and width of areas paved. Concrete curb and gutter will be measured separately, regardless if the curb is installed with integral curb. Curb and

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gutter will be paid per linear foot for 24" width. The width and length will be subtracted from the concrete pavement area if integral curb is constructed.

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

**1.6 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 expansion joint.
4. Providing curing.
5. Existing pavement removal.
6. Subgrade preparation.
7. Removal of Tree Roots.
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 DRILLING TIE BARS AND DOWEL BARS**

A. The unit price for Drilling Tie Bars and Dowel Bars work includes:

1. General Work Items of Article 1.2.
2. Providing and installing tie bars and dowel 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.

C. The unit of measurement for payment is each.

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1.8 DETECTABLE WARNING FIELD NATURAL

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- 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 5 feet.
- B. Measurement for payment will be the actual number of detectable warning field installed.
- C. The unit of measurement for payment is each.

1.9 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.

1.10 CROSS-STITCHING CONCRETE PAVEMENT

- A. The unit price for Cross Stitching Concrete Pavement work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Furnish all labor, tools, equipment and services.
  - 3. Supply and install 3/4" epoxy coated tie bars.
  - 4. Drilling holes in concrete per specifications.
  - 5. Supply and install epoxy grout.
- B. Measurement of payment will be the actual number of 3/4" bars installed.
- C. The unit of measurement for payment is each.

1.11 CONCRETE PAVEMENT PARTIAL DEPTH REPAIR- JOINT REPAIR

- A. The unit price for Concrete Pavement Partial Depth Repair Joint Repair work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Furnish all labor, tools, equipment and services.

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3. Furnish and place sand where required.
4. Furnish and place compression relief material where required.
5. Furnish and place preformed joint filler where required.
6. Providing and placement of the Portland cement concrete mixture.
7. Providing curing with linseed oil.
8. Reestablish cracks or joints.

B. Measurement for payment will be along centerline of joint or crack repaired.

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

**1.12 PAVEMENT MARKING EPOXY LINES**

A. The unit price for Pavement Marking Epoxy Lines includes:

1. General Work Items of Article 1.2.
2. Providing and installing the Pavement Marking Epoxy Lines includes preparing the surface, including brush-off blasting of concrete, for providing all marking, including reflectorization with glass beads, for protecting marking until dry or cured, and for replacing marking improperly constructed or that fails during the warranty period.
3. For remarking if initially applies at less than 90% of the specified rate.

B. Measurement of payment will be by the linear foot, calculates as follows:

1. For solid lines; by adding the linear feet of solid line measured end to end.
2. For intermittent lines; by multiplying the specified length of the individual marking of the line by the number of markings in the intermittent line end to end.

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

**1.13 REMOVE PAVEMENT AND SIDEWALK**

A. The unit price for Remove Pavement and Sidewalk work includes:

1. General Work Items of Article 1.2.
2. Sawcutting, breaking, and removal of existing asphaltic concrete pavement or concrete pavement, or concrete sidewalk over the project limits.
3. Sawcutting to protect adjacent surfaces.

B. Measurement of payment will not be made unless there is a change in project scope. The estimated quantity represents the computed area based off the City survey and will be the basis for payment.

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

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**1.14 REMOVE CURB AND GUTTER**

- A. The unit price for Remove Curb and Gutter work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Sawcutting, breaking, and removal of existing concrete curb and gutter over the project limits.
  - 3. Sawcutting to protect adjacent curb and gutter or roadway surfaces.
- 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.

**1.15 REMOVE AND SALVAGE BRICK PAVERS**

- A. The unit price for Remove and Salvage Brick Pavers work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Removal of decorative brick pavers as shown on plans.
  - 3. Brick pavers for salvage in neat stacks on a pallet outside of the construction limits but within the right of way at locations the engineer approves.
  - 4. Hauling and disposal of all brick pavers not designated for salvage in accordance with all regulations governing solid waste disposal.
  - 5. Salvaged brick pavers remaining after reinstallation shall be delivered to the De Pere Municipal Service Center at 925 S. Sixth Street. Coordinate delivery with the Project Engineer.
- B. Measurement for payment will be the average horizontal length and width of the decorative bricks removed.
- C. The unit of measurement for payment is square foot.

**1.16 REINSTALL BRICK PAVERS**

- A. The unit price for Reinstall Brick Pavers work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Grading and cleaning of base materials to allow for replacement of decorative brick pavers in such a way the final product will be level and matching flush with surrounding pavement, curb head or brick elevations.
  - 3. Sand setting course at the depth shown on the plan.
  - 4. Replacement of decorative brick pavers in locations as shown on plans.
  - 5. Sawcutting of brick pavers to fit around existing and newly constructed pavements.
  - 6. Filing joints between bricks with sand.

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- B. Measurement for payment will be the average horizontal length and width of the decorative bricks replaced.
- C. The unit of measurement for payment is square foot.

**1.17 UNCLASSIFIED EXCAVATION**

- A. The unit price for Unclassified Excavation work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Removal of topsoil to depth available.
  - 3. Hauling and stockpiling topsoil.
  - 4. Excavation to subgrades shown on the Drawings.
  - 5. Hauling of unclassified material.
  - 6. Placing unclassified material in fill areas to subgrades shown on the drawings and the subgrade required for placement of topsoil.
  - 7. Compaction of subgrade and fill areas.
  - 8. Excavation of undercut areas for placing topsoil.
  - 9. Respreding topsoil to final grades shown on the Drawings.
  - 10. Disposal of surplus topsoil, unclassified material and unsuitable material.
  - 11. Preparation of disposal site and transportation of material over an Engineer approved haul route from the site including all loading and dumping of material
  - 12. Finish grading.
- B. Measurement of payment will not be made unless there is a change in project scope. The estimated quantity represents the computed volume by comparing of triangulated surfaces and will be the basis for payment.

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

**1.18 PLANTER BOX**

- A. The unit price for Planter Box work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Providing Portland cement concrete mixture of the dimensions shown in the drawings.
  - 3. Providing and assembling metal reinforcement of the dimensions and spacing shown in the drawings.
  - 4. Providing anchor holes for decorative wrought iron fencing. Anchor holes should be able to accommodate a 1-1/2"x1-1/2" square fence post and shall be set to the depth specified by the decorative fence fabricator for fence installation.
  - 5. Providing curing.
  - 6. Subgrade preparation.
  - 7. Providing contraction joints.
  - 8. Finishing.

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9. Protection.
10. Restoration.

- B. Measurement of payment will be the length of the concrete foundation constructed for the planter box measured on center.
- C. The unit of measurement for payment is linear feet.

**1.19 DECORATIVE FENCING**

- A. The unit price for Decorative Fencing work includes:
1. General Work Items of Article 1.2.
  2. Providing all wrought iron fencing, fabricated to the dimensions shown on plans.
  3. Installing all fencing and appurtenances as shown on the plans.
  4. Cleanup and disposal of excess material.
- B. Measurement of payment will be the length of decorative fencing installed.
- C. The unit of measurement for payment is linear feet.

**1.20 TOPSOIL LANDSCAPING**

- A. The unit price for Topsoil Landscaping work includes:
1. General Work Items of Article 1.2.
  2. Providing 18" topsoil.
- B. Measurement for payment will be the width and length of the planter boxes.
- C. The unit of measurement for payment is square yard.

END OF SECTION

**MEASUREMENT AND PAYMENT SPECIAL CONSTRUCTION**

**PART 1 – GENERAL**

**1.1 SUMMARY**

<b>A. Section includes:</b>	<b>Bid Item No.</b>
1. Colored Concrete Sealing	SC-01
2. Inlet Protection Erosion Control	SC-02
3. Traffic Control	SC-03
4. Remove Tree and Grind Stump	SC-04
5. Rectangular Rapid-Flash Beacon Installation	SC-05
6. City Hall Ramp Masonry Repair	SC-06
7. Build, Weld and Finish 304 Stainless Steel Hand Railing	SC-07
8. Remove and Dispose of Existing Railing	SC-08
9. Install New Railing	SC-09

**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.

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

**1.3 COLORED CONCRETE SEALING**

- A. The unit price for Colored Concrete Sealing work includes:
1. General Work Items of Article 1.2.
  2. Furnish all labor, tools, equipment and services.
  3. Sealant material.
  4. Preparation of concrete.
  5. Placing sealant (first and second coats).
  6. Protection.
- B. Measurement of payment will be the average horizontal length and width of the sealant placed.
- C. The unit of measurement for payment is square feet.

**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 TRAFFIC CONTROL**

- A. The unit price for Inlet Protection Erosion Control work includes:
1. General Work Items of Article 1.2.
  2. Furnish all labor, tools, equipment and services.
  3. Construct and use traffic control facilities in accordance with the U.S. D. O. T. Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways Maintenance of traffic control. Submit the proposed plan to the Engineer for review and approval at least one week prior to installation.
  4. Removal of signage, barricades, etc. after the project has been completed.

- B. Measurement for payment will not be made.
- C. The unit of measurement for payment is lump sum.

#### 1.6 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 for payment will be the will be the inch diameter of trees removed.
- C. The unit of measurement for payment is inch diameter.

#### 1.7 RECTANGULAR RAPID-FLASH BEACON INSTALLATION

- A. The unit price for Rectangular Rapid-Flash Beacon Installation work includes:
  - 1. General Work Items of Article 1.2.
  - 2. Provide footings and appurtenances.
  - 3. Providing and installing all sign posts, sign bases and associated appurtenances.
  - 4. Providing and installing the rectangular rapid-flash sign assembly including reflective signs, flashing beacons, pedestrian push buttons, solar panels, communications, wiring, and associated appurtenances as recommended by the manufacturer.
  - 5. Restoration
- B. Measurement for payment will be each rectangular rapid-flash beacon installed.
- C. The unit of measurement for payment is each.

#### 1.8 CITY HALL RAMP MASONRY REPAIR

- A. The unit price for City Hall Ramp Masonry Repair:
  - 1. Inspection and testing of ramp landing and vertical wall for soundness.
  - 2. Loose, honeycombed or spalled concrete to be removed to a sound base.
  - 3. Exposed reinforcing steel to be treated and rust protected.
  - 4. Areas then patched with waterproof Portland cement, reinforced as necessary and finished to match existing surface.
  - 5. Removed or damaged parge coat on existing wall to be re-coated to achieve a uniform finish.
  - 6. Routing of all horizontal and vertical expansion joints to 1/4" width and 1/2" depth joints to be cleaned with solvent and sealed.

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7. Apply two coats of Thorocoat waterproofing to entire vertical wall.
8. Saw cut joint between ramp way slab and vertical concrete wall to a depth of 2 inches and install a stainless steel drip flashing to protect vertical wall.
9. Apply urethane caulking to the top side of the drip edge.
10. Install 32 stainless steel mounting plates for handrailing.
11. Installation of new stainless steel drip flashing along joint.

- B. Measurement of payment will not be made.
- C. The unit of measurement for payment is lump sum.

**1.9 BUILD, WELD AND FINISH 304 STAINLESS STEEL HAND RAILING**

- A. The unit price for build, weld and finish 304 stainless steel hand railing work includes:
1. Ensure the proposed plan meets Americans With Disabilities Act (ADA) Standards for Accessible Design.
  2. Site verify all measurements/dimensions prior to fabrication of hand railing.
  3. Build and weld hand railing per plan, comprised entirely of 304 stainless steel per plan.
  4. Utilize the bead blasting method to achieve a smooth, medium finish on the entire hand railing surface. Contractor to provide Owner an example of the finish on the stainless steel material to be used. Finish must be approved by the Project Manager/Engineer prior to finishing the Owners hand railing.

- B. Measurement of payment will not be made.
- C. The unit of measurement for payment is lump sum.

**1.10 REMOVE AND DISPOSE OF EXISTING RAILING**

- A. The unit price for remove and dispose of existing railing.
1. Unbolt and remove existing painted metal hand railing from existing ramp no earlier than one day before Masonry contractor begins work.
  2. Dispose of the existing hand railing by means they determine appropriate.

- B. Measurement of payment will not be made.
- C. The unit of measurement for payment is lump sum.

**1.11 INSTALL NEW HAND RAILING INCLUDING ANY NECESSARY FIELD WELDING AND FINISHING.**

- A. The unit price for Install new hand railing including any necessary field welding and finishing:
1. Provide stainless steel plates (per plan) for installation on vertical ramp. Provide supervision to ensure proper placement of wall plates at time of their installation.

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2. Deliver the new hand railing to site, securely install it, and perform any field welding and finishing necessary. Field welded sections must match the finish of the overall railing.
  3. Hand railing installation to commence no later than one day after Masonry work concludes.
  4. Clean Project site of any hand railing installation debris.
- B. Measurement of payment will not be made.
- C. The unit of measurement for payment is lump sum.

END OF SECTION

**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**

**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**

**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.

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- 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.

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- 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 "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**

**REGULATORY REQUIREMENTS**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section Includes
  - 1. Underground Utilities
  - 2. Property Monuments
  - 3. Traffic Control

**1.2 UNDERGROUND UTILITIES**

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

**1.3 PROPERTY MONUMENTS**

- A. Protect iron pipe monuments from movement.
- B. The cost of replacement of any monuments moved or destroyed during construction shall be the Contractor's responsibility.
- C. Perpetuation of destroyed or moved monuments shall be performed in accordance with state statutes by a registered land surveyor.

**1.4 TRAFFIC CONTROL**

- A. Provide traffic control facilities including barricades, signs, lights, warning devices, pavement markings, flaggers, etc.
- B. Construct and use traffic control facilities in accordance with the U.S. D. O. T. Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways.
- C. Maintain traffic control devices as required to properly safeguard the public travel through final completion, including during periods of suspension of work.

**PART 2 – PRODUCTS (Not used)**

**PART 3 – EXECUTION (Not used)**

**END OF SECTION**

**FIELD ENGINEERING**

**PART 1 – GENERAL**

**1.1 SUMMARY**

**A. Section Includes**

1. Engineering Surveys Provided by the Engineer
2. Engineering Surveys Provided by the Contractor

**1.2 SUBMITTALS**

- A. None

**PART 2 – PRODUCTS (Not Used)**

**PART 3 – EXECUTION**

**3.1 PREPARATION**

- A. Investigate and verify the existence and location of site improvements, utilities, and other existing facilities.
- B. Before construction, verify the location of invert elevations at points of connection of sanitary sewer, storm sewer, water piping and underground electrical services.
- C. Furnish information to the Engineer and the appropriate utility regarding conflicts that are necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.
- D. Provide the Engineer two working days advance notification when ready for engineering surveys for construction to be provided by the Engineer.

**3.2 ENGINEERING SURVEYS TO BE PROVIDED BY THE ENGINEER**

**A. General**

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

**B. Gravity Sewer Systems and Water Distribution Systems.**

1. Provide construction reference stakes set for pipe construction location at critical changes in horizontal and vertical alignment.
2. Provide construction stakes for location of pipe at connections.

**C. New Road Construction**

1. Provide construction slope intercept stakes for horizontal and vertical alignment on each side

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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, bench marks, 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 03 35 33**

**STAMPED COLORED CONCRETE FINISHING AND SEALING**

1.1 SUMMARY

A. Section Includes:

1. Constructing stamped colored concrete.
2. Sealing Stamped Colored Concrete.

1.2 REFERENCES

- A. WisDOT Standard Specification for Highway and Structure Construction, Latest Edition.

1.3 SUBMITTALS

A. Design Mixes

1. Submit copies of the composition and strength testing results for design mix for each type of concrete.

B. Certificates

1. Manufacturer's certification of the curing compound.
2. Manufacturer's certification of evaporation retarders.
3. Manufacturer's certification of sealer with sure grip.

C. Samples

1. Provide all material samples needed for the required testing.

1.4 QUALITY ASSURANCE

- A. Independent testing will be completed by the Owner.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Concrete shall be in accordance with the Standard Specifications.
- B. The stamping pattern shall be Belgian Basket Weave used brick.
- C. The coloring admixture shall be WisDOT Red, conforming to Section 405 of the WisDOT Standard Specification for Highway and Structure Construction.
- D. The maximum amount of chert allowed shall be less than one percent (1.0%) by weight.
- E. The City of De Pere will provide three sets of six basic concrete stamping and patterning tools. The contractor shall provide other tools necessary to complete the work.

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- F. Evaporation retarders: Waterborne monomolecular film forming manufactured for application to fresh concrete, Dayton Superior Day-Chem Sure Film J-74 or equal.
- G. Form Release Agent.
- H. BW Crete Seal 25LV curing and sealing, non-yellowing with Increte Sure Grip added or equal. Use a minimum amount of one pound of Sure Grip per five gallons of sealant.
- I. Curing and sealing materials shall be compatible with colored concrete as recommended by the manufacturer.

**PART 3 – EXECUTION**

**3.1 PLACING AND FINISHING CONCRETE**

- A. Construct stamped colored concrete pavement in accordance with the standard specifications and as hereinafter provided. The coloring of the concrete shall be full depth color, not surface application
- B. The City of De Pere will provide the decorative stamping and patterning tools for stamping the concrete. The City has 21 rigid stamps and 3 flexible stamps. The stamps owned by the City are Belgian Basket Weave used brick. If the Contractor needs to purchase more stamps to perform the work, the additional stamps purchased shall be considered incidental to the stamped colored concrete. Return the concrete stamping and patterning tools to the City once work is complete. Return concrete stamping and patterning tools in good condition. If the concrete stamping and patterning tools are not returned to the City in good condition the contractor shall replace the stamping and patterning tools.
- C. Provide all other standard finishing tools for stamping the colored concrete.
- D. Colored concrete shall be produced in one (1) cubic yard increments. No ½ cubic yard loads will be accepted.
- E. Water/cement in mix design shall be consistent to maintain consistent color.
- F. Colored concrete mixes for the entire project shall be consistent. If the mix is started with High Early Strength then all colored concrete shall be provided as High Early Strength. Switching from regular colored concrete to High Early Strength colored concrete or High Early Strength colored concrete to regular colored concrete will not be allowed.
- G. Once pouring of the colored concrete on the project has begun, cement switching in the colored concrete will not be allowed because it will affect the color consistency of the colored concrete.
- H. Any additional water added to colored concrete once the truck is on site will be rejected.

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- I. Blessing of the colored concrete pavement with water once concrete is in place will not be allowed. If water is added to the surface of the colored concrete surface once concrete is in place, the colored concrete will be rejected and will need to be removed.
- J. Evaporation reducers will be used throughout the construction of the colored concrete.
- K. Cover and protect adjacent construction and concrete from discoloration and spillage during placement of colored concrete, application of release agents, and sealers.
- L. Liquid release agent shall be uniformly applied onto the colored still plastic state concrete to provide clean release of imprinting tools from the concrete surface without lifting imprint or tearing concrete.
- M. While initially finished concrete is in plastic state, accurately align and place imprinting stamps. Monitor the setting up of the concrete. Once the concrete has set to the point it can be stamped the contractor shall begin stamping. Uniformly pound or press imprint tool into concrete to produce required pattern and depth of imprint on concrete surface. Remove platform tools immediately. Hand texture and stamp edges and surfaces unable to be imprinted by stamp mats. Touch up imperfections such as broken corners, double imprints and surface cracks.
- N. Stamp concrete consistently so that stamped concrete does not have a vertical elevation difference of ½ inch or depressions in concrete capable of causing ponding water or ice.
- O. For concrete hand stamp edges and surfaces that are unable to be imprinted by platform tools, use texture mats and single blade hand stamps to match platform tool stamping pattern. Finished imprinting shall match pre-construction mock-up.
- P. After concrete has been stamped and the sheen has left the surface of the colored concrete, the colored concrete shall be sealed with AK-2 ACHRO KURE 1315 with sharp grip added. Apply per manufacturer's recommendations. Two coats of seal shall be applied. Apply second coat after first coat has dried. Do not seal over blemishes or imperfections caused by rainfall or protection materials.
- Q. In general colored concrete must be protected from premature drying and excessive cold or hot temperatures. Apply evaporation retarders to concrete surfaces only if hot, dry, or windy conditions causing a moisture loss approaching 0.20lb./sq.ft. x h before and during initial finishing operations. Apply according to manufacturer's written instructions after placing and screeding and during initial floating operations.
- R. Protect the colored concrete from damage.
- S. Adjacent concrete that is discolored shall be removed and replaced to the approval of the engineer.

