

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
DT1502 01/2020 s.66.0901(7) Wis. Stats

Proposal Number: **028**

<u>STATE ID</u>	<u>FEDERAL ID</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>	<u>COUNTY</u>
1470-27-71	N/A	Manitowoc-Two Rivers, E Magnolia Ave-12th Street	STH 042	Manitowoc
1470-33-71	N/A	City of Two Rivers, Washington St, West Twin River Bridge B360117	STH 042	Manitowoc
1470-37-71	N/A	Manitowoc - Two Rivers, Waldo Blvd - E Magnolia Ave	STH 042	Manitowoc

ADDENDUM REQUIRED ATTACHED AT BACK

This proposal, submitted by the undersigned bidder to the Wisconsin Department of Transportation, is in accordance with the advertised request for proposals. The bidder is to furnish and deliver all materials, and to perform all work for the improvement of the designated project in the time specified, in accordance with the appended Proposal Requirements and Conditions.

Proposal Guaranty Required: \$100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: February 11, 2025 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time July 31, 2025	SAMPLE NOT FOR BIDDING PURPOSES
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or 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 bid.

Do not sign, notarize, or submit this Highway Work Proposal when submitting an electronic bid on the Internet.

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(Bidder Signature)

(Print or Type Name, Notary Public, State Wisconsin)

(Print or Type Bidder Name)

(Date Commission Expires)

(Bidder Title)

Notary Seal

Type of Work: Removals, Milling, Grading, Aggregate, Asphalt Pavement, Structure Rehabilitation, Curb and Gutter, Concrete Sidewalk, Storm Sewer, Beam Guard, Erosion Control, Permanent Signing, Traffic Control, Pavement Marking, Restoration.	For Department Use Only
Notice of Award Dated	Date Guaranty Returned

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

PROPOSAL REQUIREMENTS AND CONDITIONS

The bidder, signing and submitting this proposal, agrees and declares as a condition thereof, to be bound by the following conditions and requirements.

If the bidder has a corporate relationship with the proposal design engineering company, the bidder declares that it did not obtain any facts, data, or other information related to this proposal from the design engineering company that was not available to all bidders.

The bidder declares that they have carefully examined the site of, and the proposal, plans, specifications and contract forms for the work contemplated, and it is assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, special provisions and contract. It is mutually agreed that submission of a proposal shall be considered conclusive evidence that the bidder has made such examination.

The bidder submits herewith a proposal guaranty in proper form and amount payable to the party as designated in the advertisement inviting proposals, to be retained by and become the property of the owner of the work in the event the undersigned shall fail to execute the contract and contract bond and return the same to the office of the engineer within fourteen (14) days after having been notified in writing to do so; otherwise to be returned.

The bidder declares that they understand that the estimate of quantities in the attached schedule is approximate only and that the attached quantities may be greater or less in accordance with the specifications.

The bidder agrees to perform the said work, for and in consideration of the payment of the amount becoming due on account of work performed, according to the unit prices bid in the following schedule, and to accept such amounts in full payment of said work.

The bidder declares that all of the said work will be performed at their own proper cost and expense, that they will furnish all necessary materials, labor, tools, machinery, apparatus, and other means of construction in the manner provided in the applicable specifications and the approved plans for the work together with all standard and special designs that may be designed on such plans, and the special provisions in the contract of which this proposal will become a part, if and when accepted. The bidder further agrees that the applicable specifications and all plans and working drawings are made a part hereof, as fully and completely as if attached hereto.

The bidder, if awarded the contract, agrees to begin the work not later than ten (10) days after the date of written notification from the engineer to do so, unless otherwise stipulated in the special provisions.

The bidder declares that if they are awarded the contract, they will execute the contract agreement and begin and complete the work within the time named herein, and they will file a good and sufficient surety bond for the amount of the contract for performance and also for the full amount of the contract for payment.

The bidder, if awarded the contract, shall pay all claims as required by Section 779.14, Statutes of Wisconsin, and shall be subject to and discharge all liabilities for injuries pursuant to Chapter 102 of the Statutes of Wisconsin, and all acts amendatory thereto. They shall further be responsible for any damages to property or injury to persons occurring through their own negligence or that of their employees or agents, incident to the performance of work under this contract, pursuant to the Standard Specifications for Road and Bridge Construction applicable to this contract.

In connection with the performance of work under this contract, the contractor agrees to comply with all applicable state and federal statutes relating to non-discrimination in employment. No otherwise qualified person shall be excluded from employment or otherwise be subject to discrimination in employment in any manner on the basis of age, race, religion, color, gender, national origin or ancestry, disability, arrest or conviction record (in keeping with s.111.32), sexual orientation, marital status, membership in the military reserve, honesty testing, genetic testing, and outside use of lawful products. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor further agrees to ensure equal opportunity in employment to all applicants and employees and to take affirmative action to attain a representative workforce.

The contractor agrees to post notices and posters setting forth the provisions of the nondiscrimination clause, in a conspicuous and easily accessible place, available for employees and applicants for employment.

If a state public official (section 19.42, Stats.) or an organization in which a state public official holds at least a 10% interest is a party to this agreement, this contract is voidable by the state unless appropriate disclosure is made to the State of Wisconsin Ethics Board.

BID PREPARATION

Preparing the Proposal Schedule of Items

A. General

- (1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:
 1. Electronic bid on the internet.
 2. Electronic bid on a printout with accompanying diskette or CD ROM.
 3. Paper bid under a waiver of the electronic submittal requirements.
- (2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.
- (3) The department will provide bidding information through the department's web site at:

<https://wisconsin.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 PM local time on the Thursday before the letting. Check the department's web site after 5:00 PM local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at <http://www.bidx.com/> after 5:00 PM local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (*.ebs or *.00x) is used to submit the final bid.

- (4) Interested parties can subscribe to the Bid Express™ on-line bidding exchange by following the instructions provided at the www.bidx.com web site or by contacting:

Info Tech Inc.
5700 SW 34th Street, Suite 1235
Gainesville, FL 32608-5371
email: <mailto:customer.support@bidx.com>

- (5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.
- (6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:

<https://wisconsin.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the department's web site listed above or by picking up the addenda at the Bureau of Highway Construction, 4th floor, 4822 Madison Yards Way, Madison, WI, during regular business hours.

- (7) Addenda posted after 5:00 PM on the Thursday before the letting will be emailed to the eligible bidders for that proposal. All eligible bidders shall acknowledge receipt of the addenda whether they are bidding on the proposal or not. Not acknowledging receipt may jeopardize the awarding of the project.

B. Submitting Electronic Bids**B.1 On the Internet**

- (1) Do the following before submitting the bid:
 4. Have a properly executed annual bid bond on file with the department.
 5. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.
- (2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:
 1. Download the latest schedule of items reflecting all addenda from the Bid Express™ web site.
 2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
 3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
 4. Submit the bid before the hour and date the Notice to Contractors designates.
 5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.
- (3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

B.2 On a Printout with Accompanying Diskette or CD ROM

- (1) Download the latest schedule of items from the Wisconsin pages of the Bid Express web site reflecting the latest addenda posted on the department's web site at:
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>
Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.
- (2) Staple an 8 1/2 by 11 inch printout of the Expedite□□ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal, not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

- (3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.
- (4) The bidder-submitted printout of the Expedite□□ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.

- (5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
1. The check code printed on the bottom of the printout of the ExpediteTM generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the ExpediteTM generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
 3. The diskette or CD ROM is not submitted at the time and place the department designates.

B Waiver of Electronic Submittal

- (1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.
- (2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a \$75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."
- (3) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
 1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
 2. The bidder fails to pay the \$75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the \$75.
 3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.
- (4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

PROPOSAL BID BOND

DT1303 1/2006

Wisconsin Department of Transportation

Proposal Number	Project Number	Letting Date
Name of Principal		
Name of Surety	State in Which Surety is Organized	

We, the above-named Principal and the above-named Surety, are held and firmly bound unto the State of Wisconsin in the sum equal to the Proposal Guaranty for the total bid submitted for the payment to be made; we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. The condition of this obligation is that the Principal has submitted a bid proposal to the State of Wisconsin acting through the Department of Transportation for the improvement designated by the Proposal Number and Letting Date indicated above.

If the Principal is awarded the contract and, within the time and manner required by law after the prescribed forms are presented for signature, enters into a written contract in accordance with the bid, and files the bond with the Department of Transportation to guarantee faithful performance and payment for labor and materials, as required by law, or if the Department of Transportation shall reject all bids for the work described, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. In the event of failure of the Principal to enter into the contract or give the specified bond, the Principal shall pay to the Department of Transportation **within 10 business days of demand** a total equal to the Proposal Guaranty as liquidated damages; the liability of the Surety continues for the full amount of the obligation as stated until the obligation is paid in full.

The Surety, for value received, agrees that the obligations of it and its bond shall not be impaired or affected by any extension of time within which the Department of Transportation may accept the bid; and the Surety does waive notice of any such extension.

IN WITNESS, the Principal and Surety have agreed and have signed by their proper officers and have caused their corporate seals to be affixed this date: **(DATE MUST BE ENTERED)**

PRINCIPAL

(Company Name) **(Affix Corporate Seal)**

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

(Name of Surety) **(Affix Seal)**

(Signature of Attorney-in-Fact)

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

IMPORTANT: A certified copy of Power of Attorney of the signatory agent must be attached to the bid bond.

CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

Time Period Valid (From/To)	
Name of Surety	
Name of Contractor	
Certificate Holder	Wisconsin Department of Transportation

This is to certify that an annual bid bond issued by the above-named Surety is currently on file with the Wisconsin Department of Transportation.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the annual bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing surety will give thirty (30) days written notice to the certificate holder indicated above.

(Signature of Authorized Contractor Representative)

(Date)

LIST OF SUBCONTRACTORS

Section 66.0901(7), Wisconsin Statutes, provides that as a part of the proposal, the bidder also shall submit a list of the subcontractors the bidder proposes to contract with and the class of work to be performed by each. In order to qualify for inclusion in the bidder's list a subcontractor shall first submit a bid in writing, to the general contractor at least 48 hours prior to the time of the bid closing. The list may not be added to or altered without the written consent of the municipality. A proposal of a bidder is not invalid if any subcontractor and the class of work to be performed by the subcontractor has been omitted from a proposal; the omission shall be considered inadvertent or the bidder will perform the work personally.

No subcontract, whether listed herein or later proposed, may be entered into without the written consent of the Engineer as provided in Subsection 108.1 of the Standard Specifications.

[illegible]

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS - PRIMARY COVERED TRANSACTIONS

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.
4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.
7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR- 1273 - "Required Contract Provisions Federal Aid Construction Contracts," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

1. The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
2. Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1470-27-71, Manitowoc – Two Rivers, E Magnolia Ave – 12th Street, STH 42, Manitowoc County, Wisconsin; Project 1470-33-71, City of Two Rivers, Washington St, West Twin River Bridge B-36-0117, STH 42, Manitowoc County, Wisconsin; and Project 1470-37-71, Manitowoc – Two Rivers, Waldo Blvd – E Magnolia Ave, STH 42, Manitowoc County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2025 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20240703)

2. Scope of Work.

The work under this contract shall consist of asphalt milling, HMA pavement, base aggregate, concrete base patching, beam guard, storm sewer, culvert pipes, apron and wingwalls repair, curb ramp upgrades, concrete deck overlay of B-36-0117 and realignment of Mirror Drive with STH 42 and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

Begin work within 10 calendar days after the engineer issues a written notice to do so.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within 10 calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

General

Have a superintendent or designated representative from the prime contractor on the job site during all controlling work operations, including periods limited to only subcontractor work operations, to serve as a primary contact person and to coordinate all work operations.

Hold prosecution and progress meetings twice a month. Invite City of Manitowoc, City of Two Rivers and Maritime Metro representatives to attend the prosecution and progress meetings, including area EMS services. The prime contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work expected to begin within the next two weeks shall provide a written schedule of the next week(s)' operations. Provide begin and end dates of specific prime and subcontractor work operations. Review the contractor's schedule and subcontractors' schedule, traffic control staging, and evaluation of progress and pay items and other agenda items at the meeting. Review plans, schedule and specifications for upcoming work at this meeting.

Interim Completion and Liquidated Damages – STH 42: Friday, May 22, 2025

Complete stage 1 construction operations on STH 42 to the stage necessary to reopen it to through traffic by May 22, 2025. Do not reopen until completing the following work: Surface milling, culvert pipe replacements, storm sewer replacements, concrete base patching, concrete deck overlay of structure B-36-0117, curb ramp replacements.

If the contractor fails to complete the work necessary to reopen STH 42 to traffic by May 22, 2025, the department will assess the contractor \$9,600 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on May 23, 2025. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to standard spec 108.11.

Schedule of Operations

Unless modifications to the staging are approved in writing by the engineer, the department anticipates that the scope of work for each stage shall be as follows and according to the plans:

Stage 1 - Closure to through traffic

- Complete surface milling
- Complete Culvert pipe replacements.
- Complete storm sewer replacements.
- Complete concrete base patching.
- Concrete deck overlay of Structure B-36-0117.
- Complete curb ramp and associated curb and gutter upgrades.
- Mirro Drive realignment.

Stage 2- Open to through traffic, utilizing flagging or shoulder and single lane closures:

- Complete all remaining non-curb ramp related curb and gutter replacements.
- Complete Mirro Drive Realignment.
- HMA Overlay.
- Complete beam guard replacements.
- Culvert apron and wingwall replacements.

Milling and Paving Operations

Perform paving operations one lane at a time. A single lane closure or flagging operations are acceptable to complete the work. Flagging shall occur during daytime hours only. Maintain a minimum travel lane of 11' during the moving flagging operation. Follow the standard specifications for drop offs after paving. If adjacent lanes are not at equal elevation, supplement with signing for "Uneven Lanes" (W8-11), per Traffic Control, Drop-Off Signing. These signs are included in the Miscellaneous Quantities.

A milled surface open to through traffic shall not remain in place for longer than 2 weeks. For paved surfaces open to through traffic, provide an even cross-sectional profile of the roadway within 72 hours of paving adjacent traffic.

Sign shoulder drop-offs and other conditions caused by work operation. These signs are incidental to the work.

Make arrangements and be responsible for the prompt replacement of damaged or dislocated traffic control or guidance devices, day or night. All traffic control devices not specified in the plans and needed to accommodate local traffic within the work zone will be considered incidental to the work being performed.

Do not proceed with any traffic operation until all traffic control devices for such work are in the proper location, as approved by the engineer.

Beam Guard Placement

Beam guard that is removed shall be replaced within 10 days if the roadway is open to through traffic. Place traffic control drums when beam guard is out of service. Do not have beam guard out of service simultaneously on shoulders directly across from each other.

Fish Spawning

There shall be no instream disturbance of the unnamed tributary at Station 188+30 as a result of construction activity under or for this contract, from March 1 to June 15 both dates inclusive, in order to avoid adverse impacts upon the spawning of fish species and other aquatic organisms.

Any change to this limitation will require submitting a written request by the contractor to the engineer, subsequent review and concurrence by the Department of Natural Resources in the request, and final approval by the engineer. The approval will include all conditions to the request as mutually agreed upon by WisDOT and DNR.

Protection of Endangered Bats (Tree Clearing)

Northern long-eared bats (*Myotis septentrionalis*, or NLEB) have the potential to inhabit the project limits because they roost in trees, bridges and culverts. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work, and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

Ensure all operators, employees, and subcontractors working in areas of known or presumed bat habitat are aware of environmental commitments and avoidance and minimization measures (AMMs) to protect both bats and their habitat.

Direct temporary lighting, if used, away from wooded areas during the bat active season April 1 to October 31, both dates inclusive.

The department has contracted with others and will perform the following operations after October 31 and prior to April 1:

- Cutting down and removing trees.

If there are clearing operations required to remove previously cut trees, submit a schedule and description with the ECIP 14 days prior to the work. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of clearing operations, and list those additional measures in the approval letter for the ECIP.

Contractor means and methods to remove additional trees will not be allowed. If it is determined that additional trees with a 3-inch or greater diameter at breast height (dbh) need to be removed beyond contractor means and methods, notify the engineer to coordinate with the WisDOT REC to determine if consultation with United States Fish and Wildlife Service (USFWS) is required. The contractor must be aware that the WisDOT REC and/or USFWS may not permit modifications.

United State Coast Guard

To obtain authorization to preform work over the West Twin River, provide the United States Coast Guard a letter with the preferred working days, a description of the work to be performed, methodology, any needed deviation from the operating regulations if the bridge is moveable, and a short purpose statement. Coordinate authorization to preform work with Blair Stanifer, William.B.Stanifer@uscg.mil, (216) 902-6086 of the Ninth Coast Guard District.

Wisconsin Department of Natural Resources

Notify Matt Schaeve with the Wisconsin Department of Natural Resources 10 working days prior to beginning work on the storm sewer pipe at Columbus Street to evaluate the need to relocate an environmentally sensitive species within the storm pipe disturbance limits.

Matt Schaeve
(920) 366-1544

Matthew.schaeve@wisconsin.gov

Federal Aviation Administration

Prior to construction, an aeronautical study form (FAA 7460-1) must be e-filed with the FAA at least 45 days prior to the start of construction, at the following website:

<https://www.faa.gov/forms/index.cfm/go/document.information/documentid/186273>

Manitowoc County Airport

A notice of impact should be provided to Manitowoc County Airport in advance of the beginning of any construction activities. This notice should include the project schedule, any identified aeronautical impacts, identify height of project components whether temporary or permanent, and anticipated effects to surface access to the airport during construction (i.e detours and/or closures)

Maritime Metro Coordination

Maritime Metro maintains Routes 1 and 2 within the project limits. Coordination of schedule will be required throughout the project and Maritime Metro will detour the route during full closure. Invite Dan Koski, Director of Public Infrastructure, dkoski@manitowoc.org, Kevin Bottesi, Transit Operations Supervisor, kbottesi@manitowoc.org and Shanna Bratz, sbratz@manitowoc.org to the Preconstruction Meeting all bi-monthly progress meetings.

Ice Age Trail & Mariners Trail

The Ice Age Trail is located on the east side of STH 42 from the beginning of the project to a crossing of STH 42 at Taylor Street. This trail is also identified as the Mariners Trail from the beginning of the project and continues on the east side of STH 42 throughout the entire project limits.

Notify Cheryl Gorsuch, Lakeshore Chapter Coordinator, at cherylgorsuch@gmail.com for the Ice Age Trail Alliance and Mike Mathis, City of Two Rivers Director of Parks and Recreation, 920-793-5591, mmathis@two-rivers.org representing the Mariners Trail one week prior to any closure of the Mariners Trail or Ice Age Trail.

The Maritime Marathon is scheduled for the first weekend of June and utilizes the trail. The trail will be open to trail users during the event and have paved surface.

1304 Memorial Drive

The current business located at 1304 Memorial Drive contains fragile inventory within the commercial building. Use caution while working in that area. Minimize the use of heavy equipment within close proximity to the building.

Bridge B-36-117 over the West Twin River

Work on Structure B-36-117 is considered preventative maintenance and impacts to the West Twin River are not expected. However, proper precautions must be made to ensure that bridge materials or debris are prevented from falling into the river during construction. Any materials that make their way into the river should be promptly cleaned up or removed.

4. Traffic.

General

Maintain one lane of directional traffic along STH 42 except as noted in the Detour section below. Single lane closures or flagging operations during daylight working hours are acceptable. Continuous single lane closures are acceptable along STH 42 as long as work is regularly occurring in the closed areas. If work is occurring within the lane closure area, but not immediately adjacent to the open travel lane, channelizing devices need to be pulled back from the travel lane according to Standard Detail Drawing "Traffic Control, Single Lane Closure, Divided Non-Freeway/Expressway."

Maintain access to all commercial, recreational and residential properties at all times for local residents, businesses, and emergency vehicles. Contact the property owner 48 hours prior to any restrictions to entrances in order to coordinate temporary closures. Restore private entrances within 12 hours of removal.

Employ such flag persons, signs, barricades, and drums as may be necessary to safeguard or protect hazards in the work zone, such as drop-offs for vehicles, and direct traffic at locations where construction operations may interfere or restrict the smooth flow of traffic.

Provide 24-hour contact information, including telephone numbers to the engineer, local first responders (police, fire, EMS) and the Manitowoc County Sheriff's Department in the event a safety hazard develops.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

Traffic Staging

Perform construction operations on STH 42 and area roadways according to the stages described in the article Prosecution and Progress and address traffic under each stage as described in this Traffic article. Maintain a minimum of one 11-foot travel lane in each direction on side streets unless otherwise noted on the plans.

Stage 1:

- STH 42 shall be milled prior to all base patching, storm sewer and culvert replacements to assist the construction engineer with identifying areas that will need base patching.
- Once areas have been milled, all base patching, storm sewer and culvert replacements will be completed in an order that allows access to all commercial, recreational and residential properties from either north or south. This work will be completed by noon May 23, 2025.
- Stage curb ramp reconstructions such that when the posted pedestrian detour is in place on the north end of the project, pedestrian access is maintained at all times.

Stage 2:

- Maintain one lane of traffic in each direction at all times on STH 42.

Trail Staging

Maintain trail access during the duration of the project.

The trail can be closed during culvert pipe and storm sewer pipe installations that cross under the trail and outfall to the lake. After new pipe installation is complete, the contractor shall have the base course material leveled and compacted in the removal areas within 24 hours, and the new asphalt layer must be in place and available for use within 72 hours of completion of the pipe installation.

When beam guard and rub rail are being installed within 10 feet of the trail, the contractor shall be responsible for stopping traffic on the trail when the contractor will be using this portion of the trail. Flagging will be required when the trail is partially or fully blocked or moving equipment presents a hazard to the travelling public as determined by the engineer. Trail traffic shall be allowed to pass when construction vehicles have cleared the trail.

Portable Changeable Message Signs – Message Prior Approval

After coordinating with department construction field staff, notify the Northeast Region Traffic Section at (920) 366-8033 (secondary contact number is (920) 360-3107) three business days before deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

PCMS boards must be deployed 7 days before the closure of STH 42.

ner-643-035 (20171213)

Temporary Work Zone Clear Zone Working Restrictions

Replace standard spec 104.6.1.2.4(1) with the following:

On roads open to all traffic, remove construction debris, stored materials, including stockpiles, and equipment not in use a minimum of 15-feet from the edge of the traveled way unless protected by concrete barrier temporary precast.

If the contractor is unsure whether an individual work operation will meet the safety requirements for working within the clear zone, review the proposed work operation with the engineer before proceeding with the work.

ner-104-005 (20230206)

Wisconsin Lane Closure System Advance Notification

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16 feet)	MINIMUM NOTIFICATION
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥ 16 feet)	MINIMUM NOTIFICATION
Shoulder Closures	3 calendar days
Lane closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

5. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 42 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday and special event periods:

- From noon Friday, May 23, 2025 to 6:00 AM Tuesday, May 27, 2025 for Memorial Day;
- From noon Thursday, July 3, 2025 to 6:00 AM Monday, July 7, 2025 for Independence Day.

stp-107-005 (20210113)

6. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.

Project 1470-27-71

The utility work plan includes additional detailed information regarding the location of known discontinued, relocated, or removed utility facilities. These can be requested from the department during the bid preparation process, or from the project engineer after the contract has been awarded and executed.

Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. In such situations, provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Provide this notice 14 to 16 calendar days in advance of when the prior work will be completed and the site will be available to the utility. Follow-up with a confirmation notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

stp-107-065 (20240703)

Any utility facility locations (stations, offsets, elevations, depths) listed in this article are approximate.

AT&T Wisconsin (Communication) has overhead and underground facilities within the project limits.

AT&T Wisconsin will complete the following to address project conflicts during construction:

AT&T has two buried cables along the west side of Mirro Drive in close proximity to proposed manhole structure 3.1 at Station 150+91, 99.7' LT. AT&T will adjust the exposed cable to provide minimum 3-foot clearance west of the storm manhole to provide construction clearance. Work will occur immediately following the closure of Mirro Drive to traffic at the start of construction. Notify AT&T once the excavation limits are staked. The work is anticipated to take 2 working days to adjust.

AT&T has one buried fiber cable along the north right-of-way line of STH 42 at Mirro Drive which crosses the proposed 12-inch storm pipe between inlets 3.4 and 3.5. AT&T will adjust the exposed cable to provide minimum clearance for the storm pipe installation. Work will occur immediately following the closure of Mirro Drive to traffic at the start of construction. Notify AT&T once the new storm pipe alignment is staked. The work is anticipated to take 2 working days to adjust.

City of Two Rivers (Sewer) has underground sanitary sewer within the project limits.

The City of Two Rivers sewer has noted there is a conflict with existing sewer utilities.

