

HIGHWAY WORK PROPOSAL

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

Proposal Number: **006**

<u>STATE ID</u>	<u>FEDERAL ID</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>	<u>COUNTY</u>
5110-06-70	N/A	Readstown - Ontario, STH 82 to STH 33/ B-62-47,-187	STH 131	Vernon

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: \$260,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: March 10, 2026 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time November 15, 2026	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, Culvert Pipe, 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-business/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-business/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 5110-06-70, Readstown - Ontario, STH 82 to STH 33/ B-62-47, -187, Vernon 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 (20250701)

2. Scope of Work.

The work under this contract shall consist of pavement replacement, beamguard replacement, bridge painting, deck overlay, base aggregate, grading, pavement marking 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 ten 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.

Under the Removing Asphaltic Surface Milling bid item, complete work to ensure that both lanes and shoulders milling limits match within 500ft before the end of the day's work, to ensure pavement drop offs are minimized.

Only remove guardrail at locations the plans indicate immediately prior to the milling operation. The lower layer of HMA pavement must be placed within 96 hours of the mill and relay operations. Immediately after the top mat of pavement is placed, place the shoulder aggregate. Install new guardrail, immediately after aggregate is placed.

Migratory Birds

Swallow or other migratory bird nests have been observed on or under the existing structure(s). All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. The nesting season for swallows and other birds is from April 15 to August 31.

See below for information on affected structure(s). As a last resort, apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds or clearing nests from all structures before the nests become active in early spring.

Either prevent active nests from becoming established or prevent birds from nesting by installing and/or maintaining one suitable deterrent device on the following structure(s) prior to nesting activity under the bid item Maintaining Bird Deterrent System:

- B-62-47
- B-62-187

The structure(s) has an existing deterrent that was installed by Vernon County.

Protection of Endangered Bats (Tree Clearing)

Federally protected bats 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 15 to October 31, both dates inclusive.

Contractor means and methods to remove trees will not be allowed. If it is determined that 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.

Schedule of Operations

The department anticipates that the schedule for each stage shall be as follows:

Do not move to the next stage until all work in the current stage is completed, except as noted below or as approved by the engineer.

Stage 1 (from STH 82 to the Rockton Kickapoo River Bridge (B-62-34))

- Remove existing guardrail
- Mill and relay existing asphalt
- Temporary pavement marking epoxy
- HMA pavement
- Install guardrail
- Complete concrete overlay on B-62-47

Stage 2 (from Rockton Kickapoo River Bridge (B-62-34) to STH 33)

- Remove existing guardrail
- Mill and relay existing asphalt
- Temporary pavement marking epoxy
- Install new culvert pipes and storm sewer
- HMA pavement
- Install guardrail
- Complete culvert repairs
- Complete bridge painting on B-62-187

4. Traffic.

Submit a detailed traffic control plan to the engineer for approval if different than the traffic control plan provided in the plan set. Submit this plan ten days prior to the preconstruction conference.

Submit all traffic control change requests to the engineer at least three working days prior to an actual traffic control change. A request does not constitute approval.

Do not deliver or store materials and equipment within open travel lanes or open side roads during any stage of construction. Conduct operations in a manner that will cause the least interference to traffic.

Mainline Closure B-62-47

Stage 1

Close STH 131 from STH 82 to Cut Off Road to through traffic. Close STH 131 at bridge B-62-47 to all traffic from both directions until work on bridge deck is complete. Detours will be utilized for traffic.

Mainline Closure B-62-187

Stage 2

Close STH 131 from Cut Off Road to STH 33 to through traffic. Close STH 131 at bridge B-62-187 to all traffic from both directions until bridge painting is complete. Detours will be utilized for traffic.

Detours

Provide signed detour routes, as shown in the plans that are fully open and free of construction. If the signs are installed prior to beginning of construction, they shall covered until the work begins. The mainline closure of STH 131 will require a northbound and a southbound detour. A signed detour will direct traffic to utilize the following roads: STH 82, STH 56, US 14, STH 27, and STH 33.

Emergency Vehicle Access

Maintain emergency vehicular access at all times to roadways located within the project limits. Maintain 12' clear width on B-62-47 to allow for emergency vehicles to cross the bridge during the concrete overlay.

Residential and Business Property Access

Keep all private entrances and field entrances accessible at all times, unless written permission is obtained from the property owner 48 hours in advance of closing the access.

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 131 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 may impede the free flow of traffic during the following holiday or special event periods:

- From noon on Friday, May 22, 2026 to 6:00AM Tuesday, May 26, 2026, for Memorial Day
- From noon on Friday, July 3, 2026 to 6:00AM Monday, July 6, 2026, for Independence Day
- From noon on Friday, September 4, 2026 to 6:00AM Tuesday, September 8, 2026, for Labor Day

stp-107-005 (20210113)

6. Utilities.

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

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.

La Farge Municipal W&S – SEWR - Has facilities within the project limits.

All work to be completed during construction by WisDOT road contractor.

Adjust five manholes to match the new finished pavement elevation. Perform this work with the requirements of the Adjusting Manhole covers bid item. Arrange for an observer to be on site during the manhole adjustments by notifying the sanitary district three to five working days prior to performing said adjustments.

Watchdog request,

Sanitary Manhole Cover Adjustments

Station 16+00-4.0' RT

Station 18+70-2.0' RT

Station 21+96-1.0' RT

Station 25+20-0.5' LT

Station 29+20-2.0' LT

Vernon Communication Coop – COMLN - Has facilities within the project limits.

Watchdog request,

No facilities will be adjusting along this station range. This is a watchdog request only.

Station 294 LT to 298 LT

Vernon Electric Coop – ELCTY - Has facilities within the project limits.

Watchdog request,

Station 181+42.88, 21.50 LT Once precision staking has been completed by the WisDOT road contractor of the EATS guard rail system at station 181+42.88, 21.50 LT, Vernon electric resources will hand dig pothole UG electric facilities to guard and protect UG facilities.

Facilities will be adjusted to insure there are no conflicts with beam guard post placement. Previous locates indicate UG facilities are 48" deep at this station. Two hours to hand dig and move facilities. Facilities will be moved outside of beam guard placement.

Watchdog request,

Station 166+50 LT to Station 181+65 LT

Station 230+75 LT to Station 234+40 LT

Station 269+47 crossing

Station 468+85 LT crossing side road Hay RD

Village of Ontario – SEWR - Has facilities within the project limits.

All work to be completed during construction by WisDOT road contractor.

Adjust four manholes to match the new finished pavement elevation. Perform this work with the requirements of the Adjusting Manhole covers bid item. Arrange for an observer to be on site during the manhole adjustments by notifying the sanitary district three to five working days prior to performing said adjustments.

Watchdog request for Sanitary Manhole Cover Adjustments:

Station 640+00-13.5' RT

Station 643+50-12.0' RT

Station 647+15-9.0' RT

Station 658+00-10.0' RT

Village of Ontario Water - WATR - Has facilities within the project limits.

All work to be completed during construction by WisDOT road contractor.

Adjust two Water Valves to match the new finished pavement elevation. Perform this work with the requirements of the Adjusting Water Valve bid item. Arrange for an observer to be on site during the water valve adjustments notifying the sanitary district three to five working days prior to performing said adjustments.

Watchdog request for Water Valve Adjustments:

Station 659+00 14' LT

Station 658+90 28' LT

The following utility owners have facilities within the project area; however, no adjustments are anticipated:

Alliant Energy – ELCTY

Brightspeed Midwest WI – COMLN

Dairyland Power Coop – ELCTY

La Farge Municipal W&S - ELCTY

La Farge Municipal W&S – WATR

Midwest Ntrl Gas Co – GSPTR

Mediacom WI – COMLN

7. Other Contracts.

Modifications to the traffic control plan may be required by the engineer to be safe and consistent with the adjacent work by others.

The following projects may be under construction concurrently with the work under this contract. Coordinate activities, detours, work zone traffic control, roadway and lane closures, and other work items as required with other contracts

Project 5710-00-72

La Farge – Hillsboro

Kickapoo River to STH 33

STH 82

WisDOT Contact: Brad Schultz, brad.schultz@dot.wi.gov, (608) 246-3241

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

The department has assumed coverage under the U.S. Army Corps of Engineers Section 404 Transportation Regional General Permit (TRGP). The department has determined that a pre-construction notification (permit application) to U.S. Army Corps of Engineers and their written verification of TRGP coverage is not necessary for this project.

A copy of the Section 404 Transportation Regional General Permit can be obtained on USACE's website:

<https://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RGP/Transportation.pdf>

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 pre-construction notification (permit application) and written verification from U.S. Army Corps of Engineers under the Section 404 Transportation Regional General permit is required. If written verification under the TRGP is necessary, submit a pre-construction notification to U.S. Army Corps of Engineers and obtain written verification of permit coverage 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 written verification of permit coverage. The contractor must be aware that the U.S. Army Corps of Engineers may not grant the permit request.

stp-107-054 (20230629)

9. Information to Bidders, WPDES Transportation Construction General Permit (TCGP) for Storm Water Discharges.

The calculated land disturbance for the project site is 6.6 acres.

The department has obtained permit coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities under this contract. Conform to all permit requirements for the project.

This permit is the Wisconsin Pollutant Discharge Elimination System, Transportation Construction General Permit, (WPDES Permit No. WI-S066796-2). The permit can be found at:

<https://widnr.widen.net/s/s5mwp2gd7s/finalsignedwisdotcsgp>

A "Certificate of Permit Coverage" is available from the regional office by contacting Randy Byom at (608) 785-9966. Post the "Certificate of Permit Coverage" in a conspicuous place at the construction site.

Permit coverage for additional land disturbing construction activities related to contractor means and methods will be considered as part of the ECIP review and approval process. Coverage under the TCGP for additional land disturbance areas will be considered if the areas meet all of the following:

- Must meet the permit's applicability criteria.
- Must be for the exclusive use of a WisDOT project.
- Land disturbance first commences after the ECIP approval, and the areas are fully restored to meet the final stabilization criteria of the permit upon completion of the work.

The contractor is responsible for obtaining any permits for areas that are not approved by the department for coverage under the TCGP.

stp-107-056 (20250108)

10. 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 infested 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)

11. Notice to Contractor, Verification of Asbestos Inspection, No Asbestos Found.

John Roelke, License Number All-119523, inspected Structure B-62-47 and B-62-187 for asbestos on 02-14-2023. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from Randy Byom. randy.byom@dot.wi.gov, (608) 785-9966.

stp-107-127 (20220628)

12. Notice to Contractor – Electronic Load Tickets.

Replace standard spec 109.1.4.3 (1) with the following:

(1) Submit an electronic ticket for each load of material for the following bid items:

- 460.6223 HMA Pavement 3 MT 58-28 S
- 460.6224 HMA Pavement 4 MT 58-28 S

Include the information as specified in 109.1.4.2 on each electronic ticket. If there is a failure in the electronic ticket system, provide a printed ticket for each load of material as a substitute for electronic tickets.

stp-107-230 (20250108)

13. Archaeological Site.

BVE-0232 (Frye VI) site is located approximately Station 373+50 to Station 374+50 LT.

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. BTS-EPDS will determine if a qualified archaeologist will need to be on site during construction of this area.

Do not use the site for borrow or waste disposal. Do not use the site area not currently capped by asphalt/concrete for the staging of personnel, equipment and/or supplies.

BVE-0160 (Frye II) site is located approximately Station 375+50 to Station 379+75.

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. BTS-EPDS will determine if a qualified archaeologist will need to be on site during construction of this area.

Do not use the site for borrow or waste disposal. Do not use the site area not currently capped by asphalt/concrete for the staging of personnel, equipment and/or supplies.

stp-107-220 (20180628)

14. Native American Hiring Provision.

Pre-Bid

Before bid submittal, contact the Ho-Chunk Nation Department of Labor to provide information on hiring procedures and future employment opportunities, and gather information on the tribal work force and tribal resources (ex. Native American owned DBE, tribal businesses, products, potential workers, etc.).

Ho-Chunk Nation tribal labor office contact information:

Julie Rodriguez
Tribal Workforce Development Division Manager
PO Box 667
Black River Falls, WI 54615
Office: (715) 284-5877 Ext. 11145
Fax: (715) 284-1520
Email: Julie.Rodriguez@ho-chunk.com

Maintain documentation of all efforts made to communicate with the Ho-Chunk Nation Department of Labor using [DT2400 Pre-Bid Contact Verification Form](#). This form is to be used as a record of communication with the designated tribe's assigned contact person. Please submit the DT2400 form and any supporting documentation when you submit the bid request (DT1633) for the project via email to:

DOT DTSD Highway Construction Contractors constplans.dtid@dot.wi.gov

The Eligible Bidders list will not be updated until this documentation is received.

After Execution

The contractor shall contact Julie Rodriguez of the Ho-Chunk Nation with the following information regarding available employment opportunities for prime and subcontractors at a minimum of five business days before the tribal coordination meeting:

- Job classification/trade
- Job qualifications and required skills
- Employment period
- Wage
- Copy of job application
- List of subcontractors and contact information (ex. Name, email, phone, etc.)
- List of available internships

After receiving employment opportunities, Julie Rodriguez may provide employment referrals or recruitment sources throughout the life of the project to obtain qualified referrals.

Document all efforts made to communicate job opportunities and the results of hiring activities throughout the life of the contract. Utilize [DT2405 Native American Hiring Provision Report](#) and submit it to the Ho-Chunk Nation and WisDOT Regional Labor Compliance Specialist on the 15th of every month for the previous month until the project construction is complete. Final report should be indicated on the form. Report shall include prime contractor and subcontractor data.

WisDOT Regional Labor Compliance Specialist contact information:

<https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/contacts.aspx>

Tribal Coordination Meeting

Between execution of contract and the project pre-construction meeting, the contractor and the Ho-Chunk Nation will setup and facilitate the Tribal Coordination Meeting, establish an agenda, date and location. Any cost incurred for the meeting would be incidental to the overall project cost. The contractor shall work with the tribe to determine who from tribal leadership and staff the contractor should notify and invite to the meeting.

The contractor shall also notify and invite to the meeting:

- Regional Tribal Liaison, Amy Coughlin, amy.coughlin@dot.wi.gov
- WisDOT Regional Labor Compliance Specialist
- WisDOT Tribal Affairs Program Manager, Jeremy Weso, Jeremy.weso@dot.wi.gov
- Tribal Affairs Project Manager, Cyless Peterson, Cyless.peterson@dot.wi.gov
- WisDOT region project team

This meeting may also include potential interviews or introductions with potential employees. The prime contractor and all subcontractors shall attend this meeting. Discussions are to include available employment opportunities and other tribal areas of interest such as scope of work, tribal regulations and ordinances, borrow sites, waste sites, and available aggregate.

Project Completion

Submit documentation summarizing communications regarding job opportunities throughout the life of the contract. This can be done using the DT2405 form noting that this is the final report. Provide final report to the tribe and the WisDOT Regional Labor Compliance Specialist compiling the results of hiring activities for the prime contractor as well as for subcontractors at all tiers.

stp-107-200 (20240703)

15. Removing Apron Endwalls Steel, Item 204.9060.S.01

A Description

This special provision describes removing Apron Endwalls Steel conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Apron Endwalls Steel by each unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Apron Endwalls Steel	EACH

stp-204-025 (20230113)

16. Removing Apron Endwalls Concrete, Item 204.9060.S.02

A Description

This special provision describes removing Apron Endwalls Concrete conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Apron Endwalls Concrete by each unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Apron Endwalls Concrete	EACH
stp-204-025 (20230113)		

17. Backfill Controlled Low Strength, Item 209.0200.S.

A Description

This special provision describes furnishing and placing a controlled low strength material designed for use as backfill in trenches for culverts, sewers, utilities, or similar structures, as backfill behind bridges abutments, or as fill for the abandonment of culverts, pipes, or tanks.

B Materials

Provide controlled low strength backfill that consists of a designed cementitious mixture of natural or processed materials. Allowable materials include natural sand, natural gravel, produced sand, foundry sand, produced gravel, fly ash, Portland cement, and other broken or fragmented mineral materials. The designed mixture shall be self-leveling and shall be free of shrinkage after hardening. Design the mixture to reach a state of hardening such that it can support foot traffic in no more than 24 hours. Provide a mixture that also meets the following requirements.

TEST	METHOD	VALUE
Flow (inch)	ASTM D-6103	9 min
Compressive	ASTM D-6024	20-40 @ 14 days
Strength (psi)		40-80 @ 28 days
		80-120 @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days before placement, furnish the engineer with a design mix detailing all components and their proportions in the mix.

C Construction

Place controlled low strength backfill at the locations and to the lines and grades as shown on the plan. Proportion and mix materials to produce a product of consistent texture and flow characteristics. The engineer may reject any materials exhibiting a substantial change in properties, appearance, or composition.

If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40° F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours.

No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.

D Measurement

The department will measure Backfill Controlled Low Strength in volume by the cubic yard of material, placed and accepted. Such volume shall be computed from actual measurements of the dimensions of the area to be backfilled. In irregular or inaccessible areas, the engineer may allow volume to be determined by other appropriate methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
209.0200.S	Backfill Controlled Low Strength	CY

Payment is full compensation for designing the mix; supplying all materials; preparing the proportioned mix; hauling it to the construction site; placing the material; and protecting it from freezing.

stp-209-010 (20191121)

18. QMP Mill and Relay Compaction, Item 374.1010.S.

A Description

- (1) This special provision describes modifying the compaction and density testing documentation requirements of work done under the Mill and Relay Pavement and Pulverize and Relay bid items. Conform to standard spec 325 and 330 as modified in this special provision.
- (2) Provide and maintain a quality management program. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process related to construction of a milled and re-laid and pulverized and re-laid base which meets all the requirements of this provision.
- (3) Chapter 8 of the department's Construction and Materials Manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

<https://wisconsin.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/rdwy/default.aspx>

- (4) This special provision applies to Mill and Relay and Pulverize and Relay material placed on both the mainline traveled way and its adjacent mainline shoulders according to the typical finished sections. Unless otherwise specified by the contract, all Mill and Relay and Pulverize and Relay material placed on side roads, private and public entrances, ramps, tapers, turn lanes, and other locations not described as the mainline traveled way and its adjacent mainline shoulders is exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

Replace paragraph (4) of standard spec 325.3 and standard spec 330.3 with the following:

- (4) Re-laid material will be accepted for compaction on a target density lot basis. Compact the re-laid material to a minimum of 96.0% of the material target density. Ensure that adequate moisture is present during placement and compaction operations to prevent segregation and to help achieve compaction.

The material target density will be identified using the average of 10 random control strip wet density measurements as described in section C.2.5.1.

Field density tests will not be considered for lot acceptance on the basis of compaction under the requirements of this provision until the moisture content of the in-place material is within -2.0 or +4.0 percentage points of the average moisture content of the 10 density tests representing a control strip.

