

CITY OF DE PERE

PROJECT

22-06

CONCRETE STREET REPAIRS

BID DATE:

MARCH 3, 2022

@ 1:00 PM

Bid documents, including plans and specifications, are available for download at www.QuestCDN.com. The QuestCDN website can also be accessed through the City website at www.deperewi.gov/projects or by pressing the *Projects* icon at the bottom of any City website page. Download cost is \$15 for each contract. Bidders will be charged an additional fee of \$30 to submit a bid electronically. Bidding documents may be viewed on the QuestCDN website or at the Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115.

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

SECTION 00 01 10

TABLE OF CONTENTS

INTRODUCTORY INFORMATION

<u>Section</u>	<u>Title</u>
00 00 01	PROJECT MANUAL COVER
00 01 10	TABLE OF CONTENTS

PROJECT BID DOCUMENTS

<u>Section</u>	<u>Title</u>
00 11 13	ADVERTISEMENT TO BID
00 21 13	INSTRUCTIONS TO BIDDERS
00 41 13	BID FORM
00 41 43	BID SCHEDULE
00 43 13	BID BOND
00 43 33	PROPOSED PRODUCTS FORM
00 43 36	TABULATION OF SUBCONTRACTORS

CONTRACTING REQUIREMENTS

<u>Section</u>	<u>Title</u>
00 51 00	NOTICE OF AWARD
00 52 13	CONTRACT
00 55 00	NOTICE TO PROCEED
00 61 13	PAYMENT BOND
00 61 16	PERFORMANCE BOND
00 62 76	APPLICATION FOR PAYMENT
00 65 16	CERTIFICATE OF SUBSTANTIAL COMPLETION

SECTION 00 11 13

FEBRUARY 11, 2022 – FEBRUARY 18, 2022

CITY OF DE PERE

ADVERTISEMENT TO BID

PROJECT 22-06

CONCRETE STREET REPAIRS

Online bids will be received and accepted for Project 22-06 Concrete Street Repairs via the online electronic bidding service through QuestCDN.com, until 1:00 PM, Thursday, March 3, 2022, at which time they will be publicly accepted, displayed and read aloud.

Project 22-06 for which proposals are being sought includes the following approximate quantities:

- 1,650 SY Remove and Replace (9-Inch) Concrete Pavement (Spot Repairs)
- 1,010 LF Remove and Replace (24-Inch) Curb and Gutter Integral (Spot Repairs)
- 1,215 LF Partial Depth Concrete Pavement Repair
- 60,920 SF Colored Concrete Sealing

Complete digital project bidding documents are available for viewing and/or downloading at www.QuestCDN.com or may be examined at the office of the Director of Public Works. Digital plan documents may be downloaded for \$15 by inputting Quest project #7407939 on Quest's Project Search page. Project documents must be downloaded from QuestCDN which will add your company to the Planholder List and allow access to vBid online bidding for the submittal of your bid. Bidders will be charged an additional fee of \$30 to submit a bid electronically. The QuestCDN website can also be accessed through the City website at www.deperewi.gov/projects or by pressing the *Projects* icon at the bottom of any City website page. Contact QuestCDN Customer Support at 952-233-1632 or info@questcdn.com for assistance in membership registration, downloading digital project information and vBid online bid submittal questions.

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

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

Section 62.15 regarding Public Works.

Section 66.0901(3) regarding Prequalification of Contractor.

**Project 22-06
Concrete Street Repairs**

City of De Pere

Each bidder shall pre-qualify by submitting proof of responsibility on forms furnished by the Director of Public Works. Such forms shall be filed with the Director of Public Works no later than 4:00 PM, Monday, February 28, 2022. Prospective bidders who have previously submitted such forms subsequent to January 1, 2022 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 11th day of February, 2022.

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

Project 22-06

SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

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

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.1 Complete sets of the Bidding documents in the number and for the deposit sum, if any, stated in the Advertisement to Bid may be obtained as stated in the Advertisement for bids.
- 2.2 Complete sets of Bidding Documents shall be used in preparing Bids; Owner does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3 Owner, in providing the Bidding Documents on the terms stated in the Advertisement for Bids, does so only for the purpose of obtaining Bids for the Work and does not confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

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

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

- 4.1 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in the General Conditions.
- 4.2 Underground Facilities
- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.3 Subsurface and Physical Conditions

- A. The technical data includes:
 - 1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except underground Facilities).
 - 3. 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;
 - D. Obtain and carefully study (or accept consequences of not doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
 - E. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
 - F. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
 - G. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
 - H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies, that bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
 - I. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- 4.7 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and, procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – SITE AND OTHER AREAS

- 5.1 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary

construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 6 – INTERPRETATIONS AND ADDENDA

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

ARTICLE 7 – BID SECURITY

- 7.1 A Bid shall be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price and in the form of a certified check or bank money order or Bid bond (on the form attached) issued by a surety meeting the requirements of the General Conditions. Submittal of a Bid Bond on a form other than the Bid Bond form included in the Bidding Documents may be cause for rejection of Bid. The fully executed bid bond must be uploaded into QuestCDN. If the bidder elects to furnish bid security other than a bid bond, the bid security must be submitted in a sealed envelope enclosed in a separate package plainly marked on the outside with the notation "BID SECURITY" along with the project number and name and addressed to the Board of Public Works of the City of De Pere, Municipal Service Center, 925 S. Sixth Street, De Pere, WI 54115 **prior to the deadline for submission of bids.**
- 7.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within fifteen (15) days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner per the General Conditions.
- 7.3 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 8 – CONTRACT TIMES

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

ARTICLE 9 – LIQUIDATED DAMAGES

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

ARTICLE 10 – SUBSTITUTE AND “OR-EQUAL” ITEMS

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

ARTICLE 11 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

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

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

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

ARTICLE 12 – PREPARATION OF BID

12.1 The Bid form is included with the Bidding documents.

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

- 12.3 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporations shall be shown below the seal.
- 12.4 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- 12.5 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.
- 12.6 A Bid by an individual shall show the Bidder's name and official address.
- 12.7 A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture shall be shown below the signature.
- 12.8 All names shall be typed or printed in ink below the signatures.
- 12.9 The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 12.10 The address and telephone number for communications regarding the Bid shall be shown.
- 12.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 13 – BASIS OF BID; COMPARISON OF BIDS

- 13.1 Unit Price
 - A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Schedule.
 - B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accord with the General Conditions.
 - C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

ARTICLE 14 – SUBMITTAL OF BID

- 14.1 A Bid shall be submitted no later than date and time prescribed and at place indicated in Advertisement for Bids and shall be submitted electronically using the QuestCDN online bidding vBid platform. No paper bids will be accepted.
- 14.2 See Bid Form for a list of documents typically required to be submitted with the Bid.

ARTICLE 15 – MODIFICATION AND WITHDRAWAL OF BID

- 15.1 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 15.2 If within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 16 – OPENING BIDS

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

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

<https://meet.goto.com/164986533>

You can also dial in using your phone.
(For supported devices, tap a one-touch number below to join instantly.)

United States (Toll Free): 1 877 309 2073
- One-touch: <tel:+18773092073,,164986533#>

Access Code: 164-986-533

Get the app now and be ready when your first meeting starts: <https://meet.goto.com/install>

ARTICLE 17 – BIDS REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 18 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.1 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 18.2 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 18.3 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 18.4 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Supplier, and other individuals or entities proposed for those portions of the Work for which the identify of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 18.5 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.
- 18.6 Bidder agrees to waive any claim it has or may have against the Owner and the respective employees arising out of or in connection with the administration, evaluation or recommendation of any Bid.
- 18.7 If the Contract is to be awarded, Owner will award the Contract to the lowest responsible responsive Bidder whose Bid is in the best interests of the Project.

ARTICLE 19 – CONTRACT SECURITY AND INSURANCE

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

ARTICLE 20 – SIGNING OF AGREEMENT

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

END OF SECTION

SECTION 00 41 13

CITY OF DE PERE

BID FORM

PROJECT 22-06

This bid, submitted by the undersigned Bidder to the City of De Pere, in accordance with the Advertisement to Bid, which will be received until 1:00 PM, Thursday, March 3, 2022 is to furnish and deliver all materials, and to perform and do all work on the project designated per Section 01 10 00 Summary of Work.

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

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

<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 price(s):

As stated in the attached Unit Price Bid Schedule.

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

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

TOTAL BID PRICE: \$_____

**Project 22-06
Concrete Street Repairs**

City of De Pere

ATTACHMENTS TO THIS BID

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

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

BID SUBMITTAL

This Bid is submitted by _____ of _____,

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

Bidder, if Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

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

Name (typed or printed): _____

A Corporation

Corporation Name: _____

State of Incorporation: _____

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

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

**Project 22-06
Concrete Street Repairs**

City of De Pere

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest _____

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

Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____

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

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

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

Name (typed or printed): _____

Title: _____

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

Bidder's Business Address _____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20__.

State Contractor License No. _____ (if applicable)

SECTION 00 41 43

CITY OF DE PERE

PROJECT 22-06

BID SCHEDULE – UNIT PRICE

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
Street and Drainage (Fire Station)					
SD-01	Unclassified Excavation	CY	130	\$	\$
SD-02	Remove Asphaltic Concrete Pavement and Concrete Curb	SY	385	\$	\$
SD-03	Provide 8-Inch Doweled Concrete Pavement	SY	355	\$	\$
SD-04	Provide 24-Inch Concrete Curb & Gutter Integral	LF	120	\$	\$
SD-05	Remove and Replace 6-Inch Concrete Sidewalk	SY	35	\$	\$
SD-06	Provide 1-1/4" Crushed Aggregate Base Course	TON	255	\$	\$
SD-07	Drilled Tie Bars	EA	25	\$	\$
Street and Drainage (Various Locations)					
SD-08	Remove and Replace 8-Inch Doweled Concrete Pavement	SY	10	\$	\$
SD-09	Remove and Replace 24-Inch Concrete Curb and Gutter Integral	LF	15	\$	\$
SD-10	Drilled Dowel Bars	EA	15		
SD-11	Drilled Tie Bars	EA	5	\$	\$
SD-12	Provide 1 1/4" Crushed Aggregate Base Course	TON	20	\$	\$

**Project 22-06
Concrete Street Repairs**

City of De Pere

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT BID
Street and Drainage (Fort Howard)					
SD-13	Remove and Replace 9-Inch Doweled Concrete Pavement (HES-3 DAY)	SY	10	\$	\$
SD-14	Remove and Replace 9-Inch Doweled Concrete Pavement (HES-24 HR)	SY	10	\$	\$
SD-15	Remove and Replace 9-Inch Doweled Concrete Pavement	SY	1,650	\$	\$
SD-16	Remove and Replace 24-Inch Concrete Curb and Gutter Integral	LF	1,010	\$	\$
SD-17	Partial Depth Concrete Pavement Joint Repair (2' Wide)	LF	1,215	\$	\$
SD-18	Drilled Dowel Bars	EA	1,925	\$	\$
SD-19	Drilled Tie Bars	EA	465	\$	\$
SD-20	Cross-Stitching Longitudinal Joints and Cracks (#6)	EA	35	\$	\$
Special Construction					
SC-01	Inlet Protection Type D	EA	55	\$	\$
SC-02	Adjust Inlet	EA	25	\$	\$
SC-03	Adjust Manhole	EA	15	\$	\$
SC-04	Colored Concrete Sealing	SF	60,920	\$	\$
SC-05	Traffic Control (Fort Howard)	LS	1	\$	\$
SC-06	Traffic Control (Main Avenue)	LS	1	\$	\$
TOTAL AMOUNT BID					\$

SECTION 00 43 13

CITY OF DE PERE

BID BOND

KNOW ALL MEN BY THESE PRESENTS: That _____,

as Principal, hereinafter called Principal, and _____,

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

WHEREAS, Principal has made a proposal to the City for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work of Project 22-06 in accordance with drawings and specifications prepared by the Director of Public Works of said City, which proposal is by reference made a part hereof, and is hereinafter referred to as the BID.

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

1. The liability of Surety shall in no event exceed the penalty of this bond.
2. Any suits at law or proceedings, in equity brought or to be brought against Surety to recover any claim hereunder shall be executed within six (6) months from the date of this instrument.

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

In the presence of:

WITNESS

PRINCIPAL (SEAL)

WITNESS

SURETY (SEAL)

SECTION 00 43 33

PROPOSED PRODUCTS FORM

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

ITEM	MATERIAL	SUPPLIER
Concrete	Not Applicable	
Concrete Sealant		
Dowel Bars	Not Applicable	
Tie Bars	Not Applicable	

SECTION 00 43 36

TABULATION OF SUBCONTRACTORS

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

PORTION OF WORK	BUSINESS NAME	BUSINESS ADDRESS

SECTION 00 51 00

NOTICE OF AWARD

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

Project Description: 22-06 Concrete Street Repairs

The City has considered the proposal submitted by you dated (BID DATE) for the above-described project in response to its Advertisement for Bids dated February 11, 2022 and February 18, 2022.

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

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

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

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

Dated this _____ day of _____ 2022.

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 22-06 Concrete Street Repairs, 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 February 11, 2022 and February 18, 2022.
- (b) Drawings designated for Project 22-06 Concrete Street Repairs dated February 11, 2022.
- (c) City of De Pere 2022 Construction Specifications.
- (d) Special Provisions dated February 11, 2022.
- (e) Proposal submitted by (Contractor Name) dated Bid Date.
- (f) Addenda No. _____ dated _____

ARTICLE II - TIME OF COMPLETION

- (a) The work to be performed under the Contract shall be commenced within (number spelled out) (__) calendar days after receipt of written notice to proceed. The work shall be completed within (Number spelled out) (__) calendar days) or (specific calendar dates) after receipt of Notice to Proceed.
- (b) Time is of the essence with respect to the date of completion herein above stated. Failure to complete the work within the number of calendar days stated in this Article, or interim dates included in the work sequence in Section 01 10 00, Summary of Work, including any extensions granted thereto, shall entitle the City to deduct from the monies due the Contractor an amount equal to Update based on 00 70 00 - General Conditions (Page 27)(\$) per day for each calendar day of delay in the completion of the work. Such amount shall be considered and treated not as a penalty but as liquidated damages, which the City will sustain, by failure of the Contractor to complete the work within the time stated.

ARTICLE III - PAYMENT

- (a) The Contract Sum. The City shall pay to the Contractor for the performance of the Contract the amounts determined for the total number of each of the following units of work completed at the unit price stated thereafter. The number of units contained in this schedule is approximate only, and the final payment shall be made for the actual number of units that are incorporated in or made necessary by the work covered by the Contract.
- (b) Progress Payments. The City shall make payments on account of the Contract as follows:
1. On not later than the fourth Friday of every month the Contractor shall present to the City an invoice covering an estimate of the amount and proportionate value of the work done as verified by the City under each item of work that has been completed from the start of the job up to and including the fourth Friday of the preceding month, and the value of the work so completed determined in accordance with the schedule of unit prices for such items, together with such supporting evidence as may be required. This invoice shall also include an allowance for the cost of such materials and equipment required in the permanent work as have been delivered to the site but not as yet incorporated in the work.
 2. On not later than the third week of the following month, the City shall, after deducting previous payments made, pay to the Contractor 95% of the amount of the approved invoice, retaining 5% of the estimate of work done until 50% of the work has been completed. At 50% completion of the work, the previous retainage shall not yet be paid, but further partial payments shall be made in full to the contractor without additional retainage being taken unless the engineer certifies that the work is not proceeding satisfactorily. If the work is not proceeding satisfactorily, additional amounts may be retained. After substantial completion, an amount retained may be paid to the contractor, keeping retained only such amount as is needed for the remaining work.
 3. The Contractor shall notify the City in writing when all work under this Contract has been completed. Upon receipt of such notice the City shall, within a reasonable time, make the final inspection and issue a final certificate stating that the work provided for in this Contract has been completed and is accepted under the terms and conditions thereof, and that the entire balance due the Contractor as noted in said final certificate is due and payable. Before issuance of the final certificate the Contractor shall submit evidence satisfactory to the City that payrolls, material bills, and other indebtedness connected with the work under this Contract have been paid. The City shall make final payment as soon after issuance of the final certificate as practicable.