City of Two Rivers Sewer will provide insulation board upon notification when backfilling near existing sewer facilities at the intersection of STH 42 and Columbus Street.

Adjust manholes to match the new finished pavement elevation. Perform this work in accordance with the requirements of Adjusting Manhole Covers.

City of Two Rivers (Water) has underground water main within the project limits.

The City of Two Rivers water will complete the following to address project conflicts during construction:

There is an existing water valve manhole near Station 325+00, 52.3' LT located within the existing concrete of the path at the northeast corner of STH 42 and Madison St. The valve will remain in place during removal and realignment of the concrete path. City of Two Rivers Water will adjust the elevation of the water valve upon completion of grading around the valve prior to paving operations. This work is estimated at 1 working day.

Existing water main structure and pipe near Station 273+00, 40' LT will be discontinued and removed once the contractor has removed the existing pavement surface. This work is estimated at 2 working days.

Two Rivers Water will replace the previously removed water main after the Columbus Street culvert is replaced and the contractor has backfilled to the existing water main elevation. A new water main valve structure and pipe will be installed for the contractor to backfill over to finished grade. The work is anticipated to take 3 working days to complete.

Frontier Communications of Wisconsin LLC (Communications) has underground facilities within the project limits.

Frontier Communications of Wisconsin LLC will complete the following work prior to construction:

Frontier will discontinue existing buried copper between pedestals located at approximately Stations 340+86 and 343+90 LT. The existing pedestal at station 343+90 will be removed.

Manitowoc Public Utilities (Electricity) has overhead and underground facilities within the project limits.

Manitowoc Public Utilities will complete the following to address project conflicts during construction:

There is a direct buried underground cable operating at 240 volts near the proposed storm sewer at Station 176+32 RT. During construction, notify Manitowoc Public Utilities and they will deenergize and discontinue the cable to accommodate installation of the storm sewer pipe and structure. This work is anticipated to take 1 working day to complete.

Manitowoc Public Utilities (Water) has underground facilities within the project limits.

Manitowoc Public Utilities will complete the following to address project conflicts during construction:

The existing fire hydrant located at Station 151+36, 68' LT (BM#5) will be relocated from the northeast side of the existing Mirro Drive location to the northwest side of the realigned Mirro Drive. A new hydrant lead will be installed to connect the hydrant to the existing water main. This work is anticipated to take 1 working day to complete.

Midwest Fiber Networks LLC (Communications) has underground facilities within the project limits.

Midwest Fiber Networks will complete the following to address project conflicts prior to construction:

Midwest Fiber has an existing duct and fiber located from approximately Station 151+44, 63' LT to Station 152+17, 62' LT. This duct will be relocated away from the storm inlet and pipe between structures 3.3 and 3.4. In addition, the handhole at approximately Station 151+54, 63' LT will be relocated to approximately Station 151+54, 58' LT.

Midwest Fiber Network facilities are in close proximity to work being completed in the following locations:

There is a buried fiber cable at Station 179+98, LT that is approximately five feet deep, five feet from the right-of-way and five feet from the end of the proposed endwall replacement.

The owner has indicated that no adjustments are anticipated.

Wisconsin Public Service Corporation (WPS) (Gas) has underground facilities within the project limits.

WPS will complete the following work prior to construction to address project conflicts at Mirro Drive:

Install a 2-inch polyethylene pipe along the west edge of the Mirro Drive Right-of-way from approximately STH 42 Station 150+50, 56 feet LT to approximately Mirro Drive Station 1+25.

Install a 2-inch polyethylene pipe at approximately 36-inches deep crossing Mirro Drive at Mirro Drive Station 1+25 to the east right-of-way.

Install a 6-inch polyethylene pipe along the east right-of-way from Mirro Drive Station 1+25 to STH 42 Station 151+55, 69' LT.

Install a 6-inch polyethylene pipe around the right-of-way corner at approximately 30-inches deep to stay over proposed storm sewer pipe.

WPS will complete the following work prior to construction to address project conflicts near the STH 42 and 12th Street / Lake Street intersection:

Install a 4-inch polyethylene pipe on the east side of STH 42 from approximately Station 333+00 to Station 338+00.

Install a 4-inch polyethylene pipe crossing of STH 42 near Station 338+00.

Install a 4-inch polyethylene pipe on the west side of STH 42 near the existing right-of-way line from approximately Station 338+00 to Station 341+00.

Install a 4-inch polyethylene pipe crossing of STH 42 near Station 341+00 continuing east and west on 12th Street and Lake Street.

Install a 2-inch polyethylene pipe on the west side of STH 42 from approximately Station 341+00 to 342+50.

WPS will complete the following work during construction:

Arrange for a watchdog to be on site during the installation of the 12-inch storm sewer pipe from structure 3.4 to 3.5 near Station 151+55 at Mirro Drive by notifying WPS.

The owner has indicated that no adjustments are anticipated.

Other Utilities

The following utility owners have facilities within the project limits; however. No adjustments are anticipated:

City of Manitowoc (Sewer)
City of Two Rivers (Electricity)
Comcast (Communications)
Central Brown County Water Authority (Water)
Manitowoc Public Utilities (Communications)
Net Lec LLC (Communications)
Spectrum (Communications)

Project 1470-33-71 & 1470-37-71

All coordination was completed under Project 1470-27-71.

7. Work by Others

City of Two Rivers (Electricity) has overhead and underground facilities within the project limits.

The City of Two Rivers electric will complete the following to address project conflicts prior to construction:

The existing streetlight at Station 272+85, 50' LT will be relocated away from the intersection of STH 42 and Columbus Street approximately 25' west to Station 272+60, 50' LT to avoid conflict with the proposed culvert replacement work.

Manitowoc Public Utilities (Electricity) has overhead and underground facilities within the project limits.

Manitowoc Public Utilities will complete the following to address project conflicts during construction:

There is an existing street light pole at Station 179+90 RT. During construction, notify Manitowoc Public Utilities and they will remove the street light pole. This work is anticipated to take 1 working day to complete.

8. Railroad Insurance and Coordination - Wisconsin Central Ltd (CN).

A Description

Comply with standard spec 107.17 for all work affecting Wisconsin Central Ltd (CN) property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3 Insurance is filed in the name of Wisconsin Central Ltd and Its Parents (CN).

Notify evidence of the required coverage, and duration to Matthew Turner, Public Projects Officer, 1625 Depot Street, Stevens Point, WI 54481; Telephone (715) 345-2503; E-mail: Matthew.turner@cn.ca.

Also send a copy to the following: Jared Kinziger, NE Region Railroad Coordinator; 944 Vanderperren Way, Green Bay, WI 54304; Telephone (920) 492-7713; E-mail: jared.kinziger@dot.wi.gov.

Include the following information on the insurance document:

- Project ID: 1470-27-00, 1470-33-00, 1470-37-00
- Project Location: Manitowoc, WI and Two Rivers, WI
- Route Name: STH 42, Manitowoc County
- Crossing ID: 181205R
- Railroad Subdivision: Manitowoc

- Railroad Milepost: 6.74
- Work Performed on or within 50' of RR right-of-way: Pavement removal, grading, asphalt paving.

A.2 Train Operation

This part of the railroad is out of service and most of the crossings have been removed to the south.

A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination

Construction Contact

Matthew Turner, Public Works Officer; 1625 Depot Street, Stevens Point, WI 54481; Telephone (715) 345-2503; E-mail matthew.turner@cn.ca for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

Flagging Contact

Flagging will not be necessary but a Cable Locate will be by contacting US Mail a "Request for Flagging Services and Cable Location" form with prepayment to: Flagging-US, 17641 South Ashland Avenue, Homewood, IL 60430; Flagging_US@CN.CA. The form can be obtained at:

<https://www.cn.ca/en/safety/regulations>

Requests for flagging and cable locates can take up to five business days after the railroad receives the paperwork. Reference the Wisconsin Milepost and Subdivision located in A.1. Advise Wisconsin Central Ltd (CN) that the flagging services are to be billed at the rate for a public highway project.

Cable Locate Contact

In addition to contacting Diggers Hotline, follow the procedure listed under Flagging Contact.

Wisconsin Central Ltd (CN) will only locate railroad owned facilities buried in the railroad right-of-way. The railroad does not locate any other utilities.

A.4 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor. None.

A.5 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

9. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

There are wetlands within the right-of-way; however, impacts are not anticipated based on the proposed slope intercepts. Therefore, the department has not requested or obtained a U.S. Army Corps of Engineers Section 404 Permit for this project.

Methods of operations, including preparatory work, staging, site clean-up, storing materials, or causing impacts to wetlands or waters are not permitted. If the contractor requires work outside the proposed slope intercepts, based on their method of operation to construct the project, it is the contractor's responsibility to determine whether a U.S. Army Corps of Engineers Section 404 Permit is required. If a Section 404 Permit is necessary, obtain the permit prior to beginning construction operations requiring the permit. No time extensions as discussed in standard spec 108.10 will be granted for the time required to apply for and obtain the permit. The contractor must be aware that the Corps of Engineers may not grant the permit request.

Information on USACE Section 404 permits is available on the USACE's website:

<https://www.mvp.usace.army.mil/Missions/Regulatory.aspx>

stp-107-054 (20230629)

10. Environmental Protection, Dewatering

Add the following to standard spec 107.18:

If dewatering is required, treat the water to remove suspended sediments by filtration, settlement or other appropriate best management practice before discharge. The means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity before treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Construction Technical Standards, Dewatering Code #1061, "Dewatering". This document can be found at the WisDNR website:

http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items the work is associated.

ner-107-040 (20180212)

11. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels before being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Guidelines from the Wisconsin Department of Natural Resources for disinfection are available at:

<http://dnr.wi.gov/topic/invasives/disinfection.html>

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
 - 4.1. Washing with ~212 F water (steam clean), or
 - 4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
 - 4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore, this disinfect should be used in conjunction with a hot water (>104° F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

stp-107-055 (20130615)

12. Construction Over or Adjacent to Navigable Waters.

Lake Michigan and West Twin River are classified as federal navigable waterways under standard spec 107.19.

stp-107-060 (20171130)

13. Erosion Control Structures.

Within three calendar days after completing the excavation for a substructure unit, place riprap or other permanent erosion control items required by the contract or deemed necessary by the engineer around the unit at a minimum to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as the engineer directs.

In the event that construction activity does not disturb the existing ground below the Q2 elevation, the above timing requirements for permanent erosion control shall be waived.

14. Archaeological Coordination.

An archaeologically significant site exists in the project area as follows:

Site	Description	Location
47MN257	Coal Dock Settlement	Station 342+75 to Station 343+50, RT

Do not use this site for borrow, waste disposal, or for the staging of personnel, equipment and/or supplies.

Notify the Bureau of Technical Services – Environmental Process and Document Section (BTS-EPDS) at (608) 266-0099 at least two weeks before commencement of any ground disturbing activities beyond the existing right-of-way limits. BTS-EPDS will determine if a qualified archaeologist will need to be on site during construction of this area.

If a potentially significant archaeological feature or material is discovered during construction operations, the qualified archeologist will promptly coordinate with the engineer and with ESS to determine an appropriate course of action.

stp-107-220 (20180628)

15. Coordination with Businesses and Residents.

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week before the start of work under this contract and no further meetings will be required unless directed by the engineer. The department will arrange for a suitable location for meeting that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meeting. The contractor shall schedule meetings with at least 2 weeks' prior notice to the engineer to allow for these notifications.

stp-108-060 (20141107)

16. Traffic Control.

Perform this work conforming to standard spec 643, and as the plans show, or as the engineer approves, except as follows.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as the plans show. Submit this plan 10 days before the preconstruction conference.

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

Obtain prior approval from the engineer for the location of egress and ingress for construction vehicles to prosecute the work.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

Do not park or store any vehicle, piece of equipment, or construction materials on the right-of-way, unless otherwise specified in the traffic control article or without approval of the engineer.

All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.

Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

ner-643-065 (20190410)

17. Public Convenience and Safety.

Replace standard spec 107.8(4) with the following:

Notify the following organizations and departments at least two business days before road closures, lane closures, or detours are put into effect:

Manitowoc County Sheriff's Department	City of Two River Fire Department
Manitowoc County Highway Department	City of Two Rivers School District
City of Manitowoc Fire Department	City of Two Rivers Police Department
Wisconsin State Patrol	City of Two Rivers Post Office
Manitowoc School District	City of Manitowoc Post Office

18. Hauling Excess Shoulder Material, Item 305.0504.S.

A Description

This special provision describes moving excess suitable shoulder material longitudinally along the roadway to areas of deficiency as the engineer directs.

B (Vacant)

C Construction

After the asphaltic removing or salvaging operation, move the suitable shoulder material, which is in excess after shaping the shoulders to the required cross section, to areas of deficiency as the engineer directs.

D Measurement

The department will measure Hauling Excess Shoulder Material in volume by the cubic yard in the vehicle.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
305.0504.S	Hauling Excess Shoulder Material	CY

Payment is full compensation for loading, hauling, placing, and for compacting the material.

stp-305-010 (20030820)

**19. HMA Percent Within Limits (PWL) Test Strip Volumetrics, Item 460.0105.S;
HMA Percent Within Limits (PWL) Test Strip Density, Item 460.0110.S.**

A Description

This special provision describes the Hot Mix Asphalt (HMA) density and volumetric testing tolerances required for an HMA test strip. An HMA test strip is required for contracts constructed under HMA Percent Within Limits (PWL) QMP. A density test strip is required for each pavement layer placed over a specific, uniform underlying material, unless specified otherwise in the plans. Each contract is restricted to a single mix design per mix type per layer (e.g., upper layer and lower layer may have different mix type specified or may have the same mix type with different mix designs). Each mix design requires a separate test strip. Density and volumetrics testing will be conducted on the same test strip whenever possible.

Perform work according to standard spec 460 and as follows.

B Materials

Use materials conforming to HMA Pavement Percent Within Limits (PWL) QMP special provision.

C Construction

C.1 Test Strip

Submit the test strip start time and date to the department in writing at least 5 calendar days in advance of construction of the test strip. If the contractor fails to begin paving within 2 hours of the submitted start time, the test strip is delayed, and the department will assess the contractor \$2,000 for each instance according to Section E of this document. Alterations to the start time and date must be submitted to the department in writing a minimum of 24 hours prior to the start time. The contractor will not be liable for changes in start time related to adverse weather days as defined by standard spec 101.3 or equipment breakdown verified by the department.

On the first day of production for a test strip, produce approximately 750 tons of HMA. (Note: adjust tonnage to accommodate natural break points in the project.) Locate test strips in a section of the roadway to allow a representative rolling pattern (i.e. not a ramp or shoulder, etc.).

C.1.1 Sampling and Testing Intervals

C.1.1.1 Volumetrics

Laboratory testing will be conducted from a split sample yielding three components, with portions designated for QC (quality control), QV (quality verification), and retained.

During production for the test strip, obtain sufficient HMA mixture for three-part split samples from trucks prior to departure from the plant. Collect three split samples during the production of test strip material. Perform sampling from the truck box and three-part splitting of HMA according to WTM R47. These three samples will be randomly selected by the engineer from each *third* of the test strip tonnage (T), excluding the first 50 tons:

<u>Sample Number</u>	<u>Production Interval (tons)</u>
1	50 to 1/3 T
2	1/3 T to 2/3 T
3	2/3 T to T

C.1.1.2 Density

Required field tests include contractor QC and department QV nuclear density gauge tests and pavement coring at ten individual locations (five in each half of the test strip length) according to Appendix A: *Test Methods and Sampling for HMA PWL QMP Projects*. Both QV and QC teams shall have two nuclear density gauges present for correlation at the time the test strip is constructed. QC and QV teams may wish to scan with additional gauges at the locations detailed in Appendix A, as only gauges used during the test strip correlation phase will be allowed.

C.1.2 Field Tests

C.1.2.1 Density

For contracts that include STSP 460-020 QMP Density in addition to PWL, a gauge comparison according to WTM T355 shall be completed prior to the day of test strip construction. Daily standardization of gauges on reference blocks and a project reference site shall be performed according to WTM T355. A standard count shall be performed for each gauge on the material placed for the test strip, prior to any additional data collection. Nuclear gauge readings and pavement cores shall be used to determine nuclear gauge correlation according to Appendix A. The two to three readings for the five locations across the mat for each of two zones shall be provided to the engineer. The engineer will analyze the readings of each gauge relative to the densities of the cores taken at each location. The engineer will determine the average difference between the nuclear gauge density readings and the measured core densities to be used as a constant offset value. This offset will be used to adjust raw density readings of the specific gauge and shall appear on the density data sheet along with gauge and project identification. An offset is specific to the mix and layer; therefore, a separate value shall be determined for each layer of each mix placed over a differing underlying material for the contract. This constitutes correlation of that individual gauge for the given layer. Two gauges per team are not required to be onsite daily after completion of the test strip. Any data collected without a correlated gauge will not be accepted.

The contractor is responsible for coring the pavement from the footprint of the density tests and filling core holes according to Appendix A. Coring and filling of pavement core holes must be approved by the engineer. The QV team is responsible for the labeling and safe transport of the cores from the field to the QC laboratory. Testing of cores shall be conducted by the contractor and witnessed by department personnel. The contractor is responsible for drying the cores following testing. The department will take possession of cores following laboratory testing and will be responsible for any verification testing at the discretion of the engineer.

The target maximum density to be used in determining core density is the average of the three volumetric/mix Gmm values from the test strip multiplied by 62.24 lb/ft³. In the event mix and density portions of the test strip procedure are separated, or if an additional density test strip is required, the mix portion must be conducted prior to density determination. The target maximum density to determine core densities shall then be the Gmm four-test running average (or three-test average from a PWL volumetric-only test strip) from the end of the previous day's production multiplied by 62.24 lb/ft³. If no PWL production QV volumetric test is to be taken in a density-only test strip, a non-random QV test will be taken according to 460.2.8.3.1.4 as modified in HMA Pavement Percent Within Limits (PWL) QMP and if non-conforming to C.2.1 herein, follow corrective action outlined in 460.2.8.2.1.7(4) as modified in HMA Pavement Percent Within Limits (PWL) QMP.

Exclusions such as shoulders and appurtenances shall be tested and reported according to CMM 815. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3. No density incentive or disincentive will be applied to shoulders or appurtenances. However, unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 815.11.

C.1.3 Laboratory Tests

C.1.3.1 Volumetrics

Obtain random samples according to C.1.1.1 and Appendix A. Perform tests the same day as taking the sample.

Theoretical maximum specific gravities of each mixture sample will be obtained. Bulk specific gravities of both gyratory compacted samples and field cores shall be determined. The bulk specific gravity values determined from field cores shall be used to calculate a correction factor (i.e., offset) for each QC and QV nuclear density gauge. The correction factor will be used throughout the remainder of the layer.

C.2 Acceptance

C.2.1 Volumetrics

Produce mix conforming to the following limits based on individual QC and QV test results (tolerances based on most recent JMF):

ITEM ACCEPTANCE LIMITS

Percent passing given sieve:

37.5-mm +/- 8.0

25.0-mm +/- 8.0

19.0-mm +/- 7.5

12.5-mm +/- 7.5

9.5-mm +/- 7.5

2.36-mm +/- 7.0

75-µm +/- 3.0

Asphaltic content in percent^[1] - 0.5

Air Voids -1.5 & +2.0

VMA in percent^[2] - 1.0

Maximum specific gravity +/- 0.024

^[1] Asphalt content more than -0.5% below the JMF will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction.

^[2] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in [table 460-1](#).

QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.

Calculation of air voids shall use either the QC, QV, or retained split sample test results, as identified by conducting the paired t-test with the WisDOT PWL Test Strip Spreadsheet.

If QC and QV test results do not correlate as determined by the split sample comparison, the retained split sample will be tested by the department's AASHTO accredited laboratory and HTCP certified personnel as a referee test. Additional investigation shall be conducted to identify the source of the difference between QC and QV data. Referee data will be used to determine material conformance and pay.

C.2.2 Density

Compact all layers of test strip HMA mixture according to Table 460-3.

Nuclear density gauges are acceptable for use on the project only if correlation is completed for that gauge during the time of the test strip and the department issues documentation of acceptance stating the correlation offset value specific to the gauge and mix design. The offset is not to be entered into any nuclear density gauge as it will be applied by the department-furnished Field Density Worksheet.

C.2.3 Test Strip Approval and Material Conformance

All applicable laboratory and field testing associated with a test strip shall be completed prior to any additional mainline placement of the mix. All test reports shall be submitted to the department upon completion and approved before paving resumes. The department will notify the contractor within 24 hours from start of test strip regarding approval to proceed with paving unless an alternate time frame is agreed upon in writing with the department. The 24-hour approval time includes only working days as defined in standard spec 101.3.

The department will evaluate material conformance and make pay adjustments based on the PWL value of air voids and density for the test strip. The QC core densities and QC and QV mix results will be used to determine the PWL values as calculated according to Appendix A.

The PWL values for air voids and density shall be calculated after determining core densities. An approved test strip is defined as the individual PWL values for air voids and density both being equal to or greater than 75, mixture volumetric properties conforming to the limits specified in C.2.1, and an

acceptable gauge-to-core correlation. Further clarification on PWL test strip approval and appropriate post-test strip actions are shown in the following table:

PWL TEST STRIP APPROVAL AND MATERIAL CONFORMANCE CRITERIA

PWL Value for Air Voids and Density	Test Strip Approval	Material Conformance	Post-Test Strip Action
Both PWL ≥ 75	Approved ¹	Material paid for according to Section E	Proceed with Production
$50 \leq$ Either PWL < 75	Not Approved	Material paid for according to Section E	Consult BTS to determine need for additional test strip
Either PWL < 50	Not Approved	Unacceptable material removed and replaced or paid for at 50% of the contract unit price according to Section E	Construct additional Volumetrics or Density test strip as necessary

¹ In addition to these PWL criteria, mixture volumetric properties must conform to the limits specified in C.2.1, split sample comparison must have a passing result and an acceptable gauge-to-core correlation must be completed.

A maximum of two test strips will be allowed to remain in place per pavement layer per contract. If material is removed, a new test strip shall replace the previous one at no additional cost to the department. If the contractor changes the mix design for a given mix type during a contract, no additional compensation will be paid by the department for the required additional test strip and the department will assess the contractor \$2,000 for the additional test strip according to Section E of this special provision. For simultaneously conducted density and volumetric test strip components, the following must be achieved:

- i. Passing/Resolution of Split Sample Comparison
- ii. Volumetrics/mix PWL value ≥ 75
- iii. Density PWL value ≥ 75
- iv. Acceptable correlation

If not conducted simultaneously, the mix portion of a test strip must accomplish (i) and (ii), while density must accomplish (iii) and (iv). If any applicable criteria are not achieved for a given test strip, the engineer, with authorization from the department's Bureau of Technical Services, will direct an additional test strip (or alternate plan approved by the department) be conducted to prove the criteria can be met prior to additional paving of that mix. For a density-only test strip, determination of mix conformance will be according to main production, i.e., HMA Pavement Percent Within Limits (PWL) QMP special provision.

D Measurement

The department will measure HMA Percent Within Limits (PWL) Test Strip as each unit of work, acceptably completed as passing the required air void, VMA, asphalt content, gradation, and density correlation for a Test Strip. Material quantities shall be determined according to standard spec 450.4 and detailed here within.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH
460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH

These items are intended to compensate the contractor for the construction of the test strip for contracts paved under the HMA Pavement Percent Within Limits QMP article.

Payment for HMA Percent Within Limits (PWL) Test Strip Volumetrics is full compensation for volumetric sampling, splitting, and testing, and for the proper labeling, handling, and retention of the split samples.

Payment for HMA Percent Within Limits (PWL) Test Strip Density is full compensation for collecting and measuring of pavement cores, acceptably filling core holes, providing of nuclear gauges and operator(s), and all other work associated with completion of a core-to-gauge correlation, as directed by the engineer.

Acceptable HMA mixture placed on the project as part of a volumetric or density test strip will be compensated by the appropriate HMA Pavement bid item with any applicable pay adjustments. If a test

strip is delayed as defined in C.1 of this document, the department will assess the contractor \$2,000 for each instance, under the HMA Delayed Test Strip administrative item. If an additional test strip is required because the initial test strip is not approved by the department or the mix design is changed by the contractor, the department will assess the contractor \$2,000 for each additional test strip (i.e., \$2,000 for each individual volumetrics or density test strip) under the HMA Additional Test Strip administrative item.