C.2 Quality Management Program

C.2.1 Quality Control Plan

- (1) Submit a comprehensive written quality control plan to the engineer no later than 10 business days before placement of material. Do not construct any re-laid base before the engineer reviews and accepts the plan. Construct the project as the plan provides.
- (2) Do not change the quality control plan without the engineer's review and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:
 1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
 2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
 3. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
 4. Location of the QC laboratory, retained sample storage, and other documentation.
 5. A summary of the random locations and calculated quantities to be tested under this provision.
 6. A description of placement methods and operations. Including, but not limited to: staging, construction of an initial working platform, lift thicknesses, and equipment.

C.2.2 Pre-Placement Meeting

- (1) A minimum of two weeks before the start of placement of material, hold a pre-placement meeting at a mutually agreed upon time and location. Present the Quality Control Plan at the meeting. Attendance at the pre-placement meeting is mandatory for the project superintendent, quality control manager, project inspection and testing staff, all appropriate contractor personnel involved in the sampling, testing, and quality control including subcontractors, and the engineer or designated representatives.

C.2.3 Personnel

- (1) Perform the quality control sampling, testing, and documentation required under this provision using technicians certified by the Department's Highway Technician Certification Program (HTCP). Have a HTCP Nuclear Density Technician I, or ACT certified technician, perform field density and field moisture content testing.
- (2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

C.2.4 Equipment

- (1) Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.
- (2) Furnish nuclear gauges from the department's approved product list at:
<https://wisconsin.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/default.aspx>
- (3) Ensure that the nuclear gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.
- (4) Conform to AASHTO T310 and CMM 8.15 for density testing and gauge monitoring methods. Determine the moisture correction value as shown in CMM 8.15, except the one-point Proctor tests of the 5 random tests is not required. Determine natural moistures in the laboratory.
- (6) Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Backscatter may be used only if the material being tested cannot reliably maintain an undistorted direct transmission test hole. Direct transmission tests must be performed at the greatest possible probe depth of 2 inches, 4 inches, or 6 inches; not to exceed the depth of the compacted layer being tested. Perform each test for 1 minute of nuclear gauge count time.

C.2.5 Contractor Testing

- (1) Perform compaction testing on the mainline re-laid material, as defined in section A paragraph (4). Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians as required in C.2.3.
- (2) Select test sites randomly using ASTM Method D3665. Do not test less than 1 ½ feet from the unsupported edge of the base layer.

C.2.5.1 Contractor Required Quality Control (QC) Testing

- (1) Conduct testing at a minimum frequency of one test per lot. A lot will consist of each 3000 SY, for each layer with a minimum lift thickness of 2", of Milled and Pulverized material re-laid, regardless of location. Each lot of in-place mainline re-laid material will be accepted for compaction when the lot field density meets the required minimum 96.0% of target density. Lots that don't achieve 96.0% of target density must be addressed and approved in accordance with C.2.7.
- (2) Notify the engineer, if a lot field density test falls below the required minimum value. Document and perform corrective action in accordance with C.2.7. Deliver documentation of all compaction testing results to the engineer at the time of testing.

C.2.5.1.1 Target Density Determination

- (1) Construct a control strip to identify the target wet density for the re-laid material. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel.

- (2) Unless the Engineer approves otherwise, construct control strips to a minimum dimension of 300 feet long and one full lane width.
- (3) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.
- (4) Construct additional control strips, at a minimum, when:
 - 1. The final layer thickness changes in excess of 2.0 inches.
 - 2. The percent of target density is less than 90% or exceeds 105.0%; and is outside the range of the 10 random measurements defining the control strip; on three consecutive density measurements.
- (9) Construct control strips using equipments and methods representative of the operations to be used to relay and compact the Milled and/or Pulverized material. Wet the base, as mutually agreed upon by the contractor and engineer, to obtain and/or maintain adequate moisture content to ensure proper compaction. Discontinue water placement if the base begins to exhibit signs of saturation or instability.
- (10) After compacting the control strip with a minimum of 2 passes, mark and take density measurements at 3 random locations, at least 1 ½ feet from the edge of the base. Subsequent density measurements will be taken at the same 3 locations.
- (11) After each subsequent pass of compaction equipment over the entirety of the control strip, take density measurements at the 3 marked locations. Continue compacting and testing until the increase in density measurements is less than 2.0 lb/ft³, or the density measurements begin to decrease.
- (12) Upon completion of control strip compaction, take 10 randomly located density measurements within the limits of the control strip, at least 1 ½ feet from the edge of the base. The final measurements recorded at the 3 locations under article paragraph (6) of this section may be included as 3 of the 10 measurements. Average the 10 measurements to obtain the control strip target density and target moisture.

C.2.6 Department Testing

C.2.6.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor.

C.2.6.2 Quality Verification (QV) Testing

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.2.3 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests at the minimum frequency of 30% of the contractor required density tests.
- (3) The department will locate nuclear density test locations independent of the contractor's QC work, collecting one test at each QV location.
- (4) The department will conduct QV tests with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will utilize contractor control strip target density testing results for determination of the material target density.
- (6) The department will assess QV test results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If QV test results are nonconforming, take corrective actions in accordance with C.2.7 until the requirements of this special provision are met. Differing QC and QV nuclear density values of more than 2.0 pcf will be investigated and resolved.

C.2.6.3 Independent Assurance (IA)

- (1) Independency assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 - 1. Split sample testing.
 - 2. Proficiency sample testing.

3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.2.6.4.

C.2.6.4 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor shall review the data, examine data reduction and analysis methods, evaluate sampling and testing methods/procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.2.7 Corrective Action

- (1) Lots not achieving 96.0% of target density may be addressed and accepted for compaction in accordance with the requirements of this section. Unless otherwise stated, the actions taken to address an unacceptable lot must be applied to the entire lot.
- (2) Investigate the moisture content of material in an unacceptable lot. Moisture content testing/samples collected under the QC and/or QV testing articles of this specification may be used to complete this investigation. Obtain moisture content readings in accordance with AASHTO T310. Correct the moisture content with the moisture correction value using the moisture bias, as shown in CMM 8.15, except the one-point Proctor tests of the 5 random tests is not required.
- (3) Lots with moisture contents within -2.0 or +4.0 percentage points of the target moisture content for the control strip, and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, shall be compacted a minimum of one more pass using equipment and methods representative of the operations used to mill or pulverize and relay the material; and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft³ continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft³, the lot is accepted as satisfying the compaction requirements of this provision.
- (4) Lots with moisture contents within -2.0 or +4.0 percentage points of the target moisture content for the control strip, and exhibiting signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, will be reviewed by the engineer. The engineer may request subgrade improvement methods, such as excavation below subgrade (EBS), installation of geotextile fabrics, installation of breaker run material or others to be completed as extra work; or may request an additional pass of compactive effort using equipment and methods representative of the operations used to mill or pulverize, relay, and compact the base and density test.
 1. If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft³ in a lot continue subsequent compactive efforts and density testing on that lot. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft³, and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.
 2. If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds 96.0% of target density the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve 96.0% of target density, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to mill or pulverize, relay, and compact the base; and density

test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft³ continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft³, the lot is accepted as satisfying the compaction requirements of this provision.

- (5) Lots with moisture contents not within -2.0 or +4.0 percentage points of the target moisture content for the control strip shall receive contractor performed and documented corrective action, including additional density testing.
- (6) Density tests completed subsequent to any corrective action will replace previous field density test results for that lot. Continue corrective actions until 96.0% of target density is achieved or an alternate compaction acceptance criteria is met in accordance with this section.

D Measurement

- (1) The department will measure QMP Mill and Relay Compaction and QMP Pulverize and Relay Compaction by the square yard, acceptably completed.
- (2) The measured square yard of QMP Mill and Relay Compaction and QMP Pulverize and Relay Compaction equals the square yard of Mill and Relay and/or Pulverize and Relay, acceptably completed, regardless of material location, density testing eligibility, or number of lifts with which it is completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
374.1010.S	QMP Mill and Relay Compaction	SY

- (3) Payment is full compensation for performing compaction testing; for sampling and laboratory testing; and for developing, completing, and documenting the compaction quality management program. The department will pay separately for Milling and Relaying or Pulverizing and Relaying material under the appropriate bid item.

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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 \geq 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 \geq 75
- iii. Density PWL value \geq 75
- iv. Acceptable correlation

If not conducted simultaneously, the mix portion of a test strip must accomplish (i) & (ii), while density must accomplish (iii) & (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> (PWL)	<i>PAYMENT FACTOR, PF</i> (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]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:

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

*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

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 (Va) 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)

≥ 90 to 100

≥ 50 to < 90

<50

PAYMENT FACTOR, PF

(percent of \$65/ton)

$PF = ((PWL - 90) * 0.4) + 100$

$(PWL * 0.5) + 55$

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:

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

*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

- (4) 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 placed (i.e., from truck tickets), and PF_{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 BELOW SPECIFIED MINIMUM

PAYMENT FACTOR (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

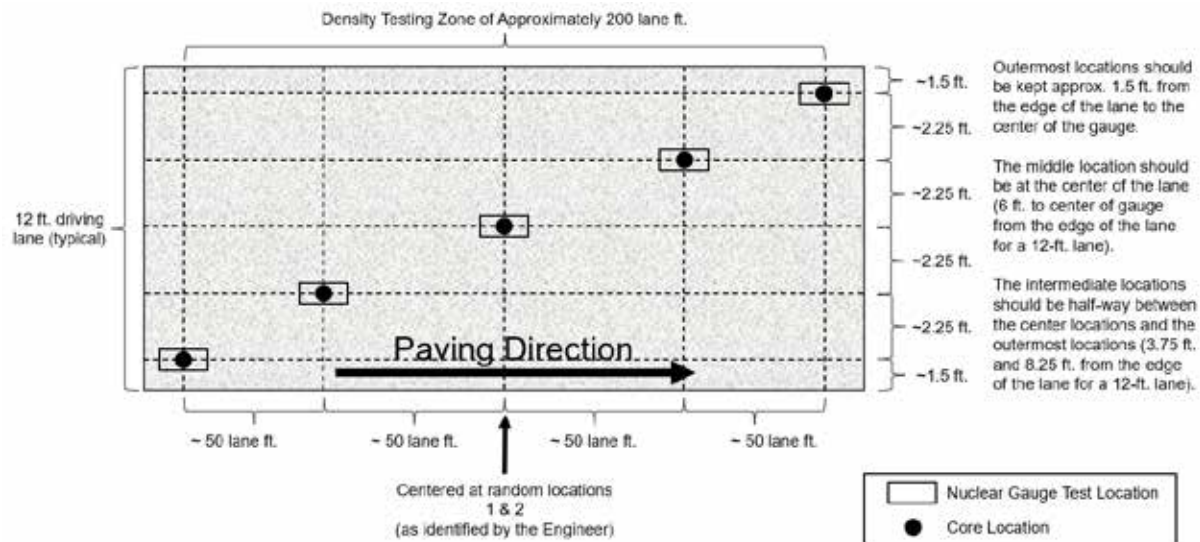


Figure 1: Nuclear/Core Correlation Location Layout

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 ¼ 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.

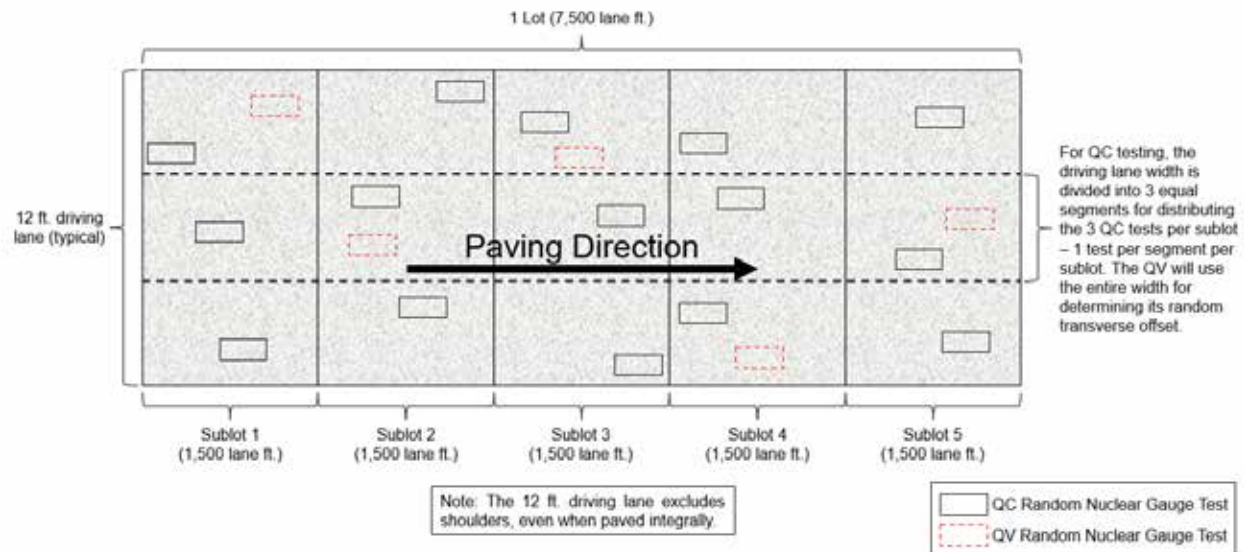


Figure 4: Example Layout of Mainline HMA Nuclear Density Tests

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 ft 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:

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

stp-460-055 (20240105)

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 HMA Longitudinal Joints](#). 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	<i>REMEDIAL ACTION^[1]</i>

^[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

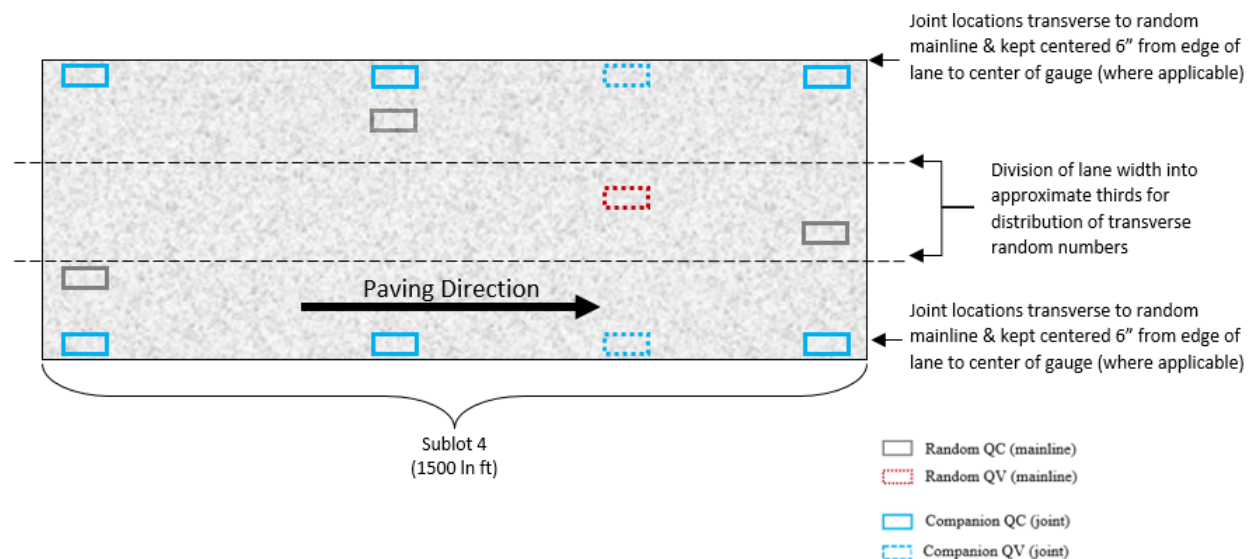
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

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				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	-
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. Cleaning Decks to Reapply Concrete Masonry Overlay, Item 509.0505.S.

A Description

This special provision describes cleaning the entire bridge deck after the existing concrete masonry overlay is removed, prior to placing a new concrete masonry overlay.

B (Vacant)

C Construction

Blast-clean the entire surface of the deck, the vertical faces of curbs, sidewalks and parapets to the depth of the adjoining concrete overlay. Blast-clean all exposed existing reinforcing steel. Repair damage to existing epoxy-coated reinforcement remaining in place that is either uncovered by or damaged by the contractor's operations. Use engineer-approved patching or repair material compatible with the existing coating and inert in concrete.

Clean the surface on which the new concrete will be placed to remove all loose particles and dust by either brooming and water pressure using a high-pressure nozzle, or by water and air pressure. Use water for cleaning that conforms to standard spec 501.2.6.

D Measurement

The department will measure Cleaning Decks to Reapply Concrete Masonry Overlay by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY

Payment for is full compensation for cleaning the concrete surfaces.

stp-509-065 (20210708)

24. Structure Repainting General.

A General

A.1 Inspection

On all structures in this contract, notify the engineer of any missing or broken bolts or nuts, any missing or broken rivets, or of any cracks or flaws in the steel members while cleaning or painting.

A.2 Date Painted

At the completion of all painting work, stencil in black paint or contrasting color paint the date of painting the bridge. The numbers shall be 3 inches (75 mm) in height and shall show the month and year in which the painting was completed: e.g., 11-95 (November 1995). On each bridge painted, stencil the date at two locations. On truss bridges, stencil the date on the cover plates of end posts near and above the top of the railings at the oncoming traffic end. On steel girder bridges, stencil the date on the inside of the outside stringers at the abutments. The date on grade separation bridges shall be readable when going under the structure or at some equally visible surface near the ends of the bridge, as designated by the engineer.

A.3 Graffiti Removal

Remove any graffiti on concrete abutments, piers, pier caps, parapet railings, slope paving or any other location at the direction of the engineer. Use a brush sandblast to remove graffiti.

The above work will not be measured and paid for separately but will be considered incidental to other items in the contract.

B (Vacant)

C Construction

C.1 Repainting Methods

Do not perform blasting, cleaning and painting on days of high winds. Prevailing winds in excess of 15 mph (25 km/hr) shall be considered high winds.

Place the final field coat of paint on the exterior of the exterior beams as a continuous painting operation. Stop at splices, vertical stiffeners or other appropriate locations so that lap marks are not evident or noticeable.

Completely clean and remove spent abrasive and other waste materials resulting from the contractor's operation from bridge deck surfaces, gutter lines, drains, curbs, bridge seats, pier caps, slope paving, roadway below, and all structural members and assemblies.

C.2 Inspection

Add the following to standard spec 105.9:

Furnish, erect and move scaffolding and other equipment to allow the inspector to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.

stp-517-005 (20150630)

25. Labeling and Disposal of Waste Material.

The EPA ID number for Structure B-62-187 is WIR000188276.

The state has an exclusive mandatory use contract with a private waste management contractor to transport and dispose of hazardous waste.

The state's waste management contractor shall furnish and deliver appropriate hazardous waste containers and site-specific labels to each bridge site. The provided containers shall be placed at pre-selected drop-off and pick-up points at each bridge site, and these locations shall be determined at the preconstruction conference. The custody of the containers and labels shall be the responsibility of the painting contractor while they are at the job site.