ARTICLE IV – CONTRACT DOCUMENTS

(a) Contents

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

SECTION 00 55 00

NOTICE TO PROCEED

Date: _____

(CONTRACTOR NAME)
(ADDRESS)
(ADDRESS)

PROJECT: 22-06 Concrete Street Repairs

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

Department of Public Works

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

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

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

Signature

BY: _____
Printed Name

TITLE: _____

SECTION 00 61 13

CITY OF DE PERE

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That **(CONTRACTOR NAME)**, as Principal, hereinafter called Contractor, and _____, as Surety, hereinafter called Surety, are held and firmly bound unto the City of De Pere, a municipal corporation of the State of Wisconsin, as Obligee, hereinafter called the City, for the use and benefit of claimants as herein below defined in the **amount _____ (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 22-06, 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 reasonable required for use in the performance of the CONTRACT, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with Contractor or with a subcontractor of Contractor for labor, material, or both, used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, lights, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the contract.
2. The above named Contractor and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant may sue on this bond for the use of such claimant in the name of the City, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon, provided, however, that the City shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a. Unless claimant shall have given written notice to any two of the following: The Contractor, the City, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Contractor, City, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of Wisconsin, save that such service need not be made by a public officer.
 - b. After the expiration of one (1) year following the date on which Contractor ceased work on said CONTRACT.

**Project 22-06
Concrete Street Repairs**

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)

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 22-06 in accordance with drawings and specifications prepared by the Director of Public Works of said City, which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.

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

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

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

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

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

In the Presence of:

(WITNESS)	(CONTRACTOR)	(SEAL)
(WITNESS)	(SURETY)	(SEAL)

SECTION 00 62 76

APPLICATION FOR PAYMENT

Contractor's Application for Payment No.

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

APPLICATION FOR PAYMENT

Change Order Summary

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

CONTRACTOR'S CERTIFICATION

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

By: _____ Date: _____

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

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

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

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

SECTION 00 65 16

CERTIFICATE OF SUBSTANTIAL COMPLETION

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

This [tentative] [definitive] Certificate of Substantial Completion applies to:

All Work under the Contract Documents: The following specified portions of the Work:

Date of Substantial Completion

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

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

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

Amended Responsibilities Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

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

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

Executed by Engineer

Date

Accepted by Contractor

Date

SECTION 01 10 00

SUMMARY OF WORK

PART 1 – GENERAL

1.1 SUMMARY

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

1.2 REFERENCES

- A. General Specifications. The work under this contract shall be in accordance with the City of De Pere, 2022 Construction Specifications and these Special Provisions and plans, and the latest edition of the Wisconsin Department of Transportation Standards Specifications for Highway and Structure Construction, where referenced in the City Specifications.
- B. Definitions. Any reference to the “state” or the “department” in said Standard Specifications shall mean the “City of De Pere” for the purposes of this contract.
- C. Industry Standards
 - 1. Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
 - 2. Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
 - 3. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
 - 4. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.
 - 5. Each section of the specifications generally includes a list of reference standards normally referred to in that respective section. The purpose of this list is to furnish the Contractor

with a list of standards normally used for outlining the quality control desired on the project. The lists are not intended to be complete or all inclusive, but only a general reference of standards that are regularly referred to.

6. Each entity engaged in construction on the Project shall be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

1.3 WORK COVERED BY THE CONTRACT DOCUMENTS

A. Project Identification

1. Project Location

- a. Fort Howard Avenue from Main Avenue to Parkview Road
- b. De Pere Fire Station at the intersection of S. Ninth Street and Grant Street
- c. Main Avenue from Mid Valley Drive to Lawrence Drive
- d. Miscellaneous repairs around the City

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

- a. 22-06 Concrete Street Repairs

B. The Work includes:

1. Fine grading and base preparation.
2. Unclassified excavation (if required).
3. Crushed aggregate base course.
4. Remove and replace doweled concrete pavement and curb and gutter.
5. Cross-stitching.
6. Partial depth concrete pavement joint repairs.
7. Terrace restoration.
8. Traffic control.
9. Erosion control.
10. Colored concrete sealing.

1.4 WORK SEQUENCE/SCHEDULE

- A. Complete all work by September 30, 2022. The City reserves the right to request one additional mobilization to complete unexpected repairs after this date.
- B. Conduct construction activities to maintain access to businesses and residences throughout construction.
- C. All city-wide spot repairs shall be completed prior to work commencing on Fort Howard Avenue or Main Avenue.
- D. Any lane closures required for colored concrete sealing will be limited to off peak hours. No work will be permitted prior to 9:00 AM or between 3:00 PM and 6:00 PM. Weekend work may

be used to accommodate colored concrete sealing outside of these hours with appropriate traffic control. Work will be permitted during peak hours if all work and equipment is staged in the median or terraces and out of the traveled way. All work on the on/off ramps will require WisDOT approval.

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

1.8 PROJECT UTILITY SOURCES

- A. Green Bay Metropolitan Sewer District (NEW Water), Lisa Sarau, (lsarau@newwater.us) (920-438-1039)
- B. AT&T, Victoria Kassab, (vk352k@att.com) (920-202-4002)
- C. Wisconsin Public Service, Bob Laskowski, (rtlaskowski@wisconsinpublicservice.com) (920-617-2775)
- D. Charter, Vince Albin, (vince.albin@charter.com) (920-378-0444)
- E. Nsight, Rick Vincent, (rick.vincent@nsight.com) (920-617-7316)
- F. TDS Metrocom, Steve Jakubiec, (steve.jakubiec@tdstelecom.com) (920-882-4166)
- G. Net-Lec (Mi-Tech Services), Dennis Lafave, (dlafave@mi-tech.us) (920-619-9774)
- H. CenturyLink, Relocation Team, (relocations@lumen.com) (800-871-9244)
- I. Central Brown County Water Authority, Rob Michaelson, (rmichaelson@mpu.org) (920-686-4354)

1.9 MISCELLANEOUS PROVISIONS

- A. Notification to Residents –notify individually all residents and businesses 2-weeks prior to the start of operations, giving an estimated time that vehicle movement will be limited or prohibited. Property owners shall be notified 24-hours prior to closing a drive.
- B. Fort Howard Avenue - Maintain a bike lane for southbound traffic throughout construction. Maintain access for northbound access from Main Avenue to Sixth Street. See the Bike Detour plan sheet for more information.
- C. Coordinate all driveway closures with US Sonoco. Stage construction to maintain access.

- D. Work shall be staged to allow a single, southbound lane on Fort Howard between Parkview Road and Main Avenue.
- E. Provide two lanes of traffic on Fort Howard Avenue during the Brown County Fair from August 17 thru August 21st.
- F. Several events are anticipated at the Brown County Fairgrounds during construction. Maintain construction in an orderly fashion during these events.
 - 1. GB Garden Blitz- May 12 thru May 15
 - 2. Wellness and Psychic Fair – May 19 thru May 21
 - 3. Large Private Event – May 26 thru May 29
 - 4. Fantasy RV Tour Group – June 5 thru June 8
 - 5. Fantasy RV Tour Group – June 12 thru June 15
- G. Fort Howard Avenue is the route for the Green Bay Marathon and several half marathons. The dates are not known at this time. Maintain construction in an orderly fashion during these events.
- H. Unclassified excavation and crushed aggregate base course placement are included in the work for the fire station. These items may be removed by the Engineer after the asphalt is removed if the existing base course is acceptable to the Engineer.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 22 04

MEASUREMENT AND PAYMENT STREET AND DRAINAGE CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

- | A. Section includes: | <u>Bid Item No.</u> |
|---|--------------------------------------|
| 1. Unclassified Excavation | SD-01 |
| 2. Remove Asphaltic Concrete Pavement and Concrete Curb | SD-02 |
| 3. Crushed Aggregate Base and Surface Course | SD-06, SD-12 |
| 4. Portland Cement Concrete Curb and Gutter | SD-04, SD-09, SD-16 |
| 5. Portland Cement Concrete Pavement | SD-03, SD-08, SD-13,
SD-14, SD-15 |
| 6. Portland Cement Concrete Sidewalk | SD-05 |
| 7. Drilling Tie Bars and Dowel Bars | SD-07, SD-10, SD-11,
SD-18, SD-19 |
| 8. Concrete Pavement Partial Depth Repair | SD-17 |
| 9. Cross Stitching Concrete Pavement | SD-20 |
- B. Unit Prices include:
1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 2. The method of measurement for payment.
 3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for street and drainage systems.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Sawcutting asphalt and/or concrete.
 3. Removal, hauling and disposal of surface materials including road pavement, curb and gutter, sidewalk, driveways and other pavement surfaces in the trench area and as shown on the drawings.
 4. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site.

5. Site access requirements including temporary aggregate material as required for local traffic access.
6. Dust control.
7. Remove and replace existing mailboxes and traffic signs.
8. Restroom facilities.
9. Construction staking and other survey work not provided by the Engineer.
10. Regulatory requirements.
11. Quality assurance and quality control testing and inspections.
12. Final casting and valve box adjustment.
13. Shop drawings and other submittals.

1.3 UNCLASSIFIED EXCAVATION

- A. The unit price for Unclassified Excavation work includes:
1. General Work Items of Article 1.2.
 2. Remove asphaltic concrete pavement and crushed aggregate base course to the subgrade per the plans.
 3. Excavation to subgrades shown on the Drawings.
 4. Hauling of unclassified material.
 5. Compacting of subgrade and fill areas.
 6. Test rolling subgrade.
 7. Disposal of surplus unclassified material and unsuitable material.
- B. Measurement of payment on this item will be on the amount of material removed from the site for pavement construction at the Fire Station. The amount will be calculated based on the following equation:
1. Total volume of excavated material from the field measured average end area volume of the existing surface to the subgrade as shown on the Drawings.
- C. The unit of measurement for payment is cubic yards.

1.4 REMOVE ASPHALTIC CONCRETE PAVEMENT AND CURB

- A. The unit price for Remove Asphaltic Concrete Pavement and Curb work includes:
1. General Work Items of Article 1.2.
 2. Remove asphaltic concrete pavement (estimated depth of 6-inches).
 3. Remove concrete curb and gutter as shown on the plans.
- B. Measurement of payment is actual area pulverized.
1. This item applies to the Fire Station.
- C. The unit of measurement for payment is square yards.

1.5 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 provided 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 percent (7%) total moisture determined based on the dry mass of the aggregates will have moisture content in excess of seven percent (7%) deducted from the measured weight.

- C. The unit of measurement for payment is tons.

1.6 PORTLAND CEMENT CONCRETE CURB AND GUTTER

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

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

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

1.7 PORTLAND CEMENT CONCRETE PAVEMENT

- A. The unit price for Portland Cement Concrete Pavement work includes:
1. General Work Items of Article 1.2.
 2. Furnish all labor, tools, equipment and services.
 3. Providing Portland cement concrete mixture of thickness shown in the drawings or specified elsewhere.
 4. Surface preparation.
 5. Providing reinforcement including tie bars and dowel bars.
 6. Drilling tie bars and dowel bars into existing pavement.
 7. Joint sealing.
 8. Providing curing.
 9. Concrete sealing with linseed oil.
 10. Fine grading of subgrade.
 11. Providing expansion joints and contraction joints.
 12. Adjustment of manholes, water valves, inlets/catch basin and other structures to finish grade.
 13. Finishing.
 14. Protection.
- B. Measurement for payment will be length and width of areas paved. Concrete curb and gutter will be measured separately, regardless if the curb is installed with integral curb. Curb and gutter will be paid per linear foot for twenty-four (24) inch width. The width and length will be subtracted from the concrete pavement area if integral curb is constructed.
- C. The unit of measurement for payment is square yard.

1.8 PORTLAND CEMENT CONCRETE SIDEWALK

- A. The unit price for Portland Cement Concrete Sidewalk work includes:
1. General Work Items of Article 1.2.
 2. Providing Portland cement concrete mixture of thickness shown in the drawings or specified elsewhere.
 3. Providing reinforcement.
 4. Providing expansion joint.
 5. Providing curing.
 6. Existing pavement removal.
 7. Subgrade preparation.
 8. Providing contraction joints.
 9. Handicap ramps.
 10. Sidewalk steps.
 11. Saw cutting adjacent surfaces.
 12. Finishing.
 13. Protection.
 14. Restoration.

- B. Measurement for payment will be the average horizontal length and width of the concrete placed.
- C. The unit of measurement for payment is square yards.

1.9 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.
 - 1. This item applies to concrete curb and gutter, sidewalk, and driveway.
 - 2. This item does not apply to concrete pavement and patches.
- C. The unit of measurement for payment is each.

1.10 CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

- A. The unit price for Concrete Pavement Partial Depth Repair work includes:
 - 1. General Work Items of Article 1.2.
 - 2. Furnish all labor, tools, equipment and services.
 - 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. Provide curing with linseed oil.
 - 8. Reestablish joints or cracks.
- B. Measurement for payment will be along the centerline of the joint or crack repaired. Concrete pavement partial depth repairs are assumed to be 24-Inches wide.
- C. The unit of measurement for payment is linear feet.

1.11 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-inch epoxy coated tie bars.
 - 4. Drilling holes in concrete per specifications.
 - 5. Supply and install epoxy grout.

- B. Measurement for payment will be the actual number of 3/4-inch bars installed.
- C. The unit of measurement for payment is each.

END OF SECTION

SECTION 01 22 05

MEASUREMENT AND PAYMENT SPECIAL CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

- | | |
|---|---------------------|
| A. Section includes: | <u>Bid Item No.</u> |
| 1. Inlet Protection Erosion Control | SC-01 |
| 2. Adjusting Existing Structure Frame and Casting | SC-02 & SC-03 |
| 3. Colored Concrete Sealing | SC-04 |
| 4. Traffic Control | SC-05 & SC-06 |
- B. Unit Prices include:
1. Defined work for each Unit Price Item which will provide a functionally complete Project when combined with all unit price items. If there are specific work items which the Contractor believes are not identified in any Unit Price Item, but is required to provide a functionally complete Project, then the identified specific work items shall be included in the appropriate Unit Price Item.
 2. The method of measurement for payment.
 3. The price per unit for payment.

1.2 GENERAL WORK ITEMS

- A. Include with the appropriate Unit Price Item the following work items which are common to the Unit Price Items for special construction.
- B. If there is a specific Unit Price Item for any of the following items, then the work item shall be included with that specific unit price item.
1. Traffic Control.
 2. Loading, hauling and disposing of surplus material.
 3. Maintenance, protection, replacement and/or repair of facilities not designated for alteration on the Site beyond the limits identified.
 4. Dust control.
 5. Restroom facilities.
 6. Construction staking and other survey work not provided by the Engineer.
 7. Regulatory requirements.
 8. Quality assurance and quality control testing and inspections.
 9. Shop drawings and other submittals.

1.3 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.

1.4 ADJUST EXISTING STRUCTURE FRAME CASTING

A. The unit price for Adjusting Existing Structure Frame Casting work includes:

1. General Work Items of Article 1.2.
2. Providing new structure frame and lid castings.
3. Removal of the casting and existing adjusting rings from the structure as required.
4. Providing concrete adjusting rings and a 2 inch rubber riser ring from the WisDOT approved product list.
5. Bituminous plastic cement sealing the exterior of the adjusting rings and casting.
6. The ring will be secured to the precast section with a 3 ½ inch wide Kent Seal or equal.
7. Above the concrete ring attach ¼ inch thru 3 inch thick ring using two ⁵/₁₆ inch bead above and below the ring of sealant type as recommended by the rubber manufacturer.
8. Initial and final adjustment.
9. Backfilling and compacting.

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

C. The unit of measurement for payment is each.

1.5 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 per manufacturer's recommendations.
5. Placing sealant (first and second coats).
6. Protection of newly placed sealant.

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

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

1.6 TRAFFIC CONTROL

- A. The unit price for Traffic 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 USDOT 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. Maintaining traffic control for the duration of work.
 - 5. Removal of signage, barricades, etc. after the project has been complete.

- B. Measurement for payment will not be made.

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

END OF SECTION

SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes:

1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

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

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as recommended by the Engineer and approved by Owner.
- B. The date for each progress payment should be the 3rd Wednesday of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends the 4th Friday of the Month.
- C. Use forms provided by Engineer for Applications for Payment. Sample copy of the Application for Payment and Continuation Sheet is included in Section 00 62 76.
- D. Application Preparation Procedures
1. When requested by the Contractor, the Engineer will determine the actual quantities and classifications of Unit Price Work performed.
 - a. Preliminary determinations will be reviewed with the Contractor before completing Application for Payment.
 - b. Engineer will complete the Application for Payment based on Engineer's decision on actual quantities and classifications.
 - c. Engineer will submit three original copies of Application for Payment to Contractor for certification of all three original copies.
 - d. Contractor shall submit signed Application for payment to Owner for approval within time frame agreed to at the Preconstruction Conference.
 2. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
 - a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.

- b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.
 - c. Evidence that the materials and equipment are covered by property insurance.
 3. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- E. With each Application for Payment, submit waivers of liens from subcontractors and suppliers for the construction period covered by the previous application.
 1. Submit partial waivers on each item for amount requested before deduction for retainage on each item.
 2. When an application shows completion for an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work shall submit waivers.
 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application.
 5. Submit waivers of lien on forms executed in a manner acceptable to Owner.
- F. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
 1. List of subcontractors.
 2. Schedule of Values (For Lump Sum Work).
 3. Contractor's construction schedule.
- G. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Consent of Surety to Final Payment.
 5. Final lien waivers as evidence that claims have been settled.
 6. Final liquidated damages settlement statement.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 32 33

CONSTRUCTION PHOTOGRAPHS

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Photographs for utility construction sites.