Pay adjustment will be calculated using 65 dollars per ton of HMA pavement. The department will pay for measured quantities of mix based on \$65/ton multiplied by the following pay adjustment:

PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY

<i>PERCENT WITHIN LIMITS</i>	<i>PAYMENT FACTOR, PF</i>
<i>(PWL)</i>	<i>(percent of \$65/ton)</i>
≥ 90 to 100	$PF = ((PWL - 90) * 0.4) + 100$
≥ 50 to < 90	$(PWL * 0.5) + 55$
<50	50% ^[1]

where, PF is calculated per air voids and density, denoted PF_{air voids} & PF_{density}

^[1] Material resulting in PWL value less than 50 shall be removed and replaced, unless the engineer allows for such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density will be according to Table 460-3. Pay adjustment will be determined for an acceptably completed test strip and will be computed as shown in the following equation:

$$\text{Pay Adjustment} = (PF - 100) / 100 \times (WP) \times (\text{tonnage}) \times (\$65/\text{ton})^*$$

*Note: If Pay Factor = 50, the contract unit price will be used in lieu of \$65/ton and the weighted percentage (WP) will equal 1.0.

The following weighted percentage (WP) values will be used for the corresponding parameter:

<u>Parameter</u>	<u>WP</u>
Air Voids	0.5
Density	0.5

Individual Pay Factors for each air voids (PF_{air voids}) and density (PF_{density}) will be determined. PF_{air voids} will be multiplied by the total tonnage produced (i.e., from truck tickets), and PF_{density} will be multiplied by the calculated tonnage used to pave the mainline only (i.e., traffic lane excluding shoulder) as determined according to Appendix A.

The department will pay incentive for air voids under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.2005	Incentive Density PWL HMA Pavement	DOL
460.2010	Incentive Air Voids HMA Pavement	DOL

The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.

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20. **HMA Pavement Percent Within Limits (PWL) QMP.**

A Description

This special provision describes percent within limits (PWL) pay determination, providing and maintaining a contractor Quality Control (QC) Program, department Quality Verification (QV) Program, required sampling and testing, dispute resolution, corrective action, pavement density, and payment for HMA pavements. Pay is determined by statistical analysis performed on contractor and department test results conducted according to the Quality Management Program (QMP) as specified in standard spec 460, except as modified below.

B Materials

Conform to the requirements of standard spec 450, 455, and 460 except where superseded by this special provision. The department will allow only one mix design for each HMA mixture type per layer required for the contract, unless approved by the engineer. The use of more than one mix design for each HMA pavement layer will require the contractor to construct a new test strip according to HMA Pavement Percent Within Limits (PWL) QMP Test Strip Volumetrics and HMA Pavement Percent Within Limits (PWL) QMP Test Strip Density articles at no additional cost to the department.

Replace standard spec 460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater with the following:

460.2.8.2.1.3.1 Contracts under Percent within Limits

- (1) Furnish and maintain a laboratory at the plant site fully equipped for performing contractor QC testing. Have the laboratory on-site and operational before beginning mixture production.
- (2) Obtain random samples and perform tests according to this special provision and further defined in Appendix A: *Test Methods & Sampling for HMA PWL QMP Projects*. Obtain HMA mixture samples from trucks at the plant. For the subplot in which a QV sample is collected, discard the QC sample and test a split of the QV sample.
- (3) Perform sampling from the truck box according to WTM R97 and four-part splitting of HMA samples according to WTM R47. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield four splits for all random sampling per subplot. All QC samples shall provide the following: QC, QV, Retained, and Extra. Take possession of the QC and Extra split samples intended for QC testing. The department will observe the splitting and take possession of the QV and Retained split samples intended for QV testing. Additional sampling details are found in Appendix A. Label samples according to WTM R97.
- (4) Test the QC split sample using the test methods identified below at a frequency greater than or equal to that indicated. The Extra split sample shall be tested only when the Gmm and/or Gmb replicate tolerances are exceeded according to WTM T166 section 13.1.4 and WTM T209 section 14.1.1. When testing the Extra split sample, only the results from the test from which the tolerances were exceeded may replace the results from the QC split sample. The Rule of Retained according to CMM 836.1.2 applies.

- Blended aggregate gradations according to WTM T30.
- Asphalt content (AC) in percent.

Determine AC using one of the following methods:

- AC by ignition oven according to WTM T308. If the department is using an ignition oven to determine AC, conform to WTP [H-003](#). If the department is not using an ignition oven to determine AC, IOCFs must still be reverified for any of the reasons listed in [WTP H-003 Table 2](#) and conform to WTP H-003 section 3.
 - AC by chemical extraction according to AASHTO T 164 Method A or B.
 - AC by automated extraction according to WTM D8159.
 - Bulk specific gravity (Gmb) of the compacted mixture according to WTM T166.
 - Maximum specific gravity (Gmm) according to WTM T209.
 - Air voids (V_a) by calculation according to WTM T269.
 - Voids in Mineral Aggregate (VMA) by calculation according to WTM R35 section 9.2.
- (5) Lot size shall consist of 3,750 tons with sublots of 750 tons. Test each design mixture at a frequency of 1 test per 750 tons of mixture type produced and placed as part of the contract. Add a random sample for any fraction of 750 tons at the end of production for a specific mixture design. Partial lots with less than three subplot tests will be included into the previous lot for data analysis and pay adjustment. Volumetric lots will include all tonnage of mixture type under specified bid item unless otherwise specified in the plan.
 - (6) Conduct field tensile strength ratio tests according to WTM T283 on each qualifying mixture according to CMM 836.6.14. Test each full 50,000-ton production increment, or fraction of an increment, after the first 5,000 tons of production. Perform required increment testing in the first week of production of that

increment. If field tensile strength ratio values are below the spec limit, notify the engineer. The engineer and contractor will jointly determine a corrective action.

Delete standard spec 460.2.8.2.1.5 and 460.2.8.2.1.6.

Replace standard spec 460.2.8.2.1.7 Corrective Action with the following:

460.2.8.2.1.7 Corrective Action

- (1) Material must conform to the following action and acceptance limits based on individual QC and QV test results (tolerances relative to the JMF used on the PWL Test Strip):

ITEM	ACTION LIMITS	ACCEPTANCE LIMITS
Percent passing given sieve:		
37.5-mm	+/- 8.0	
25.0-mm	+/- 8.0	
19.0-mm	+/- 7.5	
12.5-mm	+/- 7.5	
9.5-mm	+/- 7.5	
2.36-mm	+/- 7.0	
75-µm	+/- 3.0	
AC in percent	-0.3	-0.5
Va		- 1.5 & +2.0
VMA in percent ^[1]	- 0.5	-1.0

^[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

- (2) QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.
- (3) Notify the engineer if any individual test result falls outside the action limits, investigate the cause and take corrective action to return to within action limits. If two consecutive test results fall outside the action limits, stop production. Production may not resume until approved by the engineer. Additional QV samples may be collected upon resuming production, at the discretion of the engineer.
- (4) For any additional non-random tests outside the random number testing conducted for volumetrics, the data collected will not be entered into PWL calculations. Additional QV tests must meet acceptance limits or be subject to production stop. If the department's non-random test does not conform to the acceptance limits, the retained sample will be tested by the BTS lab. If the BTS results also do not meet the acceptance limits, the material will be considered unacceptable as described in (5) below.
- (5) Remove and replace unacceptable material at no additional expense to the department. Unacceptable material is defined as any individual QC or QV tests results outside the acceptance limits or a PWL value < 50. For AC in percent, unacceptable material is defined as any individual QV test result outside of the acceptance limit. The engineer may allow such material to remain in place with a price reduction. The department will pay for such HMA Pavement allowed to remain in place at 50 percent of the contract unit price.

Replace standard spec 460.2.8.3.1.2 Personnel Requirements with the following:

460.2.8.3.1.2 Personnel Requirements

- (1) The department will provide at least one HTCP-certified Transportation Materials Sampling (TMS) Technician, to observe QV sampling of HMA mixtures.
- (2) Under departmental observation, a contractor TMS technician shall collect and split samples.
- (3) A department HTCP-certified Hot Mix Asphalt, Technician I, Production Tester (HMA-IPT) technician will ensure that all sampling is performed correctly and conduct testing, analyze test results, and report resulting data.

- (4) The department will make an organizational chart available to the contractor before mixture production begins. The organizational chart will include names, telephone numbers, and current certifications of all QV testing personnel. The department will update the chart with appropriate changes, as they become effective.

Replace standard spec 460.2.8.3.1.4 Department Verification Testing Requirements with the following:

460.2.8.3.1.4 Department Verification Testing Requirements

- (1) HTCP-certified department personnel will obtain QV random samples by directly supervising HTCP-certified contractor personnel sampling from trucks at the plant. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield four splits for all random sampling per subplot. All QV samples shall furnish the following: QC, QV, Retained, and Extra. The department will observe the splitting and take possession of the QV, Retained, and Extra split samples intended for QV testing. The department will take possession of retained samples accumulated to date each day QV samples are collected. The department will retain samples until surpassing the analysis window of up to 5 lots, as defined in standard spec 460.2.8.3.1.7(2) of this special provision. Additional sampling details are found in Appendix A.
- (2) The department will verify product quality using the test methods specified here in standard spec 460.2.8.3.1.4(3). The department will identify test methods before construction starts and use only those methods during production of that material unless the engineer and contractor mutually agree otherwise.
- (3) The department will test the QV split sample using the test methods identified below at the frequency indicated. The Extra split sample will be tested only when the Gmm and/or Gmb replicate tolerances are exceeded according to WTM T166 section 13.1.4 and WTM T209 section 14.1.1. When testing the Extra split sample, only the results from the test from which the tolerances were exceeded may replace the results from the QV split sample. The Rule of Retained according to CMM 836.1.2 applies. In the event that both the department and contractor's replicate tolerances are exceeded, perform dispute resolution according to 460.2.8.3.1.7(2).
 - Bulk specific gravity (Gmb) of the compacted mixture according to WTM T166.
 - Maximum specific gravity (Gmm) according to WTM T209.
 - Air voids (Va) by calculation according to WTM T269.
 - Voids in Mineral Aggregate (VMA) by calculation according to WTM R35 section 9.2.
 - Asphalt Content (AC) in percent determined by ignition oven method according to WTM T308 and conforming to WTP H-003, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to WTM D8159.
- (4) The department will randomly test each design mixture at the minimum frequency of one test for each lot.

Delete standard spec 460.2.8.3.1.6.

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

460.2.8.3.1.7 Data Analysis for Volumetrics

- (1) Analysis of test data for pay determination will be contingent upon QC and QV test results. Statistical analysis will be conducted on Gmm and Gmb test results for calculation of Va. If either Gmm or Gmb analysis results in non-comparable data as described in 460.2.8.3.1.7(2), subsequent testing will be performed for both parameters as detailed in the following paragraph.
- (2) The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Additional comparisons incorporating the first 3 lots of data will be performed following completion of the 4th and 5th lots (i.e., lots 1-3, 1-4, and 1-5). A rolling window of 5 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-6, then lots 3-7, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025. If the F- and t-tests report comparable data, the QC and QV data sets are determined to be statistically similar and QC data will be used to calculate the Va used in PWL and pay adjustment calculations. If the F- and t-tests result in non-comparable data, proceed to the *dispute resolution* steps found below. Note: if both QC and QV Va PWL result in a pay adjustment of 102% or

greater, dispute resolution testing will not be conducted. Dispute resolution via further investigation is as follows:

- [1] The Retained portion of the split from the lot in the analysis window with a QV test result furthest from the QV mean (not necessarily the subplot identifying that variances or means do not compare) will be referee tested for Gmm, Gmb, and Asphalt Content by the bureau's AASHTO accredited laboratory and certified personnel. All previous lots within the analysis window are subject to referee testing and regional lab testing as deemed necessary. Referee test results will replace the QV data of the subplot(s).
- [2] Statistical analysis will be conducted with referee test results replacing QV results.
 - i. If the F- and t-tests indicate variances and means compare, no further testing is required for the lot and QC data will be used for PWL and pay factor/adjustment calculations.
 - ii. If the F- and t-tests indicate non-comparable variances or means, the Retained portion of the random QC sample will be tested for Gmm, Gmb, and Asphalt Content by the department's regional lab for the remaining 4 sublots of the lot which the F- and t-tests indicate non-comparable datasets. The department's regional lab and the referee test results will be used for PWL and pay factor/adjustment calculations. Upon the second instance of non-comparable variance or means and for every instance thereafter, the department will assess a pay reduction for the additional testing of the remaining 4 sublots at \$2,000/lot under the HMA Regional Lab Testing administrative item.
- [3] The contractor may choose to dispute the regional test results on a lot basis within 7 days after receiving the results from the region. In this event, the retained portion of each subplot will be referee tested by the department's AASHTO accredited laboratory and certified personnel. The referee Gmm and Gmb test results will supersede the regional lab results for the disputed lot.
 - i. If referee testing results in an increased calculated pay factor, the department will pay for the cost of the additional referee testing.
 - ii. If referee testing of a disputed lot results in an equal or lower calculated pay factor, the department will assess a pay reduction for the additional referee testing at \$2,000/lot under the Referee Testing administrative item.
- (3) The department will notify the contractor of the referee test results within 3 working days after receipt of the samples by the department's AASHTO accredited laboratory. The intent is to provide referee test results within 7 calendar days from completion of the lot.
- (4) The department will determine mixture conformance and acceptability by analyzing referee test results, reviewing mixture data, and inspecting the completed pavement according to the standard spec, this special provision, and accompanying Appendix A.
- (5) Unacceptable material (i.e., resulting in a PWL value less than 50 or individual QC or QV test results not meeting the Acceptance Requirements of 460.2.8.2.1.7 as modified herein) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel and those test results used for analysis. Such material may be subject to remove and replace, at the discretion of the engineer. If the engineer allows the material to remain in place, it will be paid at 50% of the HMA Pavement contract unit price. Replacement or pay adjustment will be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material will replace the original data for the subplot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

Delete standard spec 460.2.8.3.1.8 Corrective Action.

C Construction

Replace standard spec 460.3.3.2 Pavement Density Determination with the following:

460.3.3.2 Pavement Density Determination

- (1) The engineer will determine the target maximum density using department procedures described in WTM T355 and CMM 815. The engineer will determine density as soon as practicable after compaction and before placement of subsequent layers or before opening to traffic.
- (2) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.
- (3) A lot is defined as 7,500 lane feet with sublots of 1,500 lane feet (excluding shoulder, even if paved integrally) and placed within a single layer for each location and target maximum density category indicated in table 460-3. Complete three tests randomly per subplot and the department will randomly conduct one QV test per subplot. A partial quantity less than 750 lane feet will be included with the previous subplot. Partial lots with less than three sublots will be included in the previous lot for data analysis/acceptance and pay, by the engineer. If density lots/sublots are determined prior to construction of the test strip, any random locations within the test strip shall be omitted. Exclusions such as shoulders and appurtenances shall be tested and recorded according to WTM T355 and CMM 815. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3 or else be subject to disincentives according to 460.5.2.2(5) herein. No density incentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 815.11.
- (4) The three QC locations per subplot represent the outside, middle, and inside of the paving lane. The QC density testing procedures are detailed in Appendix A.
- (5) QV nuclear testing will consist of one randomly selected location per subplot. The QV density testing procedures will be the same as the QC procedure at each testing location and are also detailed in Appendix A.
- (6) An HTCP-certified nuclear density technician (NUCDENSITYTEC-I) shall identify random locations and perform the testing for both the contractor and department. The responsible certified technician shall ensure that sample location and testing is performed correctly, analyze test results, and provide density results to the contractor weekly, or at the completion of each lot.
- (7) For any additional tests outside the random number testing conducted for density, the data collected will not be entered into PWL calculations. However, additional QV testing must meet the tolerances for material conformance as specified in the standard specification and this special provision. If additional density data identifies unacceptable material, proceed as specified in CMM 815.11.

Replace standard spec 460.3.3.3 Waiving Density Testing with Acceptance of Density Data with the following:

460.3.3.3 Analysis of Density Data

- (1) Analysis of test data for pay determination will be contingent upon test results from both the contractor (QC) and the department (QV).
- (2) As random density locations are paved, the data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. A rolling window of 3 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-4, then lots 3-5, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025.
 - i. If the F- and t-tests indicate variances and means compare, the QC and QV data sets are determined to be statistically similar and QC data will be used for PWL and pay adjustment calculations.
 - ii. If the F- and t-tests indicate variances or means do not compare, the QV data will be used for subsequent calculations.

- (3) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture data, and inspecting the completed pavement according to standard spec, this special provision, and accompanying Appendix A.
- (4) Density resulting in a PWL value less than 50 or not meeting the requirements of 460.3.3.1 (any individual density test result falling more than 3.0 percent below the minimum required target maximum density as specified in standard spec Table 460-3) is unacceptable and may be subject to remove and replace at no additional cost to the department, at the discretion of the engineer.
 - i. Replacement may be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material will replace the original data for the subplot.
 - ii. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test must be conducted and under such circumstances will be entered into the data analysis and pay determination.]
 - iii. If the engineer allows such material to remain in place, it will be paid for at 50% of the HMA Pavement contract unit price. The extent of unacceptable material will be addressed as specified in CMM 815.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

D Measurement

The department will measure the HMA Pavement bid items acceptably completed by the ton, as specified in standard spec 450.4 and as follows in standard spec 460.5, as modified in this special provision.

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following:

460.5.2 HMA Pavement

460.5.2.1 General

- (1) Payment for HMA Pavement Type LT, MT, and HT mixes is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for HMA PWL QMP testing and aggregate source testing; for warm mix asphalt additives or processes; for stabilizer, hydrated lime and liquid antistripping agent, if required; and for all materials including asphaltic materials.
- (2) If provided for in the plan quantities, the department will pay for a leveling layer, placed to correct irregularities in an existing paved surface before overlaying, under the pertinent paving bid item. Absent a plan quantity, the department will pay for a leveling layer as extra work.

460.5.2.2 Calculation of Pay Adjustment for HMA Pavement using PWL

- (1) Pay adjustments will be calculated using 65 dollars per ton of HMA pavement. The HMA PWL Production Spreadsheet, including data, will be made available to the contractor by the department as soon as practicable upon completion of each lot. The department will pay for measured quantities of mix based on this price multiplied by the following pay adjustment calculated according to the HMA PWL Production Spreadsheet:

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

PERCENT WITHIN LIMITS (PWL)	PAYMENT FACTOR, PF (percent of \$65/ton)
≥ 90 to 100	$PF = ((PWL - 90) * 0.4) + 100$
≥ 50 to < 90	$(PWL * 0.5) + 55$
<50	50% ^[1]

where PF is calculated per air voids and density, denoted PF_{air voids} & PF_{density}.

^[1] Any material resulting in PWL value less than 50 shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

- (2) For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be according to standard spec Table 460-3.
- (3) Pay adjustment will be determined on a lot basis and will be computed as shown in the following equation:

$$\text{Pay Adjustment} = (\text{PF}-100)/100 \times (\text{WP}) \times (\text{tonnage}) \times (\$65/\text{ton})^*$$

*Note: If Pay Factor = 50%, the contract unit price will be used in lieu of \$65/ton and the weighted percentage (WP) will equal 1.0.

The following weighted percentage (WP) values will be used for the corresponding parameter:

<u>Parameter</u>	<u>WP</u>
Air Voids	0.5
Density	0.5

- (4) Individual Pay Factors for each air voids ($\text{PF}_{\text{air voids}}$) and density ($\text{PF}_{\text{density}}$) will be determined. $\text{PF}_{\text{air voids}}$ will be multiplied by the total tonnage placed (i.e., from truck tickets), and $\text{PF}_{\text{density}}$ will be multiplied by the calculated tonnage used to pave the mainline only (i.e., travel lane excluding shoulder) as determined according to Appendix A.
- (5) Pay adjustment for shoulders and appurtenances accepted by department testing will be determined on a lot basis. If the lot density is less than the specified minimum in table 460-3, the department will reduce pay based on the contract unit price for the HMA pavement bid item for that lot as follows:

DISINCENTIVE PAY REDUCTION FOR HMA PAVEMENT DENSITY	
PERCENT LOT DENSITY	PAYMENT FACTOR
BELOW SPECIFIED MINIMUM	(percent of contract price)
From 0.5 to 1.0 inclusive	98
From 1.1 to 1.5 inclusive	95
From 1.6 to 2.0 inclusive	91
From 2.1 to 2.5 inclusive	85
From 2.6 to 3.0 inclusive	70
More than 3.0 ^[1]	—

[1] Remove and replace the lot with a mixture at the specified density. When acceptably replaced, the department will pay for the replaced work at the contract unit price. Alternatively, the engineer may allow the nonconforming material to remain in place with a 50 percent payment factor.

- (6) The department will pay incentive for air voids and density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
460.2005	Incentive Density PWL HMA Pavement	DOL
460.2010	Incentive Air Voids HMA Pavement	DOL

The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.

The department will administer a disincentive under the Disincentive HMA Binder Content administrative item for each individual QV test result indicating asphalt binder content below the Action Limit in 460.2.8.2.1.7 presented herein. The department will adjust pay per subplot of mix at 65 dollars per ton of HMA pavement multiplied by the following pay adjustment calculated according to the HMA PWL Production Spreadsheet:

<u>AC Binder Relative to JMF</u>	<u>Pay Adjustment / Sublot</u>
-0.4% to -0.5%	75% ^[1]
More than -0.5%	50% ^{[1] [2]}

- [1] Any material resulting in an asphalt binder content more than 0.3% below the JMF AC content will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to automated extraction according to WTM D8159.
- [2] Any material resulting in an asphalt binder content more than 0.5% below the JMF AC content shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

Note: PWL value determination is further detailed in the PWL Production Spreadsheet Instructions located in the *Project Info & Instructions* tab of the HMA PWL Production spreadsheet.

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21. Appendix A.

Test Methods & Sampling for HMA PWL QMP Projects

The following procedures are included with the HMA Pavement Percent Within Limits (PWL) Quality Management Program (QMP) special provision:

- WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip
- WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production
- Sampling for WisDOT HMA PWL QMP
- Calculation of PWL Mainline Tonnage Example

WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip

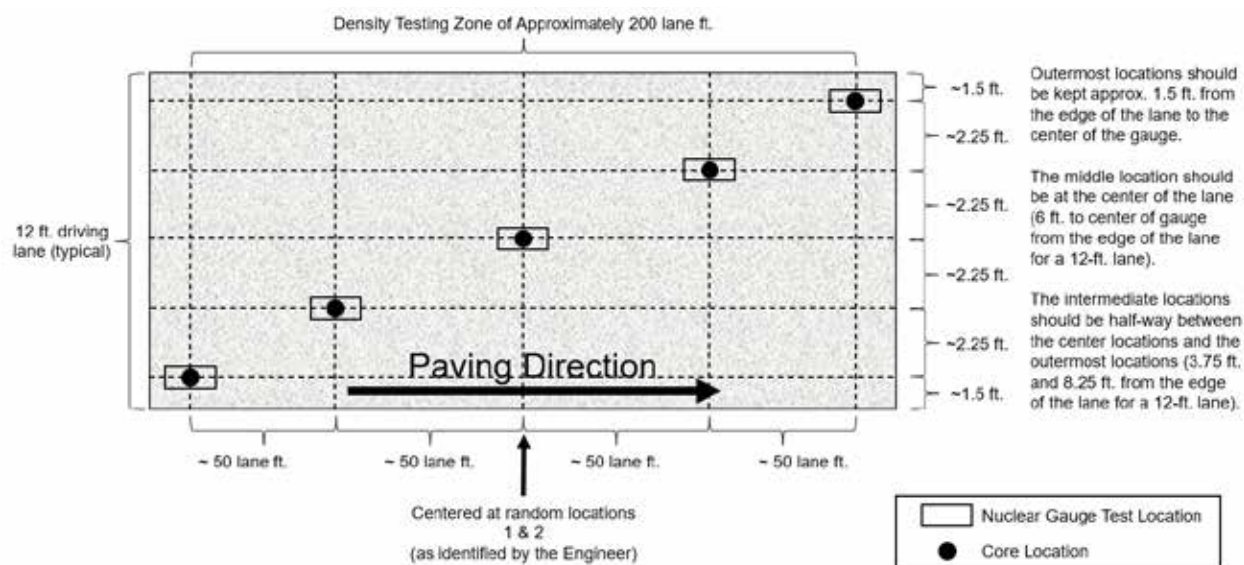


Figure 1: Nuclear/Core Correlation Location Layout

The engineer will identify two zones in which gauge/core correlation is to be performed. These two zones will be randomly selected within each *half* of the test strip length. (Note: Density zones shall not overlap and must have a minimum of 100 feet between the two zones; therefore, random numbers may be shifted (evenly) in order to meet these criteria.) Each zone shall consist of five locations across the mat as identified in Figure 1. The following shall be determined at each of the five locations within both zones:

- two one-minute nuclear density gauge readings for QC team*
- two one-minute nuclear density gauge readings for QV team*
- pavement core sample

*If the two readings exceed 1.0 pcf of one another, a third reading is conducted in the same orientation as the first reading. In this event, all three readings are averaged, the individual test reading of the three which falls farthest from the average value is discarded, and the average of the remaining two values is used to represent the location for the gauge.