Fill out form DT 1231, <https://wisconsindot.gov/Documents/formdocs/dt1231.docx> and email it to the waste management contractor, the region environmental coordinator, and the DOT Hazmat unit mailbox (dothazmatunit@dot.wi.gov) a minimum of 10 working days in advance to request container drop-off or pickup. Using the form, provide the waste management contractor with the project ID, structure number, EPA ID, and the agreed-upon location for container staging. Contact information for the waste management contractor is located on the WisDOT Internet site at:

<https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/hazwaste-contacts.pdf>

Report all reportable spills and discharges according to the contingency plan.

Labels are site-specific. Check the labels to ensure that the project ID, structure number, and EPA ID match the structure generating the waste. Apply a label to each drum when it is opened for the first time.

Fill in the date on the label the first day material is accumulated in the drum. The following page is an example of a properly filled-in label.

During paint removal operations, continuously monitor and notify the project inspector of the status of waste generation and quantity stored so that timely disposal can be arranged.

stp-517-055 (20230113)

HAZARDOUS WASTE	
WW-5257580999-001-01-0	
STORAGE LABEL	
RQ, HAZARDOUS WASTE, SOLID, n.o.s., (LEAD), 9, NA3077, III, (D008)	
Enter the date that waste materials were first placed into the container	
EPA CODE: E/D008	STATE: S
WIP#: 391498	
WIP DESC: BRIDGE SAND WITH LEAD	
DATE ACCUMULATED: 07/01/2005	
HAZARDOUS WASTE – FEDERAL LAW PROHIBITS IMPROPER DISPOSAL IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.	
WISC DOT BRIDGE # B-29-53/54 I-94 OVER CTH H PROJECT ID # 5882-03-70 CAMP DOUGLAS, WI 54618	
(608) 963-0871	GENERATOR EPA ID WIR000121103

Project ID Number on label must match the Project Number assigned by the WIDOT

Bridge Number and Address on label must match specific bridge from which waste was generated.

EPA ID Number on label is specific to the bridge from which the waste is generated.

26. Structure Repainting Recycled Abrasive B-62-187, Item 517.1801.S.

A Description

This special provision describes surface preparation and painting of the metal surfaces according to the manufacturer's recommendations as modified in this special provision.

A.1 Areas to be Cleaned and Painted

All structural metal surfaces of:

1. Structure B-62-187 3859 SF.

Areas are approximate and given for informational purposes only.

B Materials

B.1 Coating System

Furnish a complete coating system from the department's approved list for "Structure Repainting Recycle Abrasive Structure". The color for the finish coating material shall match the color number the plans show according to Federal Standard Number 595. Supply the engineer with the product data sheets for approval before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, and the minimum drying time between coats.

The color of the primer must be such that a definite contrast between it and the color of the blasted steel is readily apparent. There shall be a color contrast between all subsequent coats for the paint system selected. Submit color samples of the primer and all coats to the engineer for approval before any application of paint.

C Construction

C.1 Surface Preparation

Before blast cleaning, solvent clean all surfaces to be coated according to SSPC-SP1.

All metal surfaces must be blast cleaned according to SSPC-SP10 and verified before painting.

Upon completion of surface preparation, test representative surfaces, which were previously rusted (i.e. pitted steel) for the presence of residual chloride. Perform Surface Contamination Tests (SCAT) according to the manufacturer's recommendations. The tests must be witnessed by the engineer. If chlorides are detected at levels greater than $7\mu\text{g}/\text{cm}^2$, continue to clean the affected areas until results are below the specified limit. Submit anticipated testing frequencies and chloride remediation methods to the Engineer for review and approval.

Apply the prime coat the same day that the metal surfaces receive the No. 10 blast or re-blast before application. Cleaned surfaces shall be of the specified condition immediately before paint application. If rust bloom occurs before applying the primer, stop the painting operation in the area of the rust bloom and re-blast and clean the area to SSPC SP-10 before applying the primer.

The steel grit and any associated equipment brought to the site and used for blast cleaning shall be clean. Remove immediately dirty grit or equipment brought to the site at no expense to the department. Furnish an abrasive that has a gradation such that it will produce a uniform surface profile between 1 to 3 mils on the steel surface, as measured according to ISO 8503-5.

The abrasive blasting and recovery system shall be a completely integrated self-contained system for abrasive blasting and recovery. It shall be an open blast and recovery system that will allow no emissions from the recovery operation. The recovery equipment shall be such that the amount of contaminants in the clean recycled steel grit shall be less than 1 percent by weight as per SSPC AB-2.

Remove by grinding all fins, tears, slivers, and burred or sharp edges that are present on any steel member, or that appear during the blasting operation, and re-blast the area to give a 1 to 3 mils surface profile.

Remove all spent material and paint residue from steel surfaces with a good commercial grade vacuum cleaner equipped with a brush-type cleaning tool, and test cleanliness according to ASTM D4285. The airline used for surface preparation shall have an in-line water trap and the air shall be free of oil and water as it leaves the airline.

Take care to protect freshly coated surfaces from subsequent blast cleaning operations. Thoroughly wire brush damaged primed surfaces with a non-rusting tool, or if visible rust occurs, re-blast to a near white condition. Clean and re-prime the brushed or blast cleaned surfaces according to this specification.

C.2 Coating Application

Apply paint according to the manufacturer's recommendations in a neat workmanlike manner. Paint application shall normally be by airless spray or inaccessible areas by brush, roller or other methods approved by the engineer.

The engineer may allow the use of conventional spray equipment after satisfactory demonstration by the contractor of the proper application technique and handling of that equipment.

Mix the paint or coatings according to the manufacturer's directions to a smooth lump-free consistency. Keep paint thoroughly mixed during the painting application.

After the inspector approves the entire cleaned surface to be coated, apply a prime coat uniformly to the entire surface. Either before or after applying the prime coat, brush or spray a stripe coat of primer on all plate edges, bolt heads, nuts, and washers. Apply succeeding coats as the product data sheet shows.

Remove all dry spray by vacuuming, wiping, or sanding if necessary.

If the application of the coating at the required thickness in one coat produces runs, bubbles, or sags; apply a "mist-coating" in multiple passes of the spray gun; separate the passes by several minutes. Where excessive coating thickness produces "mud-cracking", remove such coating back to soundly bonded coating and re-coat the area to the required thickness.

The resultant paint film shall be smooth and uniform, without skips or areas of excessive paint according to SSPC PA1.

The coating is supplied for normal use without thinning. If in cool weather it is necessary to thin the coating for proper application, thin according to the manufacturer's recommendations.

During surface preparation and coating application the ambient and steel temperature shall be between 39 degrees F and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature. (This requires the steel to be dry and free of any condensation or ice regardless of the actual temperature of the steel.) The relative humidity shall not exceed 85%. The manufacturer's ambient condition requirements must be followed if they are more stringent.

Paint thickness shall be within the requirements for a three coat paint system listed in the department's approved list for Structure Repainting Recycle Abrasive Structure and the paint system being used.

Time to recoat shall be according to the manufacturer's recommendations.

The dry film thickness will be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement according to SSPC-PA 2. Dry film thickness in each area measured will be based on an average of three gage readings, after calibration of the gage to account for surface profile of the bare steel as a result of surface preparation.

D Measurement

The department will measure Structure Repainting Recycled Abrasive (Structure #) as a single unit for each structure, 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
517.1801.S	Structure Repainting Recycled Abrasive B-62-187	EACH

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the paint; and for providing the listed equipment.

stp-517-050 (20210708)

27. Negative Pressure Containment and Collection of Waste Materials, B-62-187, Item 517.4501.S.

A Description

This special provision describes providing a dust collector to maintain a negative air pressure in the enclosure; furnishing and erecting enclosures as required to contain, collect and store waste material

resulting from the preparation of steel surfaces for painting, and repainting, including collection of such waste material, and labeling and storing waste material in approved hazardous waste containers.

B (Vacant)

C Construction

Erect an enclosure to completely enclose (surround) the blasting operations. The ground, slope paving, or roadway cannot be used as the bottom of the enclosure unless covered by approved containment materials. So that there are no visible emissions to the air or ground or water, design, erect, operate, maintain and disassemble the enclosures in such a manner to effectively contain and collect dust and waste materials resulting from surface preparation and paint over spray. Suspend all enclosures over water from the structure or as approved by the engineer.

Construct the enclosure of flexible materials such as tarpaulins or of rigid materials such as plywood, or of a combination of flexible and rigid materials and meet SSPC Guide 6 requirements with Level 1 emissions. Systems manufactured and provided by Eagle Industries, Detroit Tarps, or equal, are preferred. The tarpaulins shall be a non-permeable material, either as part of the tarp system or have a separate non-permeable lining. Maintain all materials free of tears, cuts or holes. The vertical sides of the enclosure shall extend from the bottom of the deck down to the level of the covered work platform or covered barge where used for structures over water and shall be fastened securely to those levels to prevent the wind from lifting them. Bulkheads are required between beams to enclose the blasting area as approved by the engineer. Where bulkheads are required, construct them of plywood and properly seal them. To prevent spent materials and paint over spray from escaping the enclosed area, overlap and fasten together all seams. Place groundcovers under all equipment before operations or as approved by the engineer.

To allow proper cleaning, inspection of structures or equipment, and painting, provide safe adequate artificial lighting in areas where natural light is inadequate.

Provide a dust collector so that there are no visible emissions outside of the enclosure and so that a negative air pressure inside the enclosure is maintained. The dust collector shall be sized to maintain the minimum air flow based on the cross-sectional area of the enclosure.

A combination of positive air input and negative air pressure may be needed to maintain the minimum airflow within the enclosure.

Filter all air exhausted from the enclosure to create a negative pressure within the enclosure so as to remove all hazardous and other particulate matter.

After all debris has been removed and all painting has been approved in the containment area is complete, remove containment according to SSPC Guide 6.

As a safety factor for structures over water, provide for scum control. Provide a plan for corrective measures to mitigate scum forming and list the procedures, labor and equipment needed to assure compliance. Effectively contain the scum that forms on the water and does not sink in place from moving upstream or downstream by the use of floating boom devices.

If in the use of floating boom devices, the scum tends to collect at the devices, contain, collect, store the scum, and do not allow it to travel upstream or downstream beyond the devices. Remove the scum at least once a day or more often if needed.

Collect and store at the bridge site for disposal all waste material or scum collected by this operation, or any that may have fallen onto the ground tarps. Collect and store all waste material and scum at the end of each workday or more often if needed. Storage shall be in provided hazardous waste containers. Label each container as it is filled, using the labels provided by the Hazardous Waste Disposal contractor. Check the label and ensure that the project ID, bridge number and EPA ID match the structure. Fill in the generation date when the first material is placed in the container. Secure all containers at the end of each workday. Keep the containers covered at all times except to add or remove waste material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain, or exposed to standing water.

In a separate operation, recover the recyclable abrasive for future application, and collect the paint and/or corrosion particles for disposal.

D Measurement

The department will measure Negative Pressure Containment and Collection of Waste Materials (Structure) as a single unit for each structure, 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
517.4501.S	Negative Pressure Containment and Collection of Waste Materials B-62-187	EACH

Payment is full compensation for designing, erecting, operating, maintaining, and disassembling the containment devices; providing negative pressure exhaust ventilation; collecting, labeling, and for storing spent materials in provided hazardous waste containers.

stp-517-065 (20230113)

28. Portable Decontamination Facility, Item 517.6001.S.

A Description

This special provision describes furnishing and maintaining weekly, or more often if needed, a single unit portable decontamination facility.

B Materials

Supply and operate all equipment according to OSHA.

Supply adequate heating equipment with the necessary fuel to maintain a minimum temperature of 68° F in the facility.

The portable decontamination facility shall consist of a separate "Dirty Room", "Shower Room" and "Clean Room". The facility shall be constructed so as to permit use by either sex. The facility shall have adequate ventilation.

The "Dirty Room" shall have appropriately marked containers for disposable garments, clothing that requires laundering, worker shoes, and any other related equipment. Each container shall be lined with poly bags for transporting clothing, or for disposal. Benches shall be provided for personnel.

The "Shower Room" shall include self-contained individual showering stalls that are stable and well secured to the facility. Provide showers with a continuous supply of potable hot and cold water. The wastewater must be retained for filtration, treatment, and/or for proper disposal.

The "Clean Room" shall be equipped with secure storage facilities for street clothes and separate storage facilities for protective clothing. The lockers shall be sized to store clothing, valuables and other personal belongings for each worker. Benches shall be provided for personnel.

Supply a separate hand wash facility, either attached to the decontamination facility or outside the containment.

C Construction

Properly contain, store, and dispose of the wastewater.

D Measurement

The department will measure Portable Decontamination Facility by each individual unit, 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
517.6001.S	Portable Decontamination Facility	EACH

Payment is full compensation for furnishing and maintaining a portable decontamination facility.

stp-517-060 (20230113)

29. Locating No-Passing Zones, Item 648.0100.

For this project, the spotting sight distance in areas with a 55 mph posted speed limit is 0.16 miles (845 feet).

stp-648-005 (20060512)

**30. Maintaining Bird Deterrent System Station 262+50, Item 999.2005.S.01;
Maintaining Bird Deterrent System Station 412+00, Item 999.2005.S.02.**

A Description

This special provision describes inspecting, installing and/or maintaining approved deterrents that prevent migratory bird nesting on bridges and culverts. Swallows or other migratory birds' nests have been observed on or under the existing culvert or bridge at the station identified. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. One deterrent system shall be installed and/or maintained for each applicable structure. Deterrent methods selected shall be appropriate for structure type, size and/or site-specific constraints.

B Materials

B.1 Hardware and Lumber

Lumber, hardware, and fastening devices shall be durable enough to last through the length of the nesting season. Fastening devices and deterrence system must be approved by the engineer prior to installation on culverts and bridges that will remain in service after removal of deterrent systems. The method of fastening should not compromise the culvert or bridge concrete surfaces or steel protection systems. The attachment locations must be restored and repaired as needed by use of engineer approved fillers, sealers and paint systems.

B.2 Netting Materials

Exclusion netting is material either wrapped around or draped and fastened to bridge decks/abutments and culvert corners to prevent bird entry.

Furnish exclusionary netting to deter nesting in bridge decks and abutments and corners of box culverts, consisting of either:

- a. 1/2" x 1/2" or 3/4" x 3/4" knotless, flame resistant, U.V. stabilized polyethylene or polypropylene netting with minimum 40-pound breaking strength per strand, or engineer approved equal.
- b. Galvanized wire mesh (hardware cloth) with a wire diameter of .040 inches (19-gauge) and opening width of 1/2-inch.

At a minimum, use either 1" x 2" (nominal) lumber or 3/4" x 2" pressure treated plywood strips and of equal length as the netting.

B.3 Plastic Strip Curtain

Plastic strip curtains are strips of plastic attached to vertical surfaces in areas suitable for nesting.

Furnish 3-foot wide lengths of 6 mil minimum plastic sheeting with the lower 2 feet cut into vertical strips 2 inches wide.

At a minimum, use either 1" x 2" (nominal) lumber or 3/4" x 2" pressure treated plywood strips and staples to attach plastic strips to wood to fabricate the strip curtain.

Furnish concrete screws to attach strip curtain to structure.

B.4 Corner Slope Materials

Corner slopes are pieces of curved plastic placed in corners suitable for nesting. They are particularly effective in preventing nesting in top corners of box culverts.

Furnish U.V. stabilized pre-fabricated PVC or polycarbonate corner slopes from commercial bird-deterrent manufacturers or an approved equal.

C Construction

C.1 General

If active nests are observed after construction starts, or if a trapped bird or an active nest is found, stop work that may affect birds or their nests, and notify the engineer to consult with the Wisconsin Department of Natural Resources transportation liaison at Enter Name, at Enter Phone, or the department regional environmental coordinator Enter Name, at Enter Phone.

Efforts should be made to release trapped birds, unharmed.

C.2 Nest Removal

Remove unoccupied nests prior to the beginning of the nesting season as designated in Prosecution and Progress. Nest removal involves the removal and disposal of unoccupied or partially constructed nests without eggs or nestlings. Removing all evidence of nesting (e.g. cleaning droppings from structures) eliminates a visual cue for a potential breeding location, especially for first-time breeders. Nest removal is not a type of deterrent and does not prevent nest establishment but can delay the process. As such, it should only be used in conjunction with other methods. It cannot be used on its own to ensure compliance. Nest removal is not required if deterrents are installed before the start of the avoidance window unless nests interfere with successful installation of the deterrent.

Remove nests on the structure by scraping or pressure washing prior to established avoidance windows to deter nesting. Remove only unoccupied or partially constructed nests without eggs or nestlings. Remove newly built nests every two days before eggs are laid. Nest removal is intended to be used prior to and in conjunction with other nesting deterrents.

C.3 Exclusion Netting

C.3.1 Installation

Using concrete screws, anchor lumber to bridge or culvert along perimeter of intended netting. Fasten netting to lumber until netting is held taut. Use the minimum length of lumber and netting necessary to avoid sections of netting that are not flush to the bridge or culvert. Eliminate any loose pockets or wrinkles that could trap and entangle birds or other wildlife. Ensure the net is pulled taut in order to prevent flapping in the wind, which results in tangles or breakage at mounting points.

For culverts, attach netting at a 45-degree angle at the culvert corner so it extends at least 12" below the corner.

C.4 Plastic Curtains

C.4.1 Installation

Attach plastic curtains along the entire length of vertical surface or corner on which nest building is to be deterred. Affix plastic curtain strips to treated lumber with staples spaced a minimum of 1 foot O.C. Wrap plastic curtains around lumber prior to attaching it to the structure to reduce the likelihood of it tearing out at the staples. Screw lumber into the underside of the bridge deck or top of box culvert with concrete screws placed 24-inches O.C. minimum.

C.5 Corner Slopes

C.5.1 Installation

Attach corner slopes to the structure per the manufacturer's recommendations. Use urethane-based adhesives if manufacturer supplied hardware or adhesives are not available or no recommendations are provided. Install end caps or seal ends of corner slopes to prevent entry of birds or other animals.

C.6 Inspection and Maintenance

Inspect bird deterrent devices every two weeks both during and prior to construction when deterrents have been installed to exclude birds prior to nesting windows, and after large storm events or high winds. Ensure that netting is taut, that no gaps or holes have formed, and that the nets are functioning properly. Ensure that corner slopes are not cracked or otherwise damaged and are functioning properly. Ensure that curtains are undamaged, with no tears, holes, or creases. Repair any damaged or loose deterrent devices. Inspect, maintain, and repair nesting deterrents whether installed by the contractor or others. Repair, replace, supplement deterrents as necessary with materials meeting the requirements of this specification.

Remove any unoccupied or partially constructed nests without eggs or nestlings.

Repair deterrents to prevent birds from attempting to nest again.