1.2 SUBMITTALS

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

1.3 QUALITY ASSURANCE

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

PART 2 – PRODUCTS

PART 3 – EXECUTION

3.1 UTILITY AND STREET CONSTRUCTION SITES

- A. Prior to start of construction provide sufficient photographs to adequately show the existing facilities and conditions within and adjacent to the construction Site to serve as a guide for final restoration including:
1. Roads including shoulders and/or curb and gutter.
 2. Sidewalks, parking areas, and driveways.
 3. Utility structures.
 4. Landscaping including signs, plantings, walls, fences, trees, shrubbery, etc.
 5. Mailboxes.
 6. Drainage facilities including culverts, inlets, ditches.
 7. Building structures.
- B. During construction provide sufficient photographs (a minimum of one per 100 feet of installed utility) to adequately show construction means, methods, and Site conditions including:
1. Crossings of other utilities.
 2. Exposure of existing structures.
 3. Soil conditions.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for submittals:
 - 1. Progress Schedule.
 - 2. Schedule of Shop Drawings and Sample Submittals.
 - 3. Shop Drawings.
- B. Failure to meet Submittal requirements to the satisfaction of the Engineer will constitute unsatisfactory performance of the work in accordance with the Contract Documents, therefore, the Engineer may recommend to the Owner that all or a portion of payments requested during the corresponding pay period be withheld until these requirements are met.

1.2 SUBMITTAL PROCEDURES

- A. Coordination: Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - 3. To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
 - a. Allow two weeks for initial submittal.
 - b. Allow two weeks for reprocessing each submittal.
 - c. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
 - 1. Assign a reference number to each submittal and re-submittal.
 - 2. Provide a space approximately four (4) by five (5) inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 - 3. Include the following information on the label for processing and recording action taken.
 - a. Project name.

- b. Date.
 - c. Name and address of the Engineer.
 - d. Name and address of the Contractor.
 - e. Name and address of the subcontractor.
 - f. Name and address of the supplier.
 - g. Name of the manufacturer.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
4. Each submittal shall be stamped by the Contractor indicating that submittal was reviewed for conformance with the Contract Documents. The Engineer will not accept unstamped submittals.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal to the Engineer. The Engineer will not accept submittals received from sources other than the Contractor.
1. On the transmittal, record relevant information and requests for Engineer action. On a form, or separate sheet, record deviations from Contract Document requirements, including variations, limitations, and justifications. Include Contractor's certification that information complies with Contract Document requirements.

1.3 CONTRACTOR'S PROGRESS SCHEDULE

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

- B. Distribution: Following response to the initial submittal, print and distribute copies of the revised construction schedule to the Engineer, Subcontractors, and other parties required to comply with scheduled dates. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.
- D. Punch List: Prepare and submit to the Engineer within ten (10) days after substantial completion a detailed progress schedule for outstanding work and punch list items.

1.4 SCHEDULE OF SHOP DRAWINGS AND SAMPLE SUBMITTALS

- A. Submit 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 initial submittal, print and distribute copies of the revised construction schedule to the Engineer, Subcontractors, and other parties required to comply with scheduled dates. Post copies in the field office. When revisions are made, distribute to the same parties. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

- B. Collect product data into a single submittal for each element of construction of system. Product data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
 - 1. Mark each copy to show actual product to be provided. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
- C. Do not use shop drawings without an appropriate final stamp indicating action taken.
- D. Submittals: Submit four (4) copies of each required submittal. The Engineer will retain two (2) 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 will return unsolicited submittals to the sender without action.

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

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

1.2 UNDERGROUND UTILITIES

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

1.3 PROPERTY MONUMENTS

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

1.4 TRAFFIC CONTROL

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

1.5 PERMITS FOR PROJECT

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

1. Wisconsin Department of Transportation Lane Closure Permit for any lane closures required on Main Avenue and Interstate 41 round-a-bouts.

PART 2 – PRODUCTS (Not used)

PART 3 – EXECUTION (Not used)

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 SUMMARY

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

1.2 SUBMITTALS

- A. None

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 PREPARATION

- A. Investigate and verify the existence and location of site improvements, utilities, and other existing facilities.
- B. Before construction, verify the location of invert elevations at points of connection of sanitary sewer, storm sewer, water piping and underground electrical services.
- C. Furnish information to the Engineer and the appropriate utility regarding conflicts that are necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.
- D. Provide the Engineer two (2) working days advance notification when ready for engineering surveys for construction to be provided by the Engineer.

3.2 ENGINEERING SURVEYS TO BE PROVIDE BY THE ENGINEER

- A. General
 - 1. Establish benchmarks for construction as shown on the drawings.
 - 2. Establish control points as shown on the drawings.
- B. Gravity Sewer Systems and Water Distribution Systems
 - 1. Provide construction reference stakes set for pipe construction location at critical changes in horizontal and vertical alignment.
 - 2. Provide construction stakes for location of pipe at connections.

C. New Road Construction

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

3.3 ENGINEERING SURVEYS TO BE PROVIDED BY THE CONTRACTOR

A. General

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

1.1 SUMMARY

A. Section Includes:

1. Constructing 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.
- 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. AK-2 ACHRO KURE 1315 sealer with sharp grip added.
- 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.
- 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.

END OF SECTION

SECTION 32 01 29.61

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

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:
 - i. 850 lb. (505kg) Portland Concrete (Type I or Type III)
 - ii. 1338 lb. (794 kg) Fine Aggregate (Per standard specifications except maximum P200-2.5%)
 - iii. 1338 lb.(794kg) Coarse Aggregate (See table below for gradation)
 - iv. 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 conforming to all requirements according to the following table:

Properties	Minimum	Maximum
Total Solids, % by weight of compound	42	
Reflectance, % in 72 hours (ASTM E1347)	65	
Loss of Water, kg/m ² in 24 hours (ASTM C156)		0.15
Loss of Water, kg/m ² 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	

¹ Test Method on file at the Department’s Materials Testing Lab.

² 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.

2. 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

1. 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

1. 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

1. 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

1. 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, 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 than 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 LONGITUDINAL JOINTS AND CRACKS

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 joint or crack. Hole diameters shall be 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 to the back of the hole to force out all dust and debris.
- D. Inject the epoxy grout into the back of the drill hole. Use a grout with a workable viscosity, pumpable, yet thick enough to remain in the hole. Insert a sufficient volume of grout into the hole to provide a small quantity of excess 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 tie 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.

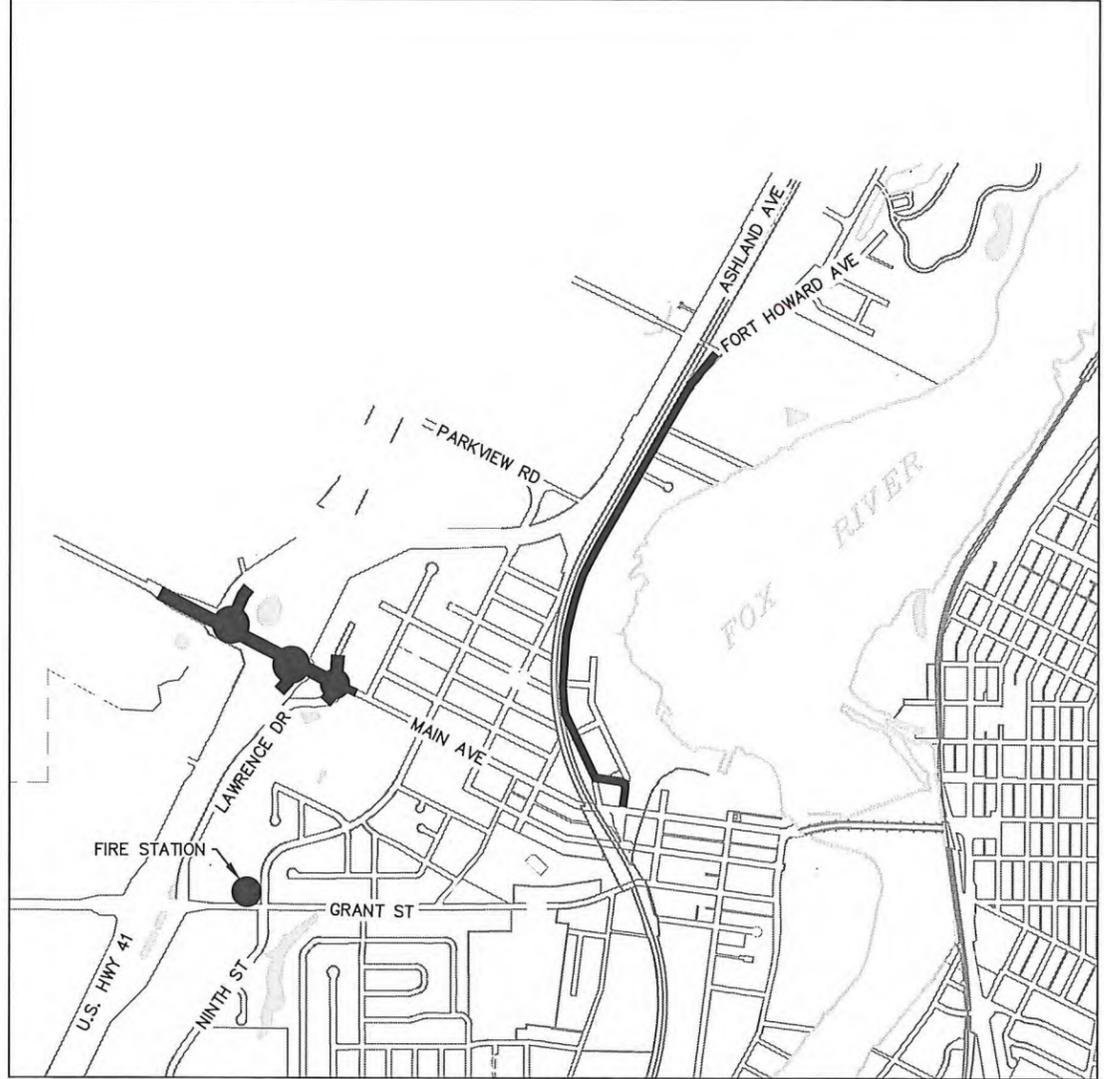
END OF SECTION

PROJECT# 22-06 CONCRETE STREET REPAIRS

CITY OF DE PERE



ENGINEER DIVISION
925 S. SIXTH ST
DE PERE, WI 54115



SITE LOCATION MAP
N.T.S.



SHEET NO.	DESCRIPTION
G001	TITLE SHEET
G002	STANDARD ABBREVIATION & SYMBOLS
C101 - C106	FORT HOWARD AVENUE PLAN SHEETS
C107	FIRE STATION PLAN SHEET
C108 - C110	MAIN AVENUE CONCRETE SEALING
C111	CITY WIDE CONCRETE SPOT REPAIRS
C401 - C403	TRAFFIC CONTROL PLANS
C501 - C502	CONSTRUCTION DETAILS
C503 - C505	TRAFFIC CONTROL DETAILS

**CITY OF DE PERE
BOARD OF PUBLIC WORKS**

2/15/22 *E.P. Rakers*
DATE CITY ENGINEER

2/16/22 *Thomas M. Miller*
DATE CITY ADMINISTRATOR

2/16/22 *John J. Boyd*
DATE MAYOR

STAMPS:

LIST OF STANDARD ABBREVIATIONS

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

MAPPING & TOPOGRAPHY SYMBOLOGY

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

GENERAL CONSTRUCTION NOTES:

1. ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
2. THE WORK UNDER THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE CITY OF DE PERE, CURRENT CONSTRUCTION SPECIFICATIONS AND THESE SPECIAL PROVISIONS AND PLANS, AND THE LATEST ADDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION SPECIFICATIONS, LATEST EDITION, WHERE REFERENCED IN THE CITY SPECIFICATIONS.
3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL CONFIRM TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONSTRUCTION SITE EROSION CONTROL AND TECHNICAL STANDARDS.
4. EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES. WHETHER SHOWN OR NOT, FROM THE OWNERS OF THE RESPECTIVE UTILITIES. ALL UTILITIES OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR 72 HOURS PRIOR TO EXCAVATION.

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL	
	PLAN	PROFILE
EXISTING SANITARY SEWER LINE		
PROPOSED SANITARY SEWER LINE		
EXISTING STORM SEWER LINE		
PROPOSED STORM SEWER LINE		
EXISTING WATER MAIN LINE		
PROPOSED WATER MAIN LINE		
EXISTING ELECTRICAL LINE		
EXISTING GAS MAIN LINE		
EXISTING TELEPHONE LINE		
EXISTING CABLE TV LINE		
EXISTING SANITARY LATERAL		
EXISTING WATER SERVICE		
RIGHT OF WAY		
PROPERTY LINE		
EASEMENT		
SILT FENCE EROSION CONTROL		
EXISTING FIBER OPTIC		
EXISTING MAJOR CONTOUR		
EXISTING MINOR CONTOUR		
PROPOSED MAJOR CONTOUR		
PROPOSED MINOR CONTOUR		

DESCRIPTION	SYMBOL
EXISTING SANITARY SEWER LINE	
PROPOSED SANITARY SEWER LINE	
EXISTING STORM SEWER LINE	
PROPOSED STORM SEWER LINE	
EXISTING WATER MAIN LINE	
PROPOSED WATER MAIN LINE	

PATCH SYMBOLS

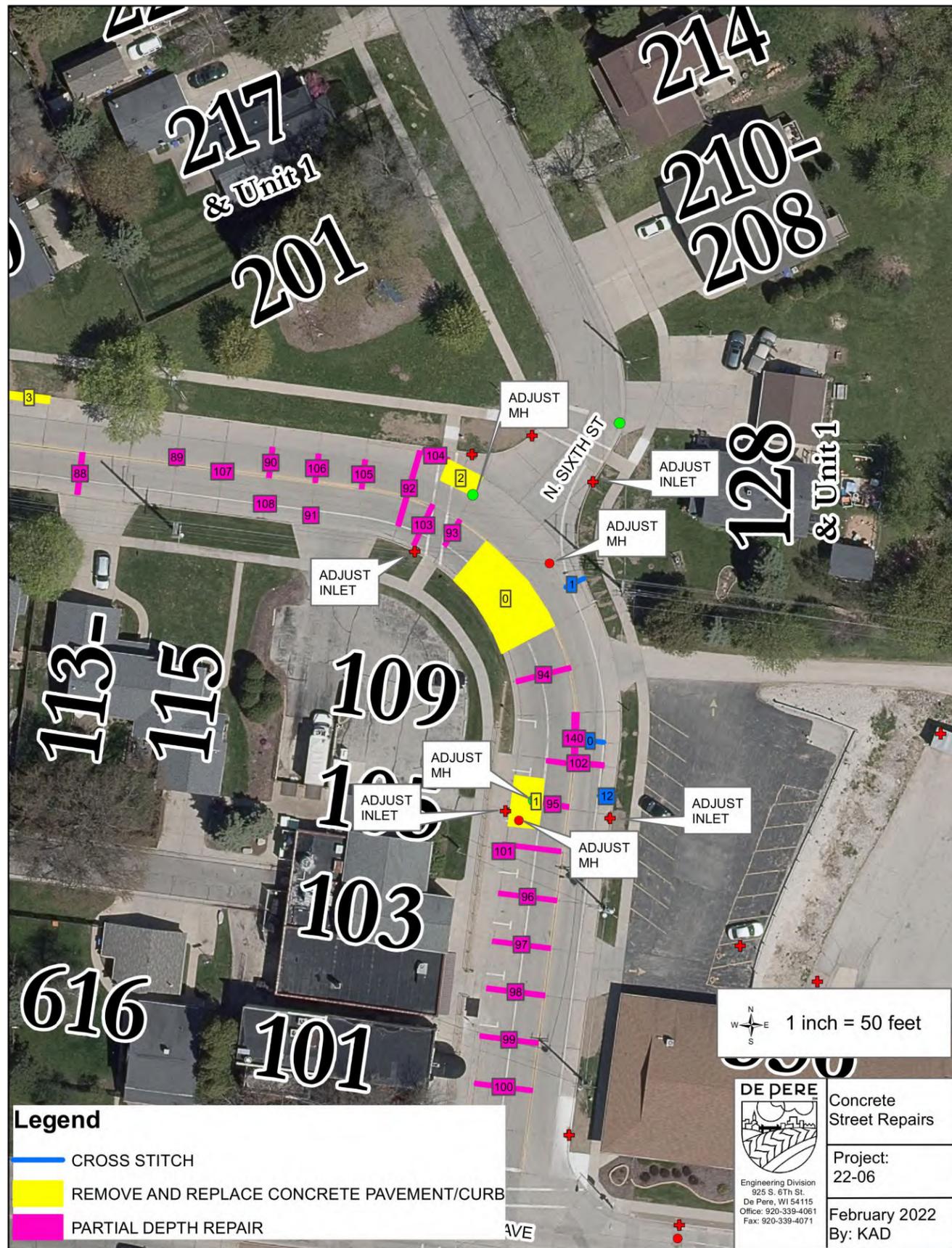
ASPHALTIC CONCRETE PAVEMENT	CRUSHED AGGREGATE BASE COURSE
PORTLAND CEMENT CONCRETE	