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**3.2 SEALING STAMPED COLORED CONCRETE**

- A. Protect area to be resealed from vehicular and pedestrian traffic.
- B. Pressure wash area and let stand so that the existing stamped concrete has become totally dry and free from any moisture.
- C. Apply two coats. Apply the first application of the sealant, let the area dry completely and then apply the second coat. Refer to the manufacture's recommendations for when to apply the second coat. Apply both coats at full strength, and do not thin sealant. Sealant must be stirred before and during applications.
- D. Remove all protection and traffic control after sealant is completely dried.

END OF SECTION

**SECTION 05 52 00**

**STAINLESS STEEL HAND RAILING AND RAILING POSTS**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. This section includes custom, stainless steel pipe handrails as shown in the contract drawings with stainless steel railing posts, guardrails, and infill.

**1.2 REFERENCES**

- A. American Society for Testing and Materials (ASTM)
1. A269 Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing
  2. A276 Standard Specification for Stainless and Heat Resisting Bars and Shapes
  3. A312 Standard Specification for Seamless and Welded Austenitic Stainless Steel Pipe
  4. E894 Standard Test Methods for Anchorage of Permanent Metal Railing Systems and Rails for Buildings
  5. E935 Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings
  6. E985 Specifications for Permanent Metal Railing Systems and Rails for Buildings
- B. American Welding Society (AWS)
1. D1.6 Structural Welding Code Stainless Steel; 2007
  2. B2.1-84 Welding Procedure and Performance Calculations

**1.3 PERFORMANCE REQUIREMENTS**

- A. Top Rail
1. Concentrated load of 200 lb/foot applied at any point and any direction.
  2. Uniform load of 50 lb/foot applied horizontally and concurrently with uniform load of 100 lb/foot applied vertically downward.
  3. Concentrated and uniform loads above need not be assumed to act concurrently.
- B. Hand Rails Other than Top Rail
1. Concentrated load of 200 lb/foot applied at any point and any direction.
  2. Uniform load of 100 lb/foot applied in any direction.
  3. Concentrated and uniform loads above need not be assumed to act concurrently.

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**C. Infill Areas**

1. Concentrated horizontal load 50 lb/foot applied to one square foot at any point in system, including intermediate rails, panels, pickets, or other elements making up infill area. Loads need not be assumed to act concurrently with loads on top rails in determining stress on infill.

**1.4 SUBMITTALS**

- A. Shop drawings which specify material sizes, shapes, plans, sections, install dates and finishes per requirements.
- B. Product data for all rail systems and finishes.
- C. Welder certifications.
- D. Samples of rail materials and finish.
- E. Structural calculations and testing. All drawings should be sealed and designed under the direct supervision of a Wisconsin Licensed Professional Engineer.

**1.5 QUALITY ASSURANCE**

- A. Check dimensions of other construction by accurate field measurements before fabrication to insure proper rail fit up. Incorporate dimensions into field use shop drawings. Coordinate fabrication lead times with construction progress to avoid delaying the work.
- B. Shop assembled mechanical joints shall fit to within 1/16 of an inch.
- C. Expansion joints shall fit within 1/8 of an inch to allow for thermal expansion within the handrail.
- D. Railing posts shall be plumb to within 1/8 of an inch over three feet.
- E. Qualify welders and procedures per AWS standard qualification procedures.
- F. Provide and submit drawings and calculations required to receive all local and state approvals. Review schedule in Wisconsin is four to eight weeks.

**PART 2 – PRODUCTS**

**2.1 MATERIAL – GENERAL**

- A. Provide metal free from pitting, seam marks, roller marks, grinding marks, and stains at areas exposed to view on completed rail units.
  1. Stainless Steel:
    - i. Pipe and tubing: ASTM A 269 type 304 or type 316

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- ii. Bar: ASTM A 276 type 304 or type 316
- iii. Fittings: ASTM A 276 / A 479 type 304 or type 316

**2.2 FINISHES**

**A. Stainless Steel**

- 1. Media blasted finish

**2.3 FABRICATION**

- A. Fabricate handrails and guardrails in accordance to approved shop drawing and field dimensions using mitered and welded joints with bends where indicated on shop drawings.
- B. Shop fabricate in greatest possible lengths to eliminate field splicing, but not to exceed 20 feet in length.
- C. Form bends to uniform radius, free of distortion, twists, cracks, and grain separation.
- D. Top rails shall be continuous over posts for strength with splices for expansion located within six to 12 inches of post.
- E. Splices and expansion joints shall utilize internal splice connectors with set screws to allow for rail expansion over ambient temperature change.
- F. Weld all shop assembled connections continuous without undercut and or distortion of rail materials.
- G. Grind and or dress exposed welds smooth and flush to corner or fillet without weakening rail connection.
- H. Remove all burrs and sharp edges from exposed ends of final rail assemblies.
- I. Lightly sand and blend with fine grit paper all light scratches prior to rail finishing.
- J. Provide drainage and weep holes within rail assemblies to prevent entrapment of water within rail assemblies. Note that caution should be used when pressure washing rails assemblies to prevent water entry to non-vented areas under pressure.
- K. Provide posts inserts where required due to loading within long post spans.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install in accordance with shop drawings utilizing established working points.
- B. Set railings within sleeves, use anchor bolts or core drill for mounting holes. Maintain slab edge distances and rail locations per shop drawings.
- C. Before erecting the railing, swing the spans free from false work. Make the railing's line and grade true and do not follow unevenness in supporting sidewalk or walls. Unless the plans require otherwise, construct the railing with the posts normal to the grade of the structure.
- D. Assemble rails fitting splices together to form tight hairline joints while allowing for thermal expansion as required.
- E. Make all adjustments to alignment for satisfactory rail appearance and to plumb posts prior to final tightening of fasteners or pouring of holes.
- F. Locate brackets per shop drawings and set anchors within concrete. Use adhesive anchors for anchor bolts drilled in concrete for all railings.
- G. Shim to align each railing post and end base plat as the plans show.
- H. After installation is complete clean product using non-abrasive mild soap and water. Do not utilize any cleaners containing any type of acid.

END OF SECTION

**SECTION 10 14 53**

**RECTANGULAR RAPID-FLASH BEACONS**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
1. Vendors
  2. Installation

**1.2 REFERENCES**

- A. State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, current edition, and all supplemental and interim supplemental specifications, as they may pertain, except the items: method of measurement and basis of payment shall not apply.
- B. Wisconsin Manual on Uniform Traffic Control Devices Chapter 4L

**1.3 SUBMITTALS**

- A. Submit manufacturer's certification for each product stated that products delivered comply with the requirements of this section and the referenced standard.
- B. Product warranty information.

**PART 2 – PRODUCTS**

**2.1 VENDORS**

- A. Rectangular Rapid-Flash Beacons (RRFBs)
1. RRFB Pedestrian Crosswalk Systems shall be purchased from Traffic & Parking Control Co., Inc. or Engineer approved equal.
  2. Systems shall include the following:
    - a. Side of pole control cabinet.
    - b. 55 watt solar panel.
    - c. 48Ah battery
    - d. Stainless steel pole mounting hardware.
    - e. Bulldog push button
    - f. Blinkerbeam wireless communication
    - g. LED units with wig-wag and simultaneous flash pattern.
    - h. 15-foot 4-1/2 OD round aluminum pole
    - i. 24"x24", fluorescent yellow, W11-2 pedestrian crossing sign(s).

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- j. 24"x12", fluorescent yellow, W-16-7pL/R plaques.
- k. Pole base shall be breakaway.

**PART 3 – EXECUTION**

**3.1 INSTALLATION**

- A. Furnish and install RRFBs and all necessary miscellaneous accessories and hardware to complete the installation of the beacons.
- B. Signs facing one-way traffic will only require single sided RRFB lights and pedestrian crossing signs/plaques. Signs abutting two-way traffic will require back-to-back RRFB lights and pedestrian crossing signs/plaques.
- C. Signs shall be mounted on Type 1 concrete base per WisDOT SDD 9c2.
- D. Follow the manufacturer's instructions regarding the RRFB system installation.

**END OF SECTION**

**SECTION 32 01 29.61**

**CONCRETE PAVEMENT PARTIAL DEPTH REPAIR – JOINT REPAIR, CRACK  
REPAIR, SURFACE REPAIR, FULL DEPTH ADJUSTMENT**

**PART 1 – GENERAL**

**1.1 SUMMARY**

**A. Section Includes**

1. Sampling and Testing
2. Surface Preparation
3. Placing and Finishing Portland Cement Concrete Pavement

**1.2 REFERENCES**

- A. American Society for Testing Materials (ASTM)
- B. WisDOT Standard Specification for Highway and Structure Construction, Latest Edition

**1.3 SUBMITTALS**

**A. Design Mixes**

1. Submit copies of the composition and strength testing results for design mix for each type of concrete.
2. Manufacturer's certification of the curing compound.

**B. Certificates**

1. Provide producer's certification that the supplied materials meet the applicable specification requirements.
2. Provide the material content per cubic yard for each class of concrete furnished.
  - a. Dry weight of concrete.
  - b. Saturated surface-dried weights of fine and coarse aggregates.
  - c. Quantity, type, and name of any admixtures used.
  - d. Weight of water.
3. Provide delivery tickets for each batch in accordance with ASTM C94.
  - a. Delivery tickets are not required for job-mixed concrete.

**C. Samples**

1. Provide all material samples needed for the required testing.

**1.4 QUALITY ASSURANCE**

- A. Independent testing will be completed by the Owner.

**PART 2 – PRODUCTS**

**2.1 MATERIALS**

**A. Concrete**

- 1. The replacement concrete shall comply with the standards specifications except as modified below. It shall be furnished, placed, and cured in accordance with the provisions in the plans, specifications, and contract.
  - a. Use the following proportions for 1 cubic yard (cubic meter) of concrete:
    - 1) 850 lb. (505kg) Portland Concrete (Type I or Type III)
    - 2) 1338 lb. (794 kg) Fine Aggregate (Per standard specifications except maximum P200-2.5%)
    - 3) 1338 lb.(794kg) Coarse Aggregate (See table below for gradation)
    - 4) These quantities assume a specific gravity of 2.65
  - b. Coarse Aggregate Gradation:

Sieve	% Passing
3/8	100
#4	55-95
#50	0-5
#200	0-1.0
  - c. Maximum slump shall be 1 inch (25mm).
  - d. Air Content shall be 6% ± 1.5.
  - e. ASTM C494 Type A admixture shall be used, unless Type E is used.
  - f. ASTM C494 Type E admixture may be used, in accordance to the manufacturer's recommendations, to achieve the required opening strength in the desired time period. Dosage will vary with ambient temperature and desired opening time.
  - g. The use of more than 50% of the maximum manufacturer's recommended dosage of Type E admixture will require the concrete to be sprayed with curing compound and covered with wet burlene.

**B. Compression Relief Material**

- 1. Provide compression relief material that is made of a rigid, compressible, non-absorbent material.

**C. Bonding Agent**

- 1. Use bonding grout that consists of equal portions of Portland cement and sand, mixed with sufficient water to form slurry having the consistency of thick cream.

**D. Concrete Curing Agent**

- 1. Provide a concrete curing agent that is a resin of 100 percent poly-alpha-methylstyrene type curing compound meeting ASTM C309 , Type 2, Class B specifications and

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conforming to all requirements according to the following table:

<b>Properties</b>	<b>Minimum</b>	<b>Maximum</b>
Total Solids, % by weight of compound	42	
Reflectance, % in 72 hours (ASTM E1347)	65	
Loss of Water, kg/m <sup>2</sup> in 24 hours (ASTM C156)		0.15
Loss of Water, kg/m <sup>2</sup> in 72 hours (ASTM C156)		0.40
Settling Test, ml/100ml in 72 hours		2
VOC Content, g/L		350
Infrared Spectrum, Vehicle	100% alpha-methylstyrene	

<sup>1</sup> Test Method on file at the Department’s Materials Testing Lab.

<sup>2</sup> The infrared scan for the dried vehicle from the curing compound shall match the infrared scan on file at the Department’s Materials Testing Lab.

- Shelf life of the product shall be six months from date of manufacture. The product may be re-tested by the department’s Materials Testing Lab and re-approved, if the physical and chemical properties have not changed, for an additional six months. However, the maximum shelf life shall not exceed one year from manufacture date.

**2.2 EQUIPMENT**

**A. Concrete Milling**

- Removal of concrete for the items of concrete pavement partial depth repair, joint repair, and crack repair shall be performed using milling machines designed for milling concrete pavement. The milling head shall be a tapered V-head or rounded head. Milling machines that leave a vertical edge such as a traditional rock saw will not be allowed. Milling machines shall be equipped with a device for stopping at preset depths to prevent damage to dowel bars. Additionally, shroud the equipment to prevent discharge of any loosened material into adjacent work areas or live traffic lanes.

**B. Air Chippers**

- Use air chippers or breakers for chipping the old concrete surface that have a total weight not exceeding 30 lbs (13.6 kg) and are equipped with flat, chisel-type points that have cutting edges not less than .75inch (19mm) or greater than 3 inches (76.2mm) wide.

**C. Concrete Mixing**

- Use concrete mixing equipment that provides material of uniform consistency. Do not prepare site-mixed concrete more than ½ hour prior to placement. Do not prepare ready-mixed concrete more than 1 hour prior to placement.

**D. Vibrators**

- Use mechanical vibrators that are capable of operating at frequencies sufficient to achieve thorough and uniform consolidation, but not less than 7000 impulses per minute. Have available at least one spare vibrator, in working order and of sufficient frequency, on the

work site before concrete placement is started.

## PART 3 – EXECUTION

### 3.1 JOINT PREPARATION

#### A. Before Placing Concrete

1. Remove the concrete by milling to the depths and dimensions as shown on the plan or as determined by the engineer, or both.
2. Milling may be accomplished either longitudinally or transversely to the joint, crack, or edge. The removal process must not damage dowel bars. In the event a dowel bar exhibits excessive corrosion, cut, or burn-off the bar.
3. The removal of the concrete surface in the designated repair areas shall have a minimum depth of 2 inches (50.8mm) with all deteriorated concrete removed to a maximum depth of one-half the pavement thickness, or the top of the dowel bars. Using air chippers, remove all cracked or deteriorated concrete exposed after milling to sound concrete. Chipping at the milled surface of the crack or joint shall be minimum 2 inches wide and shall be at a 1:1 slope.
4. When dowel bars are present, take precaution not to disturb unsound concrete below the tops of the dowels. If some of this unsound material is accidentally blown out during the cleaning process, fill in the voids with clean, dry sand.
5. Use air chippers only for final preparation of the repair area.
6. Storage of the removed material on the roadway will only be permitted in conjunction with a continuous removal and pick-up operation. During non-working hours, clear all the roadway of all materials and equipment.
7. The removed pavement shall become the property of the contractor and disposed of in accordance to subsection 204.3.1.3 of the WisDOT Standards Specifications.
8. Install pavement ties in accordance to subsection 416.3.6 of the WisDOT Standard Specifications.
9. Sandblast all exposed surfaces within 24 hours prior to concrete placement. If it rains prior to concrete placement, sandblast the repair areas again. Additionally, clean the repair areas of loose material by air blasting before applying the bonding grout.

### 3.2 PLACING AND FINISHING CONCRETE

- A. Place and finish in accordance with the WisDOT Specification for Highway and Structure Construction.
- B. Coat exposed surfaces of dowel bars to prevent bonding between the bar and the repair concrete. Take precaution to prevent contamination of existing concrete in the repair area.
- C. Place compression relief material to maintain the continuity of the existing crack or to reestablish the joint in a full-depth adjustment. Install compression relief material such that it remains in position and is tight to all edges during placement of the repair concrete. During concrete placement and vibrating, keep the compression relief material in contact with the bottom of the repair area. To ensure that cracks are reestablished in their original locations,

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scribe their locations on the adjoining pavement outside the removal area, prior to removal operations.

- D. Reestablish cracks and joints to a ¼-inch width, or to the existing crack or joint width, whichever is greater.
- E. Immediately prior to placing the concrete, coat the repair surface with bonding grout. The surface shall be completely dry for at least one-half hour before coating with bonding grout. If the surface isn't completely dry, dry the surface using heat to remove all moisture from the repair surface. Mix the grout by mechanical means and thoroughly brush it over the prepared concrete surface to ensure that all parts receive an even coating. No excess grout shall be permitted to collect in pockets. Place grout within 1 ½ hours of mixing. If the grout whitens, sandblast, and re-grout.
- F. Vibrate concrete as necessary to uniformly and thoroughly consolidate the entire mass of fresh concrete without causing segregation of the aggregates or the formation of localized areas of grout.
- G. Concrete repairs shall not protrude beyond the original cross-section of the pavement by more the 3/8 inch. The edges shall be formed or sawn full-depth.
- H. Strike-off the surface of the repaired area flush with the adjacent concrete and finish the surface to a uniform texture, true to grade and cross section and free from porous areas. As a final finishing operation, float the concrete toward the edges of the repair.
- I. While the concrete is still plastic, the repair shall be tested for trueness with a straightedge.
- J. Reestablish cracks using compression relief material to or beyond the surface of the repair. Initially reestablish joints in plastic concrete by using a jointing tool. Establish tooled joints to a minimum depth of 2 inches. Tooled edges shall be provided, adjacent to all compression relief material, in fresh concrete. Complete the removal of excess compression relief material above the pavement surface without damage to the repair area. The method of removal will be reviewed and approved by the engineer prior to any removal.
- K. Surface texturing, if required by the engineer, shall consist of a broomed finish in the long dimension direction of the repair.
- L. Apply curing compound to the fresh concrete as soon as possible. Apply the compound uniformly, at a minimum rate of one gallon per 100 square feet.
- M. Restore joints by sawing. Saw the joints in a single cut, to the width and depth shown on the plans, and in accordance to 415.3.7 of the WisDOT Standards Specifications.
- N. Thoroughly clean the joint or crack after sawing to remove loose compressible material.

END OF SECTION

**SECTION 32 01 29.64**

**CROSS-STITCHING CONCRETE PAVEMENT**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section Includes
  - 1. Epoxy Coated Bars
  - 2. Epoxy Grout

**1.2 REFERENCES**

- A. The International Grooving and Grinding Association (IGGA)
- B. WisDOT Standard Specification for Highway and Structure Construction, Latest Edition

**1.3 SUBMITTALS**

- A. Epoxy Coated Tie Bars
- B. Epoxy Grout

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Epoxy Coated Tie Bars
  - 1. Use epoxy coated tie bars that conform to the requirements prescribed in subsections 505.2.6.1 and 505.2.6.3 of the WisDOT Standard Specification for Highway and Structure Construction, Latest Edition.
- B. Epoxy Grout
  - 1. Use an epoxy grout conforming to the requirements prescribed in subsection 416.2.3.2 of the WisDOT Standard Specification for Highway and Structure Construction, Latest Edition.