Record all inspection, removal, and maintenance activities. Provide inspection, removal and maintenance records to the engineer upon request.

C.7 Removal and Structure Repair

Maintain the deterrent until the engineer determines that the deterrent is deemed no longer necessary. Upon completion of the project, remove any remaining migratory bird deterrent from the project site. If the existing bridge or culvert is to remain after construction, restore and repair as needed by use of engineer approved fillers, sealers and paint systems.

D Measurement

The department will measure Installing and Maintaining Bird Deterrent System (Station) as a single unit at each structure, acceptably completed.

The department will measure Maintaining Bird Deterrent System (Station) as a single unit at each structure, 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
999.2005.S.01	Maintaining Bird Deterrent System Station 262+50	EACH
999.2005.S.02	Maintaining Bird Deterrent System Station 412+00	EACH

Payment for Maintaining Bird Deterrent System is full compensation for inspecting structures for the presence of migratory birds, inspecting deterrents installed by others; maintaining, repairing, replacing, and supplementing existing deterrent materials; repairing damage to structures resulting from installation of deterrents; removal and disposal of materials.

stp-999-200 (20250108)

31. Resetting Culvert Sections, Item SPV.0060.01.

A Description

This special provision describes providing resetting culvert sections and the apron end wall for existing reinforced concrete culverts at the locations shown on the plans or indicated by the engineer and according to the requirements of the plan and pertinent sections of the standard specifications.

B (Vacant)

C Construction

All construction methods shall be performed according to standard spec 520.3.3.

Dewater pipe before start of work to a designated site as indicated by the engineer.

Remove woody debris and existing vegetation that would interfere with work and excavate around the culvert sections, disassembling the sections as necessary. Provide and place additional material for foundation for the culvert sections.

Reset culvert sections and apron end walls using approved joint geotextile joint wrap and joint ties.

Restore the slope and haul debris and unnecessary materials offsite to a waste area.

D Measurement

The department will measure Resetting Culvert Sections by the each individual unit 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.0060.01	Resetting Culvert Sections	EACH

Payment is full compensation for dewatering, removal of debris to an approved offsite waste area, providing and placing additional foundation material as necessary, disassembling as necessary and

resetting concrete culvert sections and existing apron end walls, furnishing and installing geotextile joint wrap and joint ties, and restoring the slope around the culvert and apron end wall.

32. Adjusting Water Valve Boxes, Item SPV.0060.02.

A Description

This special provision describes locating, exposing, and protecting existing water valve boxes after the pavement or sidewalk is removed, furnishing and installing water valve box extensions if necessary; and adjusting the water valve boxes to the final finished elevation required.

B Materials (Vacant)

C Construction

Furnish and install water valve box extensions to the existing water valve boxes if necessary. Protect the water valve boxes during construction. Clean out the water valve boxes as necessary to assure the valve wrench will fit completely over the valve bolt. Adjust the valve boxes to within 1/4 inch of the required final finished elevation.

D Measurement

The department will measure Adjusting Water Valve Boxes by the each unit, 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.0060.02	Adjusting Water Valve Boxes	EACH

Payment is full compensation for locating, exposing, and protecting water valve boxes; furnishing and installing water valve box extensions if necessary; exclusive of water valve boxes; cleaning out the water valve boxes, and adjusting water valve boxes to the final finished elevation. Replace water valve boxes, which are damaged by the contractor's operations, in kind, at the contractor's expense.

33. Reseal Joints, Item SPV.0090.40.

A Description

This special provision describes resealing of existing wingwall construction joints. Perform work as directed by the engineer, as shown on the plans, and according to standard specification section 502.

B Materials

Provide non-bituminous joint sealer as specified in section 502.2.9 of the standard specifications.

C Construction

Confirm locations for sealing with the engineer. Prepare existing surfaces for joint sealing by removing old sealant (if present) and cleaning the joint with water blasting. Clean and dry surfaces prior to sealing. Immediately before sealing, direct compressed air over the surface to remove dust and loose particles.

If required, provide an appropriately sized backer rod along vertical joints to facilitate sealing. Existing back rods may be re-used with the consent of the engineer.

Seal prepared and fully dry joints with non-bituminous joint sealer, according to all manufacturer recommendations.

D Measurement

The department will measure Reseal Joints 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.0090.40	Reseal Joints	LF

Payment is full compensation for all surface preparation and cleaning; waste material confinement, collection and disposal; providing sealant and backer rods; installing back rods; and sealing the joints.

34. Fiber Wrap Reinforcing Non-Structural, Item SPV.0165.40.

A Description

This special provision describes providing non-structural protection using externally bonded, high-strength, fiber reinforced polymer (FRP) composite/epoxy resin systems field-applied per the details shown on the plans.

B Materials

Furnish a glass or carbon composite fabric that is a continuous unidirectional filament woven fabric with a primary fiber of electrical (E) glass or carbon, respectively.

Use a two-component, solvent-free with 0% Volatile Organic Compound (VOC) epoxy that is supplied by the manufacturer. Polyester resin shall not be allowed as a substitute for epoxy resin. Deliver epoxy materials in factory sealed containers with the manufacturer's labels intact and legible with verification of the date of manufacture and shelf life.

The protective top coating shall be concrete gray in color and match the color of the adjacent unwrapped concrete. Protective top coating shall be vapor permeable and UV resistant.

The use of more than one FRP system in an application is not permitted. All components, including primer, putty, filler, protective coating, and other materials, shall be compatible with the FRP system.

Store products in a protected area at a temperature between 40°F and 100°F with no moisture contact, no UV exposure, protected from dirt, chemicals, and physical damage, and according to the manufacturer's requirements. Do not use components exceeding their shelf lives.

Provide the following to the engineer:

- The manufacturer's data sheet indicating physical, mechanical and chemical characteristics of all materials used in the FRP system including the primer, putty, resin, saturant, fibers, and top coating.
- The manufacturer's Material Safety Data Sheets (MSDS) for all materials used.
- The manufacturer's instructions for installation and repair, including information on lap details if required.
- The manufacturer's storage and handling requirements of all materials.

Supplied composite fabric and epoxy resin products must have a minimum of ten installations. Furnish proof of successful installations including date of construction and owner references. Furnish certified test reports including 1000 hour tests for 140°F, water, and salt water.

C Construction

C.1 Certified Applicators

Installers shall have a minimum of three years of experience performing similar FRP composite strengthening, and be trained and certified by the manufacturer of the supplied FRP composite/epoxy resin system being used. Submit a list of completed surface bonded FRP composite strengthening projects completed with the manufacturer's FRP composite system in the past three years. The list shall include a minimum of 10 projects with the proposed FRP system, the dates when work was performed, general description of work, quantity of work and owner references. Provide written verification from the FRP composite manufacturer that the applicator has received the required training and is a certified installer by the FRP manufacturer.

C.2 Surface Preparation

Remove spalled and loose concrete.

Grind uneven surfaces or protrusions until smooth. Any corners or edges shall be rounded over to a minimum radius of 1/2-inch. This requirement also applies to beveled edges which must be ground smooth to eliminate sharp spots.

Per standard spec 509, treat any areas of active corrosion of the reinforcement and patch the concrete surface so as to restore it to its original dimensions. When patching the concrete substrate, remove defective concrete down to sound concrete; the extents of the area to be removed and patched shall be

1/2-inch beyond the boundary of the distress on all sides. If there is a loss of bond between the reinforcing steel and the concrete, remove the surrounding concrete to a depth equal to the greater of 3/4-inch or the maximum aggregate size plus 1/4-inch. If surface repair is performed, allow patches to cure a minimum of 10 days before FRP application or until the surface moisture is less than 4%. This work to be paid for under separate bid items per the plans.

Epoxy inject cracks in the concrete larger than 0.25 mm in width at least 24 hours prior to FRP installation. Seal cracks smaller than 0.25 mm in width in aggressive environments at the direction of the engineer. This work to be paid for under a separate bid item per the plans.

Preserve and utilize the required existing reinforcing steel, and blast clean, realign, and retie as the engineer directs. If additional reinforcement is required, use grade 60 steel conforming to AASHTO M31 and standard spec 505.2. Repair damage to existing, epoxy-coated reinforcement conforming to 509.3.1.

The concrete surface shall be clean, and free of any material that could interfere with bonding, such as dirt, grease, wax, etc. The surface must also be free of moisture with a maximum moisture content of 4%. Immediately prior to bonding, all contact surfaces shall receive a final cleaning by hand or oil-free compressed air to remove any residual dust, powder residue or laitance.

C.3 Installation

A minimum of two layers are required.

Place FRP only under the following conditions or per manufacturer's recommendation:

- Ambient temperature and the temperature of the epoxy resin components shall be between 55°F and 90°F during the entire application process.
- Relative humidity less than 85%.
- Surface temperature more than 5°F above the dew point.
- Moisture level of all contact surfaces, included patched areas, less than 4% unless the resin has been specifically formulated for wet applications.

Unless directed otherwise by the engineer, install the FRP after all dead loads have been applied to the bridge. Do not install FRP while the component being repaired is subjected to live loads.

Apply, per manufacturer's instructions, a system-compatible putty as required to fill uneven surfaces or recesses. Depending on the manufacturer, this putty may be applied before or after the primer.

Apply the primer coat uniformly to the substrate using a roller or trowel. Primed and puttied surface shall be protected from all contaminants (i.e., dust, moisture, etc) prior to the application of the fiber wrap.

Mix the components of the epoxy resin with a mechanical mixer and apply the epoxy resin uniformly to the fiber at a rate that ensures complete saturation of the fabric. Apply saturating resin uniformly to the prepared substrate. Begin resin application within one hour after the batch has been mixed. Use all resin within the pot life as specified by the manufacturer.

Apply the fabric per manufacturer's recommendation. Handle fiber wraps in a manner to maintain fiber straightness and prevent fiber damage. Any kinks, folds, or severe waviness will not be accepted. Use rollers or hand pressure to remove any air trapped between the fabric and the concrete, or between fabric plies. Rolling must be parallel to the direction of the fibers to avoid fiber misalignment or damage. Do not use metal serrated rollers because they can damage the FRP fabric.

Stagger the joints between layers so that a continuous sheet in one layer will span the joints of the sheets in the layer below. If multiple layers cannot all be placed in one day, defer to the manufacturer to determine the extent of the cure and surface preparation required for the previously placed layers required before proceeding. If required, laps shall be per manufacturer's instructions, with a minimum edge lap of 6 inches and a minimum end lap of 12 inches. Laps should be staggered between layers.

Cover the final layer of fabric with a coat of epoxy that produces a uniform finished surface per manufacturer's instructions.

Cure per manufacturer's instructions. The FRP system shall be protected from weather, large temperature variations, moisture, sand, dust, and other foreign particles during curing. Do not allow the system to be subjected to live loads until it is completely cured. Defer to manufacturer's instructions regarding the degree of cure which must be achieved before additional dead loads can be applied to the wrapped member.

An additional protective coating is required to protect the fibers from the elements, specifically UV radiation, and to give the final aesthetic effect. Install protective coating per manufacturer's instructions

after the field inspection described in section C.4.2 has been conducted. To prepare the FRP surface to receive the coating, clean and roughen the exterior surfaces of the composite wrap using a light abrasive after the final epoxy coat is completely polymerized. The abrasive shall be of the appropriate hardness to roughen the surface without damaging the fibers. Remove all dust, dirt, and other bond inhibiting materials and dry all cleaned and roughened surfaces.

C.4 Testing and Acceptance

C.4.1 Records and Sampling

The contractor shall record the following information for each installation:

- Date, time, and specific location of installation.
- Surface preparation methods.
- Widths and lengths of cracks not injected with epoxy.
- Material information including product used, fiber and resin lot/batch numbers, mixture ratios, mixing times, etc.
- Ambient temperature, relative humidity, and general weather observations at the beginning and end of each installation.
- Concrete surface temperature, concrete moisture content, and surface cleanliness.
- Number of FRP layers used and fiber orientation of each layer.
- Square footage of fabric and volume of epoxy used each day.

C.4.2 Field Testing

In the presence of the engineer, the contractor will conduct a visual and acoustic sounding inspection to test for defects such as voids, delaminations, external cracks, chips, cuts, loose fibers, external abrasions, blemishes, foreign inclusions, depressible raised areas, or fabric wrinkles. Conduct this inspection after the FRP is cured but before the protective coating is applied.

In the presences of the engineer, the contractor will conduct a visual inspection of the protective coating for damage including but not limited to cracking, crazing, blisters, peeling, or external abrasions. Conduct this inspection after placement and cure of the protective coating.

If any defects are found, they must be repaired as detailed in C.4.3, or removed and replaced.

C.4.3 Required Remediation

Inject or back fill any small voids or bubbles (1-1/2" diameter or less) with epoxy. If five or more such voids are found in an area smaller than 10 square feet, submit a proposed remediation procedure subject to the acceptance of the engineer.

Voids or delaminated areas greater than 3" in diameter or an equivalent rectangular area shall be reported to the engineer. Proposed remediation procedure(s) for addressing these areas are subject to the acceptance of the engineer.

D Measurement

The department will measure Fiber Wrap Reinforcing Non-Structural by the square 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.0165.40	Fiber Wrap Reinforcing Non-Structural	SF

Payment for Fiber Wrap Reinforcing Non-Structural is full compensation for preparing required submittals, cleaning the surfaces of elements to be confined, furnishing, transporting, handling, and installing the fabric, finish coat of epoxy, the final protective coating system, field testing, and required remediation. No extra measurement or payment will be made for overlap areas.

Repairing damage to existing reinforcement is incidental to this item.

35. Prestressed Girder Surface Repair, Item SPV.0165.41.

A Description

This special provision describes removing deteriorated concrete from surfaces of precast prestressed concrete girders as designated by the engineer and replacing it with a polymer modified Portland cement mortar.

B Materials

Provide a polymer modified Portland cement mortar meeting the following requirements:

- Have a corrosion inhibitor additive.
- A workable mix capable of bonding and holding its own plastic weight, when mixed and placed according to manufacturer instructions, on vertical and overhead surfaces..
- A minimum compressive strength of 1,500 psi at 24 hours, 3,500 psi at 3 days, and 5,000 psi at 28 days; according to ASTM C 109.
- Have minimum bond strength of 2,000 psi at 28 days

Have a water-soluble chloride ion content of less than 0.40 lb/cu yd. The test shall be performed according to ASTM C 1218, and the mortar shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the department.

C Construction

Perform the work according to the requirements of standard spec 509.3.7 and as specified herein. Remove all deteriorated concrete to sound material. The repair depth shall be a minimum of 3/8 inches. Take necessary precautions while removing deteriorated concrete to preserve all existing reinforcing steel and prestressing strands. At locations where reinforcing steel is exposed due to deteriorated and/or spalled concrete, remove concrete to a minimum depth of ½ inch behind the steel. Do not remove concrete behind prestressing strands except of it is heavily deteriorated.

Abrasive blast clean concrete and exposed steel reinforcement and prestressing strands against which repair mortar will be placed.

Use chipping hammers for removing concrete that are a light-duty pneumatic or electric tool with a 15-pound class or less. Use blast cleaning equipment for concrete surface preparation of the abrasive type with equipment having oil traps.

Power wash using water pressure between 1,200 psi to 2,000 psi to remove all chlorides, dust and loose materials, and any bond-inhibiting materials from the prepared surface.

After power washing, coat the blast cleaned surfaces of steel reinforcement and prestressing strands with zinc rich paint.

Just prior to mortar placement, saturate the repair surface with water to a saturated surface-dry condition.

Mix and place the polymer modified Portland cement mortar according to the manufacturer's instructions. Place and finish mortar to the contours of the member, as originally constructed. Do not place the mortar when the air temperature is below 45° F and falling below 40° F. Do not place mortar when the surface temperature of the repair area is less than 40° F. Do not place mortar when the air temperature is greater than 90° F. Ensure mortar has a minimum temperature of 50° F and a maximum temperature of 90° F.

Apply cotton mats for curing the exposed layer of mortar within 10 minutes after finishing and begin wet curing immediately. Maintain curing for a minimum of 3 days. If temperatures below 45° F are forecast during the curing period, provide protection methods during the curing period.

Provide appropriate equipment for the engineer to inspect repaired areas. After curing but no sooner than 28 days after placement of the mortar, examine the repair in the presence of the engineer for conformance with original dimensions, cracks, and delaminations. Perform sounding for delaminations with a hammer or by other methods determined by the engineer. Remove and replace repaired areas of mortar as determined by the engineer for delaminations or surface cracks greater than 0.01 inches in width.

D Measurement

The department will measure Prestressed Girder Surface Repair by the square 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.0165.41	Prestressed Girder Surface Repair	SF

Payment is full compensation for completing all work including saw cutting, removing concrete; abrasive blasting, preparing surfaces; furnishing, applying and curing the repair mortar; and cleanup.

36. Removing Distressed Pavement Milling, Item SPV.0180.01.

A Description

This special provision describes the removal and disposal of additional 2-inches of asphaltic pavement by milling in areas of distressed pavement. This will be completed in spot locations throughout the project as directed by the engineer.

B (Vacant)

C Construction

C.1 Milling

Use a milling machine designed and constructed for milling pavements without tearing or gouging the underlying surface. Space the teeth on the drum to mill a surface finish that is acceptable to the engineer. Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes. Equip the machine with electronic devices that provide accurate depth, grade, and slope control, and an acceptable dust control system.

The milling operation is to be done in a manner to prevent damage to the remaining pavement. It should result in a reasonably uniform plane surface free of excessively large scarification marks, and with the uniform transverse slope required on the plans or directed by the engineer.

Any milled surface will not be allowed during nonworking hours. Windrowing or storing of the removed milled asphaltic pavement on the road is only permitted in connection with the continuous removal and pick-up operation. During nonworking hours, clear the road of waste materials and equipment.

The removed material shall become the property of the contractor. Properly dispose of it in accordance with section 204 of the standard specifications.

C.2 Cleaning

Clean the milled surface by removing all dust, dirt, debris, or other foreign or loose material.

C.3 Pavement Prep

The cleaned milled surface will have Tack Coat applied and be filled with Asphaltic Surface.

D Measurement

The department will measure Removing Distressed Pavement Milling 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	Removing Distressed Pavement Milling	SY

Payment is full compensation for removing the asphaltic surface; cleaning the milled surface; and for disposing of waste material. Tack Coat and Asphaltic Surface will be paid for separately.

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

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Additional Special Provision 6 (ASP-6)
Modifications to the standard specifications

Make the following revisions to the standard specifications.

104 Scope of Work

104.2.2 Issuing Change Orders

Replace subsection 104.2.2 with the following and rearrange to add a 104.2.2.7 effective with the February 2026 letting.