The zones are supposed to be undisclosed to the contractor/roller operators. The engineer will not lay out density/core test sites until rolling is completed and the cold/finish roller is beyond the entirety of the zone. Sites are staggered across the 12-foot travel lane, and do not include shoulders. The outermost locations shall be 1.5-feet from the center of the gauge to the edge of the lane. [NOTE: This staggered layout is only applicable to the test strip. All mainline density locations after test strip shall have a longitudinal and transverse random number to determine the location as detailed in the *WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production* section of this document.]

The nuclear site is the same for QC and QV readings for the test strip, i.e., the QC and QV teams are to take nuclear density gauge readings in the same footprint. Each of the QC and QV teams are to take a minimum of two one-minute readings per nuclear site, with the gauge rotated 180 degrees between readings, as seen here:



Figure 2: Nuclear Gauge Orientation for (a) 1st One-Minute Reading and (b) 2nd One-Minute Reading

Take photos of each of the 10 core/gauge locations of the test strip. Include gauge readings (pcf) and a labelled core within the gauge footprint. If a third reading is needed, record and document all three readings. Only raw readings in pcf shall be written on the pavement during the test strip, with a corresponding gauge ID/SN (generalized as QC-1 through QV-2 in the following Figure) in the following format:



Figure 3: Layout of Raw Gauge Readings as Recorded on the Pavement

Take each core from the center of the gauge footprint and correlate each gauge with the laboratory-measured bulk specific gravities of the pavement cores. One core in good condition must be obtained from each of the 10 locations. If a core is damaged at the time of extracting from the pavement, a replacement core should be taken immediately adjacent to the damaged core, i.e., from the same footprint. If a core is damaged during transport, it shall be recorded as damaged and excluded from the correlation. Coring after traffic is on the pavement shall be avoided. The contractor shall be responsible for coring of the pavement. Coring and filling of core holes must be approved by the engineer. The QV team is responsible for the labeling and safe transport of the cores from the field to the QC laboratory. Conduct core density testing with a witness by department personnel. Dry the cores following testing. The department will take possession of cores following initial testing and is responsible for any verification testing.

Each core 100 or 150 mm (4 or 6 inches) in diameter will be taken at locations as identified in Figure 1. Each random core will be full thickness of the layer being placed. Thoroughly dry cores obtained from the mat according to WTM R79 prior to using specimens for in-place density determination according to WTM T166.

Cut cores by the next day after completion of the test strip, except if the next day is not a working day, then cut within 48 hours of placement. Cores are cut under department/project staff observation. Relabel

each core immediately after extruding or ensure that labels applied to pavement prior to cutting remain legible. The layer interface should also be marked immediately following extrusion. Cores should be cut at this interface, using a wet saw, to allow for density measurement of only the most recently placed layer. Cores should be protected from excessive temperatures such as direct sunlight. Also, there should be department custody (both in transport and storage) for the cores until they are tested whether that be immediately after the test strip or the subsequent day if agreed upon between department and contractor. Use of concrete cylinder molds works well to transport cores. Cores should be placed upside down (flat surface to bottom of cylinder mold) in the molds, one core per mold, cylinder molds stored upright, and ideally transported in a cooler. Avoid any stacking of pavement cores.

Fill all core holes with non-shrink rapid-hardening grout, mortar, or concrete, or with HMA. When using grout, mortar, or concrete, remove all water from the core holes prior to filling. Mix the mortar or concrete in a separate container prior to placement in the hole. If HMA is used, fill all core holes with hot-mix matching the same day's production mix type at same day compaction temperature ± 20 F. Dry the core holes and coat with tack before filling, filled with a top layer no thicker than 2.25 inches, lower layers not to exceed 4 inches, and compacted with a Marshall hammer or similar tamping device using approximately 50 blows per layer. The finished surface shall be flush with the pavement surface. Any deviation in the surface of the filled core holes greater than $\frac{1}{4}$ inch at the time of final inspection will require removal of the fill material to the depth of the layer thickness and replacement.

WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production

For nuclear density testing of the pavement beyond the test strip, QC tests shall be completed at three locations per subplot, with a subplot defined as 1,500 lane feet. The three locations shall represent the outside, middle, and inside of the paving lane (i.e., the lane width will be divided into thirds as shown by the dashed longitudinal lines in Figure 3 and random numbers shall be used to identify the specific transverse location within each third determined by WTM D3665). Longitudinal locations within each subplot shall be determined with 3 independent random numbers determined by WTM D3665. The PWL Density measurements do not include the shoulder and other appurtenances. Such areas are tested by the department and are not eligible for density incentive but are subject to disincentive according to 460.5.2.2(5) of the HMA PWL QMP article. Measure each location with two one-minute gauge readings oriented 180 degrees from one another, in the same footprint as detailed in Figure 2 above. Each location requires a minimum of two readings per gauge. The density gauge orientation for the first test shall be with the source rod towards the direction of paving. QV nuclear testing will consist of one randomly selected location per subplot. The QV is also comprised of two one-minute readings oriented 180 degrees from one another. For both QC and QV test locations, if the two readings exceed 1.0 pcf of one another, a third reading shall be conducted in the same orientation as the first reading. In this event, all three readings are averaged, the individual test reading of the three which falls farthest from the average value is discarded, and the average of the remaining two values is used to represent the location for the gauge. The subplot density testing layout is depicted in Figure 4, with QC test locations shown as solid black boxes and QV test locations shown as dashed red boxes.

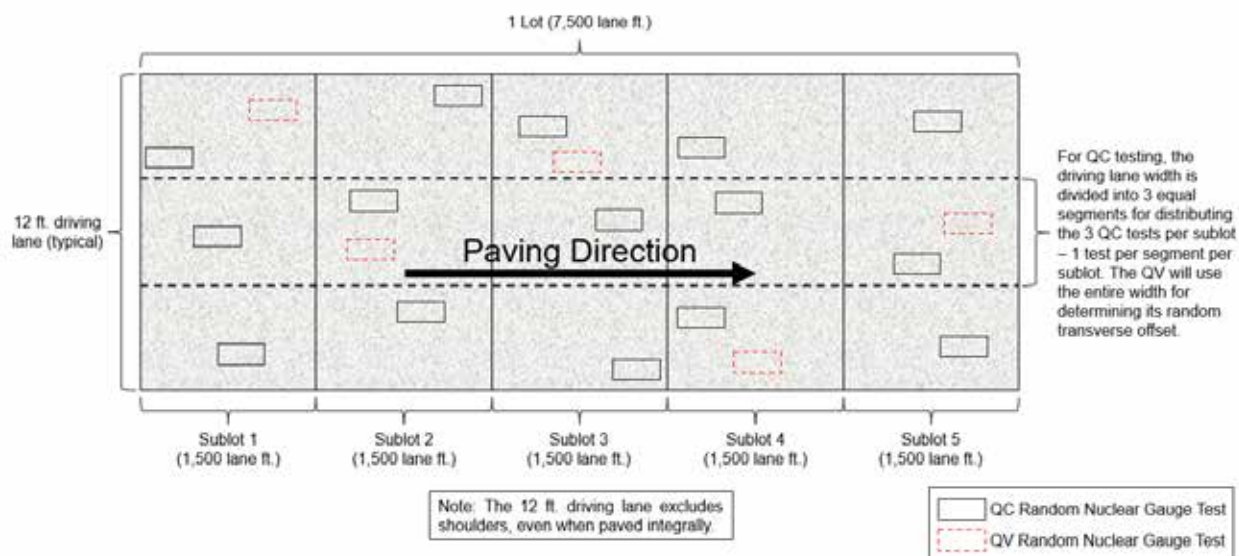


Figure 4: Example Layout of Mainline HMA Nuclear Density Tests

Raw nuclear density data must be shared by both parties at the end of each shift. Paving may be delayed if the raw data is not shared in a timely manner. QC and QV nuclear density gauge readings will be statistically analyzed according to Section 460.3.3.3 of the HMA PWL QMP article. (Note: For density data, if F- and t-tests compare, QC data will be used for the subsequent calculations of PWL value and pay determination. However, if an F- or t-test does not compare, the QV data will be used in subsequent calculations.)

Investigative cores will be allowed on the approaching side of traffic outside of the footprint locations. Results shall be shared with the department.

The QV density technician is expected to be onsite within 1 hour of the start of paving operations and should remain on-site until all paving is completed. Perform footprint testing as soon as both the QC and QV nuclear density technician are onsite and a minimum of once per day to ensure the gauges are not drifting apart during a project. Footprint testing compares the density readings of two gauges at the same testing location and can be done at any randomly selected location on the project. Both teams are encouraged to conduct footprint testing as often as they feel necessary. Footprint testing does not need to be performed at the same time. At project start-up, the QV should footprint the first 10 QC locations. Individual density tests less than 0.5% above the lower limit should be communicated to the other party and be footprint tested. Each gauge conducts 2 to 3 1-minute tests according to WTM T355 and the final results from each gauge are compared for the location. If the difference between the QC and QV gauges exceeds 1.0 pcf (0.7 percent) for an average of 10 locations, investigate the cause, check gauge moisture and density standards and perform additional footprint testing. If the cause of the difference between gauge readings cannot be identified, the regional HMA Coordinator will consult the RSO, the regional PWL representative and the BTS HMA unit to determine necessary actions. If it is agreed that there is a gauge comparison issue, perform one of the following two options:

New Gauge Combination

- All 4 gauges used on the test strip must footprint 10 locations on the pavement. Pavement placed on a previous day may be used.
- The results of the footprint testing will be analyzed to see if a better combination of acceptable gauges is available.
- If a better combination is found, those gauges should be used moving forward.
- If a better combination cannot be found, a new gauge correlation must be performed. (see below)

Re-correlation of Gauges

- Follow all test strip procedures regarding correlating gauges except the following:
- The 10 locations can be QC or QV random locations.
- The locations used may have been paved on a previous day.
- Retesting with gauges must be done immediately prior to coring.
- New gauge offsets will be used for that day's paving and subsequent paving days. New gauge offsets will not be used to recalculate density results from prior days.

Density Dispute Resolution Procedure

Density results may be disputed by the contractor on a lot-by-lot basis if one of the following criteria is met:

- The lot average for either QC or QV is below the lower specification limit.
- The lot average for QC is different from the lot average for QV by more than 0.5%.
- The lot is in disincentive.

In lieu of using density gauges for acceptance of the lot, the lot will be cored in the QV locations. The results of the cores from the entire lot will be entered in the spreadsheet and used for payment. If the pay factor increases, the contractor will only receive the additional difference in payment for the disputed lot. If

the pay factor does not increase, the department will assess the contractor \$2,000 for the costs of additional testing.

Notify the engineer in writing before dispute resolution coring. Immediately prior to coring, QC and QV will test the locations with nuclear density gauges.

Under the direct observation of the engineer, cut 100 or 150 mm (4 or 6 inch) diameter cores. Cut cores by the next day after completion of the lot, except if the next day is not a working day, then cut within 48 hours of placement. Prepare cores and determine density according to WTM T166. Dry cores after testing. Fill core holes according to Appendix A and obtain engineer approval before opening to traffic. The department will maintain custody of cores throughout the entire sampling and testing process. The department will label cores, transport cores to testing facilities, witness testing, store dried cores, and provide subsequent verification testing. If a core is damaged at the time of coring, immediately take a replacement core 1 foot ahead of the existing testing location in the direction of traffic at the same offset as the damaged core. If a core is damaged during transport, record it as damaged and notify the engineer immediately.

Sampling for WisDOT HMA PWL QMP Production

Sampling of HMA mix for QC, QV, Retained, and Extra split samples shall conform to WTM R97 and WTM R47.

Sampling Hot Mix Asphalt

At the beginning of the contract, determine the anticipated tonnage to be produced. The frequency of sampling is 1 per 750 tons (sublot) for QC and Retained Samples and 1 per 3,750 tons (lot or 5 sublots) for QV as defined by the HMA PWL QMP article. A test sample is obtained randomly from each sublot. Each random sample shall be collected at the plant according to WTM R97. Submit the random numbers for all mix sampling to the department before production begins.

Example 1

Expected production for a contract is 12,400 tons. The number of required samples is determined based on this expected production (per HMA PWL QMP SPV) and is determined by the random sample calculation.

Sample 1 – from 50 to 750 tons
Sample 2 – from 751 to 1500 tons
Sample 3 – from 1501 to 2250 tons
Sample 4 – from 2251 to 3000 tons
Sample X –
Sample 16 – from 11,251 to 12,000 tons
Sample 17 – from 12,001 to 12,400 tons

The approximate location of each sample within the prescribed sublots is determined by selecting random numbers using WTM D3665. The random numbers selected are used in determining when a sample is to be taken and will be multiplied by the subplot tonnage. This number will then be added to the final tonnage of the previous subplot to yield the approximate cumulative tonnage of when each sample is to be taken.

To allow for plant start-up variability, the procedure calls for the first random sample to be taken at 50 tons or greater per production day (not intended to be taken in the first two truckloads). Random samples calculated for 0-50 ton shall be taken in the next truck (51-75 ton).

This procedure is to be used for any number of samples per contract.

If the production is less than the final randomly generated sample tonnage, then the random sample is to be collected from the remaining portion of that subplot of production. If the randomly generated sample is calculated to be within the first 0-50 tons of the subsequent day of production, it shall be taken in the next truck. Add a random sample for any fraction of 750 tons at the end of the contract. Lot size will consist of

3750 tons with sublots of 750 tons. Partial lots with less than three subplot tests will be included into the previous lot, by the engineer.

It is intended that the plant operator is not advised ahead of time when samples are to be taken.

If belt samples are used during troubleshooting, the blended aggregate will be obtained when the mixture production tonnage reaches approximately the sample tonnage. For plants with storage silos, this could be up to 60 minutes in advance of the mixture sample that's taken when the required tonnage is shipped from the plant.

Collect QC, QV, Retained, and Extra split samples for all test strip and production mixture testing using a four-part splitting procedure according to WTM R47.

Calculation of PWL Mainline Tonnage Example

A mill and overlay project is being constructed with a 12-foot travel lane and an integrally paved 3-foot shoulder. The layer thickness is 2 inches for the full width of paving. Calculate the tonnage in each subplot eligible for density incentive or disincentive.

Solution:

$$\frac{1500 \text{ ft} \times 12 \text{ ft}}{9 \text{ sf/sy}} \times \frac{2 \text{ in} \times 112 \text{ lb/sy/in}}{2000 \text{ lb/ton}} = 224 \text{ tons}$$

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22. HMA Pavement Longitudinal Joint Density.

A Description

This special provision incorporates longitudinal joint density requirements into the contract and describes the data collection, acceptance, and procedure used for determination of pay adjustments for HMA pavement longitudinal joint density. Pay adjustments will be made on a linear foot basis, as applicable per pavement layer and paving lane. Applicable longitudinal joints are defined as those between any two or more traffic lanes including full-width passing lanes, turn lanes, or auxiliary lanes more than 1,500 lane feet, and those lanes must also include the 460.2005 Incentive Density PWL HMA Pavement bid item. This excludes any joint with one side defined as a shoulder and ramp lanes of any length. If echelon paving is required in the contract, the longitudinal joint density specification shall not apply for those joints. Longitudinal joints placed during a test strip will be tested for information only to help ensure the roller pattern will provide adequate longitudinal joint density during production. Longitudinal joint density test results collected during a test strip are not eligible for pay adjustment.

Pay is determined according to standard spec 460, HMA Pavement Percent Within Limits QMP special provisions, and as modified within.

B Materials

Compact all applicable HMA longitudinal joints to the appropriate density based on the layer, confinement, and mixture type shown in Table B-1.

TABLE B-1 MINIMUM REQUIRED LONGITUDINAL JOINT DENSITY

Layer	Percent of Target Maximum Density			
	Unconfined		Confined	
	LT and MT	HT	LT and MT	HT
Lower (on crushed/recycled base)	88	89	89.5	90.5
Lower (on Concrete/HMA)	90 ^[1]	90 ^[1]	91.5 ^[1]	91.5 ^[1]
Upper	90	90	91.5	91.5

^[1] Minimum reduced by 1.0 percent for a 1.25-inch-thick No. 5 mix lower layer constructed on a paved or milled surface.

C Construction

Add the following to standard spec 460.3.3.2:

- (5) Establish companion QC and QV density locations for each applicable joint. Each companion location shares longitudinal stationing with the respective QC or QV mainline density location within each subplot and is located transversely with the center of the gauge 6-inches from the final joint edge of the paving area. Sublot and lot numbering remains the same as mainline densities, however, in addition to conventional naming, joint identification must clearly indicate “M” for inside/median side of lane or “O” for outside shoulder side of lane, as well as “U” for an unconfined joint or “C” for a confined joint (e.g., XXXXX-MC or XXXXX-OU).
- (6) Each joint shall be measured, reported, and accepted under methods, testing times, and procedures consistent with the program employed for mainline density, i.e., PWL.
- (7) For single nuclear density test results greater than 3.0% below specified minimums per Table B-1 herein, perform the following:
 - a) Testing at 50-foot increments both ahead and behind the unacceptable site.
 - b) Continued 50-foot incremental testing until test values indicate higher than or equal to -3.0 percent from target joint density.
 - c) Materials within the incremental testing indicating lower than -3.0 percent from target joint density are defined as unacceptable and will be handled with remedial action as defined in the payment section of this document.
 - d) The remaining subplot average (exclusive of unacceptable material) will be determined by the first forward and backward 50-foot incremental tests that reach the criteria of higher than or equal to -3.0 percent from target joint density.

Note: If the 50-foot testing extends into a previously accepted subplot, remedial action is required up to and inclusive of such material; however, the results of remedial action must not be used to recalculate the previously accepted subplot density. When this occurs, the lane feet of any unacceptable material will be deducted from the subplot in which it is located, and the previously accepted subplot density will be used to calculate pay for the remainder of the subplot.

- (8) Joint density measurements shall be kept separate from all other density measurements and entered as an individual data set into Atwood Systems.
- (9) Placement and removal of excess material outside of the final joint edge, to increase joint density at the longitudinal joint nuclear testing location, shall be done at the contractor's discretion and cost. This excess material and related labor will be considered waste and will not be paid for by the department. Joints with excess material placed outside of the final joint edge to increase joint density or where a notched wedge is used will be considered unconfined joints.
- (10) When not required by the contract, echelon paving may be performed at the contractor's discretion to increase longitudinal joint density and still remain eligible to earn incentive. The additional costs incurred related to echelon paving will not be paid for by the department. If lanes are paved in echelon, the contractor may choose to use a longitudinal vertical joint or notched wedge longitudinal joint as described in [SDD 13c19](#). Lanes paved in echelon shall be considered confined on both sides of the

joint regardless of the selected joint design. The joint between echelon paved lanes shall be placed at the centerline or along lane lines.

- (11) When performing inlay paving below the elevation of the adjacent lane, the longitudinal joint along the adjacent lane to be paved shall be considered unconfined.

D Measurement

- (1) The department will measure each side of applicable longitudinal joints, as defined in Section A of this special provision, by the linear foot of pavement, acceptably placed. Measurement will be conducted independently for the inside or median side and for the outside or shoulder side of paving lanes with two applicable longitudinal joints. Each paving layer will be measured independently at the time the mat is placed.

E Payment

Add the following as 460.5.2.4 Pay Adjustment for HMA Pavement Longitudinal Joint Density:

- (1) The department will administer longitudinal joint density adjustments under the Incentive Density HMA Pavement Longitudinal Joints and Disincentive Density HMA Pavement Longitudinal Joints items. The department will adjust pay based on density relative to the specified targets in Section B of this special provision, and linear foot of the HMA Pavement bid item for that subplot as follows:

PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY

PERCENT SUBLOT DENSITY	PAY ADJUSTMENT PER LINEAR FOOT
ABOVE/BELOW SPECIFIED MINIMUM	
Equal to or greater than +1.0 confined, +2.0 unconfined	\$0.20
From 0.0 to +0.9 confined, 0.0 to +1.9 unconfined	\$0
From -0.1 to -1.0	\$(0.20)
From -1.1 to -2.0	\$(0.40)
From -2.1 to -3.0	\$(0.80)
More than -3.0	REMEDIAL ACTION ^[1]

^[1] Remedial action must be approved by the engineer and agreed upon at the time of the pre-pave meeting and may include partial sublots as determined and defined in 460.3.3.2(7) of this document. If unacceptable material is removed and replaced per guidance by the engineer, the removal and replacement will be for the full lane width of the side of which the joint was constructed with unacceptable material.

- (2) The department will not assess joint density disincentives for pavement placed in cold weather because of a department-caused delay as specified in [standard spec 450.5.2\(3\)](#).
- (3) The department will not pay incentive on the longitudinal joint density if the traffic lane is in disincentive. A disincentive may be applied for each mainline lane and all joint densities if both qualify for a pay reduction.
- (4) Inlay paving operations will limit payment for additional material to 2 inches wider than the final paving lane width at the centerline.

The department will pay incentive for longitudinal joint density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL

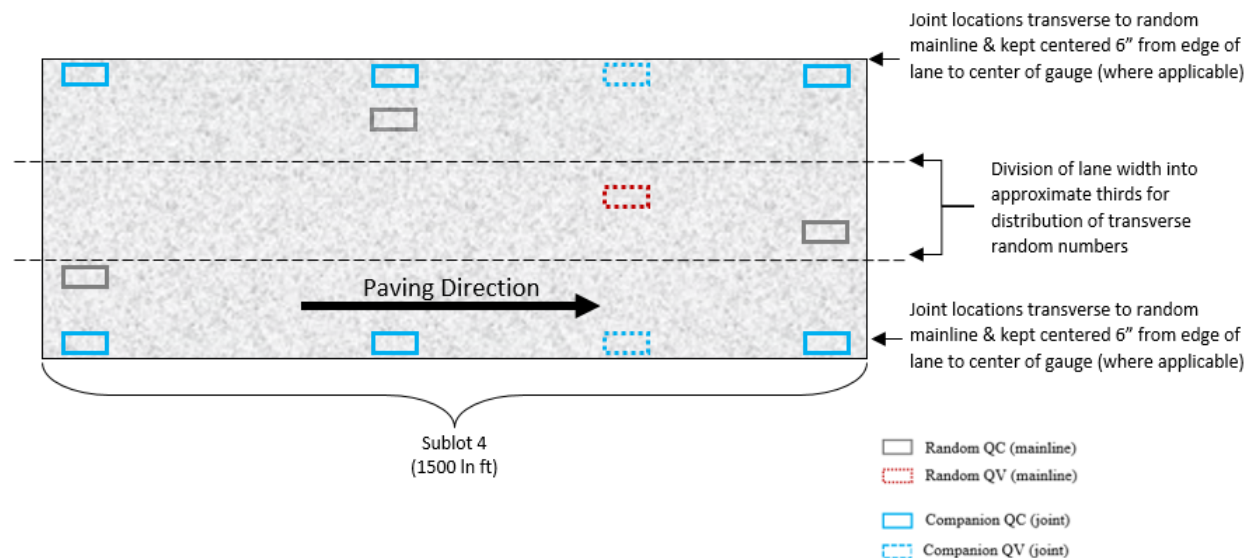
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Nuclear Gauge Density Layout

Each QC and QV density location must have a companion density location at any applicable joint. This companion location must share longitudinal stationing with each QC or QV density location and be located transversely with the center of the gauge 6-inches from the final joint edge of the paving area.