**2.2 EQUIPMENT**

- A. Concrete Drill
  - 1. Use a drill with tungsten carbide bits. Control the forward and reverse travel of the drills by mechanically applied pressure. Mount the drill on a suitable piece of equipment such that is quickly transported and positioned. Rest and reference the drill rig frame on and to the pavement surface such that the drilled holes are cylindrical and repeatable in terms

of position and alignment on the surface being drilled. Hand-held drills are not permitted.

## PART 3 - EXECUTION

### 3.1 CROSS-STITCHING

- A. Cross-Stitching consists of tying existing concrete pavement slabs together by drilling holes, installing and anchoring epoxy coated tie bars diagonally across longitudinal joint or cracks. Install the tie bars as part of the cross-stitching operation in the existing concrete pavement as shown in the details and according to the following specifications.
- B. Drill the end holes in a slab at the offset, depth, and angle specified on detail drawing. Drill such that the hole centerlines are perpendicular to the joint or crack (in plan view) at each location being drilled. Adjacent holes are drilled in opposite directions across the crack. Hole diameters are no more than 3/8" larger than the tie bar diameter. Repair cracks and spalls that result from drilling with a partial or full-depth repair as directed by the Engineer.
- C. Clean drilling dust, debris, and excess moisture from drill holes before inserting the epoxy grout and tie bar. Clean holes with oil-free and moisture-free compressed air. The compressor must deliver air at a minimum pressure of 120 cubic feet per minute and develop a minimum nozzle pressure of 90 psi. Insert the nozzle into the back of the hole to force out all dust and debris.
- D. Inject the epoxy grout into the drill hole. Use grout with a workable viscosity, pump-able, and thick enough to remain in the hole. Insert enough volume of grout into the hole to provide a small quantity of material at the face of the concrete after fully inserting the bar.
- E. Use a positive fixed displacement dispensing system, equipped with a nozzle of sufficient length to deposit the epoxy at the back of the drilled hole. Use a system equipped with a means of checking the mix ratio of the epoxy components. Use the manufacturer's recommended mix ratio and check the ratio at least once a day.
- F. The contractor may use hand-powered mixing and injecting equipment capable of thoroughly mixing and depositing the epoxy grout at the back of the drill hole.
- G. Insert the tie bar such that the anchoring material is evenly distributed around the bar. Use an amount that slightly extrudes out the hole as the tie bar is inserted. Remove the excess and trowel the anchoring material smooth to the pavement surface, filling any chipped areas.
- H. Cross-Stitching Bar Dimensions and Angles/Locations of Holes shall be per the cross-stitching detail.

END OF SECTION

**SECTION 32 31 19**

**DECORATIVE METAL FENCES**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section includes:
1. Materials
  2. Installation

**1.2 REFERENCES**

- A. City of Chicago Streetscape Guidelines

**PART 2 – PRODUCTS**

**2.1 MATERIALS**

- A. Fence is to be fabricated and designed by P&D Metal Works, Inc as shown on the plans.
1. Top Rail, Bottom Rail and Mid Rail are to be 1-1/2" x 1/2" x 1/8" Steel C-Channel. Pickets are to be 1/2" x 1/2" Solid Steel. Posts are to be 1-1/2" x 1-1/2" 11 gauge steel square TU.
  2. Post caps are to be item #45-806 from King Architectural Metals.
  3. Fence shall be 15" in height with 6-inch bury depth on posts.

- B. The contact for P&D Metal Works, Inc. is as follows:

1. Kirk Pruchnofski  
P&D Metal Works, Inc.  
2475 Schultz Drive  
Neenah, WI 54956  
Office: 920-727-1947  
Cell: 920-850-1723

- C. Estimated construction and delivery time for the decorative fences is eight weeks.

**2.2 INSTALLATION**

- A. Fences should be pre-fabricated prior to installation.
- B. Posts shall be set in a vertical position at the required location and alignment within the 6"x18" Reinforced Concrete Planter Box. Coordinate fence post setting locations with concrete contractor to ensure accurate installation.

**END OF SECTION**

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT A**

**WEST DE PERE REPAIR AREAS**

# WEST DE PERE REPAIR AREAS

EXHIBIT A-1

Kelly Danen Park  
Replace Sidewalk

726 Oak St  
Replace Driveway

Main & 8th  
Replace Pavement

 1 inch = 200 feet



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

Sidewalk, Curb,  
and Concrete  
Pavement Repair

Project:  
19-05

April 2019  
BY: JML

# WEST DE PERE REPAIR AREAS

EXHIBIT A-2



516 S. Sixth St  
Replace Sidewalk

Building A  
Units 1-8

Building B  
Units 9-16

Building C  
Units 17-24

Building E  
Units 33-40

Building D  
Units 25-32

1 inch = 200 feet

**DE PERE**  
Sidewalk, Curb, and Concrete Pavement Repair

Project: 19-05

April 2019  
BY: JML

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

# WEST DE PERE REPAIR AREAS

EXHIBIT A-3



 Engineering Division 925 S. 6th St. De Pere, WI 54115 Office: 920-339-4061 Fax: 920-339-4071	Sidewalk, Curb, and Concrete Pavement Repair
	Project: 19-05
	April 2019 BY: JML

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT B**

**EAST DE PERE REPAIR AREAS**

# EAST DE PERE REPAIR AREAS

101 S. Broadway  
Repair Curb

S. Wisconsin & Charles  
Replace Curb Ramp

S. Wisconsin & Merrill  
Replace Curb Ramp



1 inch = 200 feet



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

Sidewalk, Curb,  
and Concrete  
Pavement Repair

Project:  
19-05

April 2019  
BY: JML

# EAST DE PERE REPAIR AREAS

436 N. Huron  
Repair Driveway

1 inch = 200 feet

**DE PERE**  
  
 Sidewalk, Curb, and Concrete Pavement Repair

---

Project:  
19-05

---

April 2019  
BY: JML

---

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



# EAST DE PERE REPAIR AREAS

EXHIBIT B-3



Webster & S. Summer Range Rd  
Replace Curb Ramp

Webster & S. Summer Range Rd  
Replace Curb Ramp

1 inch = 200 feet



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

Sidewalk, Curb,  
and Concrete  
Pavement Repair

Project:  
19-05

April 2019  
BY: JML

# EAST DE PERE REPAIR AREAS

EXHIBIT B-4

142 Nob Hill  
Replace Sidewalk

 1 inch = 200 feet



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

Sidewalk, Curb,  
and Concrete  
Pavement Repair

Project:  
19-05

April 2019  
BY: JML

# EAST DE PERE REPAIR AREAS

EXHIBIT B-5

831 Bomier  
Replace Sidewalk

 1 inch = 200 feet



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

Sidewalk, Curb,  
and Concrete  
Pavement Repair

Project:  
19-05

April 2019  
BY: JML

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT C**

**SIDEWALK REPAIR AREA**



**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT D**

**THIRD STREET REHABILITATION PLAN SHEETS**

31

# THIRD STREET CONCRETE PAVEMENT REPAIR

EXHIBIT D-1

MARSH ST

619

## LEGEND

-  REMOVE AND REPLACE CONCRETE PAVEMENT/CURB
-  PARTIAL DEPTH REPAIR


 1 inch = 40 feet

**DE PERE**



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

Exhibit D  
 Third Street  
 Concrete Repair

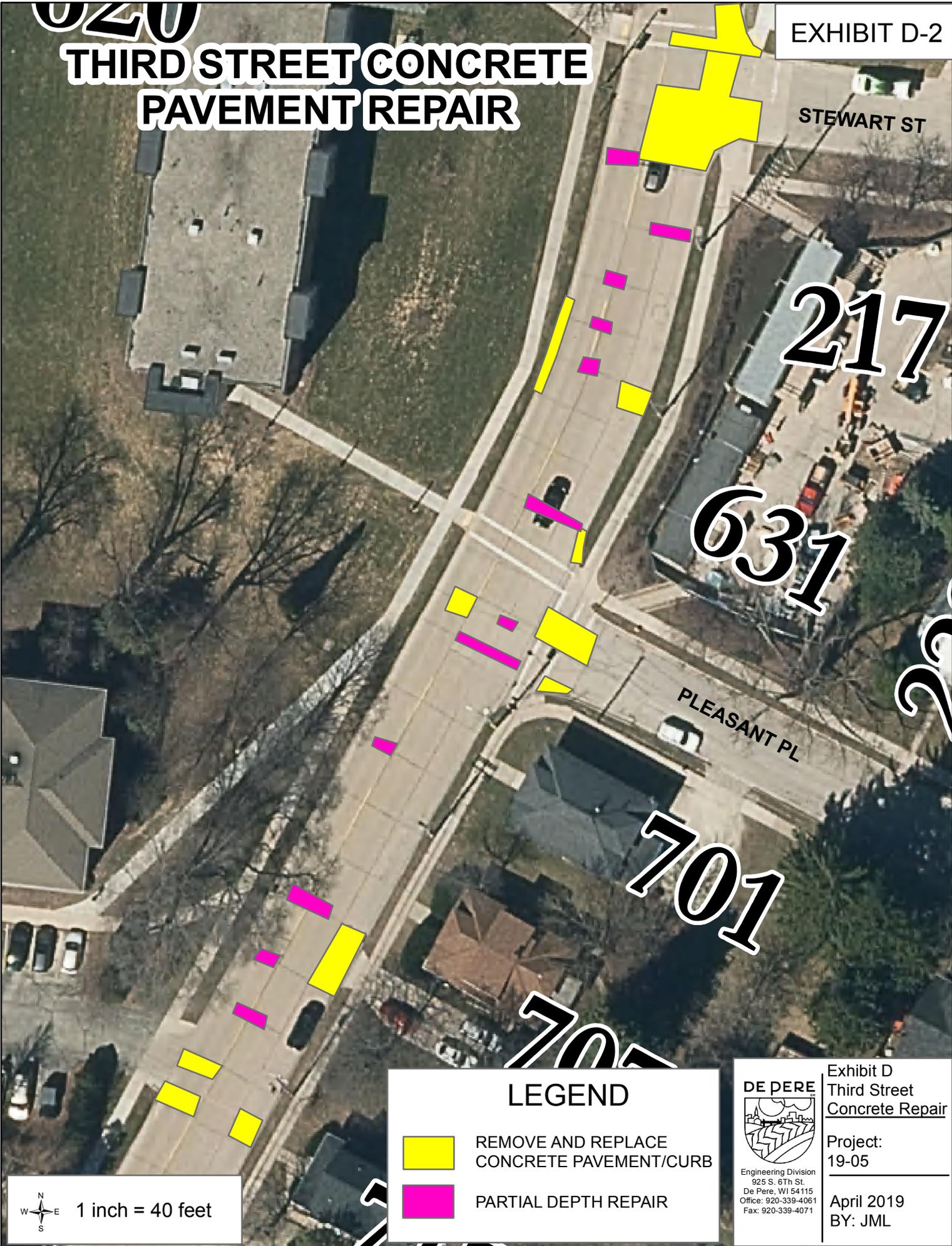
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Project:  
 19-05

---

April 2019  
 BY: JML

# 020 THIRD STREET CONCRETE PAVEMENT REPAIR



**LEGEND**

- REMOVE AND REPLACE CONCRETE PAVEMENT/CURB
- PARTIAL DEPTH REPAIR

 1 inch = 40 feet

**DE PERE**



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

---

Exhibit D  
Third Street  
Concrete Repair

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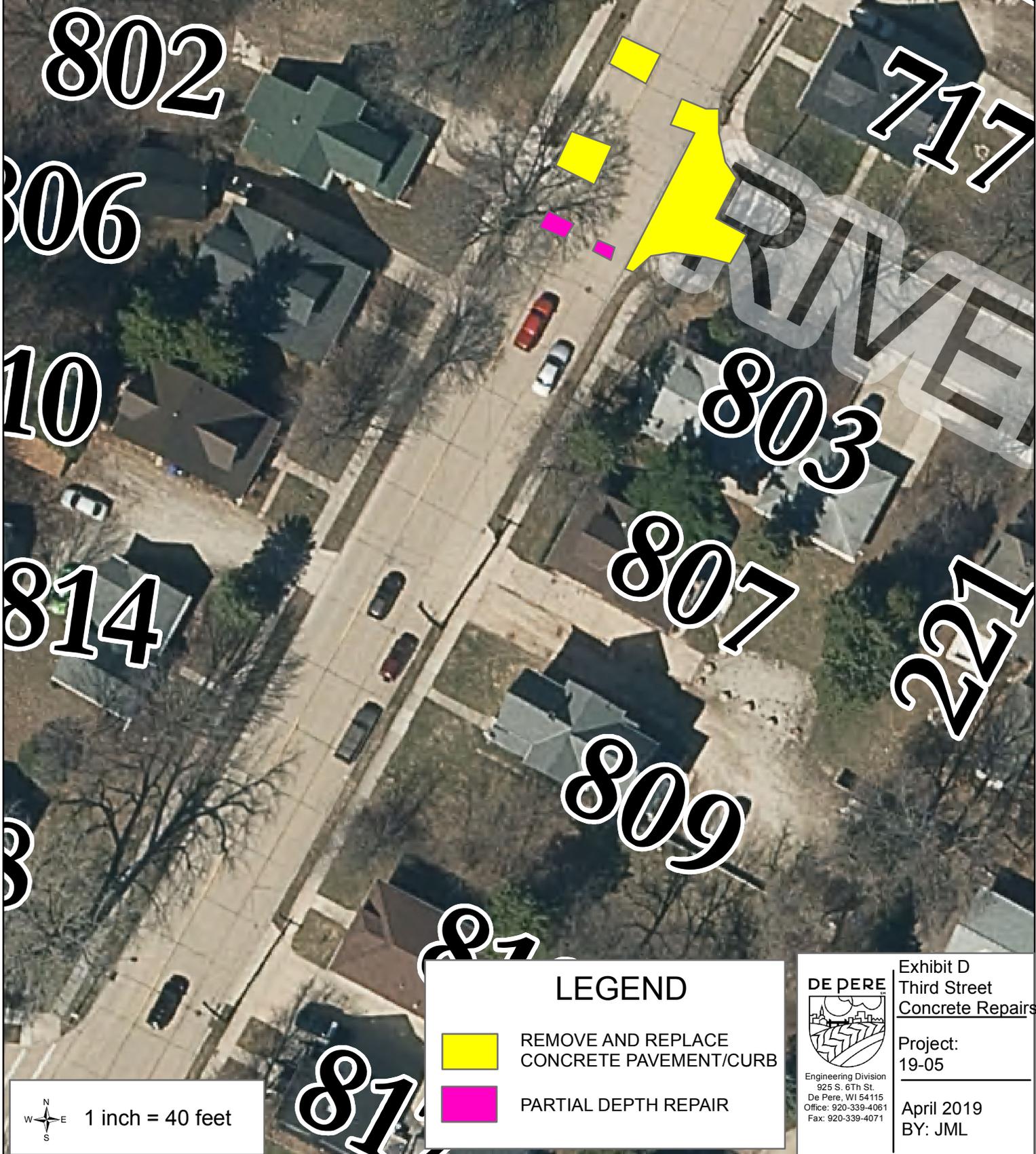
Project:  
19-05