104.2.2.1 Change Orders for Differing Site Conditions

- (1) During the progress of the work, if one or more of the following differing conditions are encountered at the site, the party discovering the condition must promptly notify the other party of the specific condition before further disturbing the site and before further performing the affected work.
 1. A subsurface or latent physical condition, differing materially from those indicated in the contract.
 2. An unknown physical condition of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work specified in the contract.
- (2) If the contractor discovers the differing condition, the contractor shall provide oral notification as specified in 104.3.2, of the specific differing condition before further disturbing the site and before further performing the affected work.
- (3) The project engineer will investigate the conditions. If the project engineer determines the conditions materially differ and cause an increase or decrease in the cost, time, or both, required to perform the work under the contract, the project engineer will adjust the contract price, time, or both, and modify the contract in writing accordingly. The project engineer will respond to the contractor as to whether or not an adjustment is warranted. The project engineer will follow the contractor notification procedures specified in 104.3.
- (4) The department will not allow a contract adjustment unless the contractor has provided the required notice as specified in 104.3.

104.2.2.2 Change Orders for Engineer-Ordered Suspensions

- (1) If the project engineer suspends or delays the performance of all or any portion of the work in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional payment, contract time, or both, is due because of the suspension or delay, the contractor shall notify the engineer as specified in 104.3.
- (2) The project engineer will evaluate the contractor's request. If the project engineer agrees that the cost, time, or both, required for the performance of the contract has increased due to the suspension or delay and the suspension or delay was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the project engineer will make an adjustment and modify the contract in writing accordingly. The project engineer will respond to the contractor as to whether or not an adjustment is warranted as specified in 104.3.6.
- (3) The project engineer will not consider a contract adjustment unless the contractor submits the request for adjustment within the time specified above.
- (4) The project engineer will not consider a contract adjustment under this clause to the extent that the performance would have been suspended by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

104.2.2.3 Change Orders for Altered Work

- (1) If original contract work is altered from what is included in the contract, the department will adjust the contract if the character of the work as altered differs materially in kind or nature from that involved or included in the original contract.
- (2) Before performing altered work, reach agreement with the project engineer for any price adjustments as specified in 109.4. If the project engineer does not agree that the work has significantly changed and a price adjustment is justified, follow the notification procedures as specified in 104.3.
- (3) If the alterations do not significantly change the character of the work under the contract, the department will not adjust the contract.

104.2.2.4 Change Orders for Quantity Variations

- (1) If all original contract work for a bid item is completed as required in the contract, and the measured quantity for that bid item varies from the contract quantity, the department will adjust the contract if the department or contractor demonstrates that the quantity variation affects the contractor's unit cost to perform the work and

meets one of the criteria below. If the quantity variation does not significantly change the character of the work under the contract, the department will pay for the work at the contract price.

1. The quantity of a major bid item, as defined in 101.3, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity applies only to that portion in excess of 125 percent of the original contract bid item quantity, or in case of a decrease below 75 percent, to the work actually performed.
2. The quantity of a minor bid item is increased to become a major bid item. An adjustment in the contract unit price for that bid item applies only to the quantity of that bid item having a contract value as follows:
 - Original Contract < \$8M: In excess of 6.25 percent of the original contract.
 - Original Contract >= \$8M: In excess of \$500,000.
3. The quantity of a minor bid item that is part of an approved subcontract and that exceeds 10 percent of the original value of that subcontract is decreased more than 50 percent from the original contract quantity for that bid item. Either party to the contract may submit a request for a revision to the contract unit price for that bid item. The department's total payment for the final reduced quantity will not exceed 75 percent of the original contract quantity at the contract price.
4. The quantity of a minor bid item that is part of an approved subcontract and that exceeds 10 percent of the original value of that subcontract is increased more than 50 percent from the original contract quantity for that bid item and which as increased does not qualify for adjustment as a major bid item. Either party to the contract may submit a request to the other for a revision of the contract unit price for that quantity of the bid item that is in excess of 125 percent of the original contract quantity.

104.2.2.5 Change Orders for Extra Work

- (1) The department has the right to direct extra work not required in the original contract, as defined in 101.3.
- (2) The engineer will determine payment for extra work as specified in 109.4.

104.2.2.6 Change Orders for Eliminated Work

- (1) The department has the right to partially eliminate or completely eliminate work the project engineer finds to be unnecessary for the project. If the project engineer partially eliminates or completely eliminates work, the project engineer will issue a change order for a fair and equitable amount as specified in 109.5.

104.2.2.7 Change Orders for Revisions to Contract Time

- (1) The department will issue a change order to revise the contract time as specified in 108.10.

104.6 Roadway Maintenance and Traffic Control

104.6.1.2.3 Drop-Off Protection

Replace subsection with the following effective with the November 2025 letting.

- (1) Eliminate vertical drop-offs greater than 2 inches and edge slopes steeper than 3:1 between adjacent lanes open to traffic.
- (2) If the roadway remains open to through traffic during construction and a greater than 2-inch drop-off occurs within 3 feet or less from the edge of the traveled way, eliminate the drop-off within 48 hours after completing that day's work. Provide aggregate shoulder material compacted to a temporary 3:1 or flatter cross slope from the surface of the pavement edge.
- (3) Unless the engineer allows otherwise address drop-offs when they exist greater than 3 and less than 8 feet from the travelled way as follows:
 - Delineate vertical drop-offs 2 inches or greater and edge slopes steeper than 3:1 with drums, barricades, and signs, by the end of the workday.
 - Eliminate vertical drop-offs 2 inches or greater and edge slopes steeper than 3:1 within 72 hours or before a weekend or holiday whichever comes first.
 - Eliminate or use temporary concrete barrier to protect vertical drop-offs 4-inches or greater after 72 hours or before a weekend or holiday whichever comes first.
- (4) If a 4-inch or greater vertical drop-off or an edge slope steeper than 3:1 exists greater than 8 and less than 15 feet from the traveled way, delineate that drop-off or edge slope with drums, barricades, and signs by the end of the workday.
- (5) If a 12-inch or greater vertical drop-off exists greater than 8 and less than 15 feet from a traveled way with a posted speed limit of 55 mph or greater, eliminate or use temporary concrete barrier to protect that drop-off within 72 hours or before a weekend or holiday whichever comes first.

104.6.1.2.4 Hazard Protection on Roads Open to All Traffic

Replace subsection with the following effective with the November 2025 letting.

- (1) On roads open to all traffic; conform to the following construction clear zone requirements:

- Posted speeds 45 mph or less: within 8 feet of the travelled way.
 - Posted speeds from 45 mph to 55 mph inclusive: within 10 feet of the travelled way.
 - Posted speeds above 55 mph: within 15 feet of the travelled way.
- (2) Remove all construction debris, stored materials, and equipment not in use from the construction clear zone; or if the engineer allows, delineate and shield with concrete barrier.
- (3) Delay removal of existing permanent roadside safety devices until necessary. When located within the construction clear zone and not shielded by concrete barrier, use temporary traffic control drums to delineate bridge abutments, concrete barrier blunt ends, sign bridge foundations, drainage structures, and slopes exposed by removing permanent protective measures.
- For exposed bridge abutments, concrete barrier blunt ends, sign bridge foundations, and drainage structures, eliminate the need for delineation within 5 calendar days.
 - For exposed slopes steeper than 3:1, eliminate the need for delineation within 14 calendar days, or duration approved by the engineer.

105.13 Claims Process for Unresolved Changes

Replace subsection with the following effective with the February 2026 letting.

105.13.3 Submission of Claim

- (1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim. If the contractor does not submit the claim prior to the earlier of the following dates, the department will deny the claim:
1. 120 calendar days from the date of the Notice of Claim.
 2. The end of the time allowed under 109.7 for the contractor to respond in writing to the engineer issued semi-final estimate.
- (2) The department will not accept the submission of a claim until the resolution process in 104.3 has been completed and the contractor makes no further requests to submit updated information that may affect the region's final decision.

107 Legal Relations and Responsibility to the Public

Add section 107.27 (Drones or Unmanned Aircraft Systems (UAS)) effective with the November 2024 letting.

107.27 Drones or Unmanned Aircraft Systems (UAS)

107.27.1 Licensing and Compliance

Add paragraph 107.27.1(5) to the information included with the November 2024 ASP-6, effective with the February 2026 letting.

- (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.
- (5) UAS and UAS components are required to be compliant with federal guidelines outlined in the American Security Drone Act of 2023 (ASDA) and the OMB memorandum M-26-02.

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

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- 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.
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305 Dense Graded Base

305.3.3.3 Shoulders Adjacent to Asphaltic Pavement or Surfacing

Replace subsection with the following effective with the November 2025 letting.

- (1) If the roadway is closed to through traffic during construction, construct the aggregate shoulders before opening the road.
- (2) If the roadway remains open to through traffic during construction, conform as specified in 104.6.1.2.3.
- (3) Provide and maintain signing and other traffic protection and control devices, as specified in 643, until completing shoulder construction to the required cross-section and flush with the asphaltic pavement or surfacing.

310 Open-Graded Base**310.2 Materials**

Replace paragraph (2) with the following effective with the November 2025 letting.

- (2) The contractor may substitute material conforming to the gradation requirements for crushed aggregate specified in table 310-01 if that material conforms to the fracture requirements for open-graded crushed gravel specified in 301.2.4.5.

TABLE 310-01 COARSE AGGREGATE (% passing by weight)**AASHTO No. 67 ^[1]**

SIEVE	COARSE AGGREGATE (% PASSING by WEIGHT) AASHTO No. 67
2-inch	-
1 1/2-inch	-
1-inch	100
3/4-inch	90 - 100
1/2-inch	-
3/8-inch	20 - 55
No. 4	0 - 10
No. 8	0 - 5
No. 16	-
No. 30	-
No. 50	-
No. 100	-
No. 200	-

^[1] Size according to AASHTO M43.

415 Concrete Pavement**415.3.16.4.1.2 Magnetic Pulse Induction**

Replace subsection with the following effective with the November 2025 letting.

- (1) The department will measure thickness within 10 business days of paving. Upon completion of the project thickness testing, the department will provide the test results to the contractor within 5 business days.
- (2) The department will establish a project reference plate at the start of each paving stage. The department will notify the contractor of project reference plate locations before testing. The department will measure the project reference plate before each day of testing.
- (3) If the random plate test result falls within 80 to 50 percent pay range specified in 415.5.2, the department will measure the second plate in that unit. The department will notify the contractor immediately if the average of the 6 readings fall within the 80 to 50 percent pay range.
- (4) If an individual random plate test result is more than 1 inch thinner than contract plan thickness, the pavement is unacceptable. Department will determine limits of unacceptable pavement by performing the following:
 - The engineer will test each consecutive plate stationed ahead and behind until the thickness test result is plan thickness or greater.
 - The engineer will direct the contractor to core the hardened concrete to determine the extent of the unacceptable area. In each direction, the contractor shall take cores at points approximately 20 feet from the furthest out of specification plate towards the plate that is plan thickness of greater. Once a core is within 80 to 100 percent pay range, the coring is complete and the limits of unacceptable pavement extend from the stationing between the core test results of 80 to 100 percent payment, inclusive of all unacceptable core and plate test results.
 - Perform coring according to WTM T24. The department will evaluate the results according to AASHTO T148
 - Fill core holes with concrete or mortar.

416 Concrete Pavement - Repair and Replacement**416.2 Materials****416.2.1 General**

Replace paragraph (3) with the following effective with the November 2025 letting.

- (3) The contractor may use accelerating admixtures for concrete placed under SHES bid items as follows:
1. If using calcium chloride,
 - AASHTO M144, type S as grade N1 or grade N2, class A.
 - AASHTO M144, type L in a concentration of approximately 30 percent for premixed solutions.
 2. If using non-chloride accelerators, conform to:
 - AASHTO M194, type C accelerating admixtures.
 3. Do not exceed the manufacturer's recommended maximum dosage.
 4. If the engineer requests, provide a written copy of the manufacturer's dosage recommendations.

416.2.4 Special High Early Strength Concrete Pavement Repair and Replacement**416.2.4.1 Composition and Proportioning of Concrete**

Add paragraph (4) to subsection effective with the November 2025 letting.

- (4) The contractor may use pre-packaged horizontal rapid set concrete patch material from the APL for partial and full-depth pavement repairs instead of specified grades of concrete.

506 Steel Bridges**506.3.12.3 High-Strength Bolts****506.3.12.3.1 Materials**

Replace subsection with the following effective with the November 2025 letting.

- (1) Install bolts according to AASHTO LRFD Bridge Construction Specifications, article 11.5.5, with the following exceptions:
1. If connections are assembled, install bolts with a hardened washer under the nut or bolt head, whichever is the element turned in tightening.
 2. If using oversized holes, 2 hardened washers are required, one under the bolt head and one under the nut.
 3. Bring the bolted parts into solid contact bearing before final tightening. Use not less than 25 percent of the total number of bolts in a joint to serve as fitting up bolts.
 4. For steel diaphragms on prestressed concrete bridges do the following:
 - 4.1. For steel-to-steel connections within diaphragms:
 - Tension by the turn-of-nut method.
 - 4.2. For steel-to-concrete girder connections:
 - No PIV or field rotational capacity (RoCAP) testing is required.
 - Tighten as the plan details specify.
- (2) Before fasteners are delivered to the site, provide documentation of rotational capacity testing in accordance with ASTM F3125, Annex A2, Rotational Capacity (RoCap) Test. The fasteners must be received in packages that match the fastener assembly combination as tested. If documentation of RoCap testing is not received; then perform this testing in the field prior to installation.
- (3) Install bolt, nut, and washer combinations from the same rotational-capacity lot.
- (4) Check galvanized nuts to verify that a visible dyed lubricant is on the threads and at least one bolt face.
- (5) Ensure that uncoated bolts are oily to the touch over their entire surface when delivered and installed.
- (6) Provide and use a Skidmore-Wilhelm Calibrator or an acceptable equivalent tension measuring device at each job site during erection. Perform pre-installation verification (PIV) testing in the field conforming to the procedures enumerated in department form DT2114 no earlier than 14 calendar days prior to permanent bolting. Submit 2 copies of form DT2114 to the engineer.
- (7) Prior to installation, ensure that the fastener condition has not changed due to accumulation of rust or dirt, weathering, mixture of tested assembly lots, or other reasons. If changes have occurred, including cleaning and re-lubricating of weathered bolts, the engineer will require re-qualification using RoCap testing in the field, for a minimum of two fastener assemblies of each combination to be used in permanent bolting, and PIV re-testing.

- (8) Additional RoCap or PIV tests are required whenever the condition of the fasteners or understanding of the bolting crew is in question by the Engineer. Do not allow permanent bolting until PIV testing is completed.
- (9) Tighten threaded bolts by the turn-of-nut method while holding the bolt head. Where clearance is an issue, the contractor may tighten the bolt head while holding the nut.
- (10) The contractor may use alternate tightening methods if the engineer approves before use.
- (11) The contractor may use a flat washer if the surface adjacent to and abutting the bolt head or nut does not have a slope of more than 1:20 with respect to a plane normal to the bolt axis. For slopes greater than 1:20, use smooth, beveled washers to produce parallelism.
- (12) Snug all bolts during installation according to AASHTO LRFD Bridge Construction Specifications, article 11.5.5.4.1.
- (13) Tighten each fastener to provide, if all fasteners in the joint are tight, at least the minimum bolt tension as follows:

TABLE 506-1 BOLT TENSION

BOLT SIZE	REQUIRED MINIMUM BOLT TENSION ^[1]
1/2-inch.....	12 kips
5/8-inch.....	19 kips
3/4-inch.....	28 kips
7/8-inch.....	39 kips
1-inch	51 kips
1 1/8-inch.....	64 kips
1 1/4-inch.....	81 kips
1 3/8-inch.....	97 kips
1 1/2-inch.....	118 kips

^[1] Equal to the proof load by the length measurement method as specified in ASTM F3125 for grade A35 bolts.

- (14) Do not reuse galvanized F3125 A325 bolts. The contractor may reuse uncoated F3125 A325 bolts, if the engineer approves, but not more than once. The department will not consider re-tightening previously tightened bolts that become loosened by the tightening of adjacent bolts as reuse.

506.3.19 Welding

Replace subsection title and text with the following effective with the November 2025 letting.

506.3.19.4 Welding Inspection

- (1) Inspect welding according to the current edition of AWS D1.5. Unless specified otherwise, test butt welds in main members by either the radiographic or the ultrasonic method.
- (2) Test fillet welds and groove welds not covered otherwise in main members in a non-destructive manner by the magnetic particle method according to ASTM E709, utilizing the yoke method. This includes, but is not limited to, a minimum of 12 inches in every 10 feet or portion thereof of each weld connecting web to flange, bearing stiffener to web or flange, framing connection bar to web or flange, and longitudinal stiffener to web or vertical bar.

506.3.31 Cleaning of Surfaces

506.3.31.2 Coated Surfaces

Replace subsection with the following effective with the November 2025 letting.

- (1) Blast clean structural steel and ferrous metal products to be coated as specified in 517.3.1.3.3.
- (2) Blast clean steel that will be encased in concrete to SSPC-SP 6 standards or cleaner.

506.3.32 Painting Metal

Replace subsection with the following effective with the November 2025 letting.

- (1) Unless the contract provides otherwise, apply 3 coats of paint to structural steel and ferrous metal products. Furnish and apply paints according to the epoxy system or as specified in the special provisions. The requirements for this system are set forth in 517.
- (2) For structural steel, including weathering steel, and miscellaneous metals that will be encased in concrete, paint as specified in 517.3.1.
- (3) For galvanized surfaces paint as specified in 517.3.1.
- (4) Use the 3-coat epoxy system to paint the end 6 feet of structural weathering steel at the abutments, the 6 feet on each side of piers, joints, downspouts, hinges, and galvanized bearings in contact with weathering

steel. Use a coat of brown urethane matching AMS Standard 595A: AMS-STD 20059. Apply one coat of zinc-rich paint to surfaces of expansion joint assemblies and other surfaces not in contact with the weathering steel but inaccessible after assembly or erection.

- (5) Do not paint structural steel to be welded before completing welding. If welding only in the fabricating shop and subsequently erecting by bolting, coat it after completing shop welding. Apply one coat of weldable primer or other engineer-approved protective coating to steel surfaces to be field welded after completing shop welding and shop fabrication. Protect machine-finished surfaces that do not receive a paint or galvanizing from contamination during the cleaning and painting process.
- (6) Upon fabrication and acceptance, coat pins and pinholes with a plastic or other engineer-approved coating before removing from the shop.
- (7) Mark members weighing 3 tons or more with their weights on areas that will be encased in concrete, or paint with a compatible paint on zinc-rich primer, or mark with soapstone on an epoxy-coated surface. Wait until material is dry, inspected, and approved for shipment before loading for shipment.

509 Concrete Overlay and Structure Repair

509.2 Materials

Replace subsection with the following effective with the November 2025 letting.