CITY OF DE PERE

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

STANDARD ABBREVIATIONS AND SYMBOLS

NAME: CONCRETE STREET REPAIRS	BY KAD	DATE 01-2022	REVISIONS / ISSUES				PAGE NO. G002
PROJECT # 22-06			NO.	DATE	BY	REMARKS	



Legend

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

N
W — E
S

1 inch = 50 feet

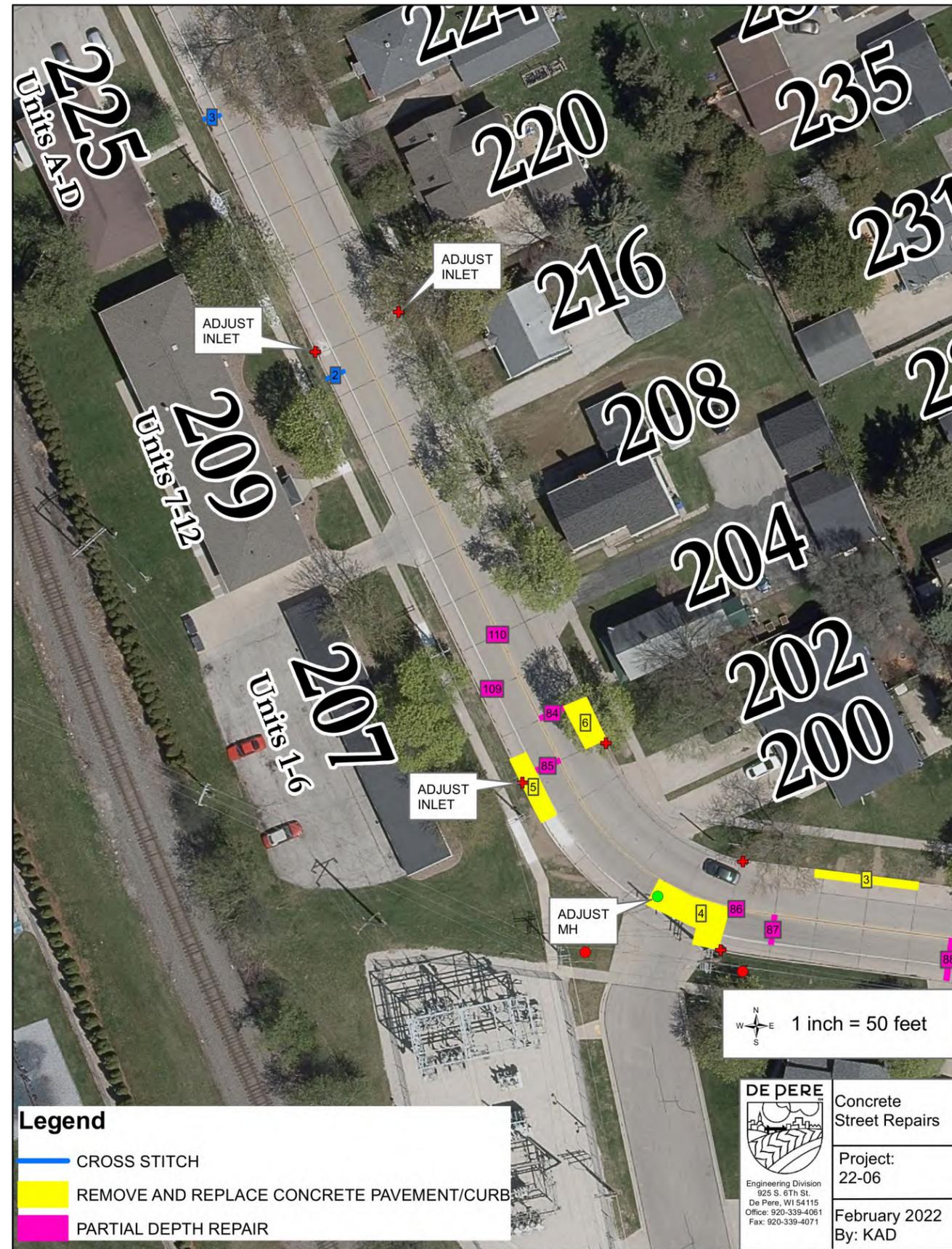
DE PERE

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

Concrete Street Repairs

Project: 22-06

February 2022
By: KAD



Legend

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

N
W — E
S

1 inch = 50 feet

DE PERE

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

Concrete Street Repairs

Project: 22-06

February 2022
By: KAD



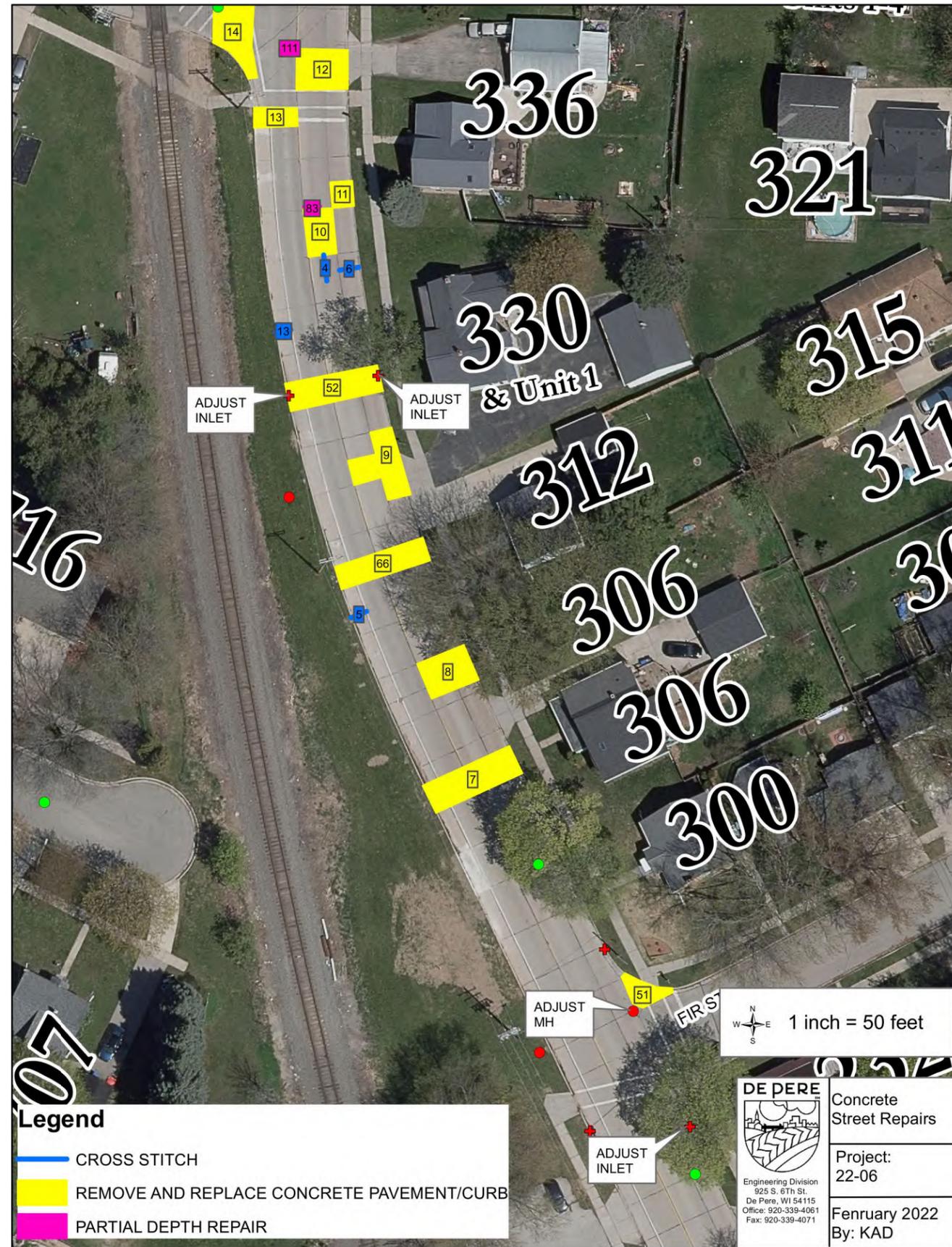
CITY OF DE PERE

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

**FORT HOWARD AVENUE
MAIN ST TO 150' S/O FIR ST**

NAME: CONCRETE STREET REPAIRS	PROJECT #	BY		DATE		REVISIONS / ISSUES			
						NO.	DATE	BY	REMARKS
	22-06								

X:\ENG\Projects\City Projects\2022\Project 22-06 Concrete Street Repairs\1200-CAD\11X17 GIS EXHIBIT PLAN SHEETS.dwg

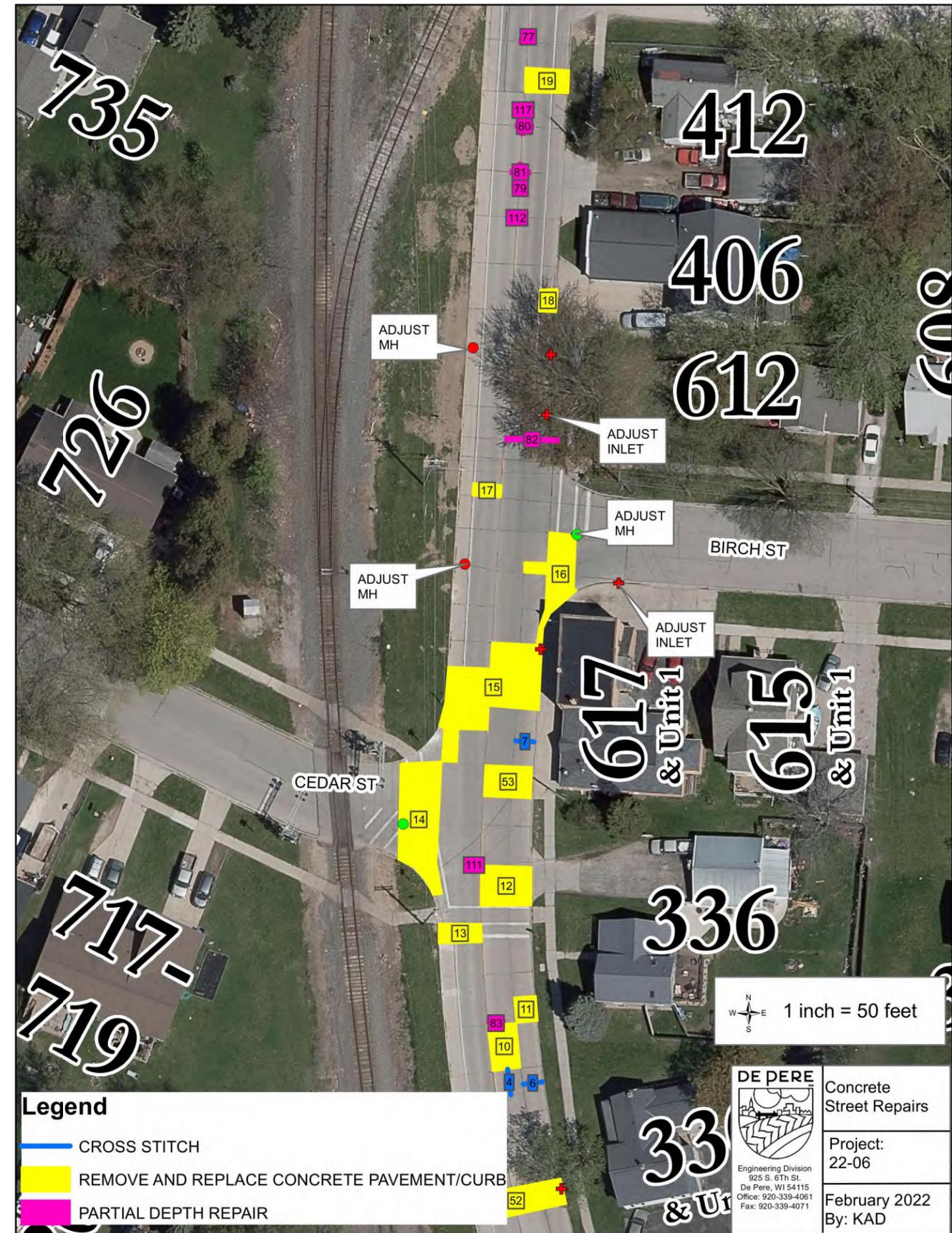


Legend

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

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

Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD



Legend

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

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

Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD



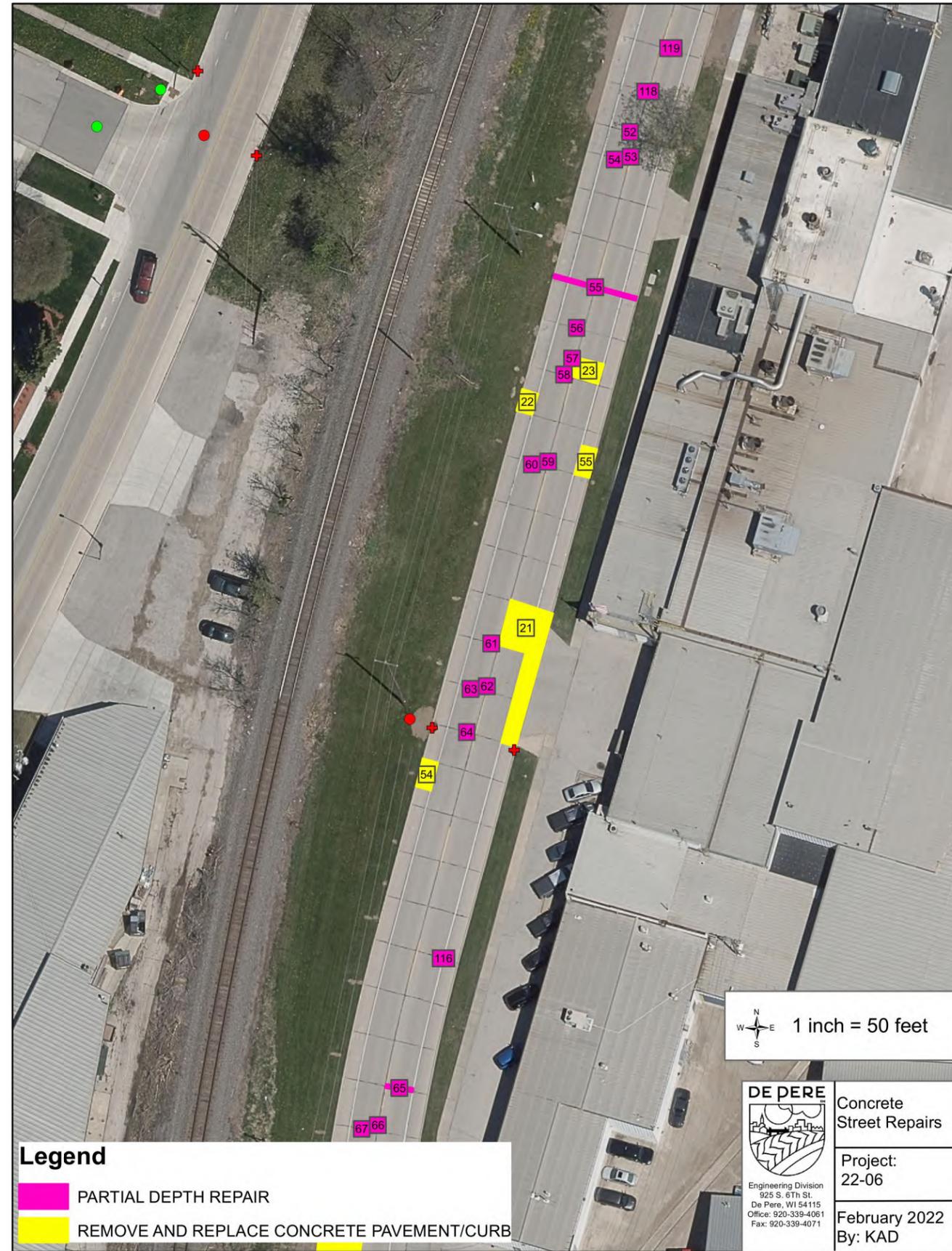
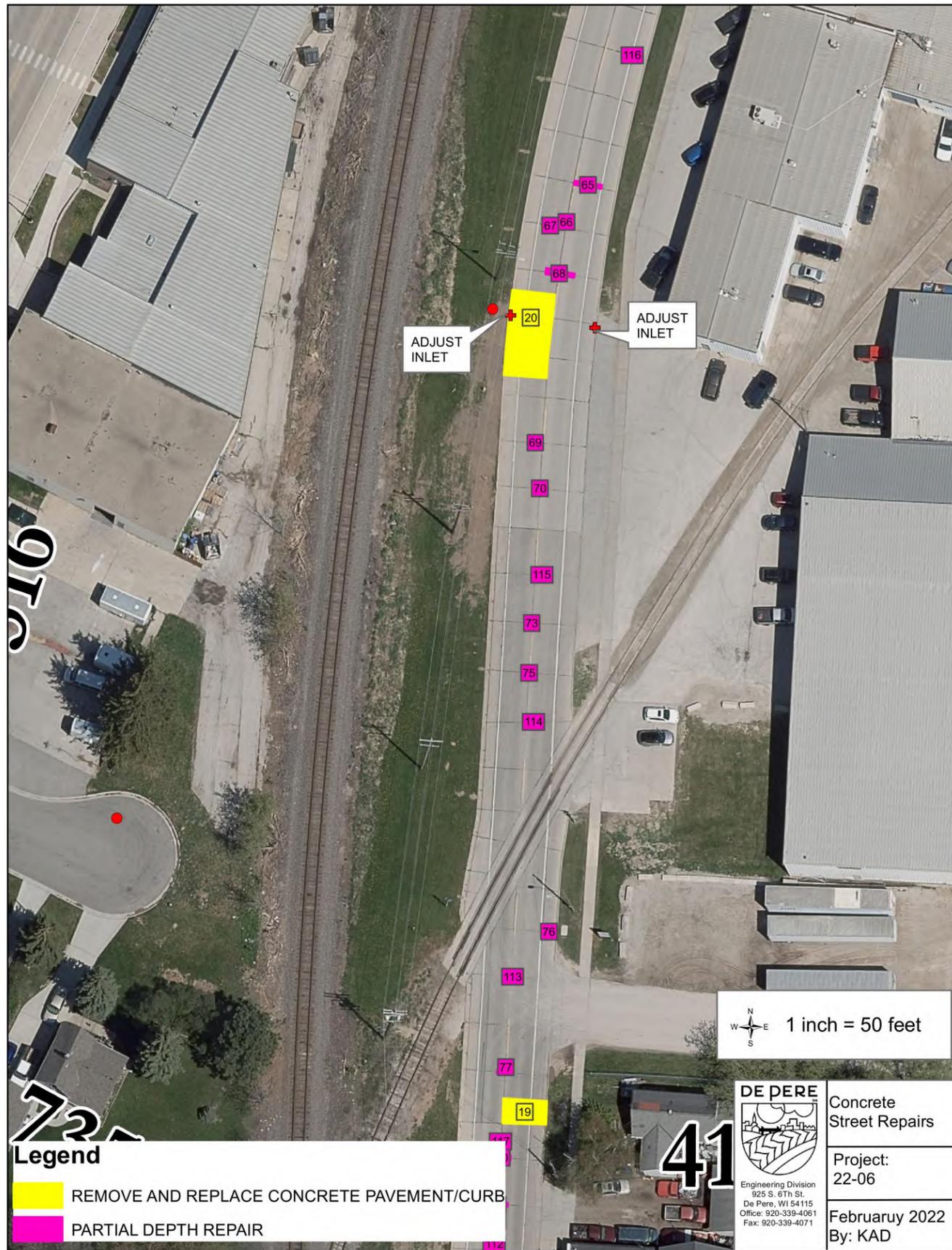
CITY OF DE PERE