---

April 2019  
BY: JML

# THIRD STREET CONCRETE PAVEMENT REPAIRS

EXHIBIT D-3



**LEGEND**

-  REMOVE AND REPLACE CONCRETE PAVEMENT/CURB
-  PARTIAL DEPTH REPAIR

 1 inch = 40 feet

**DE PERE**



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

Exhibit D  
Third Street  
Concrete Repairs

Project:  
19-05

April 2019  
BY: JML

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT E**

**MAIN AVENUE BUMP OUT PLAN SHEET**



**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

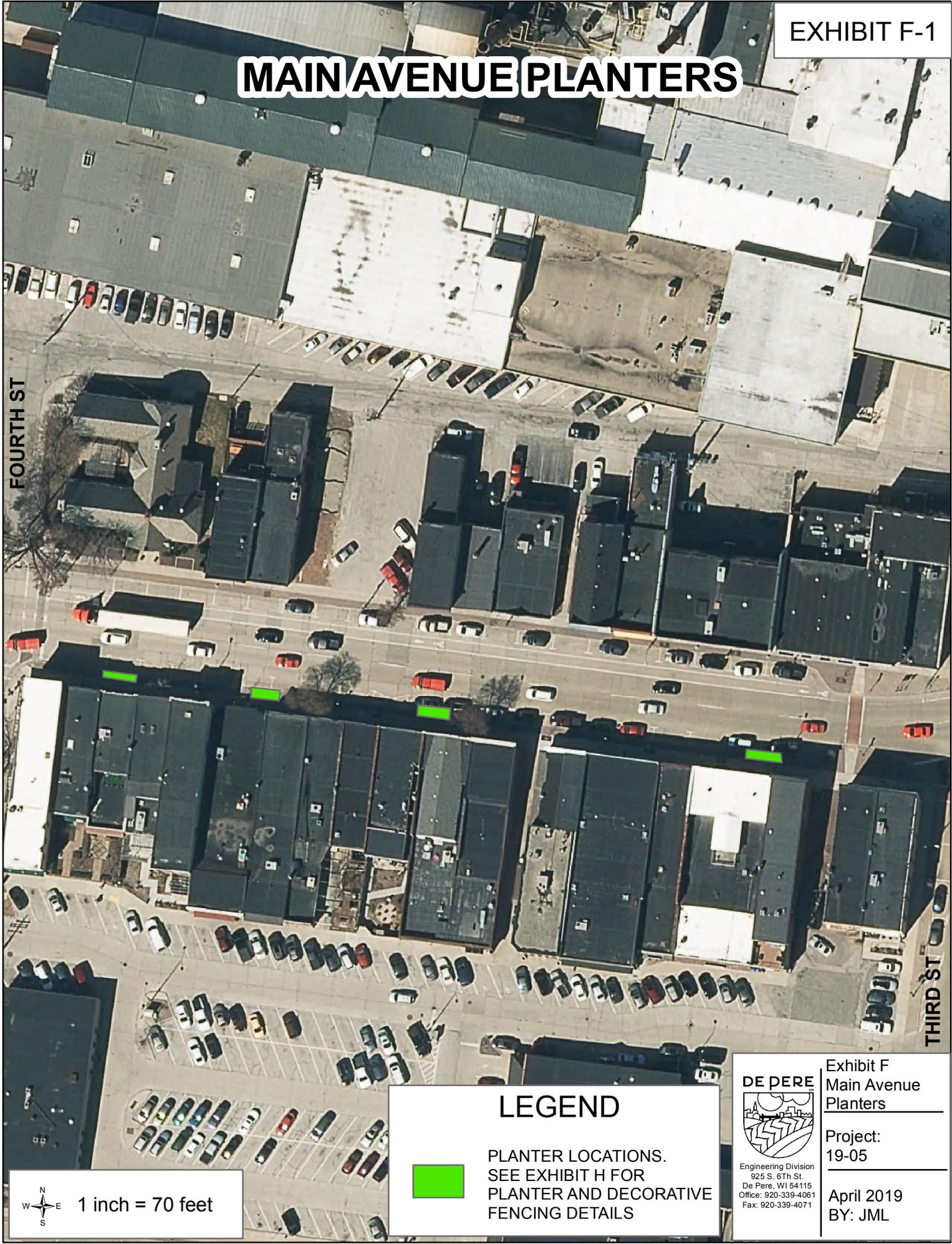
**EXHIBIT F**

**MAIN AVENUE PLANTER PLAN SHEET**

# MAIN AVENUE PLANTERS

FOURTH ST

THIRD ST



**LEGEND**

 PLANTER LOCATIONS. SEE EXHIBIT H FOR PLANTER AND DECORATIVE FENCING DETAILS

 1 inch = 70 feet



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

Exhibit F  
Main Avenue  
Planters

Project:  
19-05

April 2019  
BY: JML

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT G**

**GEORGE STREET PLANTER PLAN SHEET**

# GEORGE STREET PLANTERS

MICHIGAN ST

SUPERIOR ST




 1 inch = 50 feet

## LEGEND



SAWCUT AND REMOVE  
 EXISTING CONCRETE  
 PAVEMENT, EXCAVATE 1.5'  
 PLACE 1.5' NEW TOPSOIL

DE PERE



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

Exhibit G  
 George Street  
 Planters

Project:  
 19-05

April 2019  
 BY: JML

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

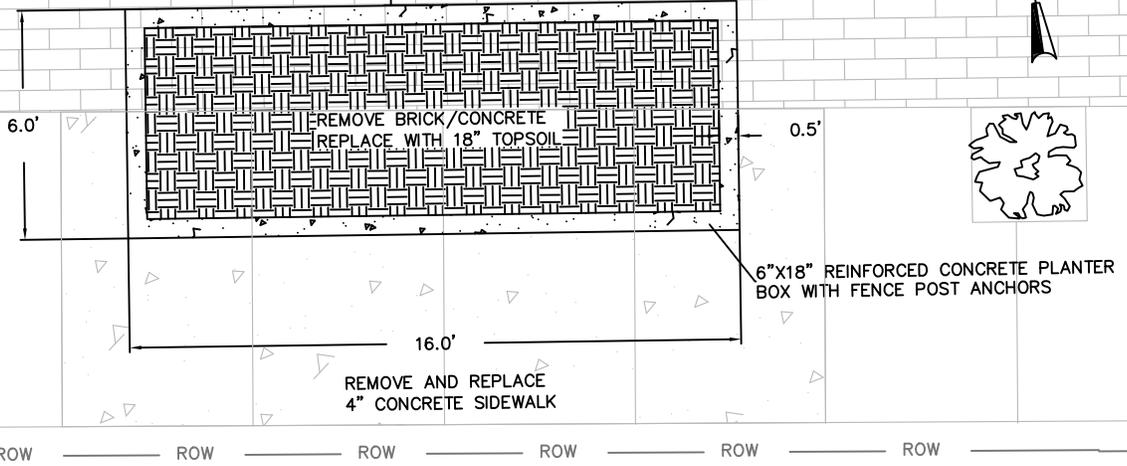
**EXHIBIT H**

**PLANTER SECTION AND FENCING DETAILS**

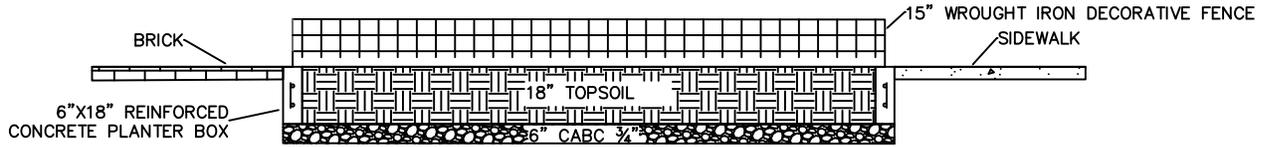
PLAN VIEW

EXIST 24" CURB AND GUTTER

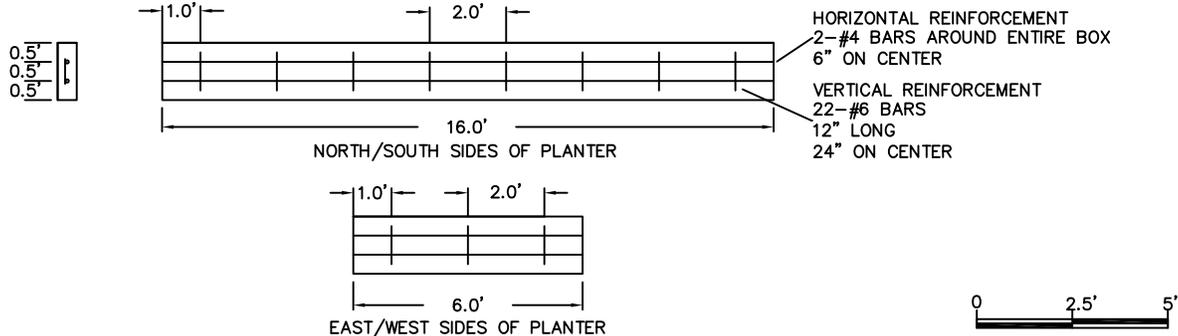
VARIES



PROFILE VIEW



REINFORCEMENT BAR DETAIL



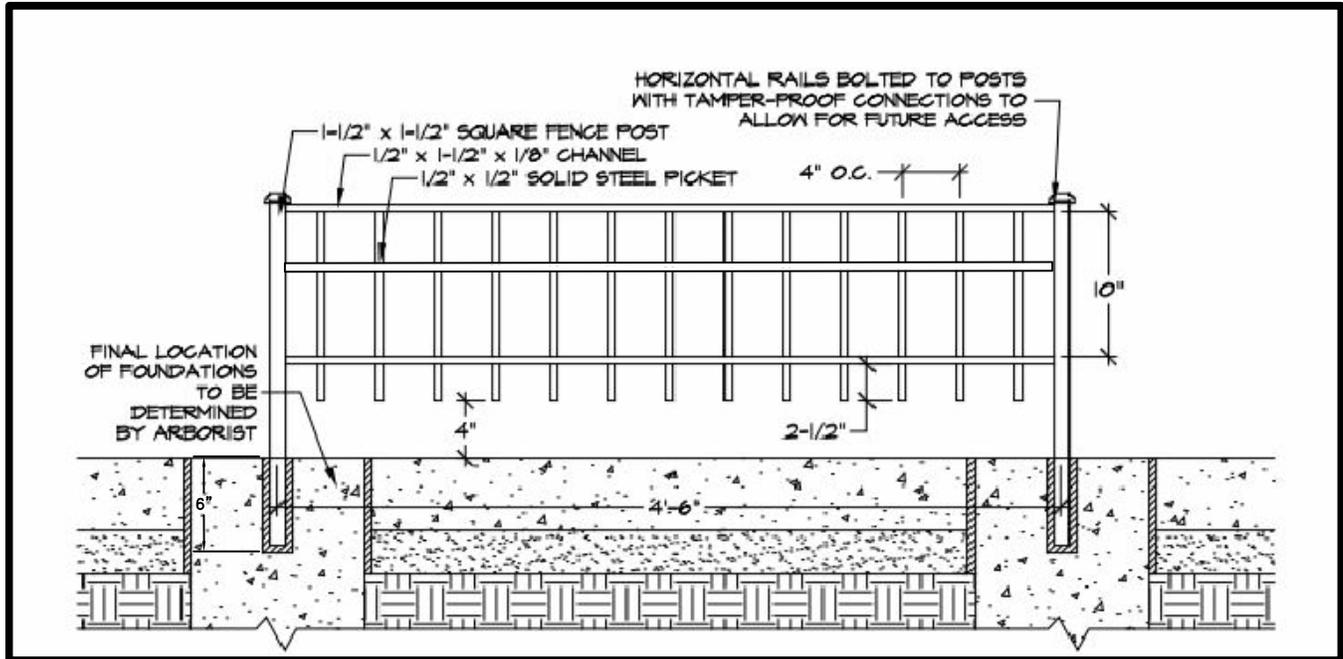
NOTES:

1. REMOVE, SALVAGE AND REPLACE BRICK
2. PLANTERS IN LINE WITH BACK OF EXISTING TREE BOXES AS MARKED IN THE FIELD

**DE PERE**

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

EXHIBIT H-1 SOUTH SIDE PLANTER SECTIONS
PROJECT: 19-05
DATE: APRIL 2019 BY: JML CHECKED: CKK



NOTES:

1. FENCE IS TO BE FABRICATED AND DESIGNED BY P&D METAL WORKS, INC.
2. THE CONTACT FOR P&D METAL WORKS, INC IS AS FOLLOWS:  
 KIRK PRUCHNOFSKI  
 P&D METAL WORKS, INC.  
 2475 SCHULTZ DRIVE  
 NEENAH, WI 54956  
 OFFICE: 920-727-1947  
 CELL: 920-850-1723

 <p>ENGINEERING DIVISION          925 S. SIXTH ST          DE PERE, WI 54115          OFFICE 920-339-4061          FAX 920-339-4071</p>	<p>EXHIBIT H-2          PLANTER SECTIONS          AND FENCING DETAILS</p>
	<p>PROJECT:          19-05</p>
	<p>DATE: APRIL 2019          BY: JML          CHECKED: CKK</p>

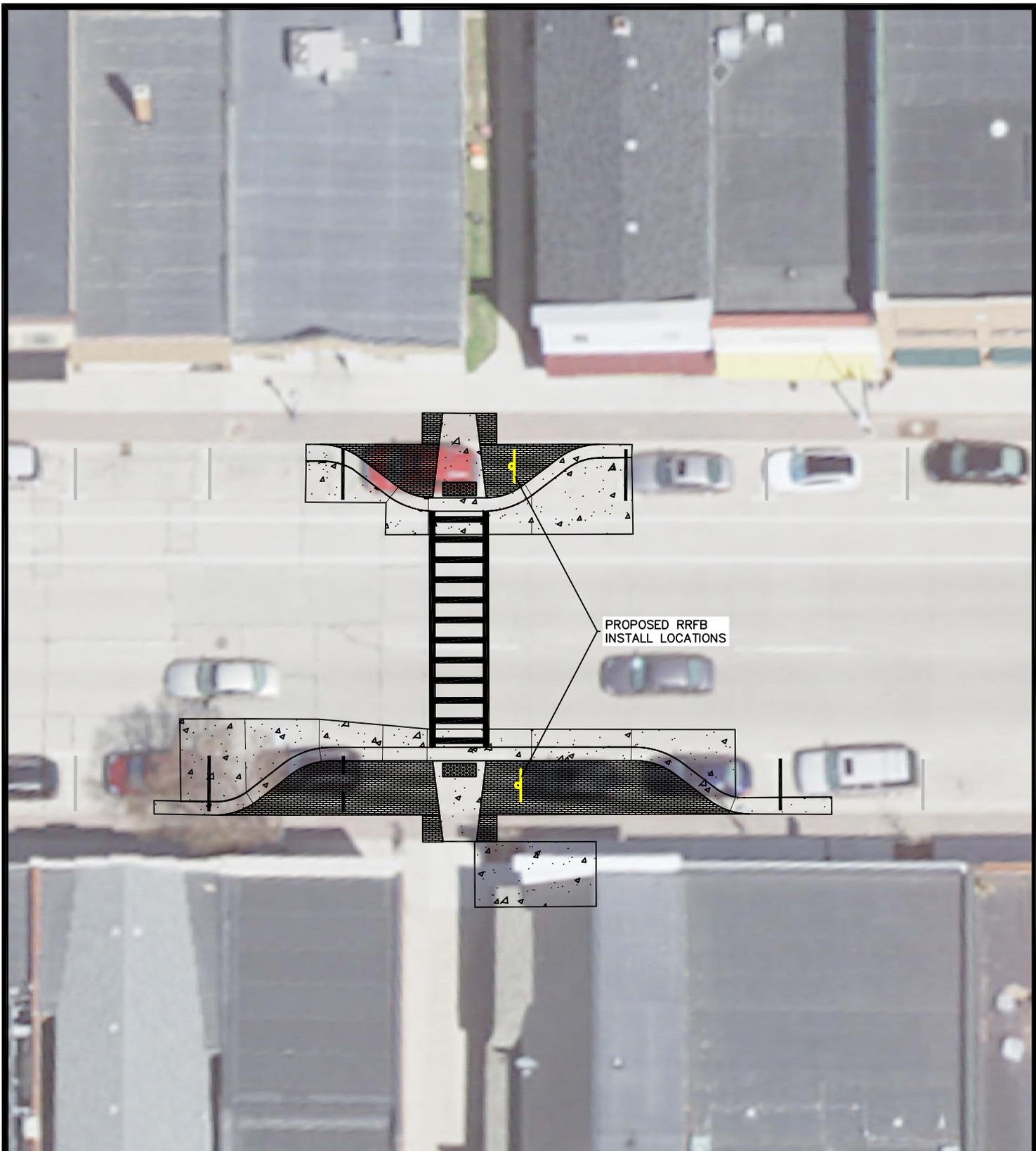
**City of De Pere**

**Project 19-05**

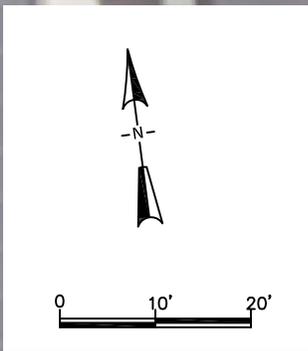
**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT I**

**MAIN AVENUE RRFB PLAN SHEET**



PROPOSED RRFB  
INSTALL LOCATIONS



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

EXHIBIT I  
MAIN AVE RRFB

PROJECT:  
19-05

DATE: APRIL 2019  
BY: JML  
CHECKED: CKK

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT J**

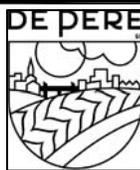
**N. BROADWAY STREET RRFB PLAN SHEET**



JAMES STREET

PROPOSED RRFB  
INSTALL LOCATIONS

PROPOSED RRFB  
INSTALL LOCATIONS



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

EXHIBIT J  
NORTH BROADWAY RRFB

PROJECT:  
19-05

DATE: APRIL 2019  
BY: JML  
CHECKED: CKK

**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT K**

**COLORED CONCRETE SEALING AREA SHEETS**

# STAMPED COLORED CONCRETE SEALING

EXHIBIT K-1



STAMPED COLORED CONCRETE SEALING AREA

1 inch = 150 feet



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

Exhibit K  
Concrete Sealing

Project:  
19-05

April 2019  
BY: JML



**City of De Pere**

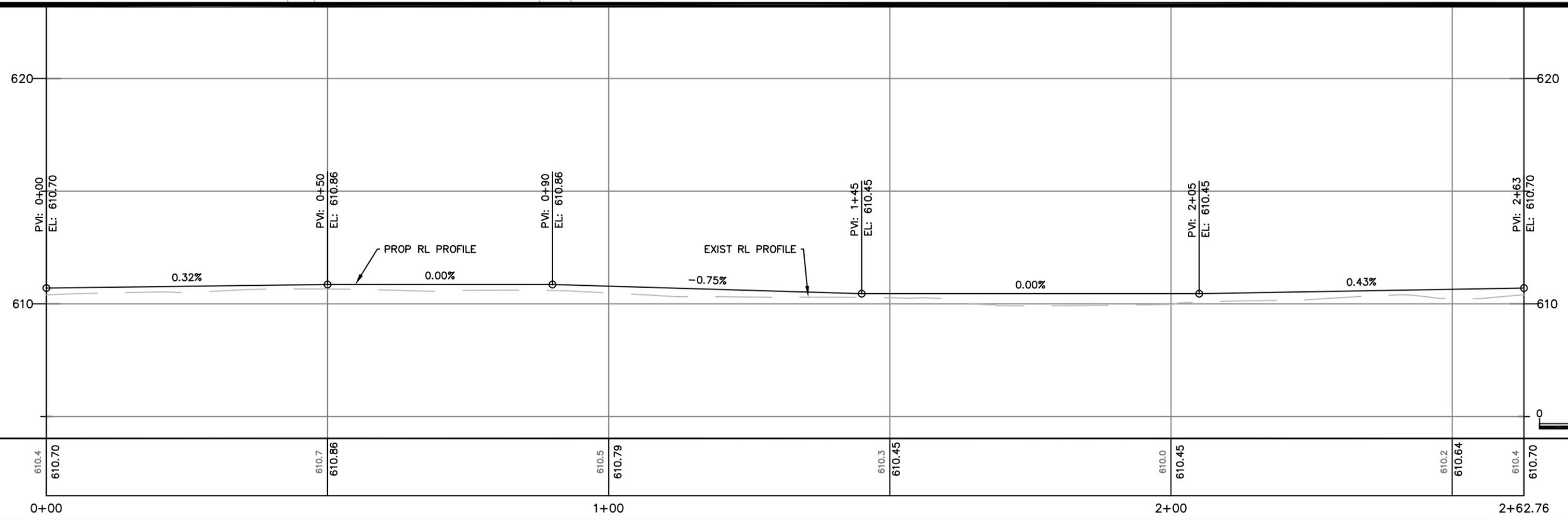
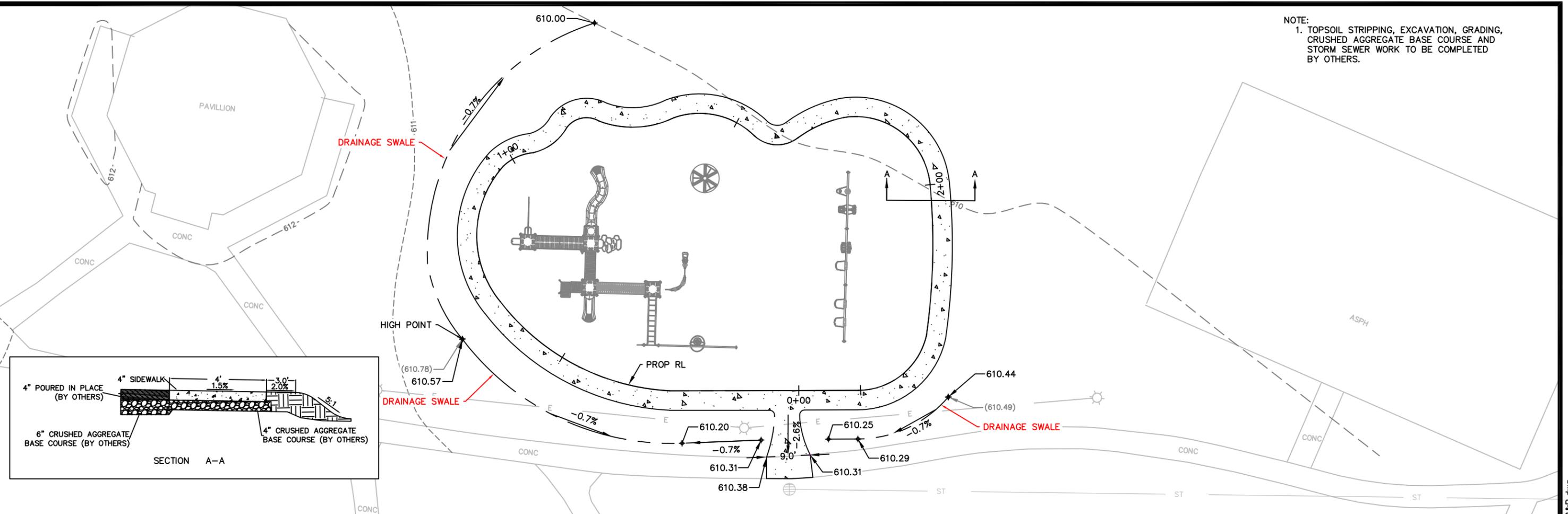
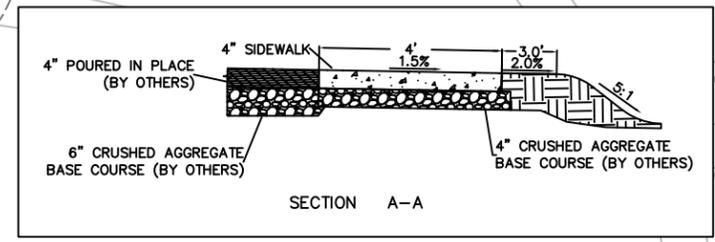
**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT L**

**VFW PARK PLAYGROUND SIDEWALK PLAN SHEETS**

NOTE:  
 1. TOPSOIL STRIPPING, EXCAVATION, GRADING, CRUSHED AGGREGATE BASE COURSE AND STORM SEWER WORK TO BE COMPLETED BY OTHERS.