- (1) Furnish a neat cement bonding grout. Mix the neat cement in a water-cement ratio approximately equal to 5 gallons of water per 94 pounds of cement. Pre-packaged non-shrink grout from the APL may be used instead of site mixed or ready mixed grout.
- (2) Furnish grade E conforming to 501 for overlays.
- (3) Furnish grade C or E concrete conforming to 501 for surface repairs. The contractor may increase the slump for grade E concrete to a maximum of 4 inches. For vertical and overhead repairs, use pre-packaged vertical and overhead repair material from the APL unless a different material is approved by the engineer in writing.
- (4) Furnish grade C or E concrete conforming to 501 for joint repairs, curb repairs, and full-depth deck repairs; except as follows:
 1. The contractor may increase slump of grade E concrete to 3 inches.
 2. The contractor may use ready-mixed concrete.
- (5) Provide QMP for class II ancillary concrete as specified in 716 if using concrete mixtures conforming to 501.

513 Railing

513.2.3 Steel Railing

Replace subsection with the following effective with the November 2025 letting.

- (1) Furnish steel railing components as follows:

Structural steel	506.2.2
High strength bolts	506.2.5
Steel guardrail	614.2
Round structural steel tubing for steel pipe railing	ASTM A500 grade B
Structural steel tubing used with other steel railings	ASTM A500 grade B or C
- (2) Furnish a two-coat paint system from the APL for structure painting systems under paint - galvanized surfaces.

517 Paint and Painting

517.3.1.3.3 Blast Cleaning

517.3.1.3.3.2 Epoxy Coating System

Replace subsection with the following effective with the November 2025 letting.

- (1) Blast clean structural steel receiving this coating to a near-white finish according to SSPC-SP 10.
- (2) Solvent clean oil and grease on surfaces receiving this coating according to SSPC-SP 1 and blast clean to a near-white finish according to SSPC-SP 10.
- (3) Remove fins, tears, slivers, and burred or sharp edges present on any steel member, or that appears during blasting, by grinding then re-blast the area to a one to 2 mils surface shape.

-
- (4) If using abrasives for blast cleaning, use either clean dry sand, steel shot, mineral grit, or manufactured grit of a gradation that produces a uniform one to 2 mils profile as measured with a department-approved impregnated surface profile tape.
 - (5) Remove abrasive and paint residue from steel surfaces with a commercial grade vacuum cleaner equipped with a brush-type cleaning tool, or by double blowing. If using the double blowing method, vacuum the top surfaces of structural steel, including top and bottom flanges; longitudinal stiffeners, splice plates, and hangers after completing the double blowing operations. Ensure that the steel is dust free when applying primer. Apply the primer within 8 hours after blast cleaning.
 - (6) Protect freshly coated surfaces from later blast cleaning operations. Brush any blast damaged primed surfaces with a non-rusting tool, or if visible rust occurs, re-blast to a near white condition. Clean the brushed or blast cleaned surfaces and re-prime within the manufacturer's recommended time.
 - (7) When coating galvanized surfaces, ensure tie-coat adhesion by brush blasting the cleaned surface according to SSPC-SP7 to create a slight angular surface profile according to manufacturer's recommendations of 1 mil to 1.5 mils. Blasting must not fracture the galvanized finish or remove dry film thickness. For the tie- and top-coat, furnish an epoxy coating system from the APL for paint systems for galvanized surfaces.

517.3.1.3.5 Galvanizing

Add subsection effective with the November 2025 letting.

- (1) After fabrication, blast clean assemblies per SSPC-SP6 and galvanize according to ASTM A123.
-

526 Temporary Structures

526.3.4 Construction, Backfilling, Inspection and Maintenance

Replace subsection with the following effective with the November 2025 letting.

- (1) Construct temporary structures conforming to 500. Backfill conforming to 206.3.13 with structure backfill conforming to 210.2.
- (2) Temporary highway bridges open to traffic less than or equal to 24 months: inspect temporary bridges conforming to the National Bridge Inspection Standards (NBIS) and the department's Structure Inspection Manual (SIM) before opening to traffic. Perform additional inspections, as the department's SIM requires, based on structure type, condition, and time in service. Submit inspection reports on department form DT2007 to the engineer and electronic copies to the BOS Maintenance Section. Ensure that a department-certified qualified team leader performs the inspections.
- (3) Temporary highway bridges open to traffic greater than 24 months: complete additional inspections and inventory data collection per the NBIS and SIM within 27 months of the bridge being opened to traffic. Contact the Bureau of Structures to have a structure number assigned. Enter the inventory data and element level bridge inspection data in accordance with the SIM into WisDOT's Highway Structures Information System (HSIS) within 90 days of completing the field portion of the inspection. Continue to complete required inspections and data submittal at intervals according to the requirements of the NBIS and SIM.
- (4) 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; do not place on the finished surface.

526.5 Payment

Replace paragraph (2) with the following effective with the November 2025 letting.

- (2) Payment for the Temporary Structure bid items is full compensation for providing a temporary structure including design and construction; for construction staking; for temporary shoring and other secondary structure items; for backfilling with structure backfill; for maintaining; and for removing when no longer needed. The department will pay 70 percent of the contract amount when open to traffic and the balance after structure removal and associated site restoration.
-

550.3.9 Pre-Boring

550.3.9.1 General

Add paragraph (2) effective with the February 2026 letting.

- (1) Pre-bore holes to the depth the plans or special provisions require. Submit written requests for pre-boring not required under the contract to the engineer for review and approval. Do not impair the capacity of in-place piles or damage adjacent structures by pre-boring operations.
- (2) Contractor may elect to not perform pre-boring, subject to written approval from the engineer as specified in 104.2.1(2). If the contractor elects to not perform pre-boring and subsequently pre-boring is necessary at any point throughout the project, no additional time or compensation will be granted.

621 Landmark Reference Monuments

Remove Standard Specification 621 (Landmark Reference Monuments) effective with the November 2025 letting. Refer to updated information in this ASP-6 for standard specifications 680 and 682.

643 Traffic Control**643.1 Description**

Replace paragraph (1) with the following effective with the November 2025 letting.

- (1) This section describes providing, maintaining, repositioning, and removing temporary traffic control devices as follows:

Drums	Warning lights	42-inch cones
Barricades type III	Connected arrow boards	Portable changeable message signs
Flexible tubular markers	Signs	Channelizing curb system
Speed feedback trailers	Connected work zone start and end location markers	

643.2.2 Department's Approved Products List (APL)

Replace paragraph (1) with the following effective with the November 2025 letting.

- (1) Furnish materials from the APL as follows:

- | | |
|--|-------------------------------------|
| - Drums | - Connected arrow boards |
| - Barricades type III | - Sign sheeting |
| - Flexible tubular marker posts including bases | - 42-inch cone assemblies |
| - Warning lights and attachment hardware | - Portable changeable message signs |
| - Channelizing curb systems | - Speed feedback trailers |
| - Connected work zone start and end location markers | |

643.3 Construction**643.3.1 General**

Add paragraphs (10), (11), (12) and (13) effective with the November 2025 letting.

- (10) For connected devices provide a local specialist to respond to emergency situations within 2 hours of being notified. Equip local specialists with sufficient resources to correct deficiencies in the connected work zone devices.
- (11) Prior to deployment, test all connected devices with the engineer to ensure the device is showing in the WisDOT approved data feed. Send an email to DOTBTOworkzone@dot.wi.gov to notify BTO that the devices have been turned on.
- (12) Provide a WisDOT approved data feed from connected devices and the remote management software, updated at least every minute.
- (13) If requested by the engineer, provide real-time status change alerts to a list of designated personnel via text or email or both. Send an alert each time a connected device is switched between operating modes which include the current operating mode, the previous operating mode, the date and time of the mode switch, and the location (latitude and longitude) of the device at the time of the mode switch in the alert.

643.3.3 Connected Arrow Boards

Revise subsection title and add paragraphs (3) and (4) effective with the November 2025 letting.

- (3) The connected arrow board may be switched between the following pattern displays per the plan:

- Blank
- Right arrow static
- Right arrow flashing
- Right arrow sequential
- Left arrow static
- Left arrow flashing
- Left arrow sequential
- Line flashing
- Bi-directional arrow flashing.

- (4) When the connected arrow board is not displaying a pattern, the display shall be blank, and the connected arrow board transmits its status to the data feed. When a connected arrow board is switched to a pattern, the connected arrow board transmits its location and its current operating mode to the data feed.

643.3.7 Temporary Pavement Marking*Add paragraph (9) effective with the November 2025 letting.*

- (9) Install temporary markings on the final surface in the same location as permanent markings will be placed or as the plans show.

643.3.10 Connected Work Zone Start and End Location Markers*Add subsection effective with the November 2025 letting.*

- (1) Place work zone start location marker at the beginning of the work zone per plan or as the engineer directs. Clearly label the work zone start location marker so that it is easily distinguishable by field personnel.
- (2) Place work zone end location marker at the end of the work zone per plan or as the engineer directs. Clearly label the work zone end location marker so that it is easily distinguishable by field personnel.
- (3) Ensure the connected work zone start and end location markers operate continuously when deployed on the project.
- (4) Ensure the work zone location markers and connected arrow board are from the same manufacturer.
- (5) When the work zone start and end location markers are switched to the ON mode, verify the begin and end location markers transmit their location and identity as begin or end markers to the data feed.
- (6) Switch the work zone start and end location markers to OFF mode when temporary traffic control is removed, and the normal traveled way is restored.

643.4 Measurement**643.4.1 Items Measured by the Day***Add paragraphs (3) and (4) effective with the November 2025 letting.*

- (3) The department will measure Traffic Control Connected Arrow Boards by day for the days the device is reporting correct data.
- (4) The department will measure Traffic Control Connected Work Zone Start and End Location Markers by day per roadway segment for the days the devices are reporting correct data.

643.5 Payment**643.5.1 General***Replace paragraph (1) with the following effective with the November 2025 letting.*

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
643.0300	Traffic Control Drums	DAY
643.0420	Traffic Control Barricades Type III	DAY
643.0500	Traffic Control Flexible Tubular Marker Posts	EACH
643.0600	Traffic Control Flexible Tubular Marker Bases	EACH
643.0650	Traffic Control Channelizing Curb System	LF
643.0700 - 0799	Traffic Control Warning Lights (type)	DAY
643.0810	Traffic Control Connected Arrow Boards	DAY
643.0900	Traffic Control Signs	DAY
643.0910	Traffic Control Covering Signs Type I	EACH
643.0920	Traffic Control Covering Signs Type II	EACH
643.1000	Traffic Control Signs Fixed Message	SF
643.1050	Traffic Control PCMS	DAY
643.1051	Traffic Control PCMS with TMC Communications	DAY
643.1070 - 1079	Traffic Control Cones (height)	DAY
643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY
643.1500	Traffic Control Speed Feedback Trailer	DAY
643.3100 - 3299	Temporary Marking Line (material/type) (width)	LF
643.3300 - 3399	Temporary Marking Crosswalk (material) 6-Inch	LF
643.3500 - 3599	Temporary Marking Arrow (material)	EACH
643.3600 - 3699	Temporary Marking Word (material)	EACH
643.3700 - 3799	Temporary Marking Raised Pavement Marker (type)	EACH
643.3800 - 3899	Temporary Marking Stop Line (material) 18-Inch	LF
643.3900 - 3959	Temporary Marking Diagonal (material) 12-Inch	LF

643.3960 - 3999	Temporary Marking Removable Mask Out Tape (width)	LF
643.4100	Traffic Control Interim Lane Closure	EACH
643.5000	Traffic Control	EACH

646 Pavement Marking**646.3.1.1 General Marking**

Replace paragraph (7) with the following effective with the November 2025 letting. Add paragraph (8) effective with the February 2026 letting.

- (7) Apply marking to the width and color the bid item indicates. Distribute beads uniformly across the line. Provide a sharp cutoff for both sides and ends of the marking with a uniform cross-section. Achieve straight alignment, not to exceed a 3/8-inch variation in any 40-foot section of travelled way. Do not damage existing marking that will remain in place.
- (8) Apply both lines of the centerline marking simultaneously to ensure a consistent gap.

646.3.1.6 Proving Period**646.3.1.6.1 General**

Replace paragraph (1) with the following effective with the February 2026 letting.

- (1) The engineer may conduct post acceptance inspections periodically during a proving period to evaluate the physical presence of pavement marking and, for permanent markings, the retroreflectivity. The proving period begins on the last day of the week, for all marking placed within that week. The proving period extends through April 15 of the next calendar year or 180 days, whichever is longer. If weather or road surface conditions prevent the engineer from fully evaluating the marking at the end of the proving period, the engineer may extend the proving period.

646.3.1.6.2 Retroreflectivity

Replace paragraph (1), included with the November 2025 ASP-6, with the following effective with the February 2026 letting.

- (1) For permanent markings, the engineer will also evaluate the percent failing retroreflectivity at the end of the proving period. Ensure that the 180-day reflectivity, in millicandelas/lux/m², meets or exceeds the following:

		180 DAY DRY
<u>MATERIAL</u>	<u>COLOR</u>	<u>RETROREFLECTIVITY</u>
Epoxy	White	150
	Yellow	100
Wet Reflective Epoxy	White	250
	Yellow	150
Permanent Tape	White	400
	Yellow	335

646.3.2.3.2 Wet Reflective Epoxy

Replace paragraph (1) with the following effective with the February 2026 letting.

- (1) Apply wet reflective epoxy binder in a grooved slot and provide a double drop bead system at the application rate specified in the APL.

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.

646.3.3 Special Marking

Replace subsection with the following effective with the February 2026 letting.

- (1) Fill in any breaks left from the stencil with the same material to ensure there are no gaps.
- (2) Under the Marking Railroad Crossings bid items, apply the RXR symbol and 3 transverse lines as the plans show.
- (3) Under the Marking Curb bid items, mark the vertical face and the top of the curb.
- (4) Under the Marking Aerial Enforcement Bars bid items, the department will locate the marking. Notify the engineer at least one week before marking so the State Patrol can provide exact locations.

650 Construction Staking**650.3.12 Supplemental Control Staking**

Replace paragraph (2) with the following effective with the November 2025 letting.

- (2) Document and provide to the engineer complete descriptions and reference ties of the control points, alignment points, and benchmarks to allow for quick reestablishment of the plan data at any time during construction and upon project completion. Document additional control on department form DT1291 as described in CMM 710, table 710-1.

680 Public Land Survey Monuments

Add section 680 (Public Land Survey Monuments) effective with the November 2025 letting.

680.1 Description

- (1) This section describes perpetuating US Public Land Survey System (USPLSS) monuments.

680.2 Materials

- (1) Furnish magnetic survey nails with center point a minimum of 2-1/2 inches long or engineer approved alternative.
- (2) Furnish minimum 3/4-inch reinforcement or 1 inch outside diameter (OD) iron pipe at least 24 inches long.
- (3) Furnish plastic survey marker cap with lettering that reads "Witness Monument".
- (4) Use alternative materials if requested and furnished by the county surveyor.

680.3 Construction**680.3.1 General**

- (1) Perform work under the direction and control of a professional land surveyor registered in the state of Wisconsin, following Wisconsin Administrative Code A-E 7 (https://docs.legis.wisconsin.gov/code/admin_code/a_e/7).
- (2) Preserve existing USPLSS monuments and witness monuments (ties) within the construction limits in their original position until monuments are verified and sufficiently tied off.

680.3.2 Pre-Construction

- (1) Notify the county surveyor at least 30 days prior to start of construction operations about all USPLSS monuments within the construction limits that might be disturbed.
- (2) Obtain the existing USPLSS Monument Record from the county surveyor. Verify existing monuments and witness monuments are in place and undisturbed.
- (3) Replace witness monuments that are missing or that could be disturbed by construction operations. Locate new witness monuments near the USPLSS monument but outside the construction limits. Submit a monument record as specified in 680.3.5.
- (4) Temporarily mark the location of all witness monuments to protect them during construction.

680.3.3 Removals

- (1) Remove or abandon existing monument and monument cover that interfere with construction operations. Remove and dispose of surplus excavation and materials as specified in 205.3.12.

680.3.4 Post-Construction

- (1) Verify the location of monuments and witness monuments when construction operations are complete.
- (2) Set new monuments and witness monuments where necessary. Recess magnetic survey nails 1/4 inch below the pavement surface for monuments located in pavement. Use reinforcement or iron pipe for monuments not in pavement and for witness monuments. Locate new witness monuments near the USPLSS monument and outside the roadbed. Install plastic caps on witness monuments.
- (3) Install marker posts next to all witness monuments if required and supplied by the county surveyor.
- (4) Omit setting monuments in the pavement if approved by the department's regional survey coordinator and county surveyor due to traffic or safety concerns.
- (5) Submit a monument record as specified in 680.3.5.

680.3.5 Monument Records

- (1) Submit a monument record on department form DT1291 to the county surveyor at locations where monuments were set. Provide a copy to the engineer and regional survey coordinator.

680.4 Measurement

- (1) The department will measure bid items under this section as each individual monument acceptably completed.

680.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
680.0100	Public Land Survey Monument Verify and Reset	EACH

- (2) Payment for the Public Land Survey Monument Verify and Salvage bid item is full compensation for providing all materials; for coordinating with county surveyors; for obtaining existing monument records; for verifying the existing location of monuments and witness monuments; for removing or abandoning existing monuments and monument covers; for resetting monuments; for setting or resetting temporary and permanent witness monuments; and for submitting monument records.

682 Geodetic Survey Monuments

Add section 682 (Geodetic Survey Monuments) effective with the November 2025 letting.

682.1 Description

- (1) This section describes salvaging geodetic survey discs and constructing geodetic survey monuments.

682.2 Materials

- (1) Furnish materials conforming to the following:

Concrete.....	501
Reinforcement	505.2
Foundation backfill	520.2

- (2) Furnish grade A concrete as modified in 716. Provide QMP for class III ancillary concrete as specified in 716.

682.3 Construction

- (1) Contact the WisDOT Geodetic Surveys Unit at (866) 568-2852 or “geodetic@dot.wi.gov” as required below.

682.3.1 Salvage Geodetic Survey Discs

- (1) Remove and salvage geodetic survey discs from existing structures or survey monuments being removed at the locations shown in the plan.
- (2) Notify the WisDOT Geodetic Surveys Unit 7 calendar days prior to removal operations.
- (3) Ship or deliver salvaged discs to following address:

WisDOT Bureau of Technical Services
 Geodetic Surveys Unit
 3502 Kinsman Boulevard
 Madison, WI 53704

Provide a tracking number to the Geodetic Surveys Unit upon shipment or contact the Geodetic Surveys Unit to schedule in-person delivery.

682.3.2 Geodetic Survey Monuments**682.3.2.1 Monument Location**

- (1) Stake the approximate location of monuments provided in the plan and contact the WisDOT Geodetic Surveys Unit 30 days prior to excavating holes for field verification and delivery of department furnished geodetic survey discs.

682.3.2.2 Placing Monuments

- (1) Excavate holes for monuments by use of a circular auger at the size and depth the plans show or as the engineer directs.
- (2) Remove and dispose of surplus excavation and materials as specified in 205.3.12.
- (3) Fill holes with concrete and strike off flush with the ground surface. Place circular forms and steel reinforcement in the concrete as the plans show. Place geodetic survey discs on monuments while the concrete is still plastic.