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

**FORT HOWARD AVENUE
 FIR ST TO 200' N/O BIRCH ST**

NAME: CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES	
PROJECT # 22-06	SURVEYED	01-2022	NO.	DATE
	DRAWN	MJT	BY	REMARKS
	DESIGNED	KAD		
	CHECKED	EPR		

X:\ENG\Projects\City Projects\2022\Project 22-06 Concrete Street Repairs\1200-CAD\11X17 GIS EXHIBIT PLAN SHEETS.dwg



Legend

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

N
W E
S
1 inch = 50 feet

DE PERE

 Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD
Engineering Division
 925 S. 6TH ST.
 De Pere, WI 54115
 Office: 920-339-4061
 Fax: 920-339-4071

Legend

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

N
W E
S
1 inch = 50 feet

DE PERE

 Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD
Engineering Division
 925 S. 6TH ST.
 De Pere, WI 54115
 Office: 920-339-4061
 Fax: 920-339-4071



CITY OF DE PERE

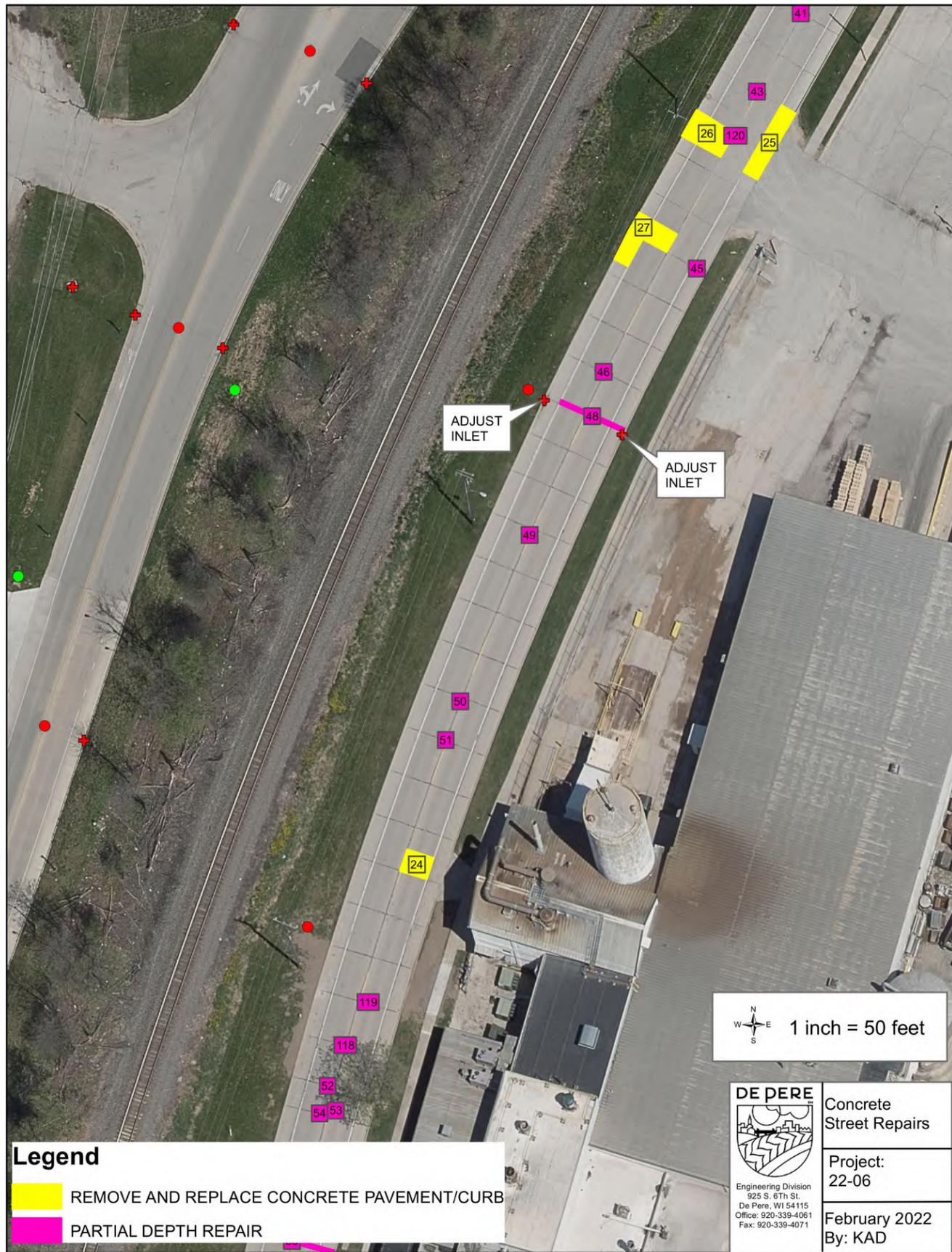
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
 OFFICE 920-339-4061 FAX 920-339-4071

FORT HOWARD AVENUE
200' N/O BIRCH ST TO 1400' S/O FOXVIEW AVE

NAME: CONCRETE STREET REPAIRS
 PROJECT # 22-06

	BY	DATE
SURVEYED	MJT	01-2022
DRAWN	KAD	01-2022
DESIGNED	KAD	01-2022
CHECKED	EPR	02-2022

REVISIONS / ISSUES		
NO.	DATE	REMARKS



Legend

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

1 inch = 50 feet

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

Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD



Legend

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

1 inch = 50 feet

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

Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD



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

FORT HOWARD AVENUE
 1400' S/O FOXVIEW AVE TO 500' S/O FOXVIEW AVE

NAME: CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES	
PROJECT # 22-06	SURVEYED DRAWN DESIGNED CHECKED	MJT KAD EPR	NO.	DATE
		01-2022 01-2022 02-2022	BY	REMARKS



Legend

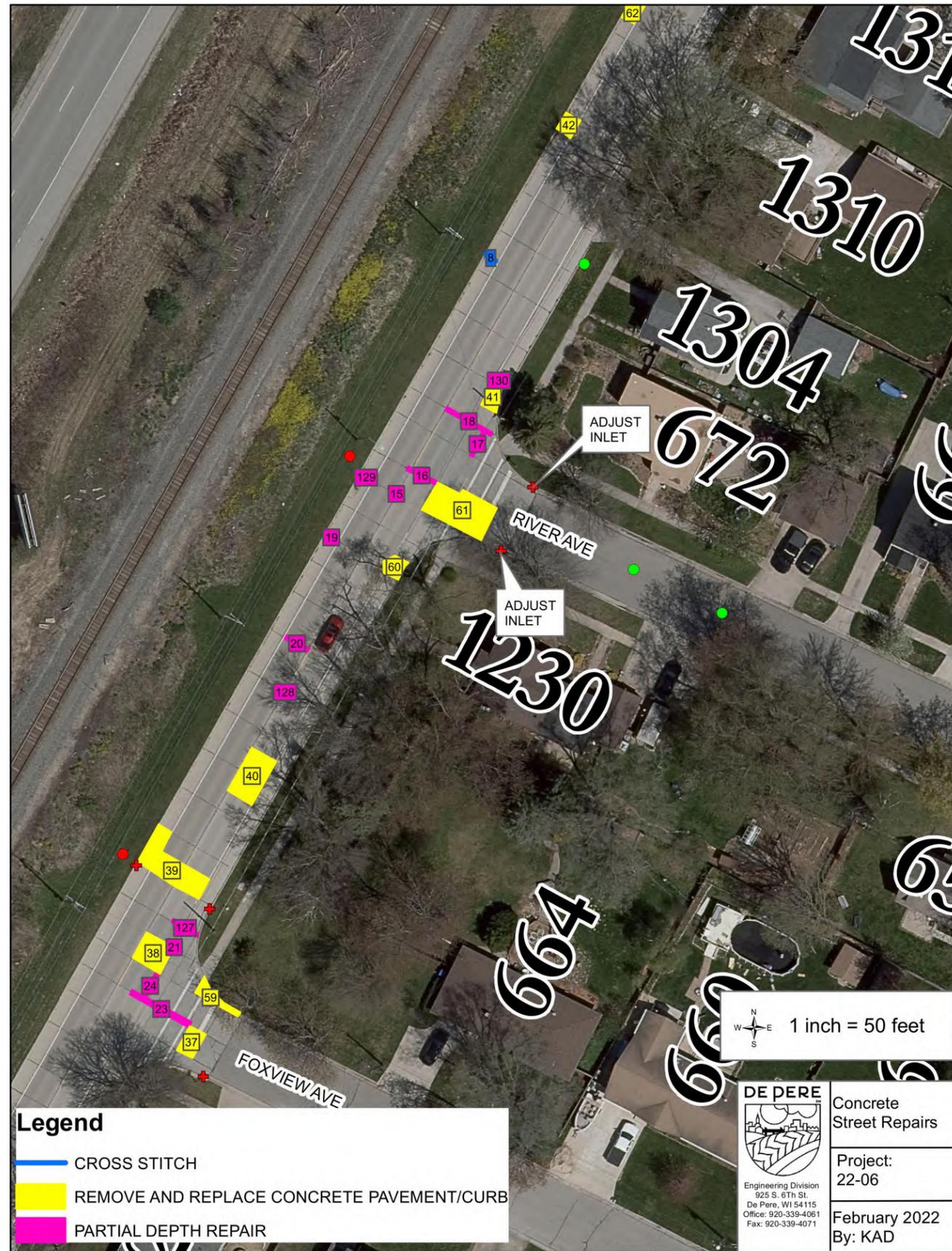
REMOVE AND REPLACE CONCRETE PAVEMENT/CURB

PARTIAL DEPTH REPAIR

1 inch = 50 feet

DE PERE
 Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD

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



Legend

CROSS STITCH

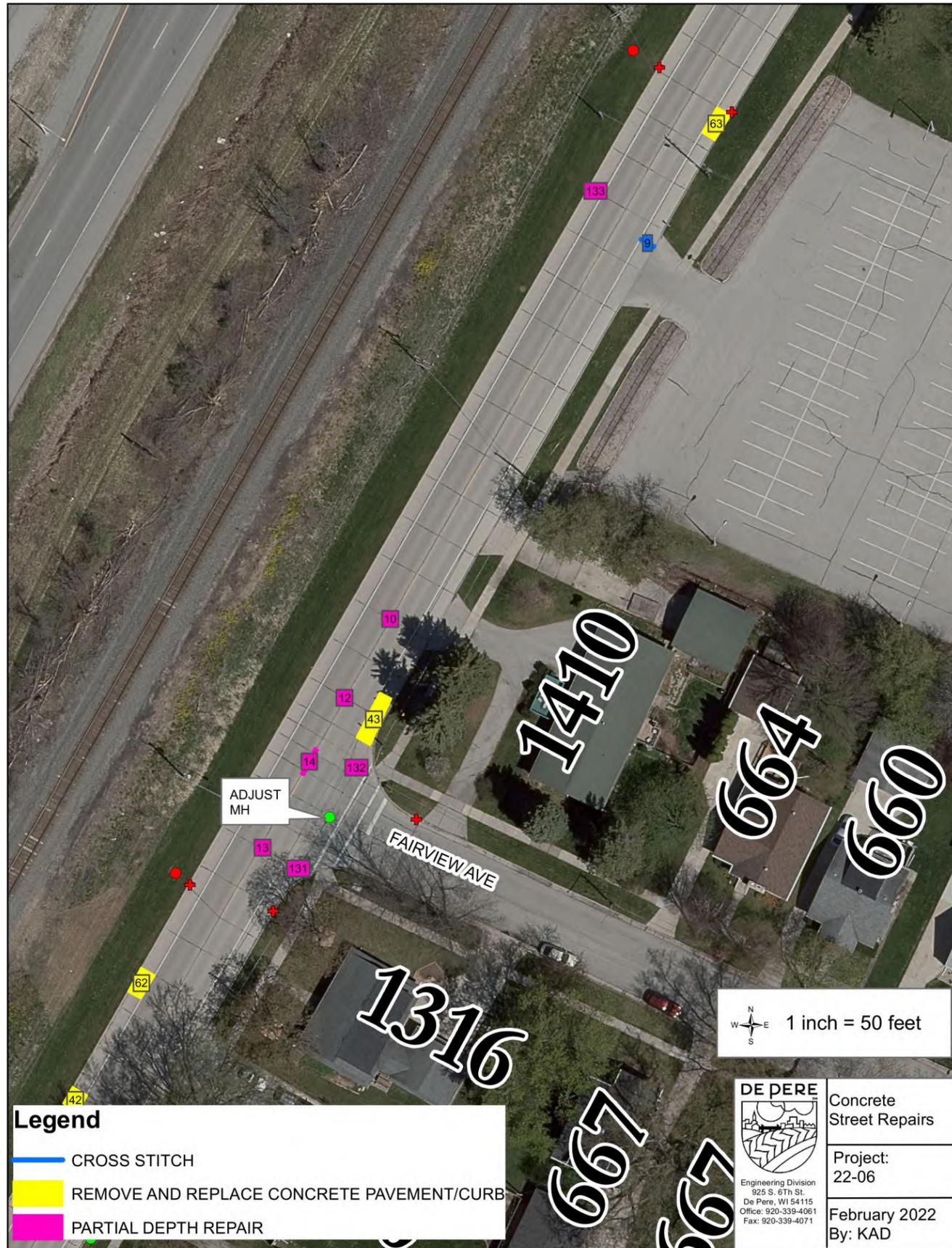
REMOVE AND REPLACE CONCRETE PAVEMENT/CURB