610.4 610.70	610.7 610.86	610.5 610.79	610.3 610.45	610.0 610.45	610.2 610.64	610.4 610.70
0+00		1+00		2+00		2+62.76



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

**VFW PARK  
 PLAYGROUND SIDEWALK**

NAME: VFW PARK PLAYGROUND CONSTRUCTION  
 PROJECT # 19-05

BY	DATE
SURVEYED	MAL 03-2019
DRAWN	MAL 03-2019
DESIGNED	MAL 03-2019
CHECKED	CKK 03-2019

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS

X:\Projects\City Projects\2019\Project 19-05 Sidewalk, Curb and Concrete Pavement Repair\1200 CAD\VF\VF\_P&P.dwg

**City of De Pere**

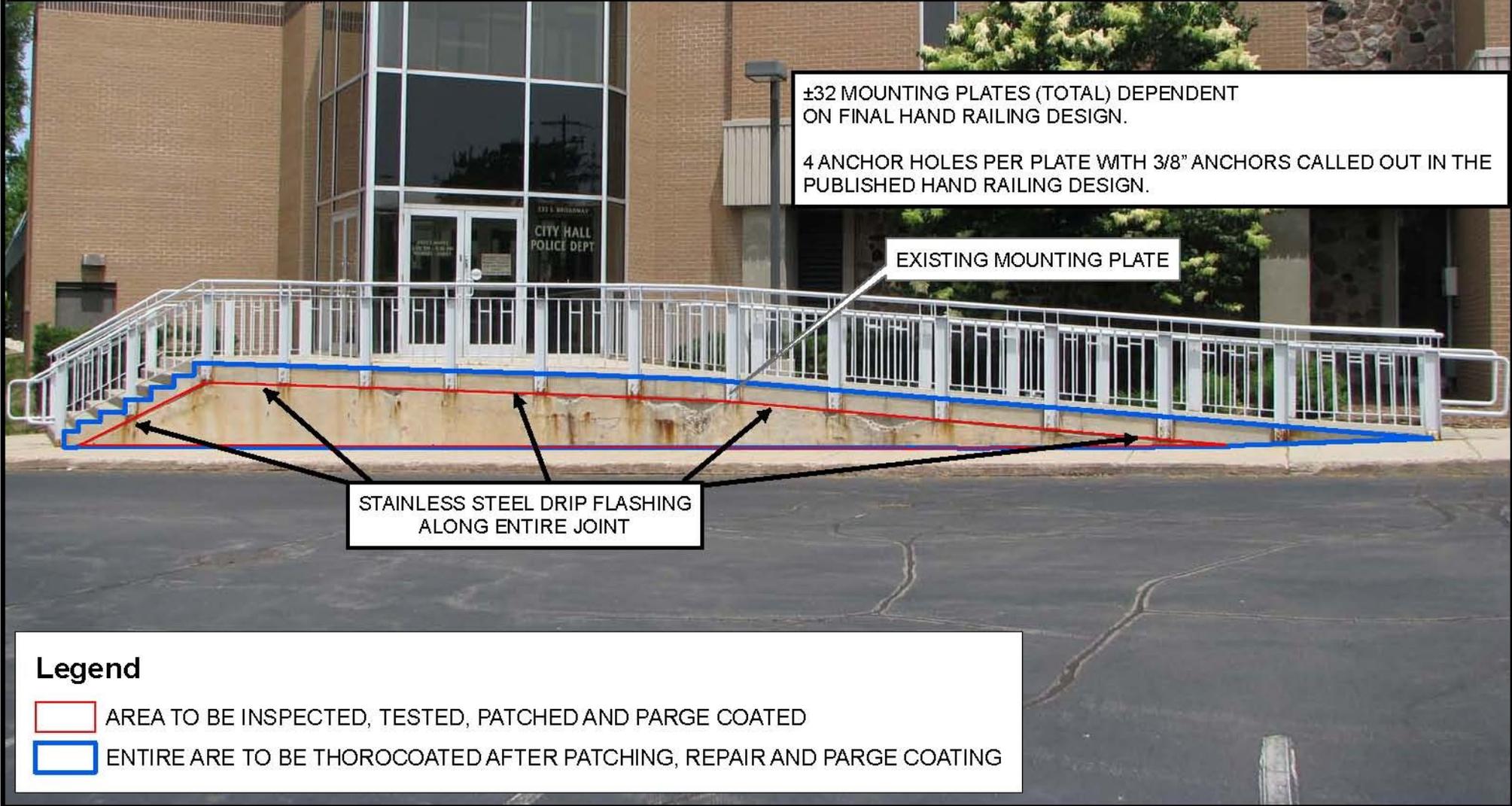
**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT M**

**CITY HALL RAMP MASONRY REPAIR PLAN SHEETS**

- 1) Inspection and testing of ramp landing and vertical wall for soundness to be completed per the Wisconsin Department of Transportation's (WisDOT) Construction and Materials Manual, Chapter 5, Section 28.
- 2) Loose, honeycombed or spalled concrete to be removed to a sound base per the WisDOT Construction and Materials Manual, Chapter 5, Section 28.
- 3) Repair of concrete on the vertical wall to be completed with a "Waterproof Portland Cement" Masteremaco T430 by BASF, or approved equal.
- 4) Removed or damaged parge coat on existing wall to be re-coated with Thoroseal by BASF, or approved equal, to achieve a uniform finish.
- 5) Exposed reinforcing steel to be coated with Zinc Rich Rebar Primer by BASF or approved equal, to protect from rust per WisDOT 2018 Standard Specifications, Chapter 509
- 6) Routed joints to be cleaned with solvent Xylene by Citgo, or approved equal.
- 7) Routed joints to be sealed with Tremco Dymonic FC caulk by Tremco, or approved equal.
- 8) Bolts used to secure the wall plates shall be stainless steel 304 and installed using Power Bolt expansion anchors by Powers, or approved equal.
- 9) Application of Thorocoat to entire vertical wall and rampway slab using MasterProtect HB-400 by BASF, or approved equal.
- 10) Saw cut, installation and caulking of stainless steel drip flashing along entire joint between rampway slab and vertical wall. Caulking of top side of flashing with BASF urethane sealant, or approved equal.



±32 MOUNTING PLATES (TOTAL) DEPENDENT ON FINAL HAND RAILING DESIGN.

4 ANCHOR HOLES PER PLATE WITH 3/8" ANCHORS CALLED OUT IN THE PUBLISHED HAND RAILING DESIGN.

EXISTING MOUNTING PLATE

STAINLESS STEEL DRIP FLASHING ALONG ENTIRE JOINT

**Legend**

- AREA TO BE INSPECTED, TESTED, PATCHED AND PARGE COATED
- ENTIRE AREA TO BE THOROCCOATED AFTER PATCHING, REPAIR AND PARGE COATING



**Legend**

-  ENTIRE AREA TO BE THOROUGHLY COATED AFTER PATCHING AND REPAIR
-  AREA TO BE INSPECTED, TESTED AND PATCHED

**Legend**

-  AREA TO BE INSPECTED, TESTED AND PATCHED
-  ENTIRE ARE TO BE THOROCOATED AFTER PATCHING AND REPAIR



Continues to  
side wall



Continues to  
front of stairs



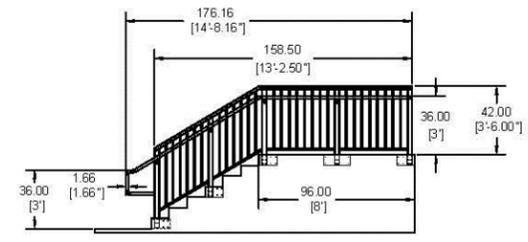
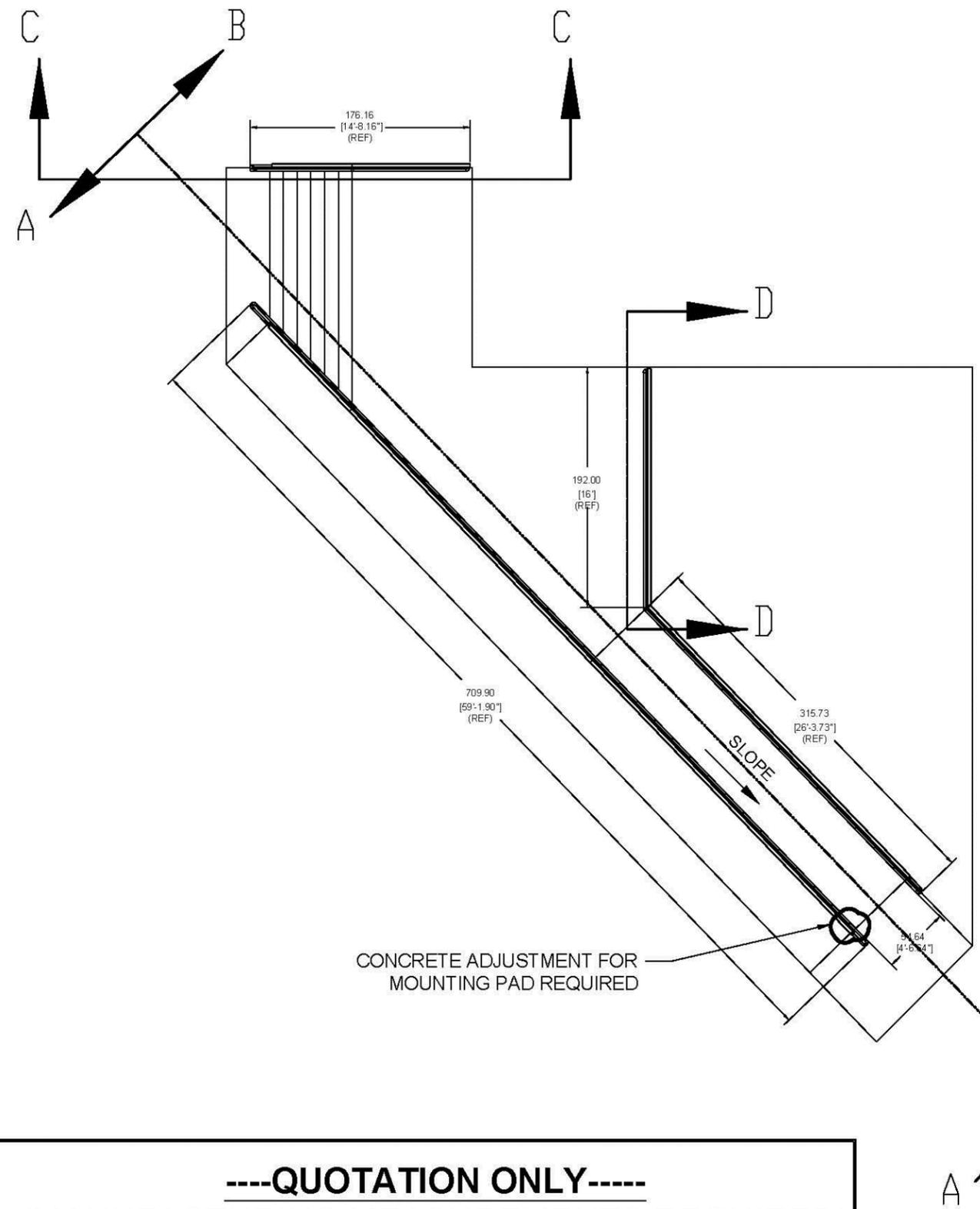
**City of De Pere**

**Project 19-05**

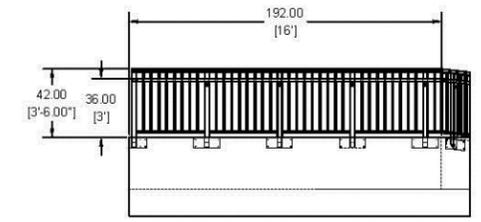
**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT N**