For HMA Pavement Percent Within Limits QMP projects, this appears as follows:



Further Explanation of *PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY* Table

	Confined				
	Lower Layer (On Base)		Upper Layer		
	LT/MT	HT	LT/MT	HT	
Mainline Target (SS 460-3)	91.0	92.0	93.0	93.0	-
Confined Target (mainline - 1.5)	89.5	90.5	91.5	91.5	-
Equal to or greater than +1.0	≥ 90.5	≥ 91.5	≥ 92.5	≥ 92.5	\$0.20
From 0.0 to +0.9	90.4 - 89.5	91.4 - 90.5	92.4 - 91.5	92.4 - 91.5	\$0
From -0.1 to -1.0	89.4 - 88.5	90.4 - 89.5	91.4 - 90.5	91.4 - 90.5	(\$0.20)
From -1.1 to -2.0	88.4 - 87.5	89.4 - 88.5	90.4 - 89.5	90.4 - 89.5	(\$0.40)
From -2.1 to -3.0	87.4 - 86.5	88.4 - 87.5	89.4 - 88.5	89.4 - 88.5	(\$0.80)
More than -3.0	< 86.5	< 87.5	< 88.5	< 88.5	REMEDIAL ACTION

	Unconfined				Pay Adjust
	Lower Layer (On Base)		Upper Layer		
	LT/MT	HT	LT/MT	HT	
Mainline Target (SS 460-3)	91.0	92.0	93.0	93.0	-
Unconfined Target (Mainline -3.0)	88.0	89.0	90.0	90.0	-
Equal to or greater than +2.0	≥ 90.0	> 91.0	≥ 92.0	> 92.0	\$0.20
From 0.0 to +1.9	89.9 - 88.0	90.9 - 89.0	91.9 - 90.0	91.9 - 90.0	\$0
From -0.1 to -1.0	87.9 - 87.0	88.9 - 88.0	89.9 - 89.0	89.9 - 89.0	(\$0.20)
From -1.1 to -2.0	86.9 - 86.0	87.9 - 87.0	88.9 - 88.0	88.9 - 88.0	(\$0.40)
From -2.1 to -3.0	85.9 - 85.0	86.9 - 86.0	87.9 - 87.0	87.9 - 87.0	(\$0.80)
More than -3.0	< 85.0	< 86.0	< 87.0	< 87.0	REMEDIAL ACTION

stp-460-075 (20240105)

23. Epoxy Crack Sealing, Item 509.9020.S.

A Description

This special provision describes sealing cracks in concrete structures, as the plan details show.

B Materials

Furnish a material that is specifically designed for concrete crack sealing. Fill vertical cracks with a non-sag sealant.

Furnish a penetrating epoxy sealant manufactured by Sika, Adhesive Engineering, Technical Sealants, Dayton Superior, or equal. Before using, obtain the engineer's approval for the epoxy system which is proposed to seal the cracks.

C Construction

Before sealing, clean the cracks by chipping and by using high-pressure air.

After all of the cleaning is completed, inject epoxy sealant into the cracks to be sealed. Seal the cracks using the penetrating epoxy sealant as recommended by the sealant manufacturer.

D Measurement

The department will measure Epoxy Crack Sealing in length by the linear foot of crack, acceptably sealed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
509.9020.S	Epoxy Crack Sealing	LF

Payment is full compensation for cleaning the cracks; and for furnishing and placing the epoxy sealant.
stp-509-020 (20240703)

24. Pipe Culverts.

Replace standard spec 520.3.3 (5) with the following:

- (5) Provide joint ties on upstream and downstream ends of circular and horizontal elliptical concrete culvert and concrete cattle pass installations. Tie the last 3 pipe joints or, if using apron endwalls, the endwall joint and the next 2 pipe joints. Ties are not required on culverts with masonry endwalls unless the plans show them. Provide joint ties at all joints of circular or horizontal elliptical concrete culvert pipes greater than 60 inches, including endwalls.

25. Culvert Pipe Backfill.

For culvert pipes where depth from top of pipe to top of final pavement is 4.0-ft or less the entire backfill area will conform and be classified as standard spec 520.2.5.2 foundation backfill.

Remove standard spec 520.5.2(2) for culvert pipes described above. No extra pay items will be added for the substitution of foundation backfill for trench backfill.

Ner-520-010 (202300519)

26. Semi-rigid Barrier Systems and End Treatments.

Replace standard spec 614.5 (4) with the following:

- (4) Payment for the Steel Thrie Beam, Steel Plate Beam Guard, Guardrail Stiffened, MGS Guardrail, Short Radius, and various transition bid items is full compensation for providing guardrail and transitions; for removing and re-installing posts as required under 614.3.2.1(4) to verify embedment depth; for offset block-mounted reflectors; for repairing damaged galvanization; for excavating and backfilling and for any required flagging during installation.

27. Wood Posts and Offset Blocks.

Supplement standard spec 614.2.5.1 with the following:

- (6) Wood posts shall be used in areas where treated timber rub rails are being installed on the back of the posts.

28. Construction Staking

Add to standard spec 650.3.5. with the following:

- (1) Determine grades of existing curb, gutter, and curb and gutter prior to its removal in order to reestablish proposed curb grades. Maintain the same curb offsets in areas with proposed curb at the existing curb.

29. Removing Modular Block Wall, Item SPV.0035.01

A Description

This special provision describes removing modular block wall conforming to standard spec 204 and grading and restoring conforming to standard spec 625, 628, 629 and 630.

B (Vacant)

C Construction

After removal of the modular block wall, provide topsoil to grade vacated area to match adjacent elevations. Restore graded area with Seeding Mixture No.40, Fertilizer Type B and Erosion Mat Urban Class I Type A.

D Measurement

The department will measure Removing Modular Block Wall as each cubic yard, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Removing Modular Block Wall	CY

Payment is full compensation for removing modular block wall and associated materials, and all excavating, grading, shaping, and restoring materials and tools to restore the ditch flow line.

30. Adjusting Water Valve Boxes, Item SPV.0060.01.

A Description

This special provision describes adjusting water valve boxes to final pavement elevations the plans show.

B Materials

Utilize existing valve boxes where the required extent of adjustment allows. If additional sections are necessary, coordinate with city of Two Rivers and contact Scott Ahl, (920) 793-5542, scoahl@two-rivers.org, to obtain required materials.

C Construction

Before completion of paving operations, adjust the water valve boxes to match the final proposed grade. Excavate and expose the existing water main valve box to the depth needed to adjust the valve box to grade, add or remove extension(s) as needed, and backfill with base aggregate material conforming to the requirements for the adjacent roadway base course construction.

Complete adjustments in such a manner to avoid any damage to the water valve boxes. Provide the city of Two Rivers two working days advance notice before adjusting the valve boxes to finished grade.

D Measurement

The department will measure Adjusting Water Valve Boxes as a unit of work for each valve box, acceptably adjusted.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Adjusting Water Valve Boxes	EACH

Payment is full compensation for adjusting each valve box; excavating as necessary to access the valve box; backfilling; repairing any damage done to the valve box during adjustment; and for adding new sections if necessary.

ner-900-015 (20190718)

31. Cleaning Ditch, Item SPV.0060.02.

A Description

This special provision describes minor grading, cleaning and finishing existing ditch flow lines to restore the conveyance of storm water as shown on the plans, according to the provisions of standard spec 205 and as hereinafter provided.

B (Vacant)

C Construction

Grade and shape the ditch flow line as necessary to restore and allow unimpeded flow at each culvert pipe location shown. Do not excavate deeper than one foot nor disturb an overall lateral width greater than 10 feet. Grade and trim the lateral areas of disturbance to produce uniform side slope surfaces. Dispose of surplus material according to standard spec 205.3.12.

D Measurement

The department will measure Cleaning Ditch as each individual unit, acceptably completed.

Each individual unit of Cleaning Ditch that exceeds 30-ft in distance along the ditch bottom will be considered an additional unit.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Cleaning Ditch	EACH

Payment is full compensation for furnishing all excavating, grading, shaping, compacting, and restoring the ditch flow line.

32. Reconnect Storm Sewer Laterals, Item SPV.0060.03.

A Description

This special provision describes reconnecting existing storm sewer laterals to new structures, new pipes or existing pipe according to the provisions of standard spec 520.

B Materials

All material utilized for reconnecting storm sewer laterals shall be in accordance with standard spec 520.2.

C Construction

Identify all private laterals in existing structures and pipes and verify elevations prior to that structure's removal and ordering of any precast structures. Remove existing lateral pipes to the right-of-way and replace in-kind. Verify that positive drainage is achieved when connecting to the new inlet or curb outlet structure. The contractor will be allowed to salvage any structurally sound pipe that was removed with

prior approval by the engineer. Connect the existing pipes to the new pipes with the appropriate coupling, concrete collar or by means approved by the engineer.

Taps into new pipe or structures must be approved by the engineer by methods shown on the plans. Concrete masonry for concrete collar shall be according to standard spec 520.3.

D Measurement

The department will measure Reconnect Storm Sewer Lateral by each lateral connected and approved in the field.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Reconnect Storm Sewer Laterals	EACH

Payment is full compensation for performing all work; removal of existing pipes, furnishing and installing all materials, couplings, concrete collars, taps and pipe.

33. Manholes 6-FT x 14-FT Special, Item SPV.0060.04.

A Description

This special provision describes the constructing a 6-FT x 14-FT manhole as shown on plans and directed by the engineer and as hereinafter provided.

B Materials

Use materials according to standard spec 611.2.

Provide drawings stamped by a professional engineer registered in the State of Wisconsin for steel reinforcing design.

C Construction

Construct manholes according to standard spec 611.3

D Measurement

The department will measure Manholes 6-FT x 14-FT Special, as a single complete unit of work, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Manholes 6-FT x 14-FT Special	EACH

Payment is full compensation for providing materials, including masonry, sewer connections, steps, and other fittings; for completing and submitting an approved structural design; for excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

34. Temporary Water Diversion C-36-0013, Item SPV.0060.05.

A Description

This special provision describes diverting and maintaining the existing flow of the Unnamed Drainage Way through a temporary diversion channel during the removal/extension of C-36-0013.

B Materials

Follow the applicable sections of the WisDOT Standard Specifications for all materials utilized under this item, as directed by the engineer. Provide evidence that items meet specifications and/or certifications prior to use of such items if requested by the engineer.

C Construction

The temporary water diversion of the unnamed drainage way shall be in place prior to removal/extension of existing Structure C-36-0013.

Alterations to the suggested methodologies of water diversion as noted below may be acceptable. Such alterations should be clearly spelled out in the Erosion Control Implementation Plan (ECIP) for approval by the Wisconsin Department of Natural Resources prior to construction.

Method #1: Dam the flow using non-erodible materials, such as rock bags and polyethylene sheets, and pump the water over the box culvert extension. Include details of the damming and pumping system in the ECIP, for approval by the engineer. Treat the water to remove suspended solids before it enters any waterway or wetland. Provide a settling basin, or other suitable means approved by the engineer, with sufficient capacity and size to provide an efficient means to filter the water from the dewatering operation before it is discharged back into the stream as provided in the Standard Specifications and these special provisions. Direct discharge into the stream will not be permitted. Saturated sediment shall be dewatered in an upland location within a dewatering device. Treatment practices may include the use of a polymer in conjunction with the dewatering mechanism, as approved by the engineer.

Remove the temporary barriers after flow through the new box culvert structure extension is established. Restore the area outside of the proposed roadbed and slopes to natural surrounding conditions and elevations.

Temporary shoring may be utilized to avoid or minimize impacts outside of the project limits.

D Measurement

The department will measure Temporary Water Diversion C-36-0013 as each complete unit of work, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Temporary Water Diversion C-36-0013	EACH

Payment is full compensation for providing, installing, removing, and disposing of all materials used to divert flow, maintaining such materials during use, all excavation required, restoration of the area to original conditions (unless shown otherwise in the project plans), and temporary shoring.

35. Remove, Salvage, and Reinstall Wood Fence, Item SPV.0090.01.

A Description

This special provision describes removing and salvaging existing wood fence, and reinstalling the fence as hereinafter provided.

B (Vacant)

C Construction

Dismantle and remove the fence, posts, and all other existing components associated with the fence from the locations the plans designates. Minimize damage to reusable materials. Do not cut material that would be otherwise reusable. Replace contractor-damaged materials that are to remain in place or be reinstalled at no cost to the department. Stockpile reusable materials in engineer-approved locations on the project. Reinstall the salvaged fence at the existing location.

D Measurement

The department will measure Remove, Salvage, and Reinstall Wood Fence by the linear foot, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0009.01	Remove, Salvage, and Reinstall Wood Fence	LF

Payment is full compensation dismantling and stockpiling reusable fence elements; for removing, disposing and replacement of unwanted or damaged materials; for resetting posts; for reinstalling fence; including all necessary items incidental to removing and reinstalling fence. The department will not pay for replacing damaged materials.

36. Treated Timber Rub Rail, Item SPV.0090.02.

A Description

This special provision describes furnishing and installing treated timber rub rail to protect trail users from guardrail bolts and screws.

B Materials

Furnish treated timber according to the pertinent requirements of standard spec 507, and according to construction details in the plans.

Furnish lag bolts and washers according to the pertinent requirements of standard spec 614, and according to construction details in the plans.

C Construction

Securely attach the treated timber to the guardrail posts with the lag bolts and washers countersunk as shown on the plans. Splices in the rail will be permitted at the post, provided the splice spacing is at least 12.5 feet.

D Measurement

The department will measure Treated Timber Rub Rail by the linear foot, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Treated Timber Rub Rail	LF

Payment is full compensation for Timber Rub Rail is full compensation for providing and installing treated timber and associated hardware and for flagging operations required during install.

37. UV GRP CIPP 12-Inch, Item SPV.0090.03.

A Description

This special provision describes furnishing, preparing, installing, and verifying ultraviolet (UV) glass reinforced plastic (GRP) cured-in-place-pipe (CIPP) liners for storm sewer or culvert pipe that when cured provides a structurally sound, smooth, joint less and watertight pipe.

A.1 Referenced Documents

The following documents form a part of this specification to the extent stated herein:

- ASTM F2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Resin Pipe (CIPP)
- ASTM F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
- ASTM F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull In and Inflate and Curing of a Resin-Impregnated Tube.
- ASTM D543 Test Method for Resistance of Plastics to Chemical Reagents
- ASTM D578 Standard Specification Glass Fiber Strands
- ASTM D638 Standard Test Method for Tensile Properties of Plastics
- ASTM D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

- ASTM D2122 Standard 1 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
- ASTM D3567 Standard Practice for Determining Dimensions of "Fiberglass" (Glass- Fiber Reinforced Thermosetting Resin) Pipe and Fittings
- ASTM D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

B Materials

B.1 General

Provide a UV cured GRP system adhering to ASTM F2019 that has a minimum 500,000 linear feet or 1000 lined sections of successful installations in the United States and that has been continuously available and in service for a minimum of 5 years.

Allow the engineer to inspect all liner to be installed under this work at the manufacturer's plant(s) and wet-out facility for compliance with these specifications if requested. Require the wet-out facility's cooperation in these inspections.

B.2 Glass Fiber Tube

Furnish a flexible fiber glass tube meeting the requirements of ASTM F2019 as appropriate that when installed, will tightly fit the internal circumference and length of the original pipe. Provide a glass fiber tube that is homogeneous throughout, uniform in color, free of cracks, holes, foreign materials, blisters, and deleterious faults. Inspect glass fiber tube for defects at time of manufacturer and prior to installation.

Fabricate any seams in the tube stronger than the unseamed material. Do not utilize overlapped layers of the tube in longitudinal seams that cause lumps in the final product. Do not form joints perpendicular to the long axis. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material included in the tube may cause delamination in the cured CIPP.

Utilize an outer and inner film to ensure that the liner remains intact during the insertion process and to protect the resin at all times during the installation and curing process from water and debris contamination, and resin migration. Provide film materials that are both impervious to airborne styrene, with the outer material also having UV blocking characteristics.

Conduct tube wet out in an indoor environmentally controlled manufacturing setting with a quality management system registered according to and conforming with the current ISO 9001 standard or having implemented a quality system similar to that in the ISO 9001 requirements. Ensure that proper materials and amounts are used in the resin saturation process and in liner shipping and storage.

No onsite wet out will be allowed. The engineer may inspect the wet out facility at the manufacturer's plant(s) for compliance with these specifications. Fully impregnate the glass fiber tube with the appropriate resin using system under manufacturer quality-controlled conditions. Minimize air entrapment to the lowest possible amount. No dry or unsaturated layers shall be evident.

Provide a wet out tube that when compressed at installation pressures will meet or exceed the design thickness. Construct the tube to withstand installation pressures and curing temperatures, have sufficient strength to bridge missing pipe, stretch to fit irregular pipe sections, and invert smoothly around bends.

Mark the tube for distance at regular intervals along its entire length, not to exceed 5 feet. Include the manufacturers name or identifying symbol.

The liner should be seamless in its cured state to ensure homogenous physical properties around the circumference of the cured liner. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

Obtain compound samples and prepare test specimens according to the latest applicable ASTM standards from the manufacturer if directed by the engineer.

B.3 Resin

Furnish a corrosion resistant polyester, vinyl ester, or orthothalic (either ppg or npg grade) and catalyst resin system, compatible with the installation process, that when properly cured within the tube creates a composite that meets the requirements of ASTM F1216, ASTM D5813, and ASTM F2019, the physical properties in Table 1, and those requirements which are to be utilized in the structural design of the CIPP for this project. Resins created from recycled materials are not allowed.

Table 1 CIPP Minimum Physical Properties

Flexural Modulus (minimum)	725,000 psi
Flexural Strength (minimum)	15,000 psi
Long term E-modulus	675,000 psi
Long term tensile bending strength	13,500 psi

Use resin requiring a UV light to cure the liner. A photo-initiator system must be added to the resin prior to the impregnation. The photo-initiator system shall be tuned to the UV-curing equipment used or vice-versa. The liquid UV resin shall saturate the tube and produce a properly cured liner, which is resistant to abrasion due to solids, grit, and sand.

B.4 Structural Requirements

A minimum of 14 days prior to delivery of the liner materials, submit design calculations prepared by an engineer licensed in the State of Wisconsin that meet the requirements of the manufacturer and that are designed as suggested by ASTM F2019, Appendix X1. The designer may use ASTM F1216, Appendix XI as modified in ASTM F2019 X1.1.2 for each pipe segment with less than 10% ovality. If the ovality is 10% or greater, use either the ASCE or the WRc Sewerage Rehabilitation Manual, Type II Design, Section 5.3.2.iii for non-round pipe. Assume the fully deteriorated condition and assume no bonding to the original pipe wall for the CIPP design. Verify the Long-Term Flexural Modulus used in design by independent testing and provide documentation to the department per Section B.5.1. Do not exceed 50% of the short-term values for the Long-Term Modulus in design. CIPP thickness shall not be less than that which is computed from the design requirements in the table below, for resin systems with physical properties shown.

Table 2 - CIPP Design Criteria

Design Variable	Value
Culvert Inside Diameter	12 Inches
Soil Density: w	120 pcf
Live Load: Ws	Follow AASHTO LRFD Bridge Design Specifications (AASHTO, 2012) Article 3.6.1.2.6
Minimum Height of Water above Culvert Crown: H _w	24 Inches
Height of Soil above Culvert Crown: H	9 feet
Culvert Deflection/Ovality:	2% minimum. To be verified by liner designer.
Modulus of Soil Reaction E's	Follow AASHTO LRFD Bridge Design Specifications (AASHTO, 2012) Article 12.12.3.5.1
Long-term Modulus of Elasticity of CIPP Liner: E _L	362,500 psi minimum, 50% of initial value in ASTM F2019. Actual value per the manufacturer can be used. Provide supporting data verified by independent testing.
Factor of Safety: N	2
Flexural Strength	15,000 psi Actual value per the manufacturer can be used. Provide supporting data verified by independent testing

B.5 Experience and Quality Control

B.5.1 Experience

Demonstrate a minimum of 5 year's experience in the installation of cured in place liners by the installation contractor with at least five projects in that time totaling over 50,000 feet of installed liner. The installing contractor must be trained and certified by the UV GRP manufacturer and have documented experience with a fiberglass UV cured liner.

Provide an experienced inspector or supervisor to oversee the installation of the CIPP liner, who completed the NASSCO cured-in-place-pipe inspector training class or equivalent and has at least 3 year's experience with cured in place pipe liner installation having previously supervised a minimum of 50,000 linear feet of CIPP lining using a similar resin and flexible tube and using the specific method of installation and curing proposed.

If the contractor does not have 50,000 linear feet of CIPP lining experience with the UV curing system being used, then a manufacturer's onsite representative must be present during installations of the CIPP system until such time the department is confident in the contractor's ability. The contractor is to provide the engineer with the manufacturer representative's work experience for approval. Do not begin prior to the engineer's approval of the manufacturer's onsite representative.

Provide five references of completed projects of similar installations by the contractor.

B.5.2 Installation and Quality Control Plan

Furnish a detailed installation and quality control plan, to be discussed at the preconstruction meeting outlining measures to assure the quality requirements of the contract are met including but not limited to;

- A summary table of CIPP material properties, including short-term flexural modulus of elasticity, 50-year flexural modulus of elasticity, short-term flexural strength (bending stress), 50-year flexural strength (bending stress), and chemical resistance.
- Manufacturer's product certifications and available standard written warranty for materials used in the liner system including documentation of testing to confirm a minimum 50-year design life for the liner, adherence to applicable ASTM standards and safety data sheets.
- Manufacturer's product literature, and application and installation requirements for materials used in the liner including:
 - Liner and resin/catalyst type including, manufacturer, product names and mixing ratios, the location of the facility where each was manufactured, and a list of appurtenant materials and accessories to be furnished.
 - Maximum, minimum and ideal installation temperatures.
 - Minimum pressure required to hold tube tight to the host conduit and maximum pressure so not damage the tube.
 - Curing times.
 - Maximum pulling forces as applicable.
- Independent third-party certified laboratory test reports demonstrating that the exact resin/liner combination to be used for this project meets the requirements for initial structural properties and chemical resistance (performed according to ASTM F1216).

Independent third-party certified laboratory test reports demonstrating that the exact resin and liner to be used for this project has been tested for long-term flexural modulus of elasticity and long-term flexural strength (i.e. 10,000 hour creep testing performed according to ASTM 2990 or DIN 761 for design conditions applicable to this project). When filled resins are proposed, complementary data of the same data for unfilled resin shall also be provided. If the data submitted is not for the exact liner to be used on this project, submit a detailed description of the physical properties of both the liner used in the test and the liner to be used for this project to demonstrate that the two liners are comparable in terms of physical properties.

Perform testing for 10,000 hours under test conditions and loadings described below. The data points from 1,000 hours to 10,000 hours, or such other time period as determined by the engineer based on the curve or slope of the plotted data, of the long-term flexural modulus shall be extrapolated using a log-log scale linear regression analysis to determine the minimum service life performance of the resin-tube.

Testing shall be conducted at:

- Temperature 21°C to 25°C
- Relative humidity: 50% minimum
- Load: Load shall be calculated at 0.25% of the short-term E-modulus as tested per ASTM D790 or ISO 178, or as approved by engineer.
- Wet out quality management ensuring that proper materials and amounts are used in the resin saturation process and in liner shipping and storage. At a minimum, the quality control documentation shall include resin lot numbers, volumes of resin, catalyst, enhancers, date of wet-out, storage / transportation controls, and quality assurance procedures.
- Method of installation.
- Proposed quality controls checks that will be performed and in place by the contractor during installation.
- Method of curing and monitoring including:
 - Curing speed
 - Light source size and wattage
 - Inner air pressure
 - Curing temperatures
- These parameters are to be controlled and documented during installation and curing and provided to the engineer including date and time and length of installed liner.
- Product sampling, liner thickness compliance, and notification/resolution of observed liner defects and/or wrinkling observed by the contractor during post lining televising operations.
- Defined responsibilities, as assigned to specific contractor's personnel, for assuring that all the quality assurances are met.
- An outline of specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Provide recommended repair/replacement procedures per the CIPP system manufacturer.
- Bypass flow plan if required.
- An odor control plan that will show project specific odors will be minimized at the project site and surrounding area.

B.6 Quality and Inspection Report

Submit a report of the inspection and quality activities performed during and after lining. Inspect pipes with a color pan and tilt, 360° rotating head camera specifically designed and constructed for sewer inspection. Provide pre and post lining video inspection files upon completion of the lining. Format files for viewing on a standard PC without additional media software. Perform video work according to NASSCO PACP standards or engineer approved equal.

B.7 Cured Liner Properties

B.7.1 Color

Provide a tube where the cured interior pipe surface after installation is a light reflective color so that a clear, detailed examination with closed circuit television inspection can be made.

B.7.2 Chemical Resistance

Provide a chemically resistance tube. Evaluate the inner surface of the cured resin/fiberglass liner matrix in a laminate for qualification testing of long term chemical exposure to a variety of chemical effluents in a manner consistent with 6.4.1 and 6.4.2 of ASTM D5813.

Provide samples of tube and resin similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meets these chemical testing requirements.

B.7.3 Hydraulic Capacity

Maintain the overall hydraulic profile as large as possible with the CIPP having a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

C Construction

C.1 General

No change of material, design values, or procedures as developed before bidding the contract may be made during the course of the work without the prior written approval of the engineer.

Coordinate with the engineer to field verify pipe lining locations and lengths before beginning work. The department will locate and designate all right-of-way areas open and accessible for the work and provide rights of access to these points. If a shoulder must be closed to traffic because of the work, institute the actions necessary to do this upon concurrence of the department for the mutually agreed time period.