PARTIAL DEPTH REPAIR

1 inch = 50 feet

DE PERE
 Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD

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

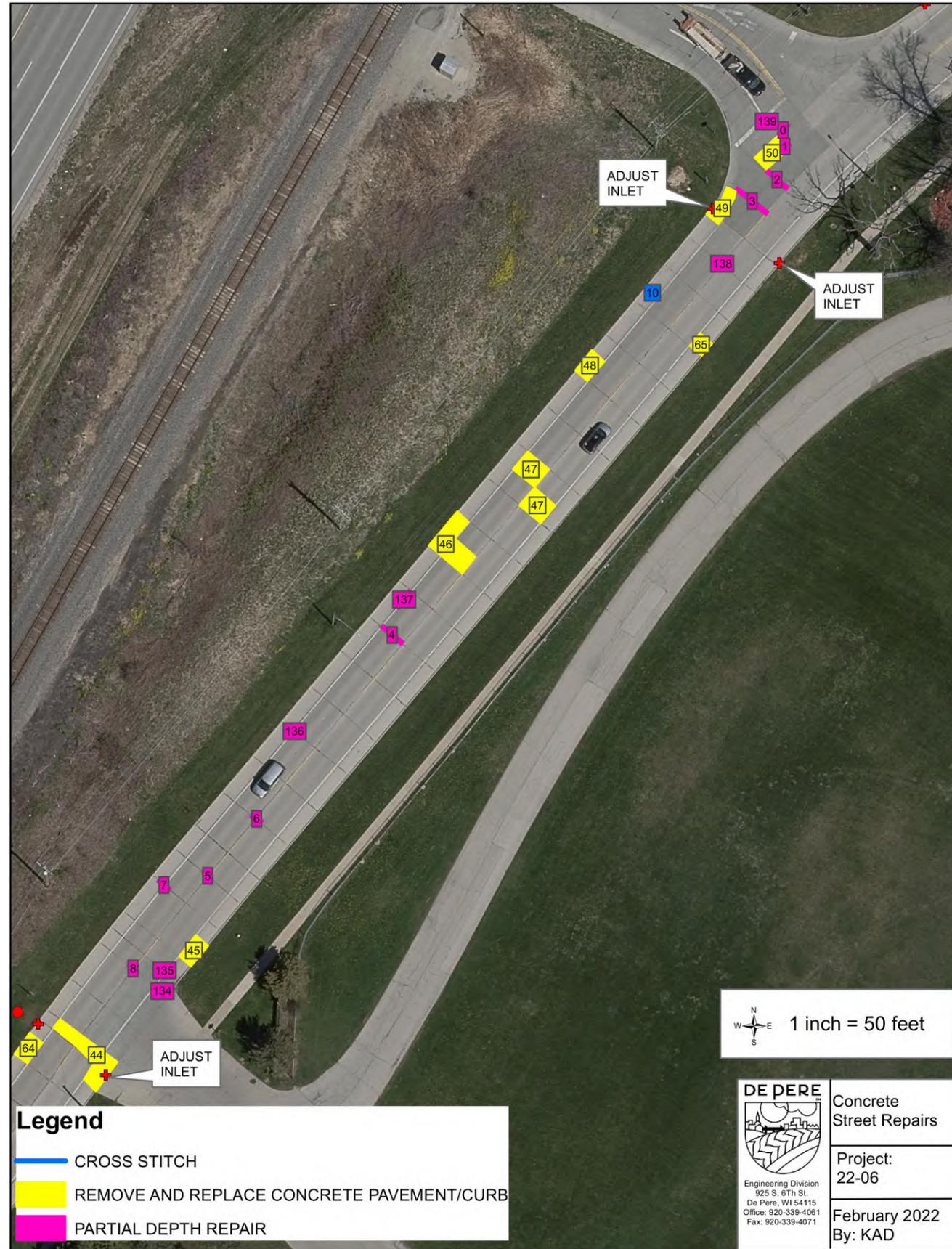


Legend

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

1 inch = 50 feet

DE PERE
 Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD



Legend

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

1 inch = 50 feet

DE PERE
 Concrete Street Repairs
 Project: 22-06
 February 2022
 By: KAD

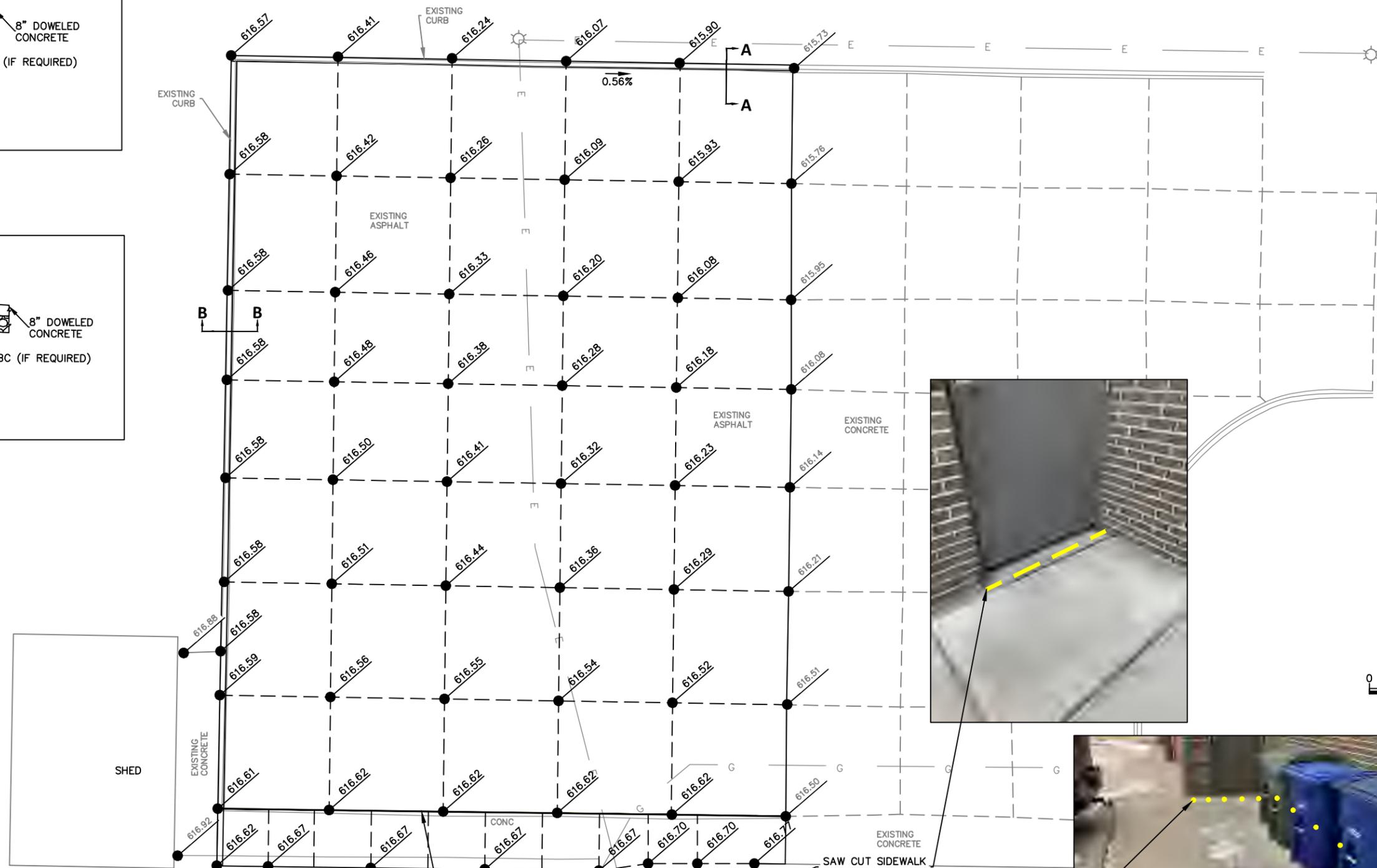
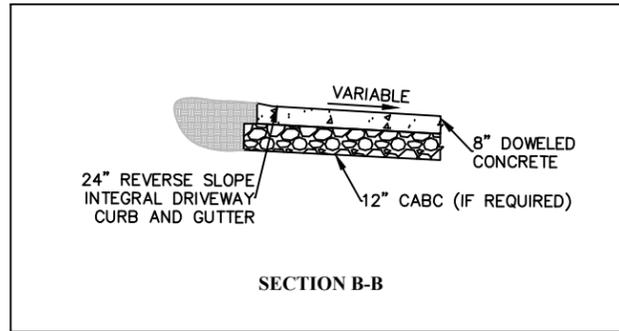
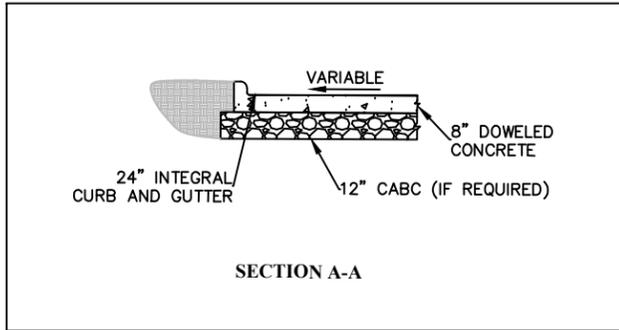


CITY OF DE PERE
 ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
 OFFICE 920-339-4061 FAX 920-339-4071

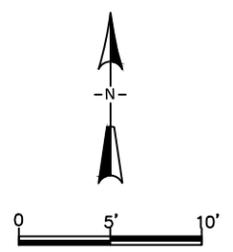
FORT HOWARD AVENUE
100' S/O FAIRVIEW AVE TO PARKVIEW RD

NAME: CONCRETE STREET REPAIRS	BY	DATE
PROJECT # 22-06	MJT KAD EPR	01-2022 01-2022 02-2022

REVISIONS / ISSUES		
NO.	DATE	REMARKS



QUANTITIES:
355 SY OF 8" REINFORCED CONCRETE
35 SY OF 6" SIDEWALK
120 LF OF 24" INTEGRAL CURB
BENCHMARK: BM 119 = ELEVATION 618.16
"T" ON TENN ON HYDRANT



CITY OF DE PERE

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

**FIRE STATION
PARKING LOT LAYOUT**

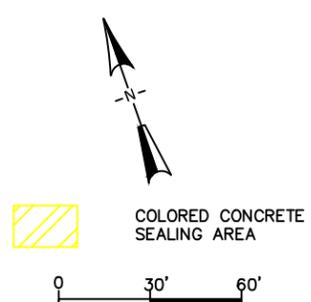
NAME: CONCRETE STREET REPAIRS
PROJECT # 22-06

	BY	DATE
SURVEYED	SRL	10-2010
DRAWN	SRL	11-2010
DESIGNED	SRL	11-2010
CHECKED	EPR	11-2010

REVISIONS / ISSUES			
NO.	DATE	BY	REMARKS



SEE PAGE C109



COLORED CONCRETE SEALING AREA

MID VALLEY DRIVE



CITY OF DE PERE

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

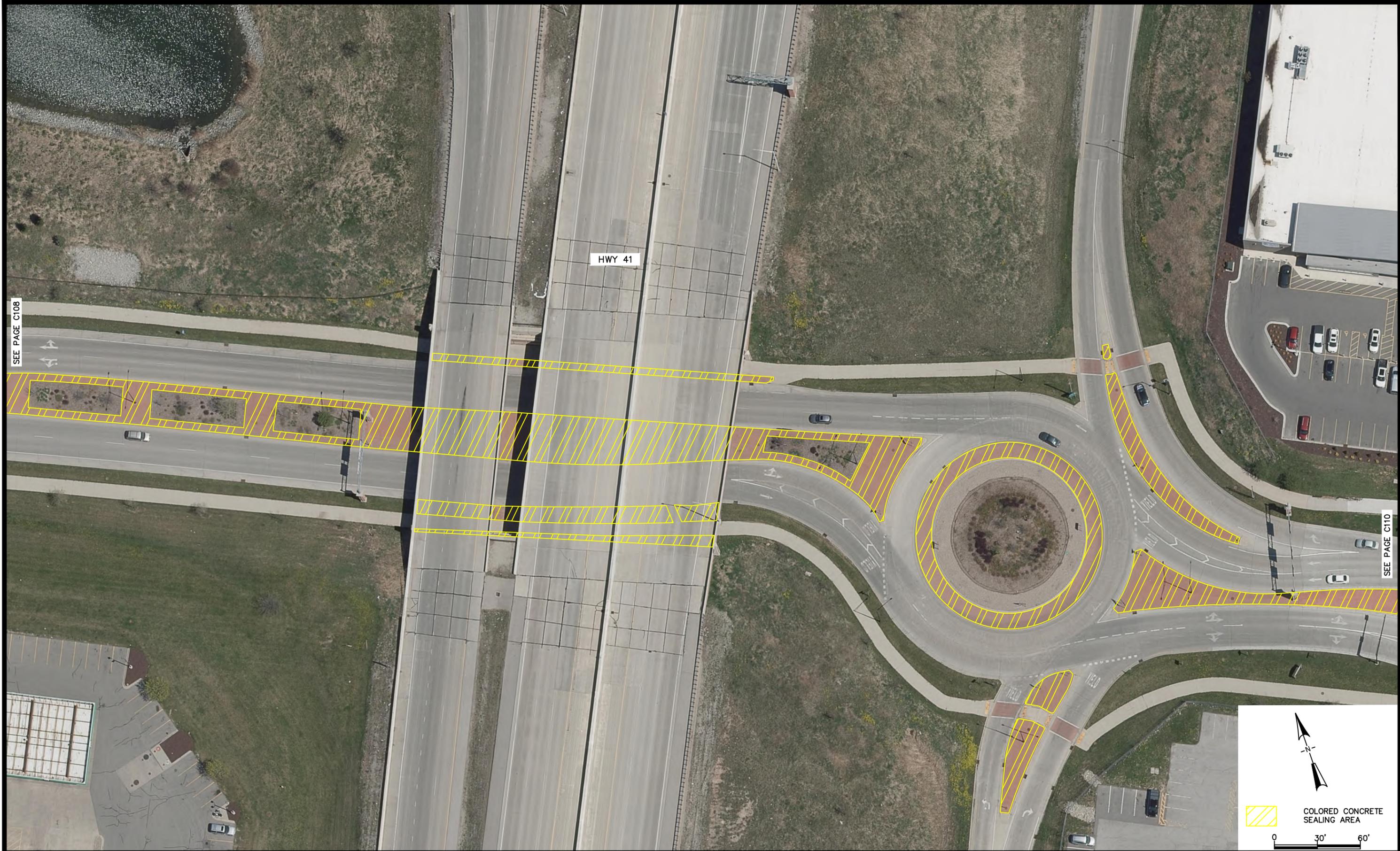
**MAIN AVENUE
600' W/O MID VALLEY DR TO
200' EAST OF MID VALLEY DR**

NAME:
CONCRETE STREET REPAIRS
PROJECT # 22-06

SURVEYED	BY	DATE
DRAWN	MJT	02-2022
DESIGNED		
CHECKED	EPR	02-2022

REVISIONS / ISSUES		REMARKS
NO.	DATE	

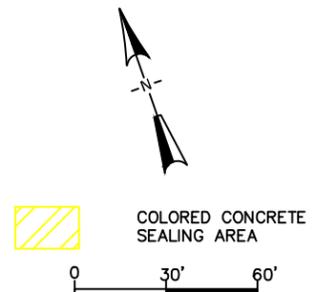
PAGE NO.
C108



SEE PAGE C108

SEE PAGE C110

HWY 41



COLORED CONCRETE SEALING AREA



CITY OF DE PERE

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

MAIN AVENUE
375' W/O HWY 41 TO 550' E/O HWY 41

NAME:
CONCRETE STREET REPAIRS
PROJECT # 22-06

BY	DATE
MJT	02-2022
EPR	02-2022

REVISIONS / ISSUES		REMARKS
NO.	DATE	

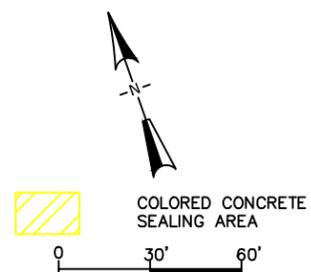
PAGE NO.
C109



SEE PAGE C109

N. TENTH STREET

LAWRENCE DRIVE



COLORED CONCRETE SEALING AREA



CITY OF DE PERE

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

MAIN AVENUE

550' E/O HWY 41 TO 425' E/O LAWRENCE DR

NAME:
CONCRETE STREET REPAIRS

PROJECT # 22-06

SURVEYED	BY	DATE
DRAWN	MJT	02-2022
DESIGNED		
CHECKED	EPR	02-2022

REVISIONS / ISSUES		REMARKS
NO.	DATE	

PAGE NO.
C110

X:\ENG\Projects\City Projects\2022\Project 22-06 Concrete Street Repairs\1200- CAD\MAIN CONCRETE SEALING.dwg

INTERSTATE 41

11.1 SY-8" DOWELED CONCRETE PAVEMENT
11.5 FEET-24" INTEGRAL CURB

939 LAWRENCE DRIVE

REMOVE AND REPLACE
CONCRETE PAVEMENT & CURB



CITY OF DE PERE

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

CITY WIDE SPOT REPAIRS
939 LAWRENCE DRIVE

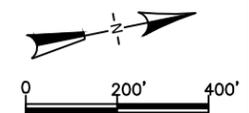
NAME:
CONCRETE STREET REPAIRS
PROJECT # 22-06

BY	DATE	REVISIONS / ISSUES		REMARKS
		NO.	DATE	
SURVEYED				
DRAWN	MJT	02-2022		
DESIGNED				
CHECKED	EPR	02-2022		

PAGE NO.
C111



NOTES:
 1. MAINTAIN ACCESS TO EACH PROPERTY AND CROSS ROAD.
 2. FOLLOW MUTCD STANDARDS FOR SIGN SPACING AND LANE DELINEATION.