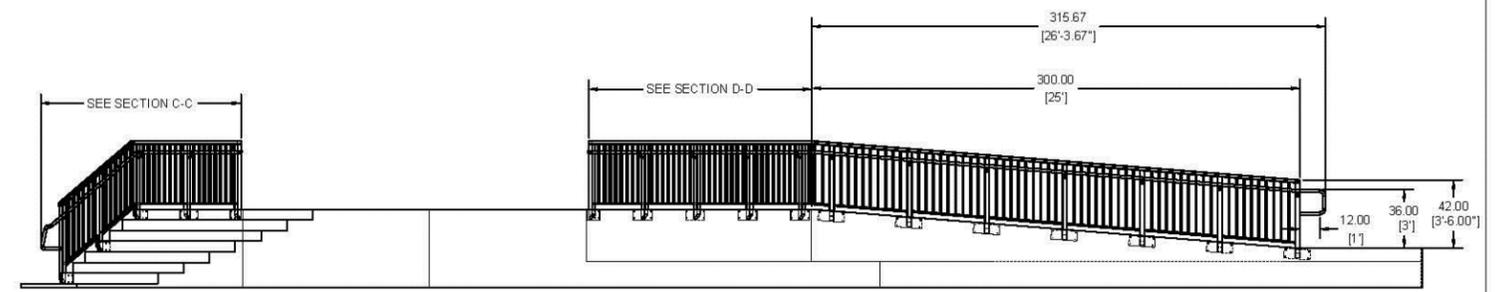
**CITY HALL RAMP HAND RAILING DESIGN AND CONSTRUCTION  
DETAIL**



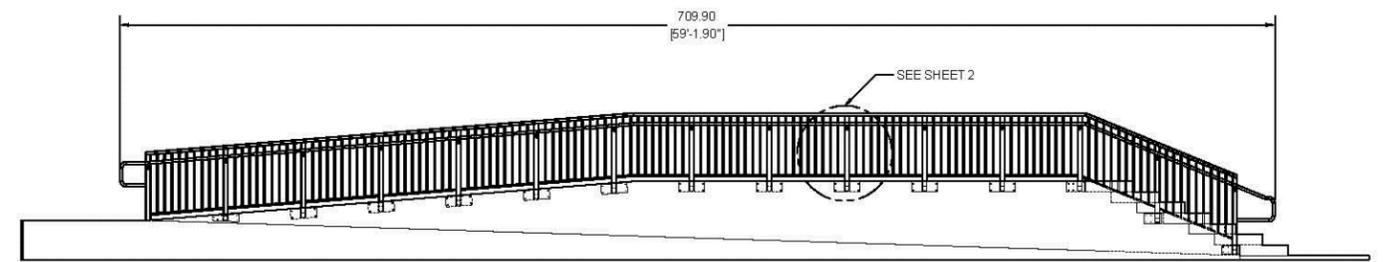
SECTION C-C



SECTION D-D



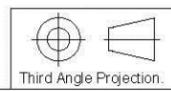
SECTION B-B



SECTION A-A

CONCRETE ADJUSTMENT FOR MOUNTING PAD REQUIRED

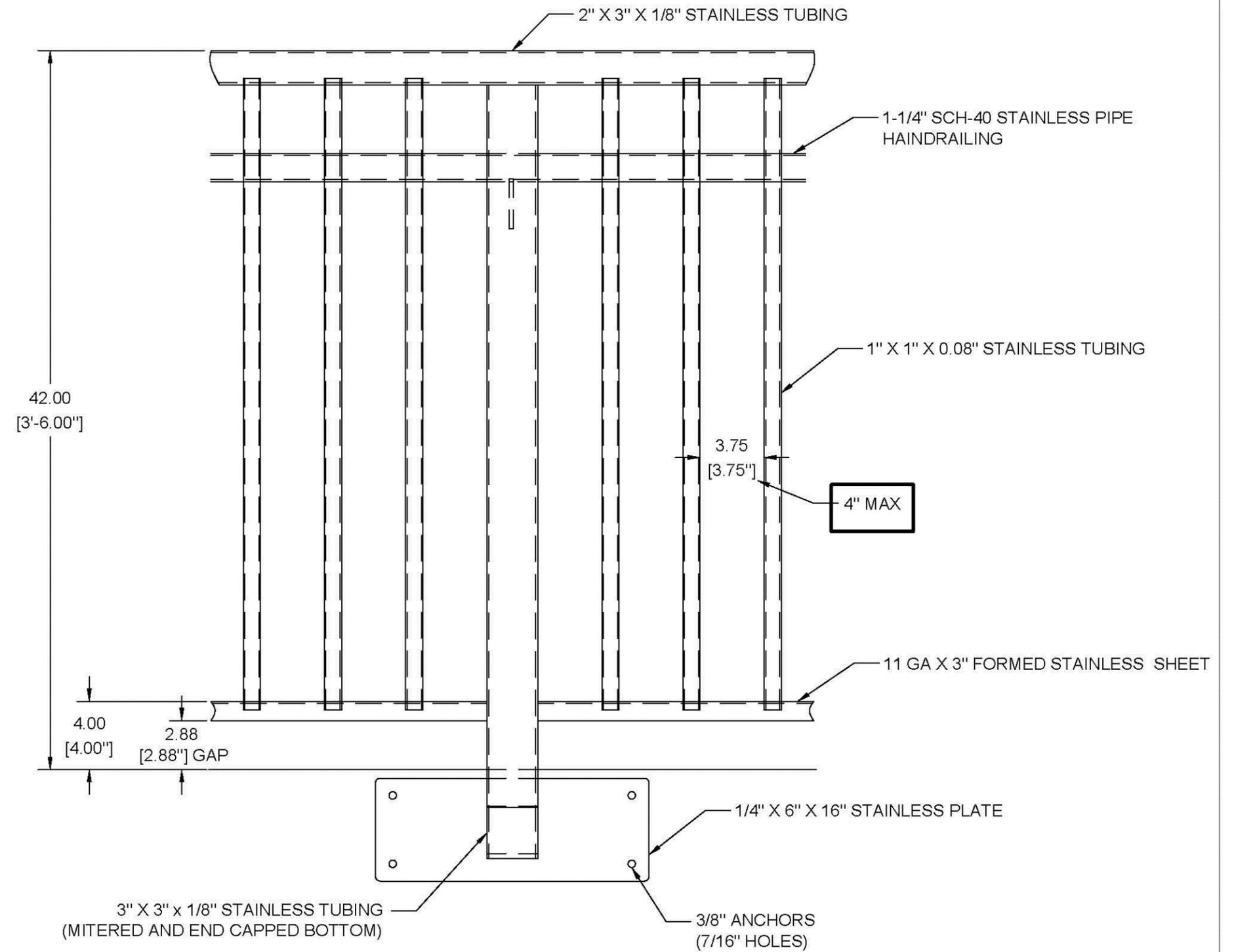
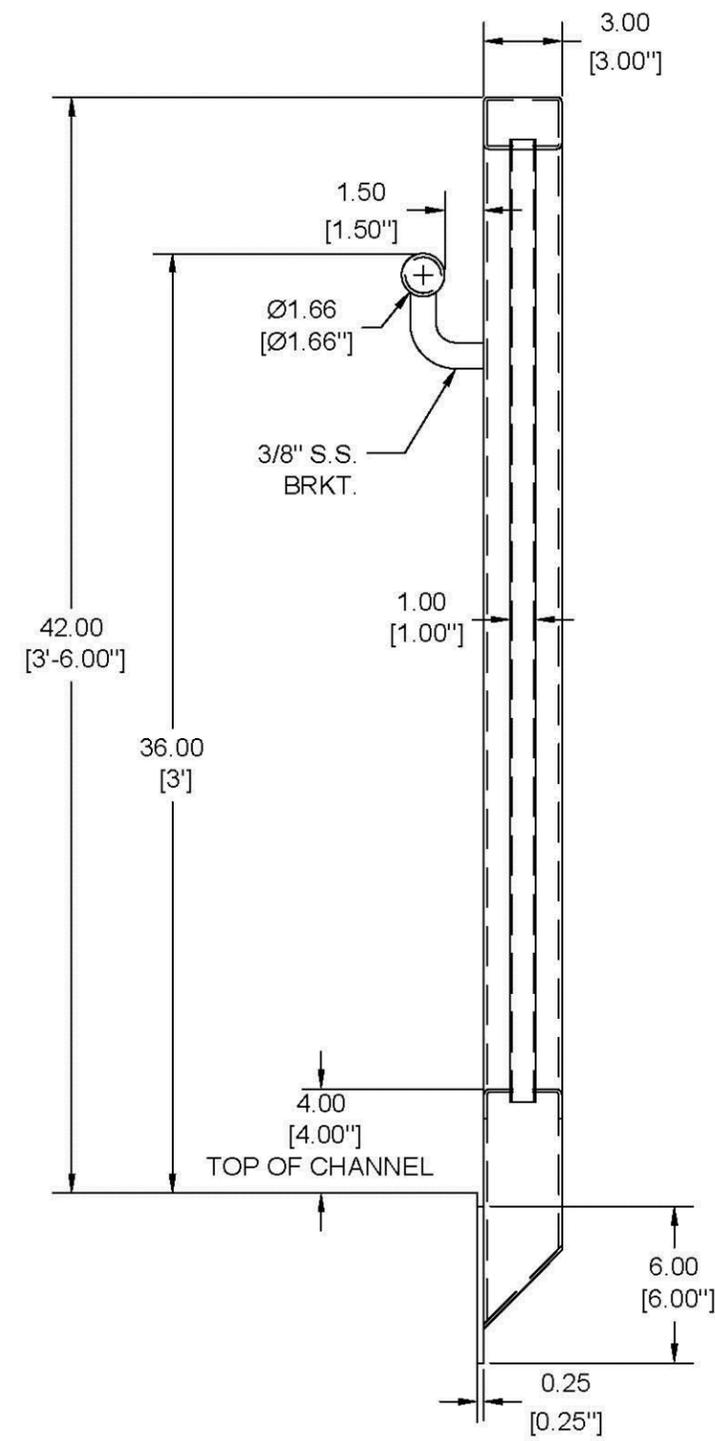
**----QUOTATION ONLY----**  
 (MANUFACTURING MEASUREMENTS REQUIRED)  
 MATERIAL : STAINLESS STEEL CONSTRUCTION.  
 FINISH : MEDIA BLASTED.



NO.	REVISION	DATE	BY
1	REMOVED TITLE INFO.	6/8/18	ICD

Project 19-05 – Sidewalk, Curb and Concrete Pavement Repairs		JOB NUMBER: -
DATE: 5/09/18		REF. DWG.
DRAWN BY: ICD		DWG #:
		GRAIL1_REV-1

# EXHIBIT N-2

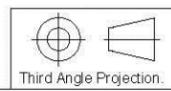


NO.	REVISION	DATE	BY
1	REMOVED TITLE INFO.	6/8/18	ICD

Project 19-05 – Sidewalk, Curb and Concrete Pavement Repairs

DATE: 5/09/18 DRAWN BY: ICD

JOB NUMBER: -  
REF. DWG.  
DWG #:  
**GRAIL1\_REV-1**



**City of De Pere**

**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

**EXHIBIT O**

**TRAFFIC CONTROL PLANS**



NOTES:  
 1. TWO PHASE CLOSURE MAINTAIN NORTHBOUND TRAFFIC AND ACCESS TO EACH PROPERTY AND CROSS ROADS.  
 2. FOLLOW MUTCD STANDARDS FOR SIGN SPACING.



**CITY OF DE PERE**

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

**THIRD STREET  
 DETOUR ROUTE TRAFFIC CONTROL  
 NORTH BOUND TRAFFIC**

NAME: SIDEWALK, CURB AND CONCRETE PAVEMENT REPAIR  
 PROJECT # 19-05

	BY	DATE
SURVEYED	JML	04-2019
DRAWN	JML	04-2019
DESIGNED	CKK	04-2019
CHECKED	CKK	04-2019

REVISIONS / ISSUES		
NO.	DATE	REMARKS

**City of De Pere**

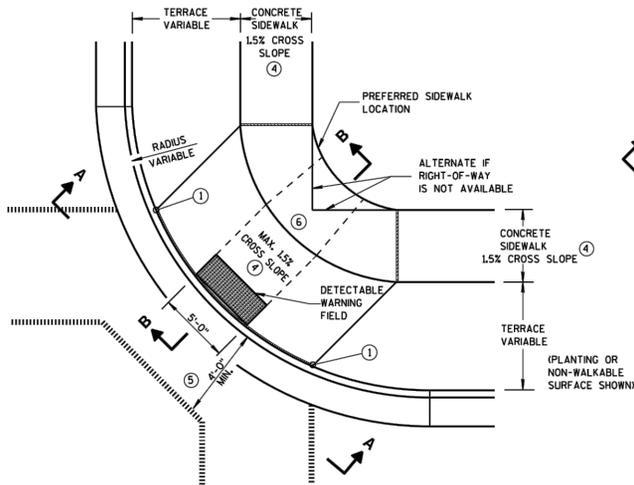
**Project 19-05**

**Sidewalk, Curb and Concrete Pavement Repair**

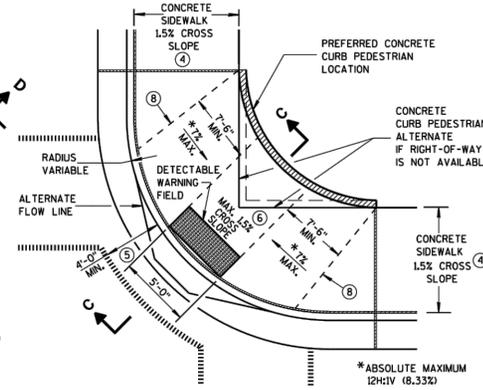
**EXHIBIT P**

**STANDARD DETAIL DRAWINGS**

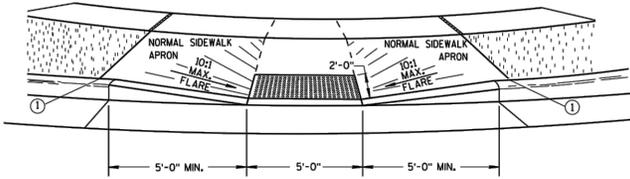
# SDD 8d5-a Curb Ramps Types 1 and 1-A



**PLAN VIEW  
TYPE 1 RAMP**  
(CENTER OF CORNER RADIUS)

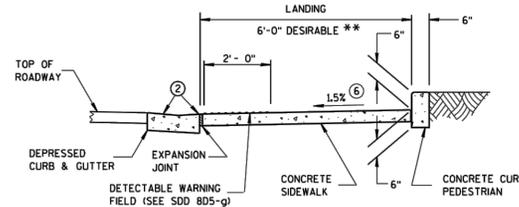


**PLAN VIEW  
TYPE 1-A RAMP**  
(NO TERRACE)

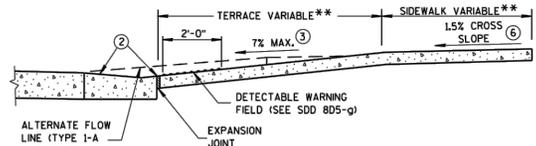


**VIEW A-A**

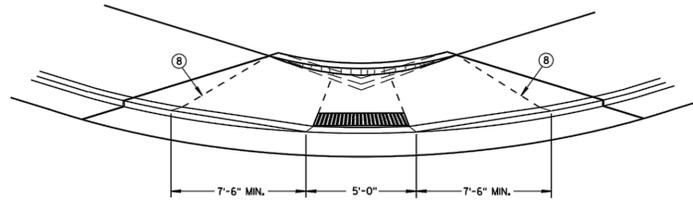
\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS



**SECTION C-C**



**SECTION B-B**



**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 RAMPS 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.
- 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.
  - GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 1%. 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.
  - ABSOLUTE MAXIMUM 12H:IV (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 1% GRADE CHANGE.
  - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - 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.
  - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
  - 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**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

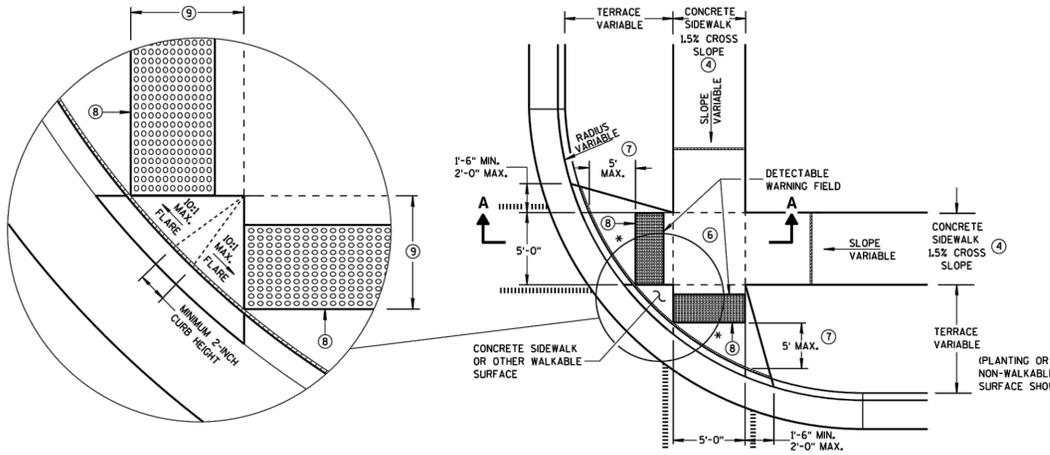
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S.D.D. 8 D 5-19a

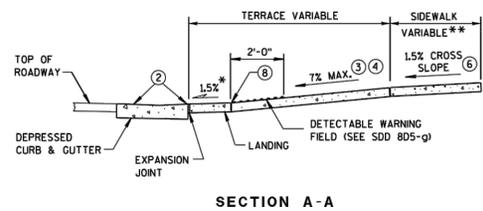
S.D.D. 8 D 5-19a

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



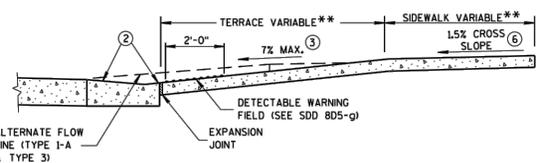
**PLAN VIEW  
TYPE 2 RAMP**  
(ON LINE WITH SIDEWALK)

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

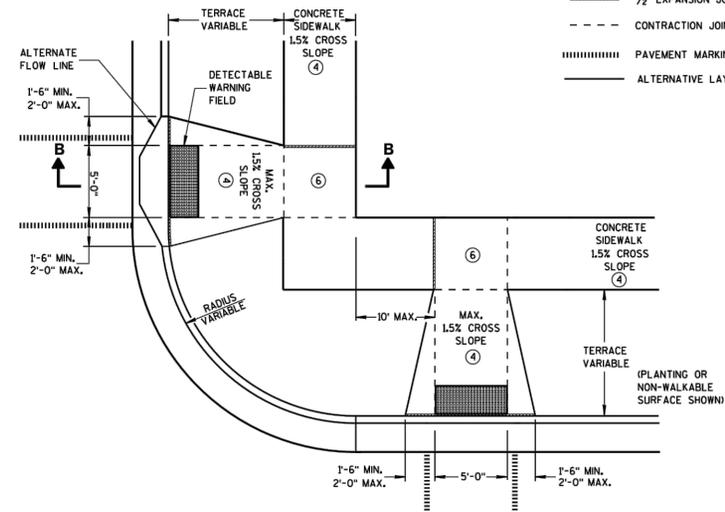


**SECTION A-A**

\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



**SECTION B-B**



**PLAN VIEW  
TYPE 3 RAMP**  
(OUTSIDE OF CROSSWALK AREA)

**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 1/4". 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 1/4" 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 805-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
- ||||| PAYEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

**CURB RAMPS  
TYPES 2 AND 3**  
  
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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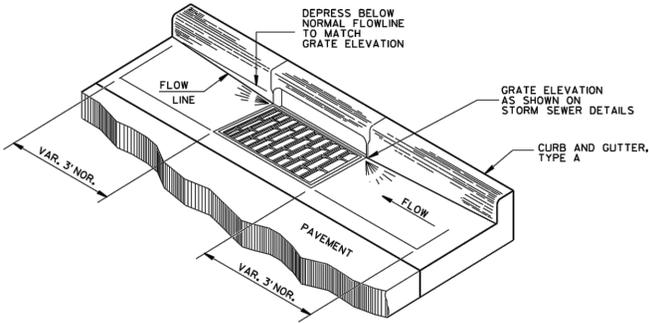
**CITY OF DE PERE**  
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
OFFICE 920-339-4061 FAX 920-339-4071

**CONSTRUCTION DETAILS  
CONCRETE PAVEMENT REPAIRS**

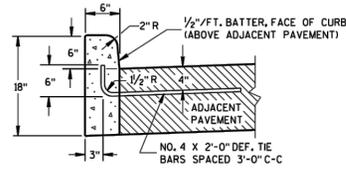
NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT # 19-05	SURVEYED	BY	DATE	REVISIONS / ISSUES		PAGE NO. P-2
	DRAWN			NO.	DATE	
	DESIGNED			BY	REMARKS	
	CHECKED					

X:\Projects\City Projects\2019 Project 19-05 Sidewalk, Curb and Concrete Pavement Repair\200 CAD\Wisdot Details.dwg

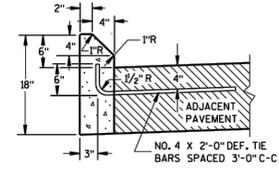
# SDD 8d1-b Concrete Curb Ties and Curb & Gutter Applications



**DETAIL OF CURB AND GUTTER AT INLETS**  
(TYPE H INLET COVER SHOWN)



TYPES A <sup>①</sup> & D



TYPES G <sup>①</sup> & J

## GENERAL NOTES

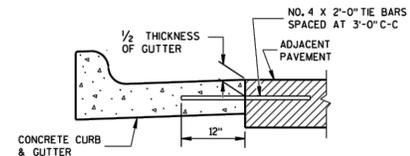
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

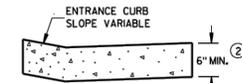
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

## CONCRETE CURB



TYPICAL TIE BAR LOCATION <sup>①</sup>

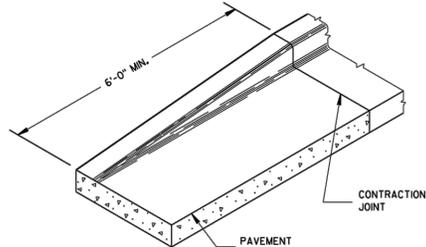


DRIVEWAY ENTRANCE CURB <sup>③</sup>  
(WHEN DIRECTED BY THE ENGINEER)

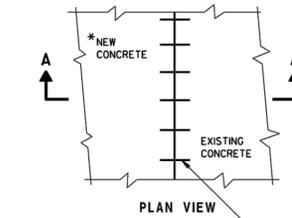
## CONCRETE CURB TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June, 2017 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
FHWA

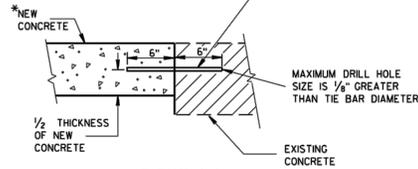


END SECTION CURB & GUTTER



\*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.



TIE BARS DRILLED INTO EXISTING PAVEMENT

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S.D.D. 8 D 1-20b

S.D.D. 8 D 1-20b

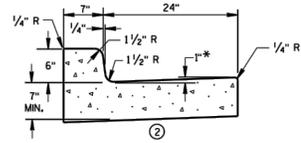


CITY OF DE PERE  
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
OFFICE 920-339-4061 FAX 920-339-4071

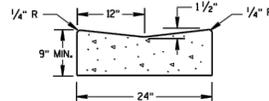
## CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT #	BY	DATE	REVISIONS / ISSUES		PAGE NO.
			NO.	DATE BY REVISIONS	
19-05					P-3

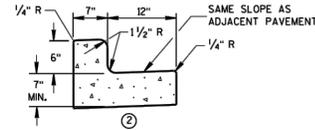
# SDD 8d16 Concrete Gutter, Curb and Gutter and Pavement Ties



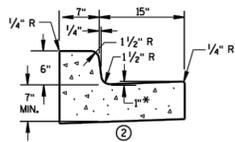
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

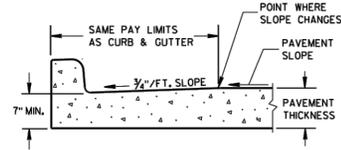


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

\* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.  
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

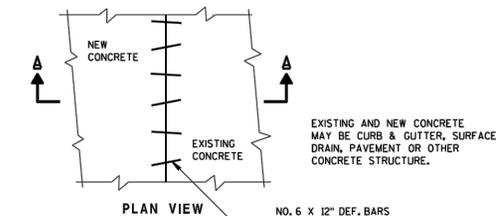
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

- ① WHEN PLACED ADJACENT TO NEW CONCRETE, THE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.

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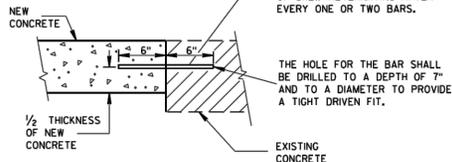
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PLAN VIEW

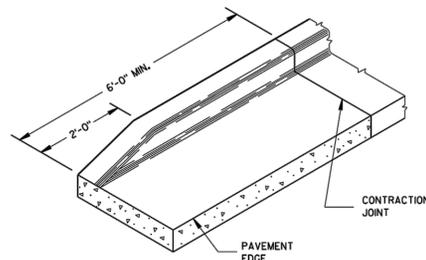
EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 63° SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.