682.3.2.3 Protecting and Curing

- (1) Cure exposed portions of cast in place concrete monuments as specified in 415.3.12 except the contractor may use curing compound conforming to 501.2.8.

- (2) Protect placed concrete monuments as specified for concrete pavement as specified in 415.3.14
- (3) Protect cast in place concrete monuments from freezing for 7 days.

682.4 Measurement

- (1) The department will measure bid items under this section as each individual monument acceptably completed.

682.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
682.0100	Salvage Geodetic Survey Disc	EACH
682.0200	Geodetic Survey Monument	EACH

- (2) Payment for the Salvage Geodetic Survey Disc bid item is full compensation for removing and salvaging; and shipping or delivering the disc to the Geodetic Surveys Unit. Removing existing survey monuments will be paid separately under the Removing Concrete Bases bid item. Removing existing survey marker posts will be paid separately under the Removing Delineators and Markers bid item.
- (3) Payment for the Geodetic Survey Monument bid item is full compensation for staking; providing concrete; providing steel reinforcement; for placing department-furnished geodetic discs; and for excavating and backfilling.

710 General Concrete QMP

710.3 Certification Requirements

Replace paragraph (1) and add paragraph (2) effective with the November 2025 letting.

- (1) Have a person certified from the Highway Technician Certification Program Portland Cement Concrete Technician 1 (HTCP - PCCTEC-1) or Assistant Certified Technician Program - Portland Cement Concrete (ACT-PCC) working under a certified technician, on the project site, prepared and equipped to perform required sampling and testing whenever placing concrete.
- (2) The department will have a certified HTCP Portland Cement Concrete Mix Design Certification (PCC MDC) technician to review and approve concrete mixes.

710.4 Concrete Mixes

Replace subsection with the following effective with the November 2025 letting.

- (1) The contractor is responsible for mix performance.
- (2) At least 7 business days before producing concrete, document that materials conform to 501 unless the engineer allows or individual QMP specifications provide otherwise. Include the following:
 - 1. For mixes: quantities per cubic yard expressed as SSD weights and net water, water to cementitious material ratio, air content, and SAM number.
 - 2. For cementitious materials and admixtures: type, brand, and source.
 - 3. For aggregates: absorption, oven-dried specific gravity, SSD bulk specific gravity, wear, soundness, light weight pieces, freeze thaw test results if required, and air correction factor. Submit component aggregate gradations, aggregate proportions, and target combined blended aggregate gradations using the following:
 - DT2220 for combined aggregate gradations.
 - DT2221 for optimized aggregate gradations.
 - 4. For optimized concrete mixtures:
 - Complete the worksheets within DT2221 according to the directions.
 - Ensure the optimized aggregate gradations and the optimized mix design conform to WisDOT specifications and pass the built-in tests within DT2221.
 - Verify slip-form mixture workability and conformance to specifications through required trial batching.
 - Submit the completed DT2221 to the engineer electronically. Include the trial batch test results with the mix design submittal.
 - 5. For high early strength (HES) concrete mixtures required by contract, complete the HES mix modification section in the DT2220 or DT2221 form.
- (3) Document mix adjustments daily during concrete production.
- (4) Prepare, notify, and submit mixture design modifications to the engineer. Do not place material until the documentation is submitted and, when required, written approval of the mixture design modifications.
- (5) Report concrete mix design modifications as classified in levels as specified in table 710-1.

TABLE 710-1 MIX DESIGN MODIFICATION NOTIFICATION

NOTIFICATION	LEVEL I	LEVEL II	NEW MIX DESIGN DURING PROJECT
Prepare, notify, and submit mix design to Engineer	Prior to use	3 business days prior to use	5 business days prior to use
Approval required before placement	No	Yes	Yes

- (6) A mix design modification is when any modification occurs for a specific level as specified in table 710-2.
- (7) Dependent on the modification performed, documentation is required to be submitted to the engineer as specified in table 710-3.
- (8) For HES concrete, conform as specified in table 710-4.
- (9) HES concrete is not eligible for 28-day strength incentives.
- (10) Submit concrete mix designs into MRS as specified in 701.1.2.7.

TABLE 710-2 MATERIAL MIX DESIGN MODIFICATIONS

Replace Table 710-2, included with the November 2025 ASP-6, with the following effective with the February 2026 letting.

MODIFICATION TYPE		LEVEL I	LEVEL II	NEW MIX DESIGN DURING PROJECT
Change in:	Water source	X		
	Cement source, type, or brand			X
	Total cementitious		X ^[1]	X
	Aggregate blend	X		
	Aggregate source			X
	SCM replacement rate		X	
	SCM type and supplier			X
	Fly ash source (different class)			X
	Fly ash source (same class for pavements and cast-in-place barriers)		X	
	Fly ash source (same class for structures)			X
	Slag source (same grade)		X	
	Slag source (different grade)		X	
	Chemical admixture manufacturer or product name ^[2]			X
	Chemical admixture dosage rates	X ^[3]		X
Removal of:	SCM			X
	Chemical admixture other than Type B or D			X ^[3,4]
	Type B or Type D chemical admixture	X ^[3]	X ^[4]	
Addition of:	Non-fading, color pigment	X		
	Chemical admixture other than Type B or D			X ^[3,4]
	Type B or Type D chemical admixture	X ^[3]	X ^[4]	
	New SCM			X

^[1] For HES/SHES concrete modification only.

^[2] Not including Type B or Type D chemical admixture.

^[3] When admixture is from the concrete admixture APL and the dosage rate is within recommended dosage rates as specified in the APL. If the admixture dosage rate is outside of recommended dosage rates as specified in the APL, BTS approval is required before use.

^[4] Not furnished from the APL.

TABLE 710-3 MIX DESIGN MODIFICATION DOCUMENTATION

Replace Table 710-3, included with the November 2025 ASP-6, with the following effective with the February 2026 letting.

NEW REQUIRED DOCUMENTATION	LEVEL I	LEVEL II	NEW MIX DESIGN DURING PROJECT
Results from trial batching if required			X
Amendment to the quality control plan	X	X	X
Water source name and report	X ^[1]		
Cement mill certification			X
WisDOT aggregate quality report			X
SCM mill certification		X	X
Chemical additive product data sheet	X	X	X
Updated DT2220 or DT2221 form	X	X	
New DT2220 or DT2221 form			X
New mixture ID: Contractor ID and WisDOT ID		X	X
New maturity curve	X ^[2]	X	X
New lot/sublot layout ^[3]		X ^[3,4,5]	X

^[1] Water for concrete report conforming to 501.2.6 for private wells or surface water sources.

^[2] Required only when using a retarder.

^[3] Required for HES concrete.

^[4] Required when changing the SCM replacement rate.

^[5] Not required for SCM source change of same Class/Grade in pavements and cast-in-place barrier projects.

TABLE 710-4 OPTIONS FOR HES CONCRETE

SCENARIO	MIXTURE MODIFICATION	
When the contract requires, or the HES is directed by the department	OPTION 1 ^[1]	Add 94 to 282 lb/cy of cement ^[2]
	OPTION 2	Use Type III cement
When the engineer allows HES when requested by the contractor in writing	Add up to 282 lb/cy of cement ^[1,2]	

^[1] Adjust water to maintain workability without raising the w/cm ratio.

^[2] Add to a previously accepted mixture.

710.5.6.2 Contractor Control Charts

710.5.6.2.1 General

Replace subsection with the following effective with the November 2025 letting.

- (1) Test aggregate gradations during concrete production except as allowed for small quantities under 710.2. Perform required contractor testing using non-random samples.
- (2) Sample aggregates from either the conveyor belt or from the working face of the stockpiles.
- (3) Complete aggregate testing as specified in table 710-5. Submit one pre-placement test within five days before anticipated placement. Include this gradation on the control charts.
- (4) Report gradation test results and provide control charts to the engineer within 1 business day of obtaining the sample. Submit results to the engineer and electronically into MRS as specified in 701.1.2.7.
- (5) Conduct aggregate testing at the minimum frequency specified in table 710-5 for each mix design, except as allowed for small quantities in 710.2. The contractor's concrete production tests can be used for the same mix design on multiple contracts.

TABLE 710-5 QC AGGREGATE TESTING FREQUENCY

Replace Table 710-5, included with the November 2025 ASP-6, with the following effective with the February 2026 letting.

CONCRETE CLASSIFICATION	PRE-PLACEMENT TESTING	PLACEMENT TESTING	
Class I: Pavement ^[1]	One pre-placement test per aggregate source	Hand Placement: ≤ 250 CY > 250 CY Slip Formed Placement ≤ 1500 CY > 1500 CY	One test per cumulative 250 CY One test per day One test per day Two tests per day
Class I: Structures ^{[2], [3], [4]}		One test per cumulative 150 CY, maximum one test per day	
Class I: Cast-in Place Barrier ^[1]		≤ 250 CY > 250 CY	One test per cumulative 250 CY One test per day
Class II: Base	One pre-placement test per aggregate source	One test per calendar week of production	
Class II: Structure Repair - Joints		One test per cumulative 150 CY, maximum one test per day	
Class II: Concrete Overlay		One test per 400 CY, minimum one test per 10 business days, maximum one test per day	
Class II: Pavement Repair			
Class II: Pavement Replacement			
Class II: Base Patching			
Class II: Ancillary			
Class II: Structure Repair – Curb & Surface ^[5]		Preplacement testing only	

^[1] Frequency is based on project daily production rate.

^[2] Aggregate gradation testing must be performed on a per contract basis. If multiple structures are on the same contract and use the same aggregate source, then the samples must be collected based on cumulative concrete contract quantities within the same concrete classification.

^[3] WTM T255 (Fine and Coarse) required for each aggregate sample.

^[4] Calculate trial batch weights for each mix design when production begins and whenever the moisture content of the fine or coarse aggregate changes by more than 0.5 percent, adjust the batch weights to maintain the design w/cm ratio.

^[5] Aggregate gradation must meet the gradation previously approved by the engineer.

710.5.6.3 Department Acceptance Testing

Replace subsection with the following effective with the November 2025 letting.

- (1) Department testing frequency is based on the quantity of each mix design placed under each individual WisDOT contract as specified table 710-6. Aggregate gradation testing must be performed on a per contract basis.
- (2) The department will split each sample, test for acceptance, and retain the remainder for a minimum of 10 calendar days.
- (3) The department will obtain the sample and deliver to the regional testing lab in the same day. The department will report gradation test results to the contractor within 1 business day of being delivered to the lab. The department and contractor can agree to an alternative test result reporting timeframe. Document alternative timeframes in the contractor's quality control plan.
- (4) Additional samples may be taken at the engineer's discretion due to a changed condition.
- (5) If multiple bid items on the same contract use the same aggregate source, then the samples must be collected based on cumulative concrete contract quantities within the same concrete classification.
- (6) Department will test small quantities at the minimum frequency specified in table 710-7.

TABLE 710-6 QV AGGREGATE TESTING FREQUENCY

CONCRETE CLASSIFICATION	PLACEMENT TESTING
Class I: Pavement	One test per placement day for first 5 days of placement. - If all samples are passing, reduced testing frequency is applied. - Reduced frequency: One test per calendar week of placement
Class I: Structures	One test per 250 CY placed. - Minimum of one test per contract for substructure - Minimum of one test per contract for superstructure
Class I: Cast-in-Place Barrier	One test per 500 CY placed
Class II: Concrete Overlay	One test per 250 CY - Maximum one test per day
Class II: Base	No minimum testing
Class II: Structure Repair	
Class II: Pavement Repair	
Class II: Pavement Replacement	
Class II: Base Patching	
Class II: Ancillary	

TABLE 710-7 QV AGGREGATE TESTING FREQUENCY FOR SMALL QUANTITIES

CONCRETE CLASSIFICATION	PLACEMENT TESTING
Class I: Pavement	One test on the first day of placement.
Class I: Structures	
Class I: Cast-in-Place Barrier	

710.5.7 Corrective Action**710.5.7.1 Optimized Aggregate Gradations**

Replace subsection with the following effective with the November 2025 letting.

- (1) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by less than or equal to 1.0 percent on a single sieve size or limits listed in the additional requirements for optimized aggregate gradation in 501.2.7.4.2 table 501-4, notify the other party immediately and do the following:

Option A:

1. Perform corrective action documented in the QC plan or as the engineer approves.
2. Document and provide corrective action results to the engineer as soon as they are available.
3. Department will conduct two tests within the next business day after corrective action. Department will provide test results to contractor after each test is complete.
4. If blended aggregate gradations are within the tarantula curve limits by the second department test:
 - Continue with concrete production.
 - Include a break in the 4-point running average.
 - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
5. If blended aggregate gradations are not within the tarantula curve limits by the second department test:
 - If the contract does not require optimized aggregate gradation under 501.2.7.4.2.1(2), stop concrete production and submit either a modified optimized aggregate gradation mix design or a new optimized aggregate gradation mix design.
 - If the contract requires optimized aggregate gradations under 501.2.7.4.2.1(2), stop concrete production and submit a modified optimized aggregate gradation mix design or a new optimized aggregate gradation mix design.

Option B:

1. Submit a modified optimized aggregate gradation mix design or a new optimized aggregate gradation mix design.
2. Restart control charts for new mix design.

- (2) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by more than 1.0 percent on one or more sieves, stop concrete production and submit a modified mix design or a new mix design.
- (3) Both the department and contractor must sample and test aggregate of the modified mix design or a new mix design at the frequency specified in 710.5.6.1.

710.5.7.2 Combined Aggregate Gradations

Replace subsection with the following effective with the November 2025 letting.

- (1) If the contractor's 4-point running average or a department test result of the percent passing by weight exceeds the combined aggregate gradation limits by less than or equal to 1.0 percent on a single sieve size, do the following:
 1. Notify the other party immediately.
 2. Perform corrective action documented in the QC plan or as the engineer approves.
 3. Document and provide corrective action results to the engineer as soon as they are available.
 4. The department will conduct two tests within the next business day after corrective action is complete.
 5. If blended aggregate gradations are within the combined aggregate gradation limits by the second department test:
 - Continue with concrete production.
 - Include a break in the 4-point running average.
 - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
 6. If blended aggregate gradations are not within the combined aggregate gradation limits by the second department test, stop concrete production and submit a modified mix design or a new mix design.
- (2) If the contractor's 4-point running average or a department test result of the percent passing by weight exceeds the combined aggregate gradation limits by more than 1.0 percent on one or more sieves, stop concrete production and submit a modified mix design or a new mix design.
- (3) Both the department and contractor must sample and test aggregate of the modified mix design or a new mix design at the frequency specified in 710.5.6.1.

715 QMP Concrete Pavement, Cast-in-Place Barrier and Structures

715.3.1.2 Lot and Sublot Definition

715.3.1.2.1 General

Replace subsection with the following effective with the November 2025 letting.

- (1) Designate the location and size of all lots before placing concrete. Ensure that no lot contains concrete of more than one mix design or placement method defined as follows:

Mix design change A modification to the mix requiring the engineer's approval under 710.4(5).
For paving and barrier mixes, follow 710.4(4) and 710.4(5) for concrete mixture design modifications.

Placement method Either slip-formed, not slip-formed, or placed under water.

- (2) Lots and sublots include ancillary concrete placed integrally with the class I concrete.

715.3.1.2.3 Lots by Cubic Yard

Replace paragraph (3) with the following effective with the November 2025 letting.

- (3) An undersized lot is eligible for incentive payment under 715.5 if the lot has 4 or more sublots for that lot.

715.3.2 Strength Evaluation

715.3.2.1 General

Replace subsection with the following effective with the November 2025 letting.

- (1) The department will make pay adjustments for strength on a lot-by-lot basis using the compressive strength of contractor QC cylinders or the flexural strength of contractor QC beams.
- (2) The department will evaluate the sublot for possible removal and replacement if the 28-day sublot average strength is:
 - Pavement (Compressive): < 2500 psi
 - Pavement (Flexural): < 500 psi
 - Structure: < f'_c - 500 psi ^[1]

- Cast-in-Place Barrier: < f'c - 500 psi ^[1]
^[1] f'c is design strength found in plans or specials.

715.5 Payment

715.5.1 General

Replace paragraph (4) and add paragraphs (8) and (9) effective with the November 2025 letting.

- (4) The department will adjust pay for each lot using PWL of the 28-day subplot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows:
 - Compressive strength of 3700 psi for pavements.
 - Flexural strength of 650 psi for pavements.
 - Compressive strength of 4000 psi for super structures and barrier, or as shown in the plan details.
 - Compressive strength of 3500 psi for substructures and culverts, or as shown in the plan details.
- (5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.
- (6) Submit test results to the department electronically using MRS software. The department will verify contractor data before determining pay adjustments.
- (7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.
- (8) If the contractor combines concrete of varying specified strengths in a single lot/sublot, the highest specified strength of the related concrete shall be used to calculate pay incentive/disincentive.
- (9) The department will apply one price adjustment to a given quantity of material. If the quantity in question is subject to more than one nonconforming test, apply the adjustment with the greater price reduction. In the absence of exact quantities affected by the subplot test results, pay reductions will be applied to the entire subplot.

715.5.4 Pay Adjustments for Nonconforming Air Content, Temperature, and Delivery Time

Add subsection 715.5.4 (Pay Adjustments for Nonconforming Air Content, Temperature, and Delivery Time) effective with the November 2025 letting.

- (1) The department will adjust pay for each subplot with nonconforming QC air content and temperature test results as specified in table 715-2 and table 715-3. If the quantity in question is subject to more than one of the following conditions, apply the adjustment with the greater price reduction.
- (2) For high temperatures, the engineer may consider the effectiveness of the contractor's temperature control plan and the contractor's compliance with their temperature control plan before taking a price reduction.
- (3) A 25% price reduction to the concrete invoice price will be applied if concrete is placed after the delivery time exceeds the limit specified in 501.3.5.2.

TABLE 715-2 PRICE REDUCTIONS FOR NONCONFORMING AIR CONTENT

LIMITS (%)		PERCENT PRICE REDUCTION OF THE CONTRACT UNIT PRICE
Above Specification	≥ 0.5 ^[1]	10
	0.1 to 0.4 ^[1]	5
Below Specification	0.1 to 0.5	20
	0.6 to 1.0	30
	> 1.0	50 or remove and replace

^[1] Evaluate the strength data. If the strengths are acceptable, do not take a price reduction for high air content. Contractor is responsible to provide additional strength data, if necessary.

TABLE 715-3 PRICE REDUCTIONS FOR NONCONFORMING TEMPERATURE

Replace Table 715-3, included with the November 2025 ASP-6, with the following effective with the February 2026 letting.