**FORT HOWARD AVENUE
 TRAFFIC CONTROL**

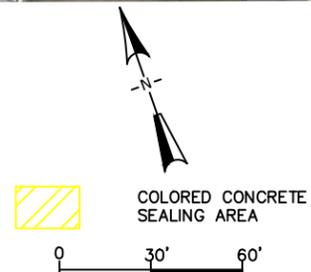
NAME: CONCRETE STREET REPAIRS	SURVEYED	BY MJT	DATE 02-2022	REVISIONS / ISSUES		PAGE NO.
PROJECT # 22-06	DRAWN	DESIGNED	CHECKED	NO.	DATE	REMARKS
						C401



NOTES:
 1. FOLLOW MUTCD STANDARDS FOR SIGN SPACING.



NOTES:
1. 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

**MAIN AVENUE
COLORED CONCRETE SEALING TRAFFIC CONTROL**

NAME:
CONCRETE STREET REPAIRS
PROJECT # 22-06

SURVEYED	BY	DATE
DRAWN	KAD	02-2022
DESIGNED		
CHECKED	EPR	02-2022

REVISIONS / ISSUES		
NO.	DATE	BY

PAGE NO.
C403

SDD 13c8 Concrete Pavement Partial Depth Repair

GENERAL NOTES

- REMOVE ALL CONCRETE TO LIMITS SHOWN TO A MAXIMUM OF 1/2 THE PAVEMENT DEPTH OR TOP OF DOWELS.
- IF REPAIR IS DEEPER THAN ANTICIPATED SARCUT, COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
- COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
- CLEAN, DRY SAND WHEN NECESSARY.
- REMOVE UNSOUND MATERIAL BY CHIPPING AT 1:1 SLOPE.
- 1/4" MINIMUM PREFORMED JOINT FILLER IF ADJACENT TO CONCRETE. EDGING REQUIRED, FULLY FORMED EDGE IF ADJACENT TO SHOULDER.
- PAVEMENT TIES AS SHOWN, ALL EMBEDMENTS 6" MINIMUM AND INSTALLED WITH GROUT.
- OVER 12" NOMINAL WIDTH WILL BE PAID AS SURFACE REPAIR.
- PAID AS JOINT OR CRACK REPAIR.
- FULL-DEPTH ADJUSTMENT SHALL BE CHIPPED TO BOTTOM OF PCC PAVEMENT AT 1:1 SLOPE.
- BEYOND 18" WILL BE PAID AS SURFACE REPAIR.

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED: 3-21-2003 DATE: 3/21/2003 BY: B.H. Dushner, P.E. PAVEMENT ENGINEER
FWBA

SDD 13c9-b Concrete Pavement Repair and Replacement

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.

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

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 5/8"	NONE	NONE	12'
7 1/2" - 9"	1"	1"	14'
8 1/2" - 10"	1 1/4"	1 1/4"	15'
9 1/2" - 11"	1 1/2"	1 1/2"	15'
12" & ABOVE	1 1/2"	1 1/2"	15'

CONCRETE PAVEMENT REPAIR AND REPLACEMENT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

SDD 13c9-c Concrete Pavement Repair and Replacement

GENERAL NOTES

- 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 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR, DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

CONCRETE PAVEMENT REPAIR AND REPLACEMENT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED: March 2008 DATE: 3/21/2008 BY: Peter Kemp, P.E. PAVEMENT SUPERVISOR
FWBA

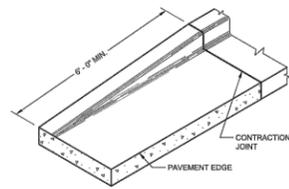


CITY OF DE PERE
ENGINEERING DIVISION 925 S. SIXTH ST DE PERE WI 54115
OFFICE 920-339-4061 FAX 920-339-4071

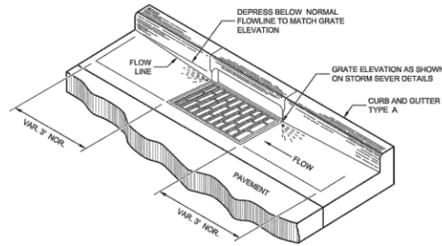
**CONSTRUCTION DETAILS
CONCRETE PAVEMENT REPAIRS**

NAME: CONCRETE STREET REPAIRS	SURVEYED	BY	DATE	REVISIONS / ISSUES		PAGE NO.
PROJECT # 22-06	DRAWN	MJT	02-2022	NO.	DATE	REMARKS
	DESIGNED	EPR	02-2022			
	CHECKED					

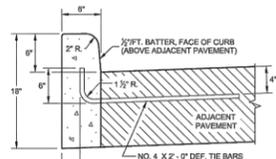
X:\ENG\Projects\City Projects\2022\Project 22-06 Concrete Street Repairs\1200-CAD\CONSTRUCTION AND TRAFFIC CONTROL DETAILS.dwg



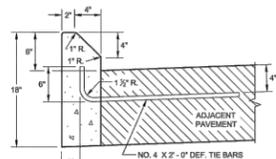
END SECTION CURB AND GUTTER



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

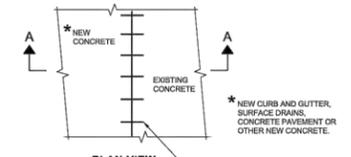


TYPES A & D

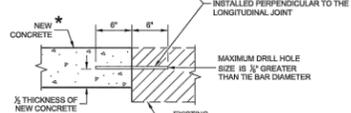


TYPES G & J

CONCRETE CURB



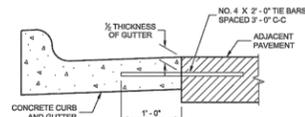
PLAN VIEW



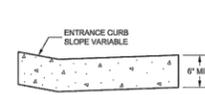
SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

GENERAL NOTES
 DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
 PAVEMENT TIE AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 902.2.2 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 GUTTERS 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 08D16 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION



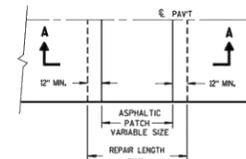
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

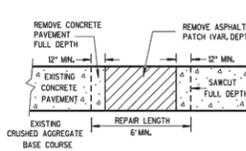
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 APPROVED February 2020 /R/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

SDD 08D01 - 21b

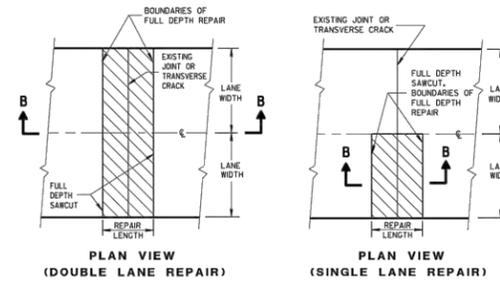
GENERAL NOTES
 SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.
 PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR 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 UNDOUBTED AND THE PAVEMENT IS TO BE OVERLAD AFTER REPAIRING.
 1. DOWEL BARS MIGHT NOT EXIST.



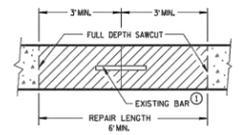
PLAN VIEW



SECTION A - A
 HMA PATCH REMOVAL



FULL DEPTH CONCRETE PAVEMENT REMOVAL

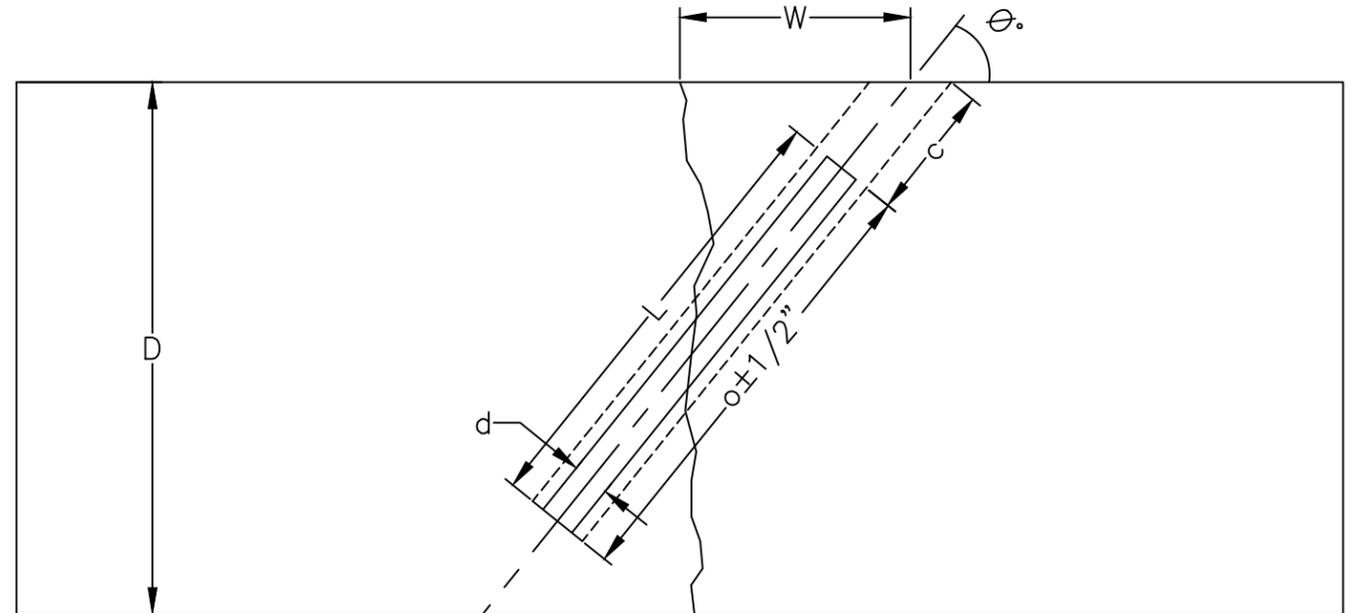


SECTION B - B
 CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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

Slab Thickness		Angle	Offset	Bar Diameter	Length of Bar	Depth of Slot	Minimum Depth to Bar
D	Ø	W	d	L	o	c	
(in)	(deg)	(in)	(in)	(in)	(in)	(in)	(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	



Cross-Stitching Details



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**

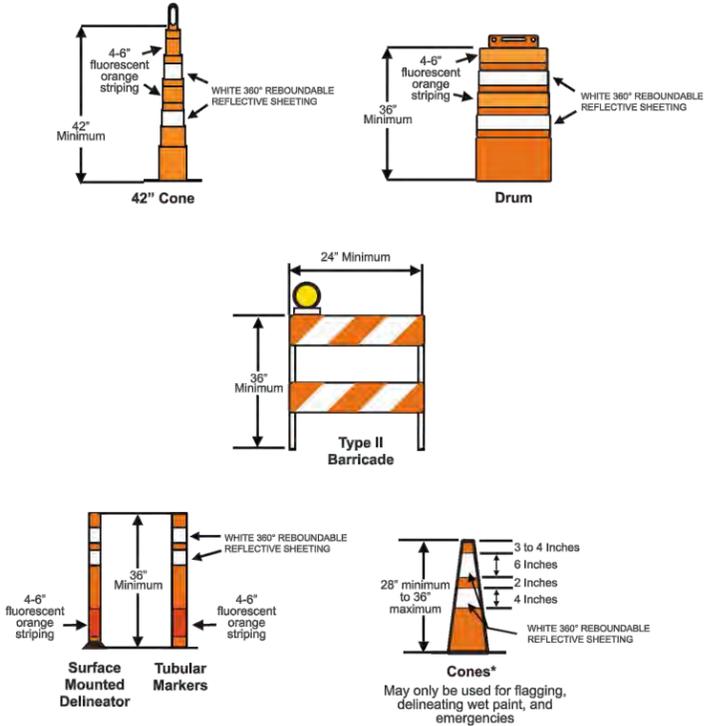
NAME: CONCRETE STREET REPAIRS	BY MUT	DATE 02-2022	REVISIONS / ISSUES		PAGE NO. C502
PROJECT # 22-06	SURVEYED	NO.	DATE	BY	
	DRAWN			REMARKS	
	DESIGNED				
	CHECKED	EPR	02-2022		



Typical Application 3
Multi-Lane Roundabouts: Inside Lane Closure

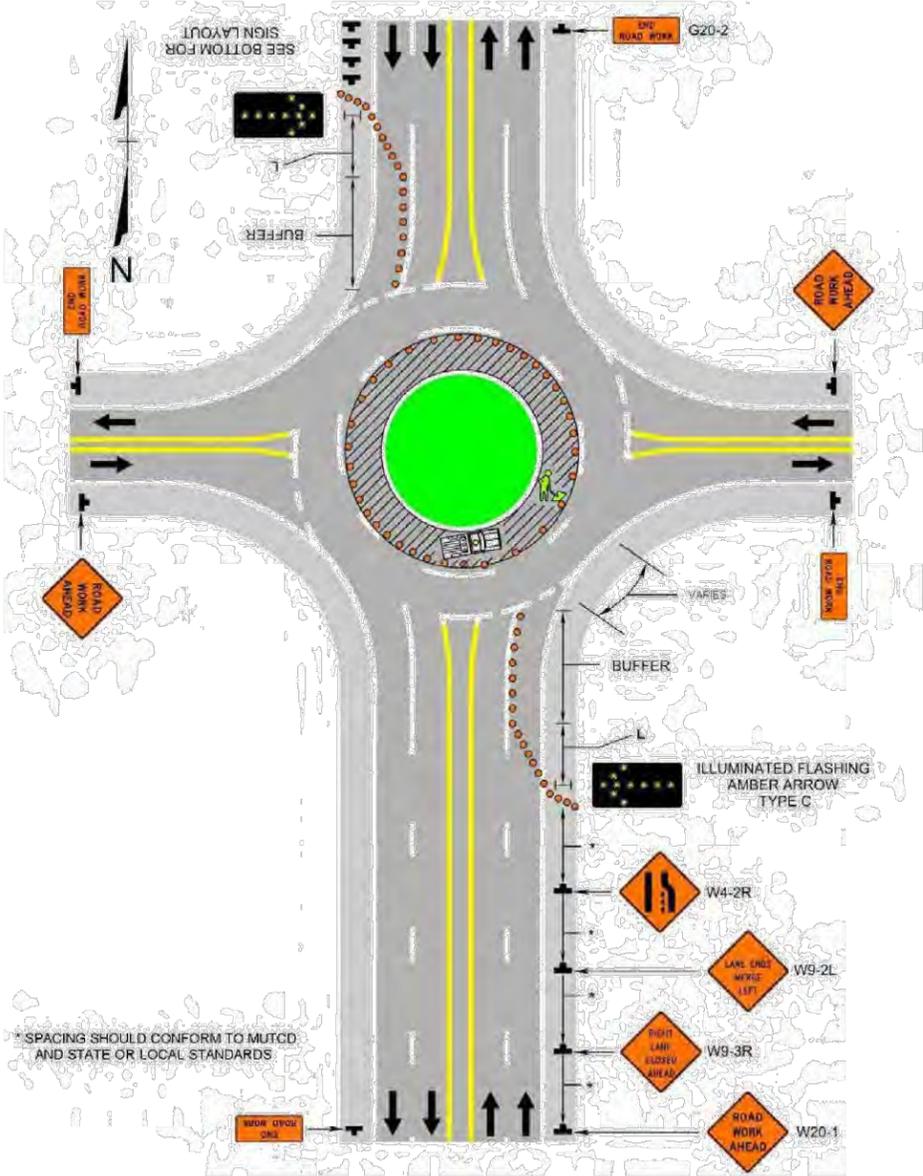
(Source: Virginia DOT (1). Work Area Protection Manual, 2011 Edition, Figure TTC-32.0)

CHANNELIZING DEVICES



TYPE 3 BARRICADES

- Orange diagonals shall slope down toward the traffic side.
- Signs mounted on Type III barricades should not cover more than half of the top two rails or 33 percent of the total area of the three rails.
- Type A Flashing Warning Lights may be used - place on both side of barricade. Required for nighttime work or if device remaining overnight.