Bypass pumping or flow division is the responsibility of the contractor. If dewatering/bypass operations are required from one pipe structure to another pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce any erosion from the discharge velocity that would cause release of sediment downstream. If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Refer to WDNR Technical Standards for Dewatering as applicable. https://dnr.wisconsin.gov/topic/Stormwater/standards/const_standards.html

C.2 Handling and Storage

Take care in shipping, handling and storage to avoid damaging the liner. Store liner as recommended by manufacturer and as approved by the engineer. Avoid exposure to light prior to installation. Any liner damaged in shipment, storage, or installation shall be replaced as directed by the engineer at no additional cost.

C.3 Accessibility of Water

This site is rural and without access to public waters systems. Supply water for cleaning the host pipe or other processes.

C.4 Cleaning Existing Conduits

Remove internal debris from the existing pipeline including any roots and protruding connections. Clean the pipes with hydraulically powered equipment, high-velocity jet cleaners, or mechanically powered equipment capable of sufficiently cleaning and clearing the existing pipe. Use precautions during the cleaning operations to prevent additional damage to the existing pipe. Properly dispose of all sediment removed from the cleaning process.

C.5 Inspection of Pipeline

Inspect the interior of the pipeline carefully to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, note these so that these conditions can be corrected. Keep a digital video and suitable log for later reference by the department.

C.6 Repair Techniques and Material Installation

Fill any voids in the host pipe that can not be bridged prior to the installation of the CIPP liner. Small gaps and offsets in the pipe culvert joints can be bridged by the CIPP liner. Repair significant gaps and offsets and stop water infiltration that may impact CIPP curing.

C.7 Installation

C.7.1 Installation of Glass Fiber Tubing

Use a constant tension winch, as specified by the liner manufacturer, to pull the glass fiber liner into position in the pipe. Provide a longitudinal fiberglass reinforcement band which runs the entire length of the liner ensuring that the pulling force is transferred to the band and not the fiberglass liner. Pull the liner keeping the force below the system recommendation for the tubing installed. Provide end plugs to

cap each end of the glass fiber liner to prepare for pressurizing the liner. Secure the end caps to prevent them from being expelled due to pressure. Use liner restraints in manholes.

Use a slip sheet/gliding foil on the bottom one third to one half of the pipe prior to liner insertion (if it is not already part of the manufactured outer film of the liner), for the purpose of protecting the liner during insertion and reduce the drag, or as recommend by the liner manufacturer.

C.7.2 Curing Liner

Cure the glass fiber liner with UV light sources at a constant inner pressure. Hold the liner tight to the host pipe per the manufacturer's recommended equipment and methods. Do not release liner inner pressure until liner reaches curing parameters specified by the manufacturer.

Assemble the UV light sources according to the manufacturer's specifications for the liner diameter. Draw a multi-lamp ultraviolet light curing assembly fitted with CCTV equipment through the pipe while the tube is expanded under pressure. Verify that the liner is properly fitted to the host pipe without any wrinkles or fins that should be avoidable given the current cross-sectional configuration (geometry) of the host pipe. Correct defects before proceeding on to the UV-light curing process. Take care not to damage the liner or inner film material when inserting the curing equipment.

Use curing speeds as recommended by the manufacturer and determined by contractor based on various site specific field conditions. The optimal curing speed, or travel speed of the energized UV light sources, is determined for each length of liner based on liner diameter, liner thickness, and exothermic reaction temperature. Use infrared sensors during the curing process to record curing data that will be submitted to the engineer with a post CCTV inspection. Monitor and control the parameters stated in the quality control plan, giving the engineer a record of the curing parameters over every segment of the entire length of the liner.

Remove the inner film material if the liner is manufactured with a removable inner film as recommended by the manufacturer after curing and discard.

Once cured, the cured-in-place pipe should be continuous and tight fitting. Cut the pipe liner neatly and smoothly at each end of the host pipe to prevent snagging and collection of debris.

C.8 Quality Control and Testing

Prepare cured liner samples and test physical properties according to ASTM F2019, Section 7. Test for conformance with the manufacturer's final CIPP design values and the CIPP Design Criteria requirement of this special provision including flexural properties listed.

Provide documentation of quality checks performed according to this part and as described in the project quality control plan.

C.9 Workmanship and Inspection

Perform an initial visual and final television inspection to document the as-built condition after the completion of the liner installation. Inspect the CIPP according to ASTM F2019, Section 7.3 and this part. Provide copies of as-built inspection documentation to the engineer in digital format that can be read without specialized software.

Provide a finished liner that is continuous over the entire length of the conduit section and that tightly conforms to the walls of the existing (host) conduit pipe that is homogeneous throughout and free of any dry spots, lifts, delaminations, wrinkles, protrusions, holes, cracks, foreign material, blisters, or other deleterious faults or defects, which in the opinion of the engineer, will affect the liner's structural integrity, hydraulic performance, future maintenance access, and overall liner performance. Provide a finished liner with no visible gaps or annular space between the finished liner and the existing (host) pipe at the manhole, sewer service connection, or other exposed points within the finished lined section. Where the CIPP does not meet the requirements of Section 7 of ASTM F2019 or this specification, the affected portions of the CIPP shall be removed and replaced with an acceptable repair as specified in 6.2 of ATSM Specification D5813 as approved by the engineer. Any excavation or restoration necessary is incidental with no additional payment.

Upon acceptance of the installation work and testing, restore the project area affected by the operations to its original condition.

D Measurement

The department will pay for UV GRP CIPP 12-Inch by the linear foot, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	UV GRP CIPP 12-Inch	LF

Payment is full compensation for furnishing all labor, tools, equipment, materials, testing, reports and incidentals, including any required bypass pumping or flow diversion, cleaning of the host pipe, gap, void and offset repair in the host pipe, and disposal of wastes including curing or cleaning water necessary to complete the contract work according to the above stated specifications.

38. Remove, Salvage, and Reinstall Riprap Heavy, Item SPV.0180.01.

A Description

This special provision describes work consisting of removing, salvaging, and reinstalling riprap heavy according to the applicable provisions of standard spec 204 and 606, as shown in the plans, and as hereinafter provided.

B (Vacant)

C Construction

Remove and store existing riprap heavy around existing pipe outfall and at the location of the proposed outfall in conformance with applicable provisions in the standard spec 204.

Upon the completion of the installation of the proposed pipe outfalls, reinstall salvaged riprap heavy in conformance with provisions in the standard spec 606. Blend in the salvaged riprap with the existing.

D Measurement

The department will measure Remove, Salvage, and Reinstall Riprap Heavy in area by the square yard, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Remove, Salvage, and Reinstall Riprap Heavy	SY

Payment is full compensation for removing, stockpiling, and reinstalling the riprap.

ADDITIONAL SPECIAL PROVISION 4

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor is not allowed to withhold retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Acceptance and Final Payment

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work.

Additional Special Provision 6 (ASP-6)

Modifications to the standard specifications

Make the following revisions to the standard specifications.

107 Legal Relations and Responsibility to the Public

Add subsection 107.27 effective with the November 2024 letting.

107.27 Drones or Unmanned Aircraft Systems (UAS)

107.27.1 Licensing and Compliance

- (1) Obtain and possess the necessary Federal Aviation Administration (FAA) licenses and certifications to operate drones commercially (<https://www.faa.gov/uas>).
- (2) Comply with all FAA regulations, airspace restrictions, and local laws. Operators of small drones that are less than 55 pounds for work or business must follow all requirements as listed in Title 14, Chapter 1, Subchapter F, Part 107 of the Code of Federal Regulations (14 CFR) and obtain a remote pilot certificate (https://www.faa.gov/uas/commercial_operators).
- (3) Comply with Wisconsin State Statute 942.10. Limit operations to the specific approved purpose and employ reasonable precautions to avoid capturing images of the public except those that are incidental to the project.
- (4) Provide copies of waivers required for specific project conditions to the engineer prior to any flight.

107.27.2 Flight Approval, Safety, and Incident Reporting

- (1) Submit information in 107.27.2(2) to obtain written drone flight approval from the engineer at least 3 business days prior to operating a drone within the right-of-way. Do not operate a drone within the right-of-way unless approved by the engineer.
- (2) Drone flight application for review and approval must include:
 - UAS pilot information and qualifications, images of certification
 - UAS drone information and FAA tail numbers
 - Max/ Min allowable flight parameters (weather)
 - Specifics of flight mission: capture scope
 - Estimated flight duration
 - Pre-flight checklist
 - Site-specific parameters
 - Notification protocols - Federal/Local/Agency/Owner/Responsible in Charge
 - Confirmation and verification of approved operators and hardware
 - Flight plan map diagram (including launch and landing location)
 - FAA-Airspace flight map classification and confirmation with graphics
 - UAS incident management protocol
- (3) If contractor is requesting multiple types of the same flight, a simplified request can be submitted listing weekly flight plan.
- (4) Safety measures must include but are not limited to:
 - Regular training and updates on drone regulations are required and must be provided upon request.
 - Drones must be operated in accordance with safety guidelines, including maintaining a safe distance from people, structures, vehicles, etc.
 - Conduct a pre-flight safety assessment, considering weather conditions, airspace restrictions, and potential hazards.
 - Emergency procedures (e.g., drone malfunction, loss of control) must be documented and followed.
 - All incidents must be reported to the engineer.
- (5) If the drone has an incident during flight, report the following to the engineer:
 - Incident background and details.
 - FAA (14 CFR 107.9) and NTSB (49 CFR 870) notification protocol.
 - Contractor internal notification protocol.

107.27.3 Insurance Requirements

- (1) Maintain drone liability insurance with the following limits.
 1. For drones weighing 10 pounds or less, a liability policy with a minimum limit of \$1,000,000.00 is required.

2. For drones weighing more than 10 pounds and less than or equal to 20 pounds, a liability policy with a minimum limit of \$2,000,000.00 is required.
3. For drones weighing more than 20 pounds, notify engineer and department will determine appropriate liability policy coverage levels based on size, use, location, and other risk factors.

646 Pavement Markings

646.3.2.4 Black Epoxy

Replace paragraph (1) with the following effective with the November 2024 letting.

- (1) Apply black epoxy in a grooved slot directly after the white marking. Apply epoxy at a wet mil thickness of 20. Apply black aggregate at or exceeding 25 pounds per gallon of epoxy. Do not apply glass beads to black epoxy.

ERRATA

204.3.1.3 Salvaging or Disposal of Materials

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (2) Dispose of concrete, stone, brick, and other material not designated for salvage as specified for disposing of materials under 203.3.5.

204.3.2.3 Removing Buildings

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (2) Buildings removed and materials resulting from building removal become the contractor's property unless the contract specifies otherwise. Dispose of unclaimed and removed material as specified for disposing of materials in 203.3.5.

335.3.2 Rubblizing

Replace paragraph (6) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (6) Remove reinforcing steel exposed at the surface by cutting below the surface and disposing of the steel as specified in 203.3.5. Do not remove unexposed reinforcing steel.

335.3.3 Compacting

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (2) Remove loose asphaltic patching material, joint fillers, expansion material, or other similar materials from the compacted surface. Also remove pavement or patches that have a maximum dimension greater than or equal to 6 inches that are either not well seated or projecting more than one inch. Dispose of removed material as specified in 203.3.5.

526.3.4 Construction, Backfilling, Inspection and Maintenance

Replace paragraph (3) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.5. Contractor-furnished materials remain the contractor's property upon removal.

602.3.6 Concrete Rumble Strips

Replace paragraph (5) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (5) At the end of each workday, move equipment and material out of the clear zone and sweep or vacuum the traveled way pavement and shoulder areas. Sweep away or vacuum up milling debris before opening adjacent lanes to traffic. Dispose of waste material as specified in 203.3.5; do not place on the finished shoulder surface.

604.2 Materials

Replace paragraph (1) with the following information to remove line and link for crushed aggregate effective with the November 2024 letting. The crushed aggregate gradation information for slope paving is now found in 604.2(3).

- (1) Furnish materials conforming to the following:

Water.....	501.2
Select crushed material.....	312.2
Concrete.....	501
Reinforcement.....	505
Expansion joint filler	415.2.3
Asphaltic materials	455.2

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. DBE firms must enter all payments to DBE and non-DBE firms regardless of tier.
6. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
7. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4), (5), and (6), and shall be binding on all first tier subcontractor relationships, all contractors and subcontractors utilizing DBE firms on the project, and all payments from DBE firms.

B. Costs for conforming to this special provision are incidental to the contract.

NOTE: CRCS Prime Contractor payment is currently not automated and will need to be manually loaded into the Civil Rights Compliance System. Copies of prime contractor payments received (check or ACH) will have to be forwarded to paul.ndon@dot.wi.gov within 5 days of payment receipt to be logged manually.

***Additionally, for information on Subcontractor Sublet assignments, Subcontractor Payments and Payment Tracking, please refer to the CRCS Payment and Sublets manual at:

<https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payments-sublets-manual.pdf>

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

- (1) Use the department's Civil Rights Compliance System (CRCS) for projects with a LET date on or before December 2024 and AASHTOWare Project Civil Rights and Labor (AWP CRL) for projects with a LET date on or after January 2025 to electronically submit Certified Payroll Reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's Highway Construction Contractor Information (HCCI) site on the Labor, Wages, and EEO Information page at:
<https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx>
- (2) Ensure that all tiers of subcontractors, including all trucking firms, either submit their weekly certified payroll reports (contracts with federal funds) or labor data (contracts with state funds only) electronically through CRCS or AWP CRL. These payrolls or labor data are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.
- (3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS or AWP CRL training as they are about to begin their submittals. The department will provide training either in a classroom setting at one of our regional offices, via the online AWP Knowledge Base, or by telephone. to schedule CRCS specific training. The AWP Knowledge Base is at: <https://awpkb.dot.wi.gov/>
- (4) The department will reject all paper submittals for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.
- (5) For firms wishing to export payroll/labor data from their computer system, have their payroll coordinator contact:
 - For CRCS: Paul Ndon at paul.ndon@dot.wi.gov. Information about exporting payroll/labor data. Not every contractor's payroll system can produce export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at: <https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf>
 - For AWP CRL: Contact AWP Support at awpsupport@dot.wi.gov. Additional information can be found in the AWP Knowledge Base at <https://awpkb.dot.wi.gov/Content/crl/Payrolls-PrimesAndSubs/PayrollXMLFileCreationProcess.htm>

NON-DISCRIMINATION PROVISIONS

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- a. Withholding payments to the contractor under the contract until the contractor complies; and/or
- b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

BUY AMERICA PROVISION

Buy America (as documented in [88 FR 57750 \(2 CFR part 184 and 200\)](#) from the Office of Management and Budget: [Federal Register: Guidance for Grants and Agreements](#)) shall be domestic products and permanently incorporated in this project as classified in the following three categories, and as noted in the Construction and Materials Manual (CMM):

1. Iron and Steel

All iron and steel manufacturing and coating processes (from the initial melting stage through the application of coatings) must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America.

The exemption of the iron and steel manufacturing and coating processes Buy America requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or \$2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project.

2. Manufactured Product

All manufactured products (as defined in CMM 228.5) are covered under a previous waiver from 1983 and are currently exempt from Buy America.

3. Construction Material

All construction materials (as defined in [88 FR 57750 \(2 CFR part 184 and 200\)](#) and as referenced in CMM 228.5) must comply with Buy America. All manufacturing process of construction materials must occur in the United States.

[88 FR 55817 \(DOT-OST-2022-0124\)](#) allows a limited waiver of Buy America requirements for de minimis costs and small grants.

- The Total value of the non-compliant products is no more than the lesser of \$1,000,000 or 5% of total applicable costs for the project¹; or
- The total amount of Federal financial assistance applied to the project, through awards or subaward, is below \$500,000²

The contractor shall take actions and provide documentation conforming to CMM 228.5 to ensure compliance with this Buy America provision.

<https://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf>

Upon completion of the project, certify to the engineer, in writing using department form DT4567 that all iron and steel, manufactured products, and construction materials conform to this Buy America provision.

Form DT4567 is available at: <https://wisconsindot.gov/Documents/formdocs/dt4567.docx>

Attach a list of iron or steel and construction material exemptions and their associated costs to the certification form using the Buy America Exemption Tracking Tool, available at:

<https://wisconsindot.gov/hccidocs/contracting-info/buy-america-exemption-tracking-tool.xlsx>

¹ The de minimis public interest waiver does not apply to iron and steel subject to the requirements of 23 U.S.C. 313 on financial assistant administered by FHWA. The de minimis threshold in 23 CFR 635.410(b)(4) continues to apply for iron and steel.

² The small grant portion of the waiver does not apply to iron, steel, and manufactured goods subject to the requirements of 49 U.S.C. 22905(a).



Proposal Schedule of Items

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Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	203.0220 Removing Structure (structure) 01. C-36-1016	1.000 EACH	_____.	_____.
0004	203.0220 Removing Structure (structure) 02. C-36-13	1.000 EACH	_____.	_____.
0006	203.0335 Debris Containment Over Waterway (structure) 01. B-36-117	1.000 EACH	_____.	_____.
0008	204.0100 Removing Concrete Pavement	8,417.000 SY	_____.	_____.
0010	204.0105 Removing Concrete Pavement Butt Joints	720.000 SY	_____.	_____.
0012	204.0110 Removing Asphaltic Surface	1,165.000 SY	_____.	_____.
0014	204.0115 Removing Asphaltic Surface Butt Joints	255.000 SY	_____.	_____.
0016	204.0120 Removing Asphaltic Surface Milling	191,050.000 SY	_____.	_____.
0018	204.0150 Removing Curb & Gutter	935.000 LF	_____.	_____.
0020	204.0155 Removing Concrete Sidewalk	370.000 SY	_____.	_____.
0022	204.0165 Removing Guardrail	11,085.000 LF	_____.	_____.
0024	204.0190 Removing Surface Drains	1.000 EACH	_____.	_____.
0026	204.0220 Removing Inlets	13.000 EACH	_____.	_____.
0028	204.0245 Removing Storm Sewer (size) 01. 12-Inch	715.000 LF	_____.	_____.



Proposal Schedule of Items

Page 2 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0030	204.0245 Removing Storm Sewer (size) 02. 18-Inch	16.000 LF	_____.	_____.
0032	204.0245 Removing Storm Sewer (size) 03. 24-Inch	104.000 LF	_____.	_____.
0034	204.0245 Removing Storm Sewer (size) 04. 42-Inch	8.000 LF	_____.	_____.
0036	205.0100 Excavation Common	1,343.000 CY	_____.	_____.
0038	206.2001 Excavation for Structures Culverts (structure) 01. C-36-13	1.000 EACH	_____.	_____.
0040	210.2500 Backfill Structure Type B	215.000 TON	_____.	_____.
0042	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0044	211.0101 Prepare Foundation for Asphaltic Paving (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0046	211.0101 Prepare Foundation for Asphaltic Paving (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0048	211.0301 Prepare Foundation for Concrete Base (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0050	213.0100 Finishing Roadway (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0052	213.0100 Finishing Roadway (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0054	213.0100 Finishing Roadway (project) 03. 1470-37-71	1.000 EACH	_____.	_____.



Proposal Schedule of Items

Page 3 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0056	305.0110 Base Aggregate Dense 3/4-Inch	1,225.000 TON	_____.	_____.
0058	305.0120 Base Aggregate Dense 1 1/4-Inch	2,095.000 TON	_____.	_____.
0060	305.0504.S Hauling Excess Shoulder Material	75.000 CY	_____.	_____.
0062	311.0110 Breaker Run	55.000 TON	_____.	_____.
0064	320.0155 Concrete Base 9-Inch	780.000 SY	_____.	_____.
0066	320.0335 Concrete Base HES 7-Inch	13.000 SY	_____.	_____.
0068	320.0355 Concrete Base HES 9-Inch	7,260.000 SY	_____.	_____.
0070	416.0610 Drilled Tie Bars	3,461.000 EACH	_____.	_____.
0072	416.0620 Drilled Dowel Bars	10,027.000 EACH	_____.	_____.
0074	455.0605 Tack Coat	23,422.000 GAL	_____.	_____.
0076	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.	_____.
0078	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	1.000 EACH	_____.	_____.
0080	460.2005 Incentive Density PWL HMA Pavement	20,154.000 DOL	1.00000	20,154.00
0082	460.2007 Incentive Density HMA Pavement Longitudinal Joints	9,590.000 DOL	1.00000	9,590.00
0084	460.2010 Incentive Air Voids HMA Pavement	27,435.000 DOL	1.00000	27,435.00



Proposal Schedule of Items

Page 4 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0086	460.6224 HMA Pavement 4 MT 58-28 S	27,435.000 TON	_____.	_____.
0088	465.0110 Asphaltic Surface Patching	50.000 TON	_____.	_____.
0090	465.0120 Asphaltic Surface Driveways and Field Entrances	7.000 TON	_____.	_____.
0092	502.3200 Protective Surface Treatment	1,016.000 SY	_____.	_____.
0094	502.3215 Protective Surface Treatment Reseal	210.000 SY	_____.	_____.
0096	502.4205 Adhesive Anchors No. 5 Bar	44.000 EACH	_____.	_____.
0098	504.0100 Concrete Masonry Culverts	40.000 CY	_____.	_____.
0100	505.0400 Bar Steel Reinforcement HS Structures	4,665.000 LB	_____.	_____.
0102	505.0600 Bar Steel Reinforcement HS Coated Structures	1,190.000 LB	_____.	_____.
0104	509.0301 Preparation Decks Type 1	2.000 SY	_____.	_____.
0106	509.0302 Preparation Decks Type 2	1.000 SY	_____.	_____.
0108	509.0500 Cleaning Decks	1,016.000 SY	_____.	_____.
0110	509.1500 Concrete Surface Repair	22.000 SF	_____.	_____.
0112	509.2000 Full-Depth Deck Repair	1.000 SY	_____.	_____.
0114	509.2500 Concrete Masonry Overlay Decks	78.000 CY	_____.	_____.



Proposal Schedule of Items

Page 5 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0116	509.9020.S Epoxy Crack Sealing	65.000 LF	_____.	_____.
0118	511.1100 Temporary Shoring	1,241.000 SF	_____.	_____.
0120	516.0500 Rubberized Membrane Waterproofing	15.000 SY	_____.	_____.
0122	520.8000 Concrete Collars for Pipe	1.000 EACH	_____.	_____.
0124	520.8700 Cleaning Culvert Pipes	5.000 EACH	_____.	_____.
0126	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	5.000 EACH	_____.	_____.
0128	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	1.000 EACH	_____.	_____.
0130	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	1.000 EACH	_____.	_____.
0132	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	1.000 EACH	_____.	_____.
0134	522.1066 Apron Endwalls for Culvert Pipe Reinforced Concrete 66-Inch	1.000 EACH	_____.	_____.
0136	601.0409 Concrete Curb & Gutter 30-Inch Type A	720.000 LF	_____.	_____.
0138	601.0411 Concrete Curb & Gutter 30-Inch Type D	240.000 LF	_____.	_____.
0140	601.0413 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	1,050.000 LF	_____.	_____.
0142	601.0600 Concrete Curb Pedestrian	20.000 LF	_____.	_____.



Proposal Schedule of Items

Page 6 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0144	602.0405 Concrete Sidewalk 4-Inch	3,560.000 SF	_____.	_____.
0146	602.0515 Curb Ramp Detectable Warning Field Natural Patina	196.000 SF	_____.	_____.
0148	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	127.790 SF	_____.	_____.
0150	602.0810 Concrete Driveway 6-Inch	75.000 SY	_____.	_____.
0152	606.0300 Riprap Heavy	135.000 CY	_____.	_____.
0154	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	767.000 LF	_____.	_____.
0156	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	10.000 LF	_____.	_____.
0158	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	97.000 LF	_____.	_____.
0160	608.0466 Storm Sewer Pipe Reinforced Concrete Class IV 66-Inch	154.000 LF	_____.	_____.
0162	611.0430 Reconstructing Inlets	2.000 EACH	_____.	_____.
0164	611.0530 Manhole Covers Type J	8.000 EACH	_____.	_____.
0166	611.0600 Inlet Covers Type A	1.000 EACH	_____.	_____.
0168	611.0612 Inlet Covers Type C	2.000 EACH	_____.	_____.
0170	611.0624 Inlet Covers Type H	12.000 EACH	_____.	_____.



Proposal Schedule of Items

Page 7 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0172	611.2004 Manholes 4-FT Diameter	7.000 EACH	_____.	_____.
0174	611.3003 Inlets 3-FT Diameter	2.000 EACH	_____.	_____.
0176	611.3230 Inlets 2x3-FT	12.000 EACH	_____.	_____.
0178	611.8110 Adjusting Manhole Covers	15.000 EACH	_____.	_____.
0180	611.8115 Adjusting Inlet Covers	1.000 EACH	_____.	_____.
0182	614.2300 MGS Guardrail 3	9,030.000 LF	_____.	_____.
0184	614.2340 MGS Guardrail 3 L	112.500 LF	_____.	_____.
0186	614.2610 MGS Guardrail Terminal EAT	6.000 EACH	_____.	_____.
0188	614.2620 MGS Guardrail Terminal Type 2	6.000 EACH	_____.	_____.
0190	618.0100 Maintenance and Repair of Haul Roads (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0192	618.0100 Maintenance and Repair of Haul Roads (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0194	618.0100 Maintenance and Repair of Haul Roads (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0196	619.1000 Mobilization	1.000 EACH	_____.	_____.
0198	620.0300 Concrete Median Sloped Nose	360.000 SF	_____.	_____.
0200	624.0100 Water	48.000 MGAL	_____.	_____.