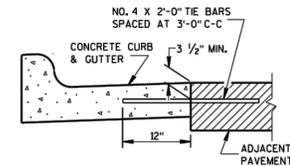


SECTION A-A PAVEMENT TIES

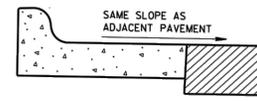
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION (TYPICAL FOR ALL CURB & GUTTER)

<b>CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES</b> (For Optional Use in Milwaukee Co. Only)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/2/2010 DATE	JSL Jerry Isaga ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 D 16-10

S.D.D. 8 D 16-10



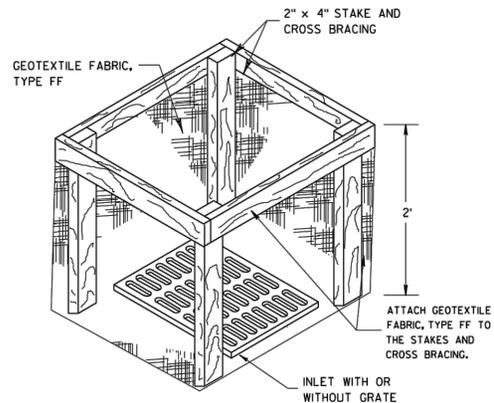
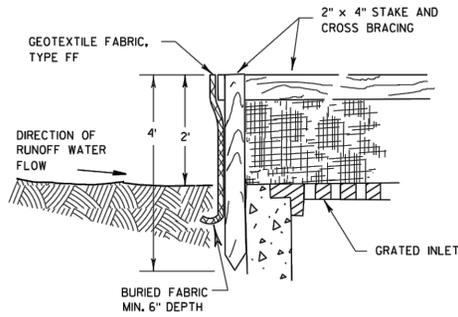
CITY OF DE PERE

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

## CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT # 19-05	SURVEYED	BY	DATE	REVISIONS / ISSUES			PAGE NO. P-4	
	DRAWN			NO.	DATE	BY		REMARKS
	DESIGNED							
	CHECKED							

# SDD 8e10 Inlet Protection Type A, B, C and D



**INLET PROTECTION, TYPE A**

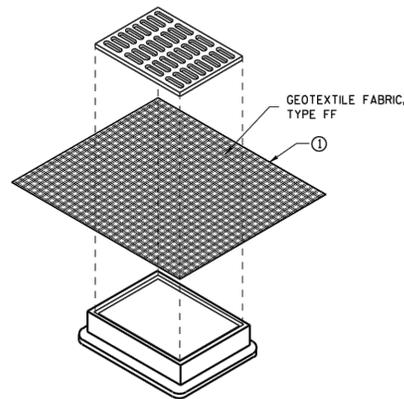
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

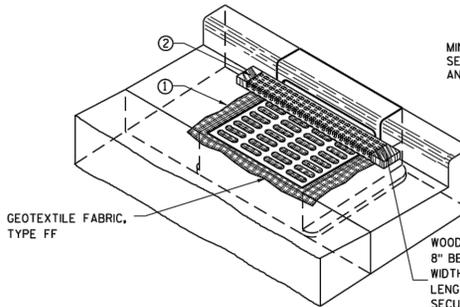
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B (WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

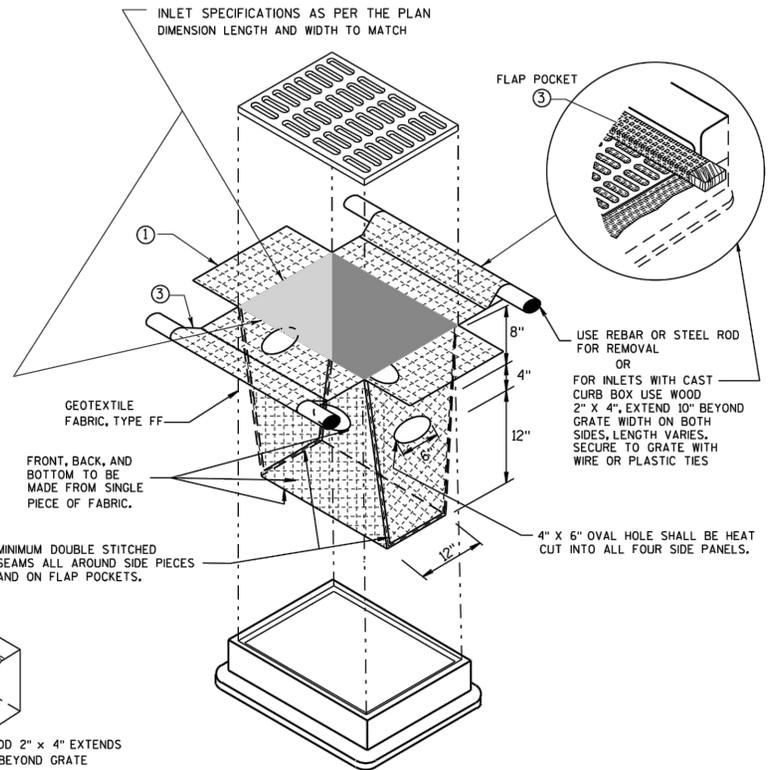
**TYPE B & C**

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

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN LETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

<b>INLET PROTECTION TYPE A, B, C, AND D</b>			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
10-16-02	/s/ Beth Conestra		
DATE	CHIEF ROADWAY DEVELOPMENT ENGINEER		
FHWA			

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S.D.D. 8 E 10.2

6

S.D.D. 8 E 10.2



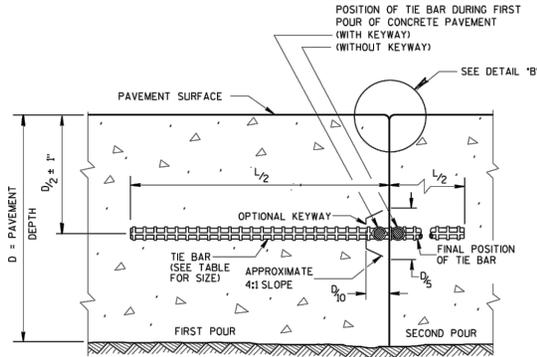
**CITY OF DE PERE**

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

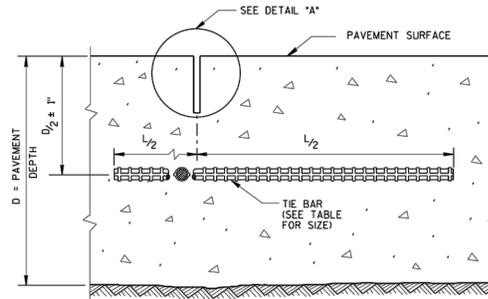
**CONSTRUCTION DETAILS  
CONCRETE PAVEMENT REPAIRS**

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT # 19-05		BY		DATE	REVISIONS / ISSUES				PAGE NO.
SURVEYED					NO.	DATE	BY	REMARKS	P-5
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# SDD 13c1 Concrete Pavement Longitudinal Joints and Ties



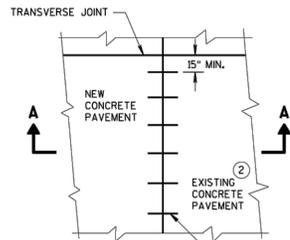
**CONSTRUCTION JOINT**



**SAWED JOINT**

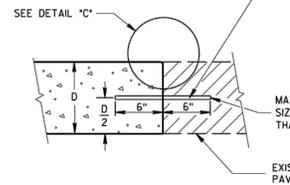
## GENERAL NOTES

- CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



**PLAN VIEW**

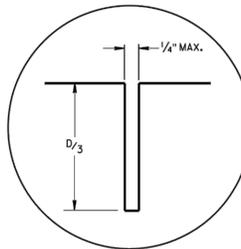
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



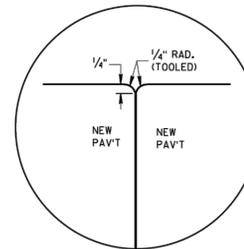
**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**

MAXIMUM DRILL HOLE SIZE IS 1/8" GREATER THAN TIE BAR DIAMETER

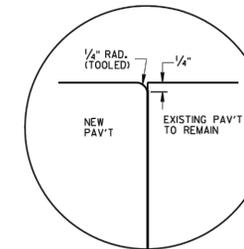
EXISTING CONCRETE PAVEMENT



**DETAIL "A"**



**DETAIL "B"**



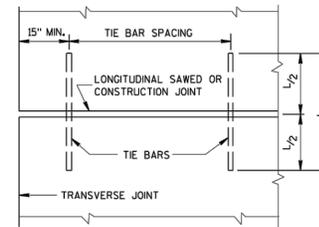
**DETAIL "C"**

### TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN THE BARS WILL BE 30" AT TRANSVERSE JOINTS.



**PLAN VIEW  
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018  
DATE: 15/ Peter Kemp, P.E.  
BY: PAVEMENT SUPERVISOR

FWHA

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S.D.D. 13 C 1-19

S.D.D. 13 C 1-19



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

## CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT #	SURVEYED	BY	DATE	REVISIONS / ISSUES			PAGE NO.
				NO.	DATE	BY	
19-05							P-6

**SDD 13c9-a Concrete Pavement Repair and Replacement**

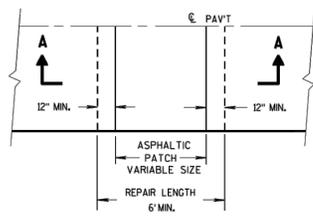
**GENERAL NOTES**

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

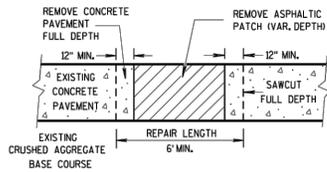
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAD AFTER REPAIRING.

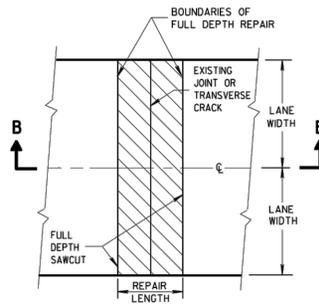
① DOWEL BARS MIGHT NOT EXIST.



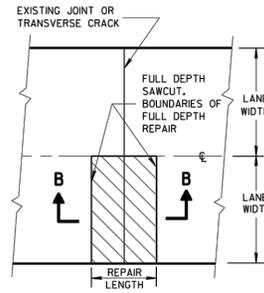
**PLAN VIEW**



**SECTION A-A  
HMA PATCH REMOVAL**

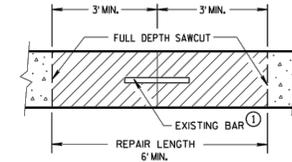


**PLAN VIEW  
(DOUBLE LANE REPAIR)**



**PLAN VIEW  
(SINGLE LANE REPAIR)**

**FULL DEPTH CONCRETE PAVEMENT REMOVAL**



**SECTION B-B  
CONCRETE REMOVAL**

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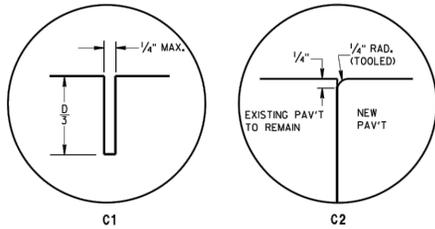
S.D.D. 13 C 9-15a

S.D.D. 13 C 9-15a

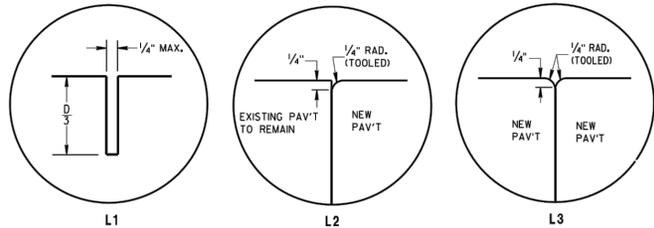
**CONCRETE PAVEMENT REPAIR AND REPLACEMENT**  
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

X:\Projects\City Projects 2019\Project 19-05 Sidewalk, Curb and Concrete Pavement Repair\200 CAD\Wisdot Details.dwg

# SDD 13c9-b Concrete Pavement Repair and Replacement



TRANSVERSE JOINTS

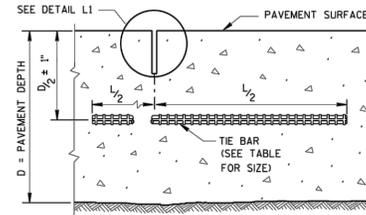


LONGITUDINAL JOINTS

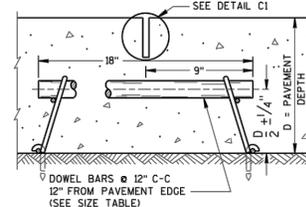
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C  
SAWED LONGITUDINAL JOINT



SECTION F-F  
CONTRACTION JOINT

## GENERAL NOTES

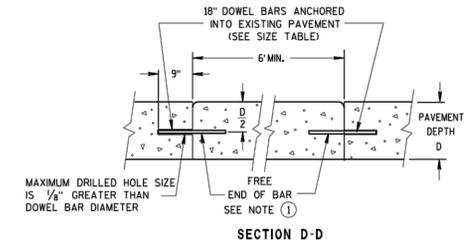
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

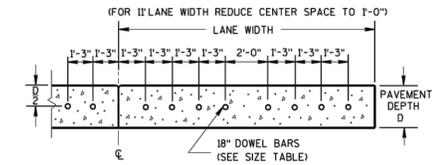
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D-D



SECTION E-E  
DRILLED DOWEL BAR CONSTRUCTION JOINT

## PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12"
7", 7 1/2"	1"	1"	14"
8", 8 1/2"	1 1/4"	1 1/4"	15"
9", 9 1/2"	1 1/4"	1 1/4"	15"
10" & ABOVE	1 1/2"	1 1/4"	15"

## CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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S.D.D. 13 C 9-15b

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S.D.D. 13 C 9-15b



CITY OF DE PERE

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

## CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

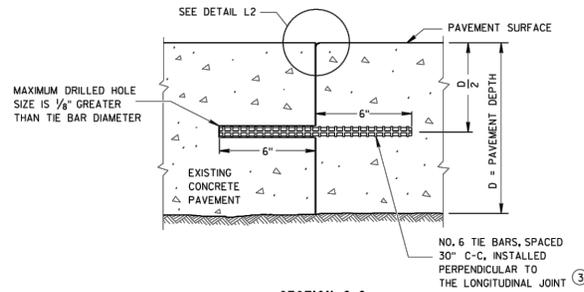
NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR  
PROJECT # 19-05

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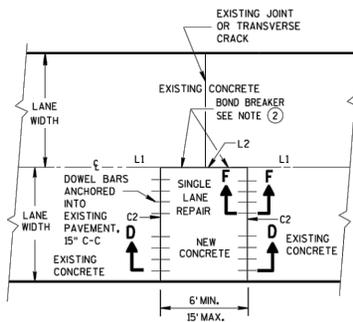
**SDD 13c9-c Concrete Pavement Repair and Replacement**

**GENERAL NOTES**

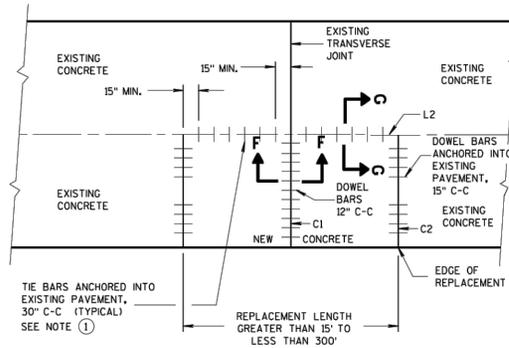
- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6" SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR, DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



**SECTION G-G  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**



**PLAN VIEW  
SINGLE LANE  
CONCRETE PAVEMENT REPAIR**



**PLAN VIEW  
SINGLE LANE  
CONCRETE PAVEMENT REPLACEMENT**

CONCRETE PAVEMENT REPAIR AND REPLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018	/s/ Peter Kemp, P.E. PAVEMENT SUPERVISOR
DATE	
FHWA	

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S.D.D. 13 C 9-15c

S.D.D. 13 C 9-15c



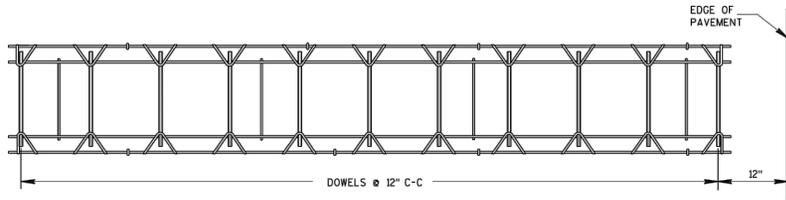
**CITY OF DE PERE**  
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115  
OFFICE 920-339-4061 FAX 920-339-4071

**CONSTRUCTION DETAILS  
CONCRETE PAVEMENT REPAIRS**

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR  
PROJECT # 19-05

	BY	DATE	REVISIONS / ISSUES		
			NO.	DATE	REMARKS
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DRAWN					
DESIGNED					
CHECKED					

# SDD 13c13 Urban Doweled Concrete Pavement



PLAN VIEW



SIDE VIEW  
CONSTRUCTION JOINT DOWEL ASSEMBLY

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5'- $\frac{1}{2}$ " - 6'- $\frac{1}{2}$ "	NONE	12"
7'- $\frac{1}{2}$ "	1"	14"
8'- $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	15"
9'- $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	15"
10' & ABOVE	1 $\frac{1}{2}$ "	15"

## GENERAL NOTES

### CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

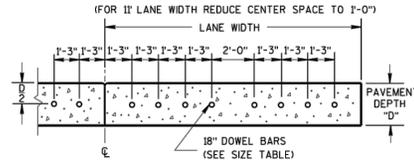
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

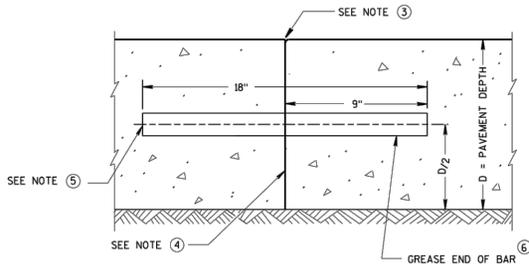
### CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

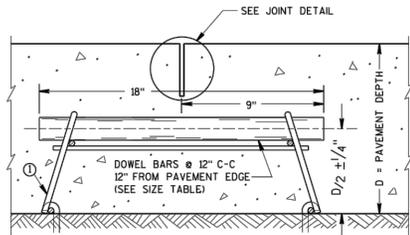
- OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A  $\frac{1}{4}$ -INCH RADIUS AT FORMED JOINTS.
- PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO DRILLED DOWEL BAR CONSTRUCTION JOINT DETAIL.
- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS  $\frac{1}{8}$ -INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



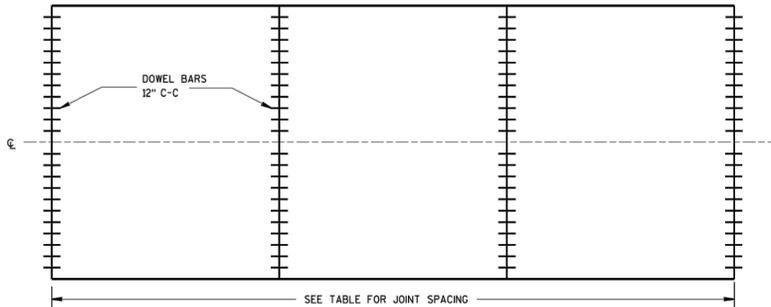
DRILLED DOWEL BAR CONSTRUCTION JOINT



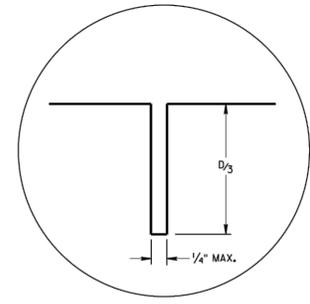
TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

## URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /s/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR  
FHWA

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S.D.D. 13 C 13-9

S.D.D. 13 C 13-9



CITY OF DE PERE

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

## CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

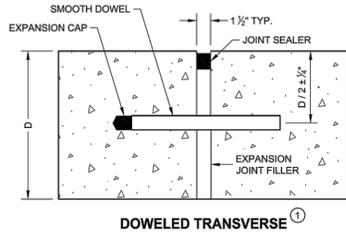
NAME: SIDEWALK, CURB, AND  
CONCRETE PAVEMENT REPAIR  
PROJECT # 19-05

SURVEYED	BY	DATE

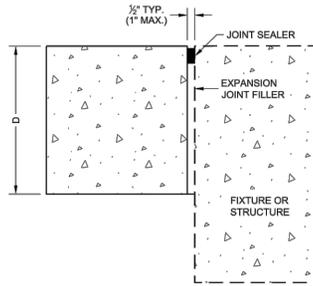
REVISIONS / ISSUES		
NO.	DATE	REMARKS

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P-10

# SDD 13c18-c Concrete Pavement Joint Types



**DOWELED TRANSVERSE** ①



**UNTIED - LONGITUDINAL**

**EXPANSION JOINTS**

**TIE BAR TABLE**

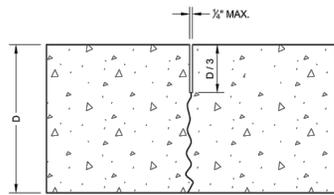
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24**

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

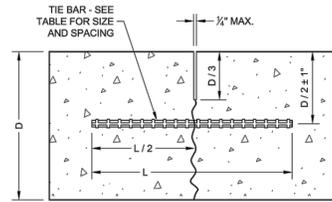
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

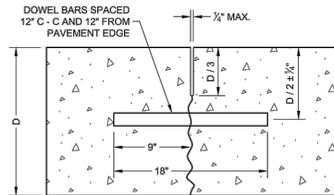
- USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- CONSTRUCTION JOINTS CAN BE FORMED OR SAWS.
- IF JOINT IS FORMED, PROVIDE A 1/2" RADIUS.
- ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



**UNDOWELED TRANSVERSE**

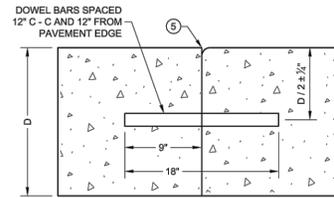


**TIED LONGITUDINAL**

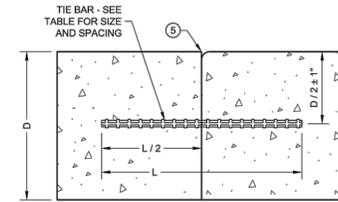


**DOWELED TRANSVERSE**

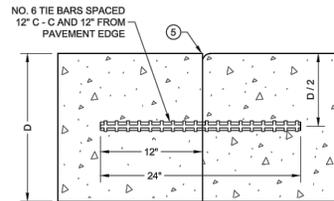
**CONTRACTION JOINTS** ②



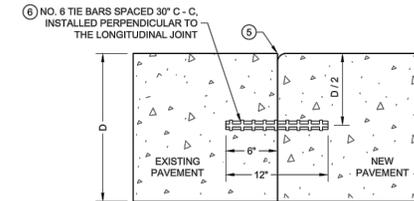
**DOWELED TRANSVERSE** ③



**TIED LONGITUDINAL**



**TIED TRANSVERSE** ④  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



**CONSTRUCTION JOINTS** ④

**CONCRETE PAVEMENT JOINT TYPES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

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SDD 13C18 - 07c

SDD 13C18 - 07c



**CITY OF DE PERE**  
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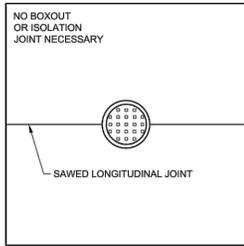
**CONSTRUCTION DETAILS**  
**CONCRETE PAVEMENT REPAIRS**

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR  
PROJECT # 19-05

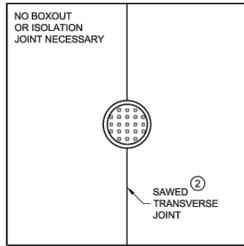
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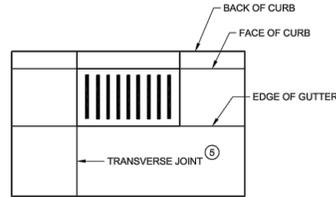
 SDD 13c18-d Concrete Pavement Jointing at Utility Fixtures



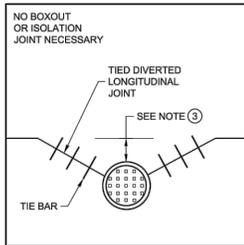
MANHOLE WITH LONGITUDINAL JOINT



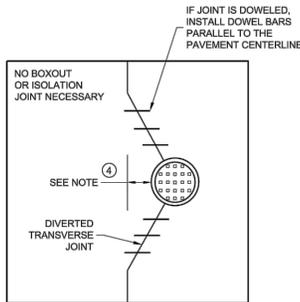
MANHOLE WITH TRANSVERSE JOINT



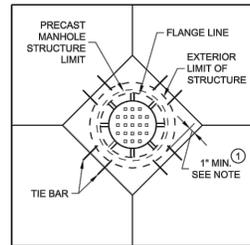
INLET WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

**GENERAL NOTES**

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

6

6

SDD 13C18 - 07d

SDD 13C18 - 07d

<b>CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2018	/s/ Peter Kemp P.E. PAVEMENT SUPERVISOR
DATE	PAVEMENT SUPERVISOR



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

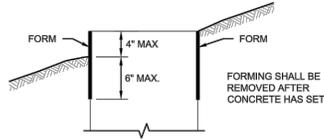
**CONSTRUCTION DETAILS**  
**CONCRETE PAVEMENT REPAIRS**

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR  
PROJECT # 19-05

NO.	DATE	BY	REVISIONS / ISSUES	
			REMARKS	
SURVEYED				
DRAWN				
DESIGNED				
CHECKED				

# SDD 9c2 Concrete Bases Types 1, 2, 5 and 6

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE.



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL BENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

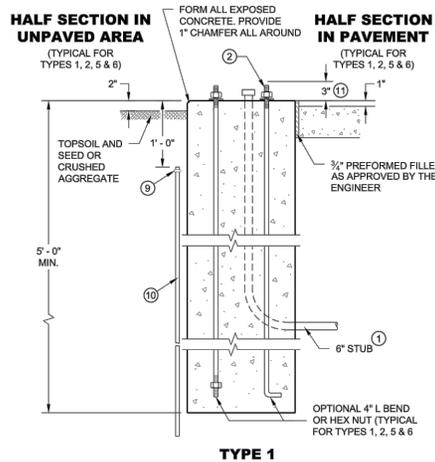
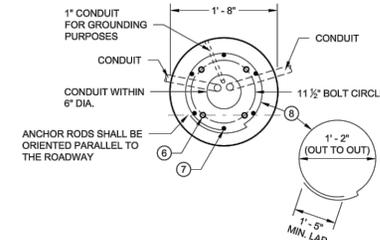
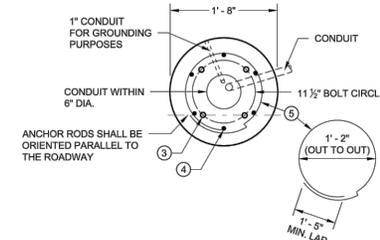
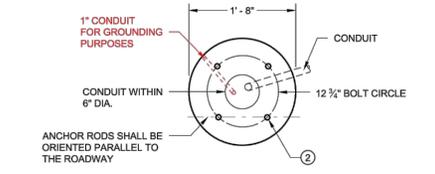
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

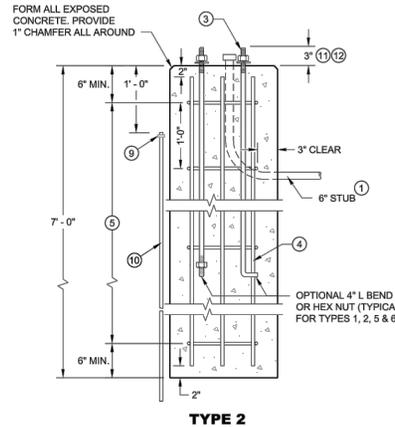
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

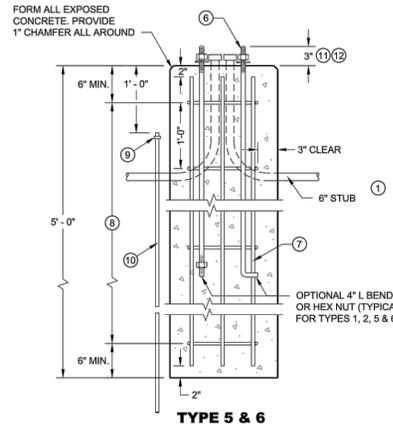
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3'-6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5'-0" ANCHOR RODS.
- 4 (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.
- 6 (4) 1" DIA. X 3'-6" ANCHOR RODS.
- 7 (6) NO. 4 X 4'-8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8'-0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.



**TYPE 1**



**TYPE 2  
CONCRETE BASES**



**TYPE 5 & 6**

### CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

SDD 09C02 - 08

SDD 09C02 - 08



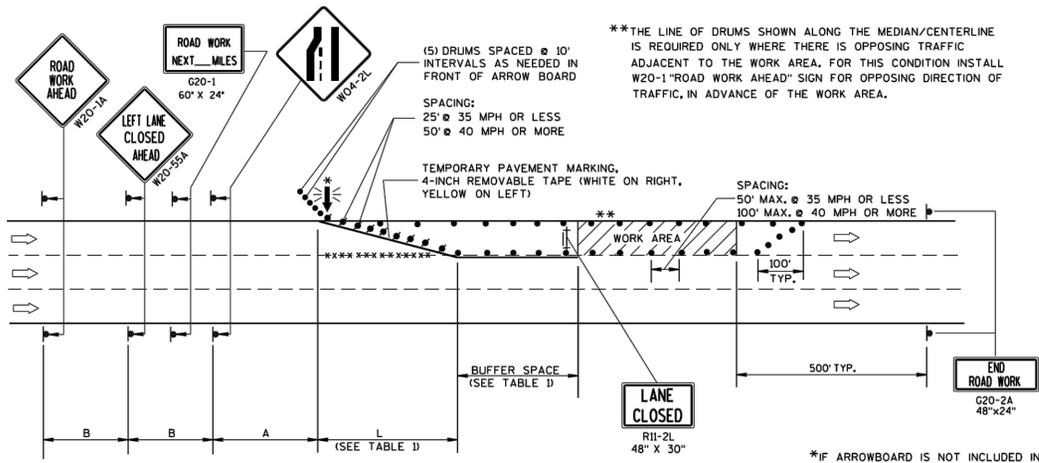
CITY OF DE PERE

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

## CONSTRUCTION DETAILS CONCRETE PAVEMENT REPAIRS

NAME SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT #	SURVEYED	BY	DATE	REVISIONS / ISSUES		PAGE NO.
				NO.	DATE	
19-05	DRAWN					P-13
	DESIGNED					
	CHECKED					

# SDD 15d20 Traffic Control, Single Lane Closure, Non Freeway/Expressway



B=400' AT 25-30 MPH  
700' AT 35-40 MPH  
1000' AT 45-55 MPH

A=200' AT 25-30 MPH  
350' AT 35-40 MPH  
500' AT 45-55 MPH

TABLE 1  
TAPER AND BUFFER SPACE  
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':  
 L = WS AT 45 MPH OR GREATER  
 $L = \frac{WS^2}{60}$  AT 40 MPH OR LESS  
 L = TAPER LENGTH IN FEET  
 S = NON-CONSTRUCTION SPEED LIMIT (MPH)  
 W = WIDTH OF LANE CLOSURE

### LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

### GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED, IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"W" SIGNS ARE THE SAME AS "R" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS. ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

**TRAFFIC CONTROL,  
SINGLE LANE CLOSURE,  
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

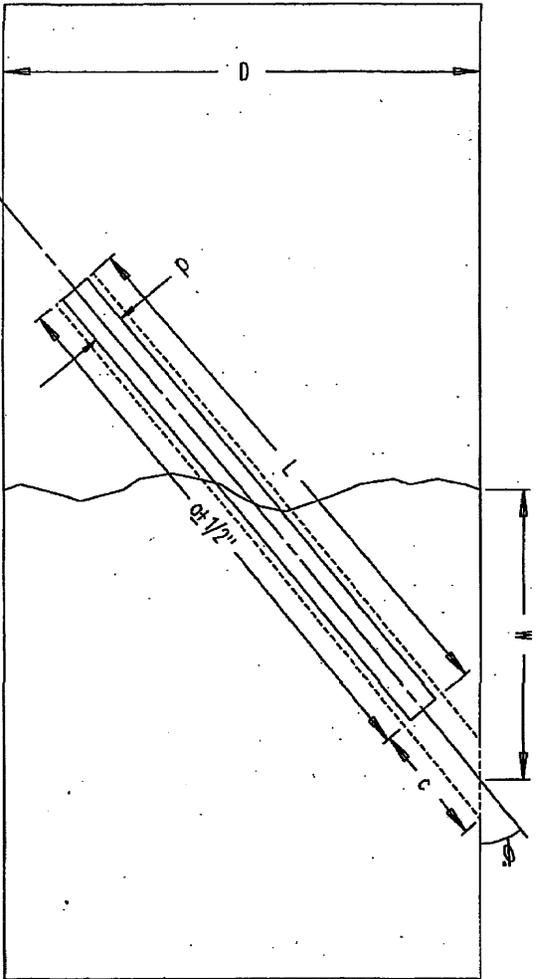
APPROVED  
June 2016 /S/ Peter Amokob Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER  
FWHA

6

6

S.D.D. 15 D 20-4

S.D.D. 15 D 20-4



Cross-Stitching Details

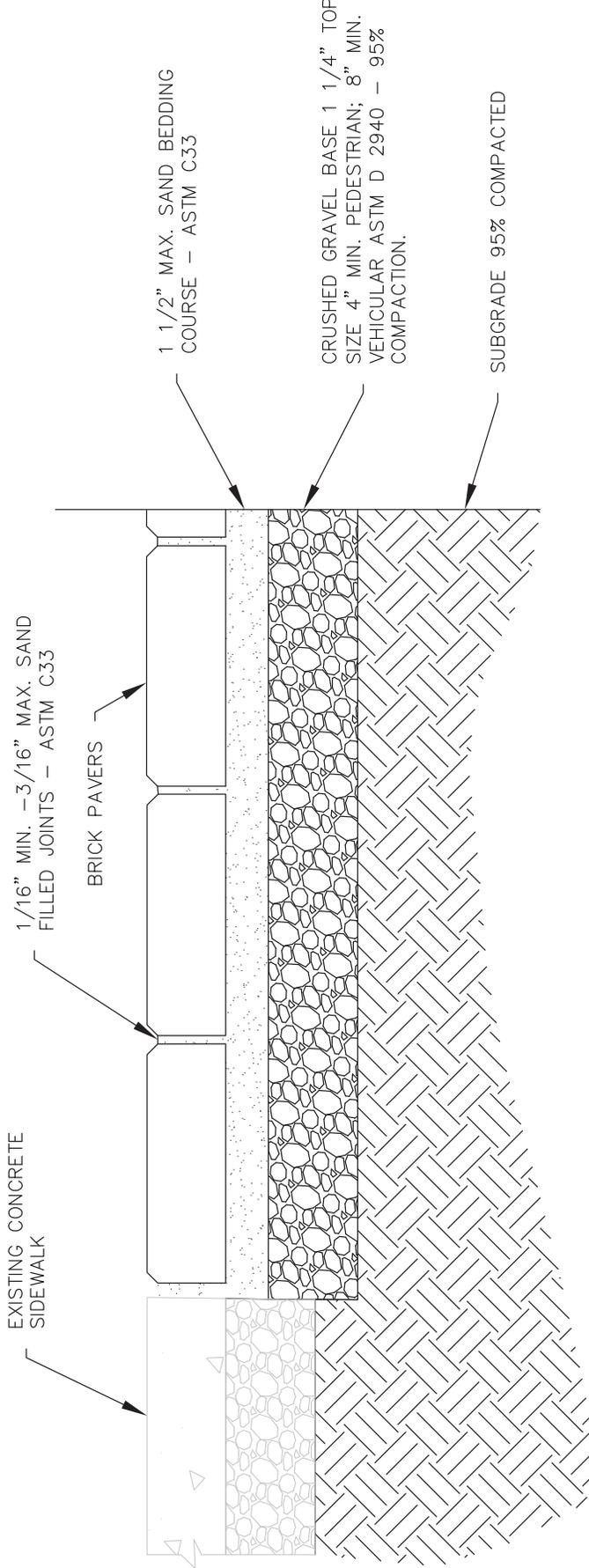
Slab Thickness D (in)	Angle O (deg)	Offset W (in)	Bar Diameter d (in)	Length of Bar (in)	Depth of Slot (in)	Minimum Depth to Bar (in)
8.00	35	5.75	0.75	9.00	12.50	3.00
8.50	35	6.00	0.75	9.50	13.00	3.00
9.00	35	6.50	0.75	10.50	14.00	3.00
9.50	35	6.75	0.75	11.50	15.00	3.00
10.00	35	7.25	0.75	12.50	16.00	3.00
10.50	45	5.25	0.75	10.50	13.25	2.25
11.00	45	5.50	0.75	11.50	14.25	2.25
11.50	45	5.75	0.75	12.00	14.75	2.25
12.00	45	6.00	0.75	13.00	15.75	2.25
12.50	45	6.25	0.75	13.50	16.25	2.25
13.00	45	6.50	1.00	14.00	17.00	2.50
13.50	45	6.75	1.00	14.50	17.50	2.50
14.00	45	7.00	1.00	15.50	18.50	2.50
14.50	45	7.25	1.00	16.00	19.00	2.50
15.00	45	7.50	1.00	17.00	20.00	2.50

NAME: SIDEWALK, CURB, AND CONCRETE PAVEMENT REPAIR PROJECT #	BY	DATE	REVISIONS / ISSUES		
			NO.	DATE	BY
19-05	SURVEYED				
	DRAWN				
	DESIGNED				
	CHECKED				

**CONSTRUCTION DETAILS**  
**CONCRETE PAVEMENT REPAIRS**

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





BRICK PAVER DETAIL

	<b>CITY OF DE PERE</b> ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115 OFFICE 920-339-4061 FAX 920-339-4071		<b>CONSTRUCTION DETAILS</b> CONCRETE PAVEMENT REPAIRS PROJECT # 19-05		SURVEYED DESIGNED CHECKED	BY MD MAM OKC	DATE 12-2018 03-2019 02-2019	NO.   	REVISIONS / ISSUES BY   	PAGE NO. <b>P-16</b>