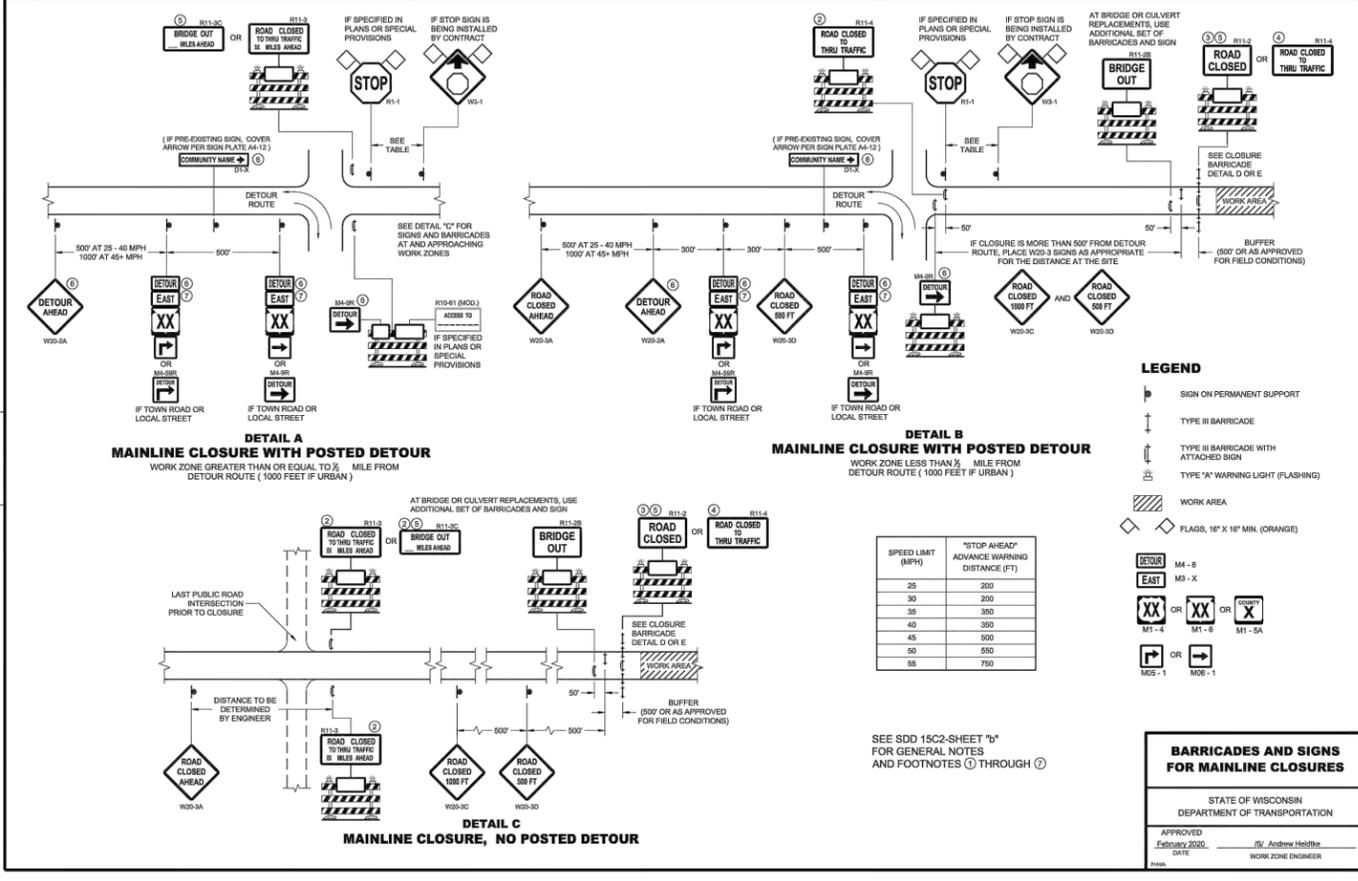
CITY OF DE PERE

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

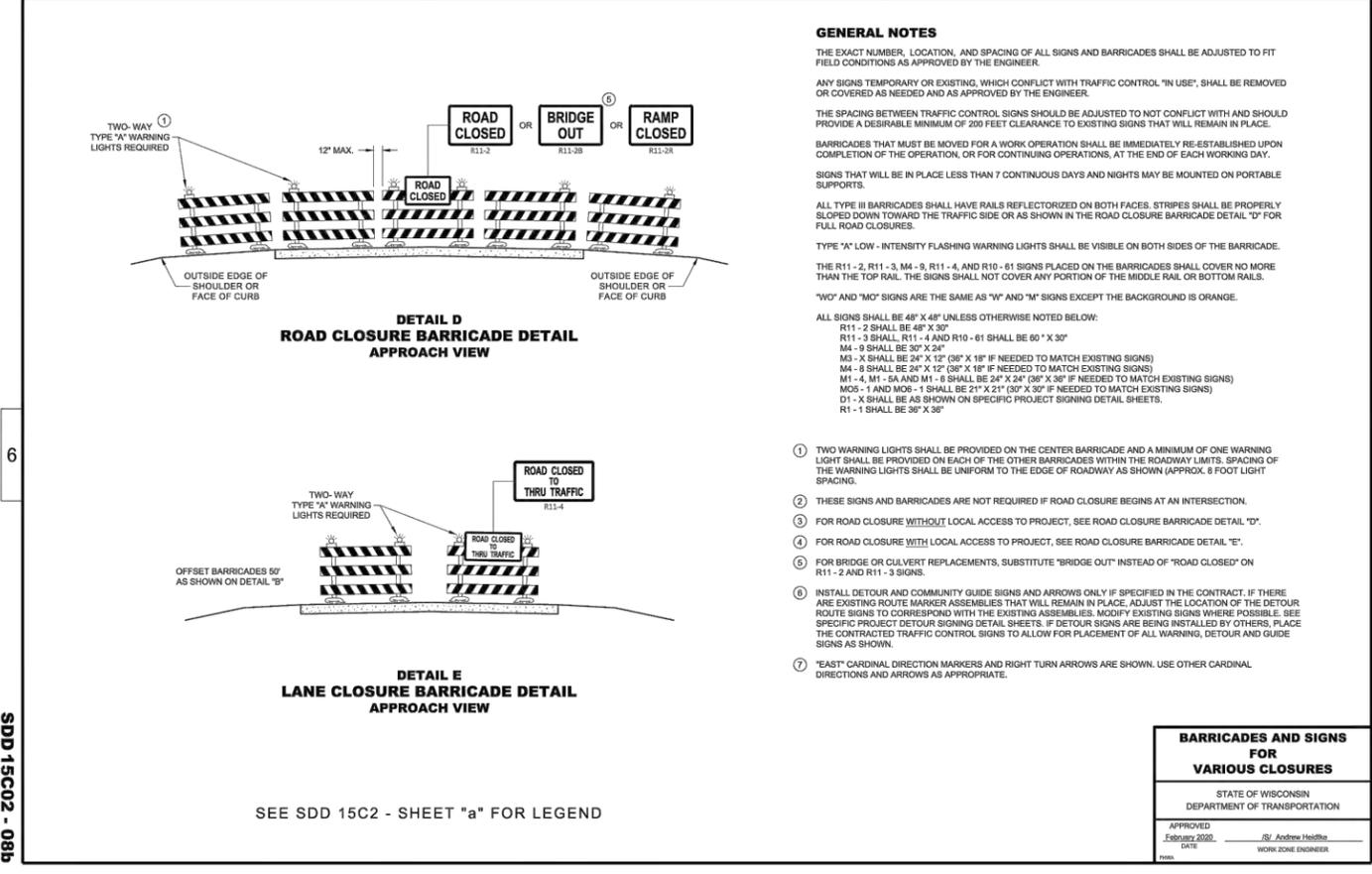
CONSTRUCTION DETAILS
TRAFFIC CONTROL

NAME: CONCRETE STREET REPAIRS	SURVEYED	BY MJT	DATE 02-2022	REVISIONS / ISSUES		PAGE NO. C503
PROJECT # 22-06	DRAWN	EPR	02-2022	NO.	DATE	
	DESIGNED			BY	REMARKS	
	CHECKED					

SDD 15C02-a Barricades and Signs for Mainline Closures



SDD 15C02-b Barricades and Sign for Various Closures



- GENERAL NOTES**
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.
- TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.
- THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.
- "W" AND "M" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
 R11 - 2 SHALL BE 48" X 30"
 R11 - 3 SHALL BE 48" X 30"
 M4 - 9 SHALL BE 30" X 24"
 M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
 M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
 M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
 M05 - 1 AND M06 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
 D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
 R1 - 1 SHALL BE 36" X 36"
- TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
 - THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
 - FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
 - FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
 - FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
 - INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
 - "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

SDD 15C02 - 08a

SDD 15C02 - 08a

SDD 15C02 - 08b

SDD 15C02 - 08b



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

**CONSTRUCTION DETAILS
TRAFFIC CONTROL**

NAME: CONCRETE STREET REPAIRS	BY	DATE	REVISIONS / ISSUES		PAGE NO. C504
PROJECT # 22-06	SURVEYED	02-2022	NO.	DATE	
	DRAWN	MJT	BY	REMARKS	
	DESIGNED	EPR			

x:\ENG\Projects\City Projects\2022\Project 22-06 Concrete Street Repairs\1200-CAD\CONSTRUCTION AND TRAFFIC CONTROL DETAILS.dwg

SDD 15D12-a Traffic Control, Lane Closure

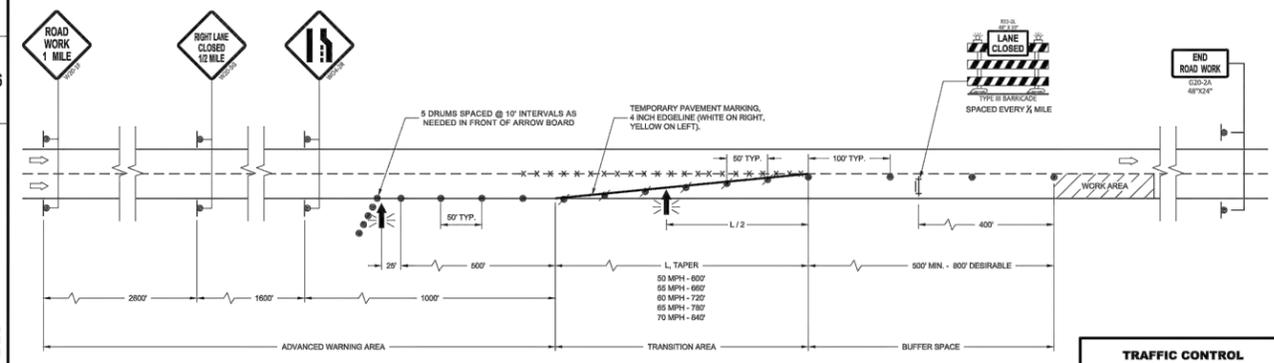
GENERAL NOTES

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.
 THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.
 ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.
 "W" IS THE SAME AS "V" EXCEPT THE BACKGROUND IS ORANGE.
 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.
 FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.
 REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.
 IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.
 WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
 ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION, THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.
 CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ▬ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- X-X-X REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ⚡ FLASHING ARROW BOARD



TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	By Andrew Heitka
DATE	WORK ZONE ENGINEER

SDD 15D20-c Traffic Control, Single Left Lane Closure, Undivided Non-Freeway/Expressway

LEGEND

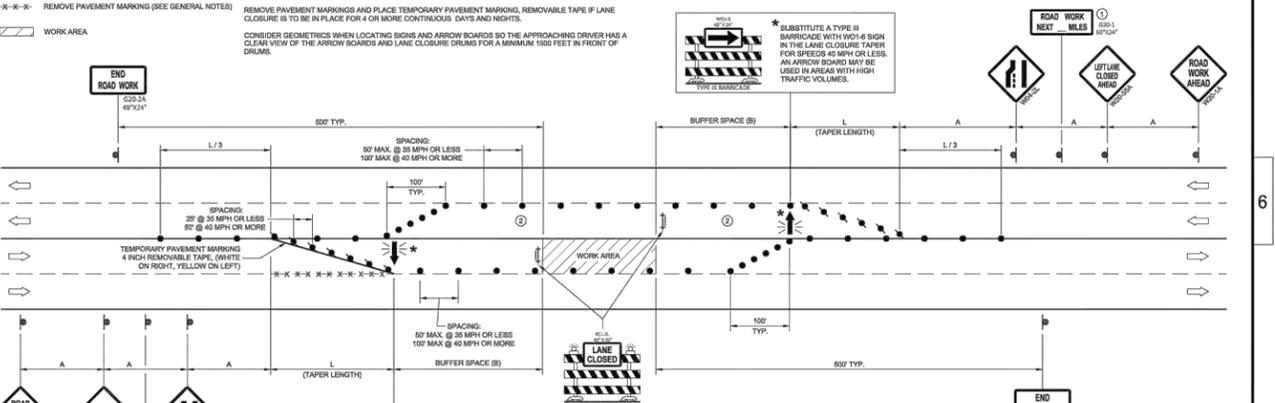
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ▬ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ⚡ FLASHING ARROW BOARD
- X-X-X REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)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

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.
 ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" x 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.
 "W" SIGN IS THE SAME AS "V" SIGN EXCEPT THE BACKGROUND IS ORANGE.
 ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNWARD" SIGNS.
 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 TEMPORARY SUPPORTS.
 THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
 W02-1A, 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.
 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.
 CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE END OF THE TAPER.
 BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.
 CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
 WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	120'	90'
30	200'	180'	90'
35	300'	240'	120'
40	300'	320'	170'
45	500'	540'	220'
50	500'	600'	260'
55	500'	660'	330'

TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREWAY/EXPRESSWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	By Andrew Heitka
DATE	STATEWORK ZONE TRAFFIC SAFETY ENGINEER

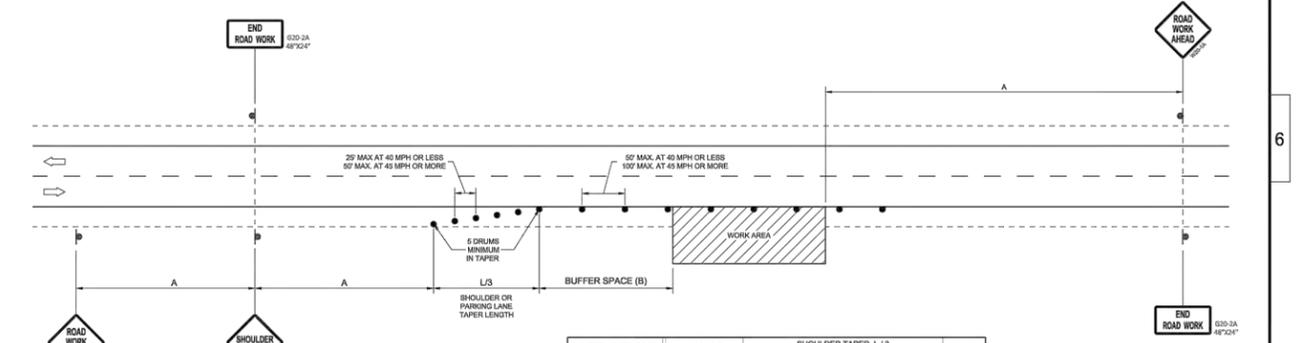
SDD 15D28 Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- ▨ WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" x 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.
 "W" SIGN IS THE SAME AS "V" SIGN EXCEPT THE BACKGROUND IS ORANGE.
 ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
 THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
 SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
 W02-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L/3 W. LATERAL OFFSET (FT)								BUFFER SPACE (B) FEET
		3	4	5	6	7	8	9		
25	200'	10	14	17	21	24	28	33	39	
30	200'	15	20	25	30	35	40	46	51	
35	300'	20	27	34	40	47	54	61	68	
40	300'	28	36	44	53	62	70	79	87	
45	500'	45	58	74	89	104	119	134	149	
50	500'	60	76	94	111	128	145	162	179	
55	500'	74	94	116	138	160	182	204	226	

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	By Andrew Heitka
DATE	STATEWORK ZONE TRAFFIC SAFETY ENGINEER

X:\ENG\Projects\City Projects\2022\Project 22-06 Concrete Street Repairs\1200-CAD\CONSTRUCTION AND TRAFFIC CONTROL DETAILS.dwg