Proposal Schedule of Items

Page 8 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0202	625.0100 Topsoil	4,210.000 SY	_____.	_____.
0204	628.1504 Silt Fence	12,850.000 LF	_____.	_____.
0206	628.1520 Silt Fence Maintenance	12,850.000 LF	_____.	_____.
0208	628.1905 Mobilizations Erosion Control	24.000 EACH	_____.	_____.
0210	628.1910 Mobilizations Emergency Erosion Control	12.000 EACH	_____.	_____.
0212	628.2006 Erosion Mat Urban Class I Type A	4,210.000 SY	_____.	_____.
0214	628.7005 Inlet Protection Type A	10.000 EACH	_____.	_____.
0216	628.7020 Inlet Protection Type D	85.000 EACH	_____.	_____.
0218	628.7555 Culvert Pipe Checks	23.000 EACH	_____.	_____.
0220	629.0210 Fertilizer Type B	2.700 CWT	_____.	_____.
0222	630.0140 Seeding Mixture No. 40	185.000 LB	_____.	_____.
0224	630.0160 Seeding Mixture No. 60	3.000 LB	_____.	_____.
0226	630.0500 Seed Water	243.000 MGAL	_____.	_____.
0228	633.5200 Markers Culvert End	9.000 EACH	_____.	_____.
0230	634.0808 Posts Tubular Steel 2x2-Inch X 8-FT	1.000 EACH	_____.	_____.
0232	637.2210 Signs Type II Reflective H	5.500 SF	_____.	_____.



Proposal Schedule of Items

Page 9 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0234	638.2102 Moving Signs Type II	54.000 EACH	_____.	_____.
0236	638.4000 Moving Small Sign Supports	48.000 EACH	_____.	_____.
0238	642.5401 Field Office Type D	1.000 EACH	_____.	_____.
0240	643.0300 Traffic Control Drums	33,550.000 DAY	_____.	_____.
0242	643.0420 Traffic Control Barricades Type III	5,244.000 DAY	_____.	_____.
0244	643.0705 Traffic Control Warning Lights Type A	10,488.000 DAY	_____.	_____.
0246	643.0715 Traffic Control Warning Lights Type C	2,000.000 DAY	_____.	_____.
0248	643.0800 Traffic Control Arrow Boards	180.000 DAY	_____.	_____.
0250	643.0900 Traffic Control Signs	22,864.000 DAY	_____.	_____.
0252	643.0920 Traffic Control Covering Signs Type II	4.000 EACH	_____.	_____.
0254	643.1000 Traffic Control Signs Fixed Message	30.000 SF	_____.	_____.
0256	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.	_____.
0258	643.3165 Temporary Marking Line Paint 6-Inch	97,525.000 LF	_____.	_____.
0260	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0262	644.1440 Temporary Pedestrian Surface Matting	70.000 SF	_____.	_____.
0264	644.1601 Temporary Pedestrian Curb Ramp	50.000 DAY	_____.	_____.



Proposal Schedule of Items

Page 10 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0266	644.1605 Temporary Pedestrian Detectable Warning Field	20.000 SF	_____.	_____.
0268	644.1810 Temporary Pedestrian Barricade	332.000 LF	_____.	_____.
0270	645.0105 Geotextile Type C	105.000 SY	_____.	_____.
0272	645.0120 Geotextile Type HR	255.000 SY	_____.	_____.
0274	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	100,420.000 LF	_____.	_____.
0276	646.4040 Marking Line Grooved Wet Ref Epoxy 10-Inch	3,940.000 LF	_____.	_____.
0278	646.5020 Marking Arrow Epoxy	4.000 EACH	_____.	_____.
0280	646.5120 Marking Word Epoxy	1.000 EACH	_____.	_____.
0282	646.6120 Marking Stop Line Epoxy 18-Inch	145.000 LF	_____.	_____.
0284	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	1,255.000 LF	_____.	_____.
0286	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	90.000 LF	_____.	_____.
0288	646.8220 Marking Island Nose Epoxy	7.000 EACH	_____.	_____.
0290	650.4000 Construction Staking Storm Sewer	31.000 EACH	_____.	_____.
0292	650.4500 Construction Staking Subgrade	404.000 LF	_____.	_____.
0294	650.5000 Construction Staking Base	455.000 LF	_____.	_____.



Proposal Schedule of Items

Page 11 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0296	650.5500 Construction Staking Curb Gutter and Curb & Gutter	2,030.000 LF	_____.	_____.
0298	650.6501 Construction Staking Structure Layout (structure) 01. C-36-13	1.000 EACH	_____.	_____.
0300	650.7000 Construction Staking Concrete Pavement	487.000 LF	_____.	_____.
0302	650.8000 Construction Staking Resurfacing Reference	24,061.000 LF	_____.	_____.
0304	650.9000 Construction Staking Curb Ramps	24.000 EACH	_____.	_____.
0306	650.9500 Construction Staking Sidewalk (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0308	650.9500 Construction Staking Sidewalk (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0310	650.9500 Construction Staking Sidewalk (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0312	650.9911 Construction Staking Supplemental Control (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0314	650.9911 Construction Staking Supplemental Control (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0316	650.9911 Construction Staking Supplemental Control (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0318	650.9920 Construction Staking Slope Stakes	713.000 LF	_____.	_____.
0320	690.0150 Sawing Asphalt	7,737.000 LF	_____.	_____.



Proposal Schedule of Items

Page 12 of 12

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0322	690.0250 Sawing Concrete	20,743.000 LF	_____.	_____.
0324	715.0502 Incentive Strength Concrete Structures	500.000 DOL	1.00000	500.00
0326	740.0440 Incentive IRI Ride	73,480.000 DOL	1.00000	73,480.00
0328	SPV.0035 Special 01. Removing Modular Block Wall	2.000 CY	_____.	_____.
0330	SPV.0060 Special 01. Adjusting Water Valve Boxes	4.000 EACH	_____.	_____.
0332	SPV.0060 Special 02. Cleaning Ditch	1.000 EACH	_____.	_____.
0334	SPV.0060 Special 03. Reconnect Storm Sewer Laterals	1.000 EACH	_____.	_____.
0336	SPV.0060 Special 04. Manholes 6-FT x 14-FT Special	1.000 EACH	_____.	_____.
0338	SPV.0060 Special 05. Temporary Water Diversion C-36-0013	1.000 EACH	_____.	_____.
0340	SPV.0090 Special 01. Remove, Salvage, and Reinstall Wood Fence	25.000 LF	_____.	_____.
0342	SPV.0090 Special 02. Treated Timber Rub Rail	6,200.000 LF	_____.	_____.
0344	SPV.0090 Special 03. UV GRP CIPP 12-Inch	121.000 LF	_____.	_____.
0346	SPV.0180 Special 01. Remove, Salvage, and Reinstall Riprap Heavy	315.000 SY	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH ADDENDA HERE



Wisconsin Department of Transportation

February 3, 2025

Division of Transportation Systems Development

Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

NOTICE TO ALL CONTRACTORS:

Proposal #28: 1470-27-71
Manitowoc – Two Rivers
E Magnolia Ave – 12th Street
STH 42
Manitowoc County

1470-33-71
City of Two Rivers, Washington St
West Twin River Bridge B360117
STH 42
Manitowoc County

1470-37-71
Manitowoc – Two Rivers
Waldo Blvd – E Magnolia Ave
STH 42
Manitowoc County

Letting of February 11, 2025

This is Addendum No. 01, which provides for the following:

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
460.6224	HMA Pavement 4 MT 58-28 S	TON	27,435	-115	27,320
460.2010	Incentive Air Voids HMA Pavement	DOL	27,435	-115	27,320

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
465.0105	Asphaltic Surface	TON	0	115	115

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
6	Typical Sections (Changed multi-use path typical section from HMA Pavement 4 MT 58-28 S to Asphaltic Surface)
13	Construction Details (Curb & Gutter Replacement Adjacent to Asphaltic Pavement Detail changed from HMA Pavement 4 MT 58-28 S to Asphaltic Surface)
13	Construction Details (Storm Sewer Replacement Trench Detail changed from HMA Pavement 4 MT 58-28 S to Asphaltic Surface)
78	Miscellaneous Quantities (Added Asphaltic Surface bid item and updated quantity for HMA Pavement 4 MT 58-28 S bid item)
79	Miscellaneous Quantities (Added Asphaltic Surface bid item locations to HMA Mixture Acceptance table)

Schedule of Items

Attached, dated February 4, 2025, are the revised Schedule of Items Pages 1 – 13..

Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 6, 13, 78 and 79.

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

END OF ADDENDUM

2



FINISHED TYPICAL SECTION - STH 42

STA. 103+95 - STA. 130+51, LT
STA. 199+34 - STA. 200+41, LT
STA. 205+79 - STA. 209+54, LT
STA. 240+94 - STA. 242+84, LT
STA. 257+04 - STA. 258+04, LT
STA. 295+76 - STA. 302+04, LT
STA. 333+04 - STA. 341+04, LT

NOTE: DISTURBED GRASS AREAS SHALL BE RESTORED WITH 6-INCHES TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B AND EROSION MAT URBAN CLASS I TYPE A (TYP.)
INSTALL SEEDING MIXTURE NO. 60 IN WETLAND AREAS, SEE PLAN DETAILS FOR LOCATIONS.



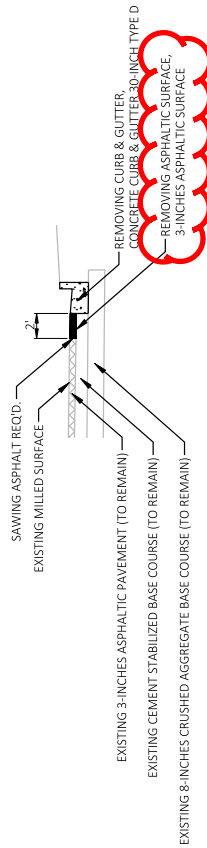
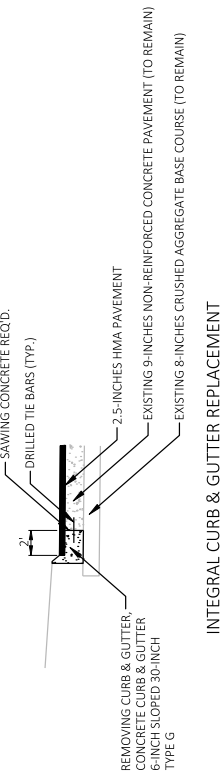
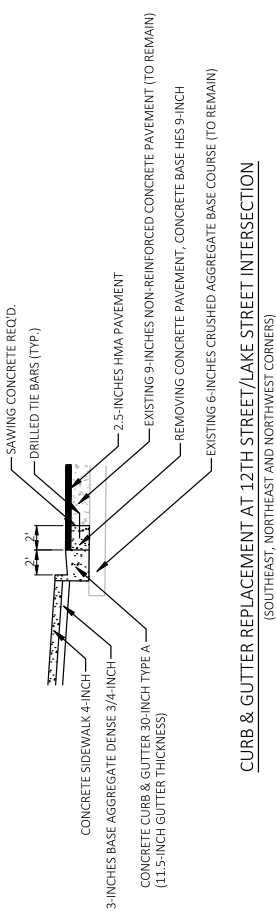
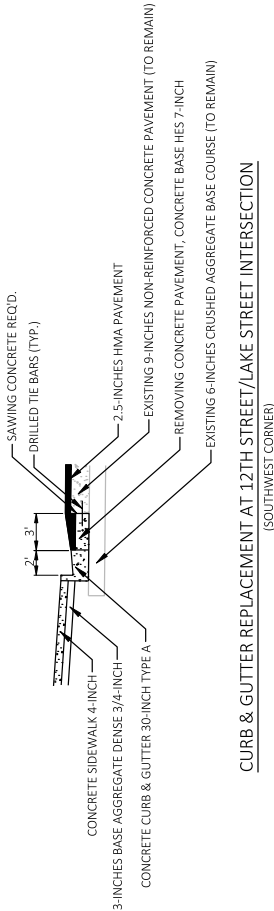
FINISHED TYPICAL SECTION - STH 42

STA. 130+51 - STA. 184+19, LT
STA. 184+19 - STA. 199+34, LT
STA. 200+41 - STA. 205+79, LT
STA. 209+54 - STA. 240+94, LT
STA. 242+84 - STA. 257+04, LT
STA. 258+04 - STA. 295+76, LT
STA. 302+04 - STA. 333+04, LT

FINISHED TYPICAL SECTION- STH 42

STA. 103+95 - STA. 124+74, RT
STA. 134+39 - STA. 334+42, RT

NOTE: DISTURBED GRASS AREAS SHALL BE RESTORED WITH 6-INCHES TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B INSTALL SEEDING MIXTURE NO. 60 IN WETLAND AREAS, SEE PLAN DETAILS FOR LOCATIONS.



Curb & Gutter Replacement Detail

PROJECT NO: 1470-27-71/1470-33-71/1470-37-71 HWY: STH 42

COUNTY: MANITOWOC

CONSTRUCTION DETAILS

SHEET 13

E

FILE NAME: G:\00\00093\0005676\CADD\CD\1470\70\NSHETSPLAN\021001-CD.DWG

LAYOUT NAME: 021001-CD

PLOT DATE: 2/9/2025 5:33 AM

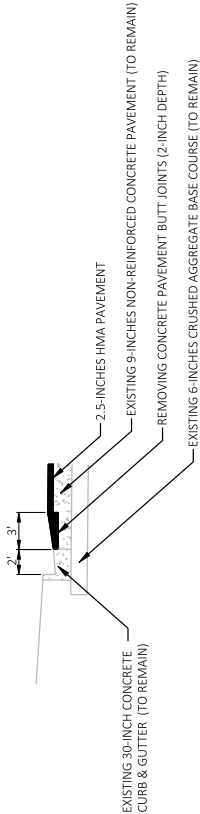
PLOT BY: JASON DOLENS

PLOT NAME:

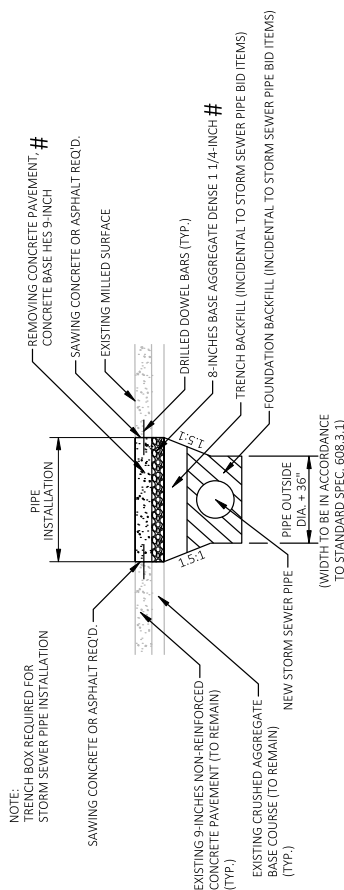
PLOT SCALE: 1:30

WISDOT/CADD SHEET 42

Addendum No. 01
ID 1470-27-71
ID 1470-33-71
ID 1470-37-71
Revised Sheet 13
February 4, 2025



STA. 340+28 - STA. 340+87, LT



PIPE INSTALLATION AREA WILL FOLLOW SECTION 608 FOR INSTALLATION, WIDTHS AND PAYMENT.
CONSTRUCT TRANSITION PERPENDICULAR TO STORM SEWER PIPE.
PAVEMENT SAW CUT TO BE PERPENDICULAR TO ROADWAY ALIGNMENT.
HMA SHOULDER PAVEMENT STRUCTURE SHALL BE: 3-INCHES ASPHALTIC SURFACE OVER 14-INCHES BASE AGGREGATE DENSE 1 1/4-INCH #. HMA SHOULDER PAVEMENT SHALL BE PAID FOR AS EXCAVATION COMMON.

Storm Sewer Replacement Trench Detail

HMA PAVEMENT (CONTINUED)									
CATEGORY	STATION	TO	STATION	LOCATION	GAL	TON	TON	ASPHALTIC SURFACE	REMARKS
PROJECT 1470-33-71									
0010	340+90	-	343+52	LT & RT	141	86	-	LEVELING LAYER	
0010	340+90	-	343+52	LT & RT	101	199	-	UPPER LAYER	
0010	345+38	-	346+42	LT & RT	41	26	-	LEVELING LAYER	
0010	345+38	-	346+42	LT & RT	29	59	-	UPPER LAYER	
PROJECT 1470-33-71 TOTALS					312	370	0		
TOTALS					23,422	27,320	115		
ASPHALTIC SURFACE PATCHING									
CATEGORY	STATION	TO	STATION	LOCATION	TON	TON	ASPHALTIC SURFACE PATCHING	REMARKS	
PROJECT 1470-37-71									
0010	UNDISTRIBUTED				5	5	FILLING POTHOLES, POP OUTS, RAMPING PRIOR TO OVERLAY		
PROJECT 1470-37-71 TOTAL									
PROJECT 1470-27-71									
0010	UNDISTRIBUTED				45	45	FILLING POTHOLES, POP OUTS, RAMPING PRIOR TO OVERLAY		
PROJECT 1470-27-71 TOTAL									
TOTAL						50			
ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES									
CATEGORY	STATION	TO	STATION	LOCATION	TON	TON	ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES	REMARKS	
PROJECT 1470-27-71									
0010	1448	-	2+15	LT		6	PARKING LOT		
PROJECT 1470-27-71 TOTAL						6			
PROJECT 1470-33-71									
0010	341+60	-	341+78	LT		1	PARKING LOT		
PROJECT 1470-33-71 TOTAL						1			
TOTAL						7			

Addendum No. 01
ID 1470-27-71
ID 1470-33-71
ID 1470-37-71
Revised Sheet 78
February 4, 2025

PROJECT NO:	1470-27-71/1470-33-71/1470-37-71	HWY: STH 42	COUNTY: MANITOWOC	MISCELLANEOUS QUANTITIES	E	SHEET 78
FILE NAME:	C:\05000901\00094670\CADD\CD3\1470-702\SHEETSP\AN2020\AQI BORDER.DWG LAYOUT NAME: 080208-mq					
	PLOT DATE:		9/6/2024 11:23 AM		PLOT BY: JASON DOLENS	

PROJECT 1470-37-71									
HMA MIXTURE ACCEPTANCE									
LOCATION	STATION/LOCATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	QUALITY MANAGEMENT PROGRAM TO BE USED	
(4) 12-FOOT DRIVING LANES	103+95 - 133+00	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	1,807	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
SHOULDERS, SIDEROADS, GUARDRAIL WIDENINGS	VARIOUS	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	568	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(4) 12-FOOT DRIVING LANES	103+95 - 133+00	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-28 S	776	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
SHOULDERS, SIDEROADS, GUARDRAIL WIDENINGS	VARIOUS	LOWER LAYER	MILLED SURFACE	4 MT 58-28 S	243	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
MULTI-USE PATH	125+86 - 126+11, RT	UPPER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	3	3.00"	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
CURB & GUTTER REPLACEMENT	VARIOUS	LOWER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	3	3.00"	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
PATCHING	VARIOUS	LOWER LAYER	MILLED SURFACE	ASPHALTIC SURFACE PATCHING	5	VARIES	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
HMA MIXTURE ACCEPTANCE									
PROJECT 1470-27-71									
LOCATION	STATION/LOCATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	QUALITY MANAGEMENT PROGRAM TO BE USED	
(4) 12-FOOT DRIVING LANES	133+00 - 340+90	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	11,952	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(2) 12-FOOT DRIVING LANES	1+16 - 2+68	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	86	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
SHOULDERS, SIDEROADS, GUARDRAIL WIDENINGS	VARIOUS	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	4,450	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(4) 12-FOOT DRIVING LANES	133+00 - 340+90	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-28 S	5,124	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(2) 12-FOOT DRIVING LANES	1+16 - 2+68	LOWER LAYER	CONCRETE PAVEMENT	4 MT 58-28 S	37	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
SHOULDERS, SIDEROADS, GUARDRAIL WIDENINGS	VARIOUS	LOWER LAYER	MILLED SURFACE	4 MT 58-28 S	1,907	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
SHOULDERS AT STORM SEWER REPLACEMENT	VARIOUS	LOWER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	70	3.00"	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
MULTI-USE PATH	VARIOUS	UPPER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	36	3.00"	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
CURB & GUTTER REPLACEMENT	VARIOUS	LOWER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE	3	3.00"	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
DRIVEWAY	1+48 - 2+15	UPPER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	6	3.00"	QMP as per SS 465	ORDINARY COMPACTION (SS 450.3.2.6.2)	
PATCHING	VARIOUS	LOWER LAYER	MILLED SURFACE	ASPHALTIC SURFACE PATCHING	45	VARIES	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)	
HMA MIXTURE ACCEPTANCE									
PROJECT 1470-33-71									
LOCATION	STATION/LOCATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	QUALITY MANAGEMENT PROGRAM TO BE USED	
(4) DRIVING LANES	340+90 - 343+52	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	199	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(4) DRIVING LANES	345+38 - 346+42	UPPER LAYER	4 MT 58-28 S	4 MT 58-28 S	59	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(4) DRIVING LANES	340+90 - 343+52	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-28 S	86	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
(4) DRIVING LANES	345+38 - 346+42	LOWER LAYER	EXISTING CONCRETE PAVEMENT	4 MT 58-28 S	26	0.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460 2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460 2005	DEPARTMENT ACCEPTANCE (SS 460.3.3.2) *NOT ELIGIBLE FOR INCENTIVE
DRIVEWAY	341+60 - 341+78, LT	UPPER LAYER	BASE AGGREGATE	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	1	3.00"	QMP as per SS 465	ORDINARY COMPACTION (SS 450.3.2.6.2)	
HMA MIXTURE ACCEPTANCE									
PROJECT 1470-37-71									
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Proposal Schedule of Items

Page 1 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	203.0220 Removing Structure (structure) 01. C-36-1016	1.000 EACH	_____.	_____.
0004	203.0220 Removing Structure (structure) 02. C-36-13	1.000 EACH	_____.	_____.
0006	203.0335 Debris Containment Over Waterway (structure) 01. B-36-117	1.000 EACH	_____.	_____.
0008	204.0100 Removing Concrete Pavement	8,417.000 SY	_____.	_____.
0010	204.0105 Removing Concrete Pavement Butt Joints	720.000 SY	_____.	_____.
0012	204.0110 Removing Asphaltic Surface	1,165.000 SY	_____.	_____.
0014	204.0115 Removing Asphaltic Surface Butt Joints	255.000 SY	_____.	_____.
0016	204.0120 Removing Asphaltic Surface Milling	191,050.000 SY	_____.	_____.
0018	204.0150 Removing Curb & Gutter	935.000 LF	_____.	_____.
0020	204.0155 Removing Concrete Sidewalk	370.000 SY	_____.	_____.
0022	204.0165 Removing Guardrail	11,085.000 LF	_____.	_____.
0024	204.0190 Removing Surface Drains	1.000 EACH	_____.	_____.
0026	204.0220 Removing Inlets	13.000 EACH	_____.	_____.
0028	204.0245 Removing Storm Sewer (size) 01. 12-Inch	715.000 LF	_____.	_____.



Proposal Schedule of Items

Page 2 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0030	204.0245 Removing Storm Sewer (size) 02. 18-Inch	16.000 LF	_____.	_____.
0032	204.0245 Removing Storm Sewer (size) 03. 24-Inch	104.000 LF	_____.	_____.
0034	204.0245 Removing Storm Sewer (size) 04. 42-Inch	8.000 LF	_____.	_____.
0036	205.0100 Excavation Common	1,343.000 CY	_____.	_____.
0038	206.2001 Excavation for Structures Culverts (structure) 01. C-36-13	1.000 EACH	_____.	_____.
0040	210.2500 Backfill Structure Type B	215.000 TON	_____.	_____.
0042	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0044	211.0101 Prepare Foundation for Asphaltic Paving (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0046	211.0101 Prepare Foundation for Asphaltic Paving (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0048	211.0301 Prepare Foundation for Concrete Base (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0050	213.0100 Finishing Roadway (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0052	213.0100 Finishing Roadway (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0054	213.0100 Finishing Roadway (project) 03. 1470-37-71	1.000 EACH	_____.	_____.



Proposal Schedule of Items

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Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0056	305.0110 Base Aggregate Dense 3/4-Inch	1,225.000 TON	_____.	_____.
0058	305.0120 Base Aggregate Dense 1 1/4-Inch	2,095.000 TON	_____.	_____.
0060	305.0504.S Hauling Excess Shoulder Material	75.000 CY	_____.	_____.
0062	311.0110 Breaker Run	55.000 TON	_____.	_____.
0064	320.0155 Concrete Base 9-Inch	780.000 SY	_____.	_____.
0066	320.0335 Concrete Base HES 7-Inch	13.000 SY	_____.	_____.
0068	320.0355 Concrete Base HES 9-Inch	7,260.000 SY	_____.	_____.
0070	416.0610 Drilled Tie Bars	3,461.000 EACH	_____.	_____.
0072	416.0620 Drilled Dowel Bars	10,027.000 EACH	_____.	_____.
0074	455.0605 Tack Coat	23,422.000 GAL	_____.	_____.
0076	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.	_____.
0078	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	1.000 EACH	_____.	_____.
0080	460.2005 Incentive Density PWL HMA Pavement	20,154.000 DOL	1.00000	20,154.00
0082	460.2007 Incentive Density HMA Pavement Longitudinal Joints	9,590.000 DOL	1.00000	9,590.00
0084	460.2010 Incentive Air Voids HMA Pavement	27,320.000 DOL	1.00000	27,320.00



Proposal Schedule of Items

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Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0086	460.6224 HMA Pavement 4 MT 58-28 S	27,320.000 TON	_____.	_____.
0088	465.0110 Asphaltic Surface Patching	50.000 TON	_____.	_____.
0090	465.0120 Asphaltic Surface Driveways and Field Entrances	7.000 TON	_____.	_____.
0092	502.3200 Protective Surface Treatment	1,016.000 SY	_____.	_____.
0094	502.3215 Protective Surface Treatment Reseal	210.000 SY	_____.	_____.
0096	502.4205 Adhesive Anchors No. 5 Bar	44.000 EACH	_____.	_____.
0098	504.0100 Concrete Masonry Culverts	40.000 CY	_____.	_____.
0100	505.0400 Bar Steel Reinforcement HS Structures	4,665.000 LB	_____.	_____.
0102	505.0600 Bar Steel Reinforcement HS Coated Structures	1,190.000 LB	_____.	_____.
0104	509.0301 Preparation Decks Type 1	2.000 SY	_____.	_____.
0106	509.0302 Preparation Decks Type 2	1.000 SY	_____.	_____.
0108	509.0500 Cleaning Decks	1,016.000 SY	_____.	_____.
0110	509.1500 Concrete Surface Repair	22.000 SF	_____.	_____.
0112	509.2000 Full-Depth Deck Repair	1.000 SY	_____.	_____.
0114	509.2500 Concrete Masonry Overlay Decks	78.000 CY	_____.	_____.



Proposal Schedule of Items

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Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0116	509.9020.S Epoxy Crack Sealing	65.000 LF	_____.	_____.
0118	511.1100 Temporary Shoring	1,241.000 SF	_____.	_____.
0120	516.0500 Rubberized Membrane Waterproofing	15.000 SY	_____.	_____.
0122	520.8000 Concrete Collars for Pipe	1.000 EACH	_____.	_____.
0124	520.8700 Cleaning Culvert Pipes	5.000 EACH	_____.	_____.
0126	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	5.000 EACH	_____.	_____.
0128	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	1.000 EACH	_____.	_____.
0130	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	1.000 EACH	_____.	_____.
0132	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	1.000 EACH	_____.	_____.
0134	522.1066 Apron Endwalls for Culvert Pipe Reinforced Concrete 66-Inch	1.000 EACH	_____.	_____.
0136	601.0409 Concrete Curb & Gutter 30-Inch Type A	720.000 LF	_____.	_____.
0138	601.0411 Concrete Curb & Gutter 30-Inch Type D	240.000 LF	_____.	_____.
0140	601.0413 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	1,050.000 LF	_____.	_____.
0142	601.0600 Concrete Curb Pedestrian	20.000 LF	_____.	_____.



Proposal Schedule of Items

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Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0144	602.0405 Concrete Sidewalk 4-Inch	3,560.000 SF	_____.	_____.
0146	602.0515 Curb Ramp Detectable Warning Field Natural Patina	196.000 SF	_____.	_____.
0148	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	127.790 SF	_____.	_____.
0150	602.0810 Concrete Driveway 6-Inch	75.000 SY	_____.	_____.
0152	606.0300 Riprap Heavy	135.000 CY	_____.	_____.
0154	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	767.000 LF	_____.	_____.
0156	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	10.000 LF	_____.	_____.
0158	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	97.000 LF	_____.	_____.
0160	608.0466 Storm Sewer Pipe Reinforced Concrete Class IV 66-Inch	154.000 LF	_____.	_____.
0162	611.0430 Reconstructing Inlets	2.000 EACH	_____.	_____.
0164	611.0530 Manhole Covers Type J	8.000 EACH	_____.	_____.
0166	611.0600 Inlet Covers Type A	1.000 EACH	_____.	_____.
0168	611.0612 Inlet Covers Type C	2.000 EACH	_____.	_____.
0170	611.0624 Inlet Covers Type H	12.000 EACH	_____.	_____.



Proposal Schedule of Items

Page 7 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0172	611.2004 Manholes 4-FT Diameter	7.000 EACH	_____.	_____.
0174	611.3003 Inlets 3-FT Diameter	2.000 EACH	_____.	_____.
0176	611.3230 Inlets 2x3-FT	12.000 EACH	_____.	_____.
0178	611.8110 Adjusting Manhole Covers	15.000 EACH	_____.	_____.
0180	611.8115 Adjusting Inlet Covers	1.000 EACH	_____.	_____.
0182	614.2300 MGS Guardrail 3	9,030.000 LF	_____.	_____.
0184	614.2340 MGS Guardrail 3 L	112.500 LF	_____.	_____.
0186	614.2610 MGS Guardrail Terminal EAT	6.000 EACH	_____.	_____.
0188	614.2620 MGS Guardrail Terminal Type 2	6.000 EACH	_____.	_____.
0190	618.0100 Maintenance and Repair of Haul Roads (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0192	618.0100 Maintenance and Repair of Haul Roads (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0194	618.0100 Maintenance and Repair of Haul Roads (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0196	619.1000 Mobilization	1.000 EACH	_____.	_____.
0198	620.0300 Concrete Median Sloped Nose	360.000 SF	_____.	_____.
0200	624.0100 Water	48.000 MGAL	_____.	_____.



Proposal Schedule of Items

Page 8 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0202	625.0100 Topsoil	4,210.000 SY	_____.	_____.
0204	628.1504 Silt Fence	12,850.000 LF	_____.	_____.
0206	628.1520 Silt Fence Maintenance	12,850.000 LF	_____.	_____.
0208	628.1905 Mobilizations Erosion Control	24.000 EACH	_____.	_____.
0210	628.1910 Mobilizations Emergency Erosion Control	12.000 EACH	_____.	_____.
0212	628.2006 Erosion Mat Urban Class I Type A	4,210.000 SY	_____.	_____.
0214	628.7005 Inlet Protection Type A	10.000 EACH	_____.	_____.
0216	628.7020 Inlet Protection Type D	85.000 EACH	_____.	_____.
0218	628.7555 Culvert Pipe Checks	23.000 EACH	_____.	_____.
0220	629.0210 Fertilizer Type B	2.700 CWT	_____.	_____.
0222	630.0140 Seeding Mixture No. 40	185.000 LB	_____.	_____.
0224	630.0160 Seeding Mixture No. 60	3.000 LB	_____.	_____.
0226	630.0500 Seed Water	243.000 MGAL	_____.	_____.
0228	633.5200 Markers Culvert End	9.000 EACH	_____.	_____.
0230	634.0808 Posts Tubular Steel 2x2-Inch X 8-FT	1.000 EACH	_____.	_____.
0232	637.2210 Signs Type II Reflective H	5.500 SF	_____.	_____.



Proposal Schedule of Items

Page 9 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0234	638.2102 Moving Signs Type II	54.000 EACH	_____.	_____.
0236	638.4000 Moving Small Sign Supports	48.000 EACH	_____.	_____.
0238	642.5401 Field Office Type D	1.000 EACH	_____.	_____.
0240	643.0300 Traffic Control Drums	33,550.000 DAY	_____.	_____.
0242	643.0420 Traffic Control Barricades Type III	5,244.000 DAY	_____.	_____.
0244	643.0705 Traffic Control Warning Lights Type A	10,488.000 DAY	_____.	_____.
0246	643.0715 Traffic Control Warning Lights Type C	2,000.000 DAY	_____.	_____.
0248	643.0800 Traffic Control Arrow Boards	180.000 DAY	_____.	_____.
0250	643.0900 Traffic Control Signs	22,864.000 DAY	_____.	_____.
0252	643.0920 Traffic Control Covering Signs Type II	4.000 EACH	_____.	_____.
0254	643.1000 Traffic Control Signs Fixed Message	30.000 SF	_____.	_____.
0256	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.	_____.
0258	643.3165 Temporary Marking Line Paint 6-Inch	97,525.000 LF	_____.	_____.
0260	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0262	644.1440 Temporary Pedestrian Surface Matting	70.000 SF	_____.	_____.
0264	644.1601 Temporary Pedestrian Curb Ramp	50.000 DAY	_____.	_____.



Proposal Schedule of Items

Page 10 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0266	644.1605 Temporary Pedestrian Detectable Warning Field	20.000 SF	_____.	_____.
0268	644.1810 Temporary Pedestrian Barricade	332.000 LF	_____.	_____.
0270	645.0105 Geotextile Type C	105.000 SY	_____.	_____.
0272	645.0120 Geotextile Type HR	255.000 SY	_____.	_____.
0274	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	100,420.000 LF	_____.	_____.
0276	646.4040 Marking Line Grooved Wet Ref Epoxy 10-Inch	3,940.000 LF	_____.	_____.
0278	646.5020 Marking Arrow Epoxy	4.000 EACH	_____.	_____.
0280	646.5120 Marking Word Epoxy	1.000 EACH	_____.	_____.
0282	646.6120 Marking Stop Line Epoxy 18-Inch	145.000 LF	_____.	_____.
0284	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	1,255.000 LF	_____.	_____.
0286	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	90.000 LF	_____.	_____.
0288	646.8220 Marking Island Nose Epoxy	7.000 EACH	_____.	_____.
0290	650.4000 Construction Staking Storm Sewer	31.000 EACH	_____.	_____.
0292	650.4500 Construction Staking Subgrade	404.000 LF	_____.	_____.
0294	650.5000 Construction Staking Base	455.000 LF	_____.	_____.



Proposal Schedule of Items

Page 11 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0296	650.5500 Construction Staking Curb Gutter and Curb & Gutter	2,030.000 LF	_____.	_____.
0298	650.6501 Construction Staking Structure Layout (structure) 01. C-36-13	1.000 EACH	_____.	_____.
0300	650.7000 Construction Staking Concrete Pavement	487.000 LF	_____.	_____.
0302	650.8000 Construction Staking Resurfacing Reference	24,061.000 LF	_____.	_____.
0304	650.9000 Construction Staking Curb Ramps	24.000 EACH	_____.	_____.
0306	650.9500 Construction Staking Sidewalk (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0308	650.9500 Construction Staking Sidewalk (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0310	650.9500 Construction Staking Sidewalk (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0312	650.9911 Construction Staking Supplemental Control (project) 01. 1470-27-71	1.000 EACH	_____.	_____.
0314	650.9911 Construction Staking Supplemental Control (project) 02. 1470-33-71	1.000 EACH	_____.	_____.
0316	650.9911 Construction Staking Supplemental Control (project) 03. 1470-37-71	1.000 EACH	_____.	_____.
0318	650.9920 Construction Staking Slope Stakes	713.000 LF	_____.	_____.
0320	690.0150 Sawing Asphalt	7,737.000 LF	_____.	_____.



Proposal Schedule of Items

Page 12 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0322	690.0250 Sawing Concrete	20,743.000 LF	_____.	_____.
0324	715.0502 Incentive Strength Concrete Structures	500.000 DOL	1.00000	500.00
0326	740.0440 Incentive IRI Ride	73,480.000 DOL	1.00000	73,480.00
0328	SPV.0035 Special 01. Removing Modular Block Wall	2.000 CY	_____.	_____.
0330	SPV.0060 Special 01. Adjusting Water Valve Boxes	4.000 EACH	_____.	_____.
0332	SPV.0060 Special 02. Cleaning Ditch	1.000 EACH	_____.	_____.
0334	SPV.0060 Special 03. Reconnect Storm Sewer Laterals	1.000 EACH	_____.	_____.
0336	SPV.0060 Special 04. Manholes 6-FT x 14-FT Special	1.000 EACH	_____.	_____.
0338	SPV.0060 Special 05. Temporary Water Diversion C-36-0013	1.000 EACH	_____.	_____.
0340	SPV.0090 Special 01. Remove, Salvage, and Reinstall Wood Fence	25.000 LF	_____.	_____.
0342	SPV.0090 Special 02. Treated Timber Rub Rail	6,200.000 LF	_____.	_____.
0344	SPV.0090 Special 03. UV GRP CIPP 12-Inch	121.000 LF	_____.	_____.
0346	SPV.0180 Special 01. Remove, Salvage, and Reinstall Riprap Heavy	315.000 SY	_____.	_____.
0348	465.0105 Asphaltic Surface	115.000 TON	_____.	_____.
Section: 0001			Total:	_____.

Total Bid: _____.



Wisconsin Department of Transportation

February 5, 2025

**Division of Transportation Systems
Development**

Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

NOTICE TO ALL CONTRACTORS:

Proposal #28: 1470-27-71
Manitowoc – Two Rivers
E Magnolia Ave – 12th Street
STH 42
Manitowoc County

1470-33-71
City of Two Rivers, Washington St
West Twin River Bridge B360117
STH 42
Manitowoc County

1470-37-71
Manitowoc – Two Rivers
Waldo Blvd – E Magnolia Ave
STH 42
Manitowoc County

Letting of February 11, 2025

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
3	Prosecution and Progress
4	Traffic

Deleted Special Provisions	
Article No.	Description
25	Culvert Pipe Backfill

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
643.0300	Traffic Control Drums	DAY	33,550	-27,550	6,000
643.0420	Traffic Control Barricades Type III	DAY	5,244	2,956	8,200
643.0705	Traffic Control Warning Lights Type A	DAY	10,488	5,912	16,400
643.0715	Traffic Control Warning Lights Type C	DAY	2,000	1,400	3,400
643.0800	Traffic Control Arrow Boards	DAY	180	120	300
643.0900	Traffic Control Signs	DAY	22,864	3,336	26,200

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
643.1070	Traffic Control Cones 42-Inch	DAY	0	125,000	125,000

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
92	Miscellaneous Quantities (Added Traffic Control Cones 42-Inch bid item and modified quantities of other traffic control devices)

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
46A	Advanced Width Restriction Signing (Added width restriction signing for use during paving operations)
196A	SDD 15C02-09f Advanced Width Restriction Signing (Shows additional advanced width restriction signing details)

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 02
1470-27-71/1470-33-71/1470-37-71
February 5, 2025

Special Provisions

3. Prosecution and Progress.

*Replace paragraph one under section titled **Milling and Paving Operations** with the following:*

Perform paving operations one lane at a time. A single lane closure or flagging operations are acceptable to complete the work. Flagging shall occur during daytime hours only. Maintain a minimum travel lane of 10' during the moving flagging operation. Follow the standard specifications for drop offs after paving. If adjacent lanes are not at equal elevation, supplement with signing for "Uneven Lanes" (W8-11), per Traffic Control, Drop-Off Signing. These signs are included in the Miscellaneous Quantities.

4. Traffic.

*Add the following paragraph under section titled **General**:*

Advanced width restriction signing shall be in place when available width is less than 16-feet.

25. DELETED

Schedule of Items

Attached, dated February 5, 2025, are the revised Schedule of Items Pages 9 and 13.

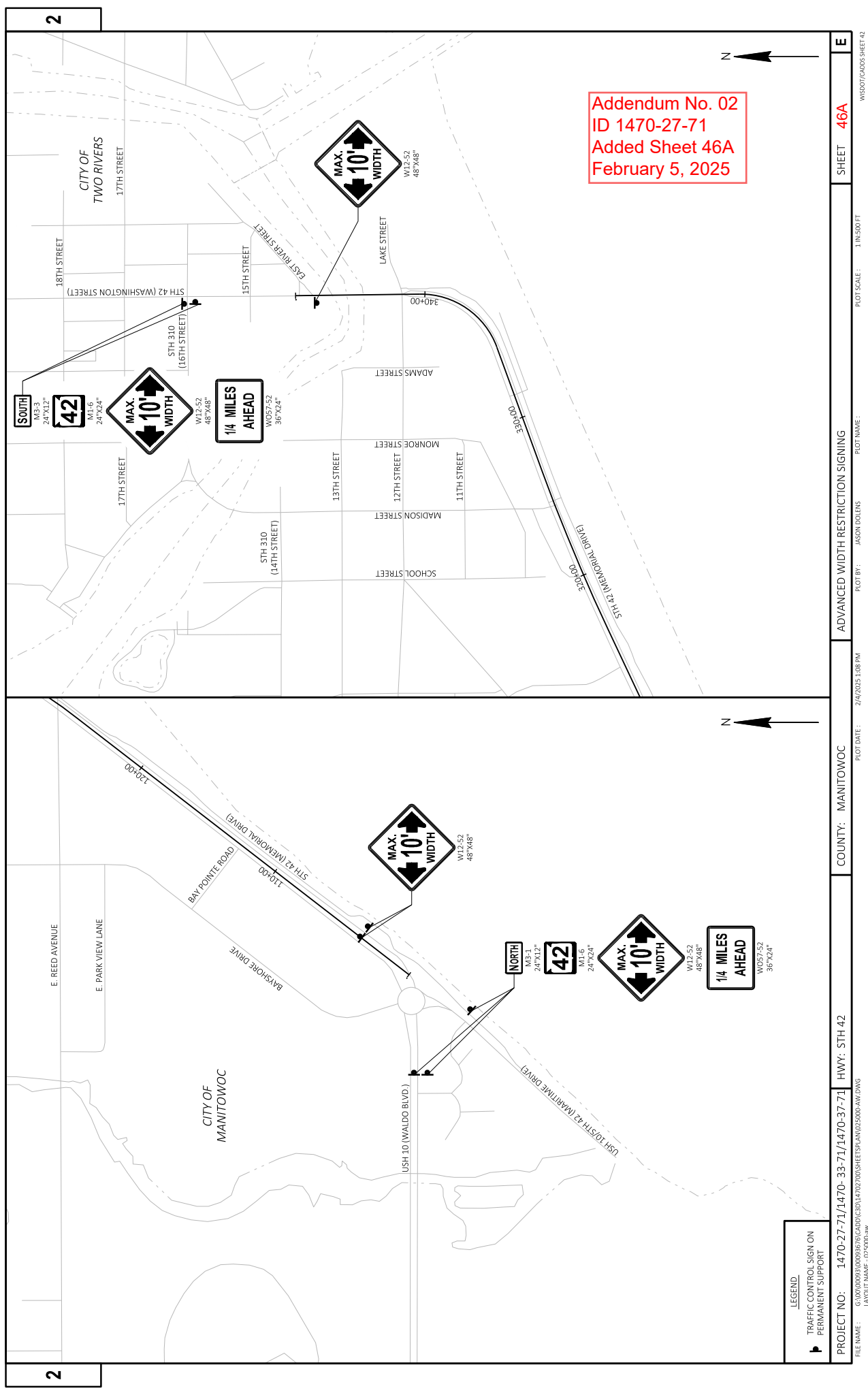
Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:

Revised: 93.

Added: 46A and 196A.

END OF ADDENDUM



LEGEND
TRAFFIC CONTROL SIGN ON
PERMANENT SUPPORT

PROJECT NO: 1470-27-71/1470-33-71/1470-37-71	HWY: STH 42	COUNTY: MANITOWOC	ADVANCED WIDTH RESTRICTION SIGNING	SHEET 46A	E
FILE NAME: G:\00\00093\00053676\CADD\CB0\147027\NSHETSPLAN\025000-AM.DWG	LAYOUT NAME: 025000-AM	DATE: 2/4/2025 1:08 PM	PLOT BY: JASON DOLENS	PLOT SCALE: 1 IN=500 FT	WISDOT/CADD SHEET 42

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS 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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

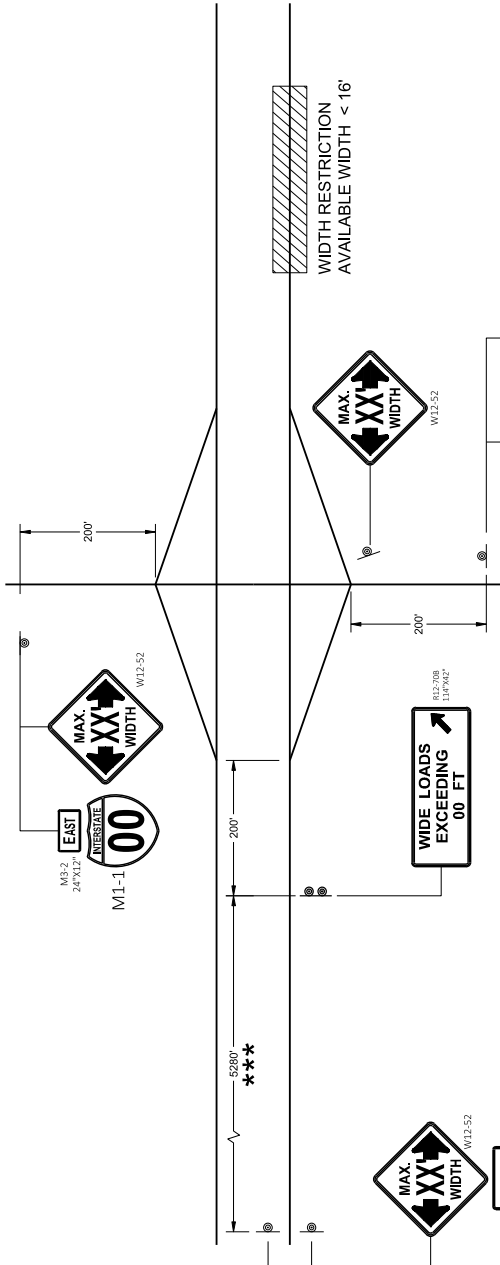
WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

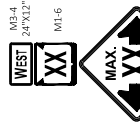
SIGN SHALL BE VISIBLE FROM ROADWAY.

ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH RESTRICTION SIGNING



WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH



SDD 15C02 - 09f

SDD 15C02 - 09f

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
MAY 2023
DATE

/S/ Andrew Hedtke
WORK ZONE ENGINEER

WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

NEAREST CTH OR
STH HIGHWAY

NEAREST CTH OR
STH HIGHWAY



Proposal Schedule of Items

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Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0234	638.2102 Moving Signs Type II	54.000 EACH	_____.	_____.
0236	638.4000 Moving Small Sign Supports	48.000 EACH	_____.	_____.
0238	642.5401 Field Office Type D	1.000 EACH	_____.	_____.
0240	643.0300 Traffic Control Drums	6,000.000 DAY	_____.	_____.
0242	643.0420 Traffic Control Barricades Type III	8,200.000 DAY	_____.	_____.
0244	643.0705 Traffic Control Warning Lights Type A	16,400.000 DAY	_____.	_____.
0246	643.0715 Traffic Control Warning Lights Type C	3,400.000 DAY	_____.	_____.
0248	643.0800 Traffic Control Arrow Boards	300.000 DAY	_____.	_____.
0250	643.0900 Traffic Control Signs	26,200.000 DAY	_____.	_____.
0252	643.0920 Traffic Control Covering Signs Type II	4.000 EACH	_____.	_____.
0254	643.1000 Traffic Control Signs Fixed Message	30.000 SF	_____.	_____.
0256	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.	_____.
0258	643.3165 Temporary Marking Line Paint 6-Inch	97,525.000 LF	_____.	_____.
0260	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0262	644.1440 Temporary Pedestrian Surface Matting	70.000 SF	_____.	_____.
0264	644.1601 Temporary Pedestrian Curb Ramp	50.000 DAY	_____.	_____.



Proposal Schedule of Items

Page 13 of 13

Proposal ID: 20250211028 Project(s): 1470-27-71, 1470-33-71, 1470-37-71

Federal ID(s): N/A, N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0350	643.1070 Traffic Control Cones 42-Inch	125,000.000 DAY	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.