CONCRETE TEMPERATURE (F) ^[1]		PRICE REDUCTION (%)
Upper Temperature Limit ^[2]	> 80 to <= 85	10
	> 85	25
Lower Temperature Limit	45 to <= 50	10
	< 45	25

^[1] Applies only for Concrete Structures and Cast-in-Place Barrier.

^[2] If a written temperature control plan outlining the actions by the contractor to control concrete temperature at the point of placement exceeding 80 F is submitted and followed to effectively control the temperature, the upper temperature limit is increased by 10 F for price reductions for nonconforming temperature.

716 QMP Ancillary Concrete

716.2 Materials

716.2.1 Class II Concrete

Replace paragraph (2) with the following effective with the November 2025 letting.

(2) Perform random QC testing at the following frequencies:

1. Test air content, temperature, and slump a minimum of once per 100 cubic yards for each mix design and placement method.
2. Cast one set of 3 cylinders per 200 cubic yards for each mix design and placement method. Cast a minimum of one set of 3 cylinders per contract for each mix design and placement method. Random 28-day compressive strength cylinders are not required for HES or SHES concrete.
3. For deck overlays, perform tests and cast cylinders once per 50 cubic yards of grade E concrete placed.
4. For concrete base, one set of tests and one set of cylinders per 250 cubic yards.

The department will allow concrete startup test results for small quantities as specified in 710.2(1). Cast one set of 3 cylinders if using startup testing for acceptance.

716.2.2 Class III Concrete

Replace paragraph (1) with the following effective with the November 2025 letting.

- (1) Acceptance of class III concrete is based on DT2220/ DT2221 certification page. Submit the certificate of compliance at least 3 business days before producing concrete along with the initial concrete mix documentation as required under 710.4(2).

Bid Items

500 Bid Items

Remove the following bid items effective with the February 2026 letting.

522.2363	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 63x98-Inch	LF
522.2663	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 63x98-Inch	EACH

600 Bid Items

Remove the following bid item effective with the February 2026 letting.

608.2363	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 63x98-Inch	LF
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Add the following bid item effective with the November 2025 letting.

611.0613	Inlet Covers Type DW	EACH
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Remove the following bid items effective with the November 2025 letting.

621.0100	Landmark Reference Monuments	EACH
621.1100	Landmark Reference Monuments and Cast-Iron Covers	EACH
621.1200	Landmark Reference Monuments and Aluminum Covers	EACH

Remove the following bid items effective with the November 2025 letting.

643.0405	Traffic Control Barricades Type I	DAY
643.0410	Traffic Control Barricades Type II	DAY
643.0800	Traffic Control Arrow Boards	DAY

Add the following bid items effective with the November 2025 letting.

643.0810	Traffic Control Connected Arrow Boards	DAY
643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY

Add the following bid item effective with the February 2026 letting.

657.0348	Poles Type 9 - Special Over Height	EACH
657.0353	Poles Type 10 - Special Over Height	EACH

Add the following bid items effective with the November 2025 letting.

680.0100	Public Land Survey Monument Verify and Reset	EACH
682.0100	Salvage Geodetic Survey Disk	EACH
682.0200	Geodetic Survey Monuments	EACH

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.

460.3.3.2 Pavement Density Determination

Replace change description annotation with the following to revise implementation date. This change is effective with the November 2025 letting.

Add information to 460.3.3.2(1) and (3). Add reference to CMM, WTM, and WTP H-002. WTP H-002 contains the subplot layouts formerly in CMM 815. Definition of a lot is now defined here (460.3.3.2(3)) instead of CMM. This change was implemented via ASP-6 with the February 2024 letting.

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://wisconsin.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://wisconsin.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).

DOMESTIC MATERIALS PREFERENCE PROVISION

Domestic Materials Preference (in accordance with the Buy America Act per [23 CFR 635.410](#), and the Build America-Buy America Act (BABA) per [2 CFR Part 184](#), and [2 CFR Part 200](#)) shall be articles, materials, or supplies permanently incorporated in this project as classified in the following four categories, and as described in the Construction and Materials Manual (CMM):

1. Iron and Steel

To be considered domestic, all steel and iron products used, and all products predominantly manufactured from steel or iron must be produced in the United States in accordance with the steel and iron product standards in 23 CFR 635.410.

This includes smelting, coating, bending, shaping, and all other manufacturing processes performed on the product. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.

Products that are predominantly iron or steel or a combination of both as defined in 23 CFR 635.410 are considered Steel and Iron products and must comply with this section.

2. Construction Materials

To be considered domestic, all construction materials used must be produced in the United States in accordance with the construction material standards in [2 CFR 184.6](#):

- Non-ferrous metals: All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.
- Plastic and polymer-based products: All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.
- Glass: All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.
- Fiber optic cable (including drop cable): All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.
- Optical fiber: All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.
- Lumber: All manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.
- Drywall: All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.
- Engineered wood: All manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

3. Manufactured Products

To be considered domestic, all manufactured products used must be produced in the United States as defined in [23 CFR 635.410\(c\)\(1\)\(vii\)](#):

- For projects with let dates on or after October 1, 2025, the final step in the manufacturing process must occur in the United States.
- For projects with let dates on or after October 1, 2026, the final step in the manufacturing process must occur in the United States and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States must be greater than 55 percent of the total cost of all components of the manufactured product.

Manufactured products means articles, materials, or supplies that have been processed into a specific form and shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. If an item is classified as an iron or steel product, an excluded material, or construction material, then it is not a manufactured product. An article, material, or supply classified as a manufactured product may include components that are iron or steel

products, excluded materials, or construction materials. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

Items that consist of two or more construction materials that have been combined together through a manufacturing process, and items that include at least one construction material combined with a material that is not a construction material (including steel/iron) through a manufacturing process are treated as manufactured products, rather than as construction materials.

Products that are classified as predominantly iron or steel do not meet the definition of a manufactured product and must comply with section 1.

With respect to precast concrete products **that are classified as manufactured products**, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of section 1. The cost of such components shall be included in the applicable calculation for purposes of determining whether the precast concrete product is produced in the United States.

With respect to intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property **and classified as manufactured products**, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of section 1. The cost of cabinets or other enclosures shall be included in the applicable calculation for purposes of determining whether systems referred to in the preceding sentence are produced in the United States.

4. Temporary and Excluded Materials

Temporary materials, and excluded materials meeting the definition of Section 70917(c) Materials as defined in [2 CFR 184](#), do not have any domestic materials requirements. Section 70917(c) Materials means cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

The classification of an article, material, or supply as falling into one of the categories listed in this section will be made based on its status at the time it is brought to the work site for incorporation into the project. Except as otherwise provided, an article, material, or supply incorporated into an infrastructure project must meet the Domestic Material Preference for only the single category in which it is classified.

Requirements do not preclude a minimal use of foreign steel and iron provided the cost of such materials do not exceed 0.1 percent (0.1%) of the total contract cost or \$2500 whichever is greater. The total contract cost is the contract amount at award.

For each iron or steel product subject to meeting domestic materials requirements, that doesn't fully meet Buy America Act requirements, the following documentation must be provided by the Contractor to verify the foreign steel value. Ensure the threshold is not exceeded and place the documentation in the project files.

- Pay Item,
- Description of associated foreign iron or steel product, or component,
- Invoiced cost of associated foreign iron or steel product, or component, and
- Current cumulative list of all foreign iron or steel products with the total dollar amount of foreign products in relation to the total contract amount.

The minimal use of foreign iron or steel under the minimal usage threshold must be approved by the Engineer prior to incorporation into the project and any associated payment under the contract. The use of foreign iron or steel under the minimal usage threshold does not need to be approved by FHWA. This amount is not considered a waiver to the domestic materials requirements. The Contractor must ensure that the minimal usage amount is not exceeded.

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

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

Effective with October 2025 Letting

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

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

Attach a list of foreign iron or steel and their associated costs to the certification form using the Domestic Material Exemption Tracking Tool, available at:

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



Proposal Schedule of Items

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Proposal ID: 20260310006 Project(s): 5110-06-70

Federal ID(s): 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	203.0100 Removing Small Pipe Culverts	8.000 EACH	_____.	_____.
0004	203.0335 Debris Containment Over Waterway (structure) .01 B-62-47	1.000 EACH	_____.	_____.
0006	204.0100 Removing Concrete Pavement	79.000 SY	_____.	_____.
0008	204.0115 Removing Asphaltic Surface Butt Joints	4,226.000 SY	_____.	_____.
0010	204.0120 Removing Asphaltic Surface Milling	236,780.000 SY	_____.	_____.
0012	204.0150 Removing Curb & Gutter	900.000 LF	_____.	_____.
0014	204.0155 Removing Concrete Sidewalk	61.000 SY	_____.	_____.
0016	204.0165 Removing Guardrail	30,701.000 LF	_____.	_____.
0018	204.0220 Removing Inlets	8.000 EACH	_____.	_____.
0020	204.9060.S Removing (item description) .01 Apron Endwalls Steel	1.000 EACH	_____.	_____.
0022	204.9060.S Removing (item description) .02 Apron Endwalls Concrete	1.000 EACH	_____.	_____.
0024	205.0100 Excavation Common	10,832.000 CY	_____.	_____.
0026	208.0100 Borrow	943.000 CY	_____.	_____.
0028	209.0200.S Backfill Controlled Low Strength	4.000 CY	_____.	_____.
0030	209.2500 Backfill Granular Grade 2	1,619.000 TON	_____.	_____.



Proposal Schedule of Items

Page 2 of 10

Proposal ID: 20260310006 Project(s): 5110-06-70

Federal ID(s): 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
0032	211.0101 Prepare Foundation for Asphaltic Paving (project) .01 5110-06-70	1.000 EACH	_____.	_____.
0034	213.0100 Finishing Roadway (project) .01 5110-06-70	1.000 EACH	_____.	_____.
0036	305.0110 Base Aggregate Dense 3/4-Inch	10,048.000 TON	_____.	_____.
0038	305.0120 Base Aggregate Dense 1 1/4-Inch	20,608.000 TON	_____.	_____.
0040	305.0500 Shaping Shoulders	704.000 STA	_____.	_____.
0042	330.0100 Mill and Relay	227,408.000 SY	_____.	_____.
0044	374.1010.S QMP Mill and Relay Compaction	227,408.000 SY	_____.	_____.
0046	455.0605 Tack Coat	16,606.000 GAL	_____.	_____.
0048	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	2.000 EACH	_____.	_____.
0050	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	2.000 EACH	_____.	_____.
0052	460.2000 Incentive Density HMA Pavement	33,960.000 DOL	1.00000	33,960.00
0054	460.2005 Incentive Density PWL HMA Pavement	36,820.000 DOL	1.00000	36,820.00
0056	460.2007 Incentive Density HMA Pavement Longitudinal Joints	12,380.000 DOL	1.00000	12,380.00
0058	460.2010 Incentive Air Voids HMA Pavement	53,050.000 DOL	1.00000	53,050.00
0060	460.6223 HMA Pavement 3 MT 58-28 S	29,838.000 TON	_____.	_____.



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0062	460.6224 HMA Pavement 4 MT 58-28 S	23,211.000 TON	_____.	_____.
0064	465.0105 Asphaltic Surface	50.000 TON	_____.	_____.
0066	465.0120 Asphaltic Surface Driveways and Field Entrances	8.000 TON	_____.	_____.
0068	465.0560 Asphaltic Rumble Strips, Centerline	61,297.000 LF	_____.	_____.
0070	502.3200 Protective Surface Treatment	868.000 SY	_____.	_____.
0072	509.0301 Preparation Decks Type 1	332.000 SY	_____.	_____.
0074	509.0302 Preparation Decks Type 2	133.000 SY	_____.	_____.
0076	509.0505.S Cleaning Decks to Reapply Concrete Masonry Overlay	868.000 SY	_____.	_____.
0078	509.1500 Concrete Surface Repair	20.000 SF	_____.	_____.
0080	509.2000 Full-Depth Deck Repair	7.000 SY	_____.	_____.
0082	509.2500 Concrete Masonry Overlay Decks	91.000 CY	_____.	_____.
0084	509.9005.S Removing Concrete Masonry Deck Overlay (structure) .01 B-62-47	868.000 SY	_____.	_____.
0086	517.1801.S Structure Repainting Recycled Abrasive (structure) .01 B-62-187	1.000 EACH	_____.	_____.
0088	517.4501.S Negative Pressure Containment and Collection of Waste Materials (structure) .01 B-62-187	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0090	517.6001.S Portable Decontamination Facility	1.000 EACH	_____.	_____.
0092	520.8000 Concrete Collars for Pipe	1.000 EACH	_____.	_____.
0094	522.0112 Culvert Pipe Reinforced Concrete Class III 12-Inch	44.000 LF	_____.	_____.
0096	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	2.000 EACH	_____.	_____.
0098	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	2.000 EACH	_____.	_____.
0100	530.0112 Culvert Pipe Corrugated Polyethylene 12-Inch	120.000 LF	_____.	_____.
0102	601.0411 Concrete Curb & Gutter 30-Inch Type D	248.000 LF	_____.	_____.
0104	601.0557 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	558.000 LF	_____.	_____.
0106	601.0588 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	474.000 LF	_____.	_____.
0108	602.0410 Concrete Sidewalk 5-Inch	1,007.000 SF	_____.	_____.
0110	602.0505 Curb Ramp Detectable Warning Field Yellow	93.000 SF	_____.	_____.
0112	606.0050 Riprap Extra-Light	2.000 CY	_____.	_____.
0114	606.0200 Riprap Medium	22.000 CY	_____.	_____.
0116	606.0300 Riprap Heavy	5.000 CY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0118	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	125.000 LF	_____.	_____.
0120	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	207.000 LF	_____.	_____.
0122	611.0639 Inlet Covers Type H-S	4.000 EACH	_____.	_____.
0124	611.0654 Inlet Covers Type V	15.000 EACH	_____.	_____.
0126	611.3220 Inlets 2x2-FT	8.000 EACH	_____.	_____.
0128	611.3230 Inlets 2x3-FT	4.000 EACH	_____.	_____.
0130	611.8110 Adjusting Manhole Covers	12.000 EACH	_____.	_____.
0132	611.8115 Adjusting Inlet Covers	10.000 EACH	_____.	_____.
0134	614.2300 MGS Guardrail 3	23,493.000 LF	_____.	_____.
0136	614.2330 MGS Guardrail 3 K	1,413.000 LF	_____.	_____.
0138	614.2350 MGS Guardrail Short Radius	1,253.000 LF	_____.	_____.
0140	614.2500 MGS Thrie Beam Transition	1,560.000 LF	_____.	_____.
0142	614.2610 MGS Guardrail Terminal EAT	70.000 EACH	_____.	_____.
0144	614.2630 MGS Guardrail Short Radius Terminal	23.000 EACH	_____.	_____.
0146	618.0100 Maintenance and Repair of Haul Roads (project) .01 5110-06-70	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0148	619.1000 Mobilization	1.000 EACH	_____.	_____.
0150	620.0300 Concrete Median Sloped Nose	14.000 SF	_____.	_____.
0152	624.0100 Water	1,172.000 MGAL	_____.	_____.
0154	625.0500 Salvaged Topsoil	30,561.000 SY	_____.	_____.
0156	628.1504 Silt Fence	38,033.000 LF	_____.	_____.
0158	628.1520 Silt Fence Maintenance	105,099.000 LF	_____.	_____.
0160	628.1905 Mobilizations Erosion Control	6.000 EACH	_____.	_____.
0162	628.1910 Mobilizations Emergency Erosion Control	5.000 EACH	_____.	_____.
0164	628.2023 Erosion Mat Class II Type B	30,553.000 SY	_____.	_____.
0166	628.7020 Inlet Protection Type D	36.000 EACH	_____.	_____.
0168	628.7504 Temporary Ditch Checks	110.000 LF	_____.	_____.
0170	628.7570 Rock Bags	12.000 EACH	_____.	_____.
0172	629.0210 Fertilizer Type B	19.340 CWT	_____.	_____.
0174	630.0130 Seeding Mixture No. 30	1,336.000 LB	_____.	_____.
0176	630.0170 Seeding Mixture No. 70	75.000 LB	_____.	_____.
0178	630.0500 Seed Water	685.000 MGAL	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0180	631.0300 Sod Water	0.080 MGAL	_____.	_____.
0182	631.1000 Sod Lawn	8.000 SY	_____.	_____.
0184	634.0614 Posts Wood 4x6-Inch X 14-FT	5.000 EACH	_____.	_____.
0186	634.0618 Posts Wood 4x6-Inch X 18-FT	9.000 EACH	_____.	_____.
0188	637.2210 Signs Type II Reflective H	6.180 SF	_____.	_____.
0190	637.2230 Signs Type II Reflective F	141.000 SF	_____.	_____.
0192	638.2102 Moving Signs Type II	117.000 EACH	_____.	_____.
0194	638.2602 Removing Signs Type II	2.000 EACH	_____.	_____.
0196	642.5201 Field Office Type C	1.000 EACH	_____.	_____.
0198	643.0300 Traffic Control Drums	2,583.000 DAY	_____.	_____.
0200	643.0420 Traffic Control Barricades Type III	4,323.000 DAY	_____.	_____.
0202	643.0705 Traffic Control Warning Lights Type A	3,056.000 DAY	_____.	_____.
0204	643.0715 Traffic Control Warning Lights Type C	111.000 DAY	_____.	_____.
0206	643.0900 Traffic Control Signs	57,217.000 DAY	_____.	_____.
0208	643.0920 Traffic Control Covering Signs Type II	14.000 EACH	_____.	_____.
0210	643.1000 Traffic Control Signs Fixed Message	280.000 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0212	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.	_____.
0214	643.3165 Temporary Marking Line Paint 6-Inch	202,656.000 LF	_____.	_____.
0216	643.3180 Temporary Marking Line Removable Tape 6-Inch	3,405.000 LF	_____.	_____.
0218	643.3850 Temporary Marking Stop Line Removable Tape 18-Inch	10.000 LF	_____.	_____.
0220	643.3970 Temporary Marking Removable Mask Out Tape 10-Inch	1,325.000 LF	_____.	_____.
0222	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0224	644.1440 Temporary Pedestrian Surface Matting	326.000 SF	_____.	_____.
0226	644.1601 Temporary Pedestrian Curb Ramp	44.000 DAY	_____.	_____.
0228	644.1605 Temporary Pedestrian Detectable Warning Field	20.000 SF	_____.	_____.
0230	644.1810 Temporary Pedestrian Barricade	30.000 LF	_____.	_____.
0232	645.0120 Geotextile Type HR	40.000 SY	_____.	_____.
0234	645.0130 Geotextile Type R	5.000 SY	_____.	_____.
0236	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	226,270.000 LF	_____.	_____.
0238	646.6120 Marking Stop Line Epoxy 18-Inch	34.000 LF	_____.	_____.
0240	646.8220 Marking Island Nose Epoxy	2.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0242	648.0100 Locating No-Passing Zones	12.260 MI	_____.	_____.
0244	650.4000 Construction Staking Storm Sewer	6.000 EACH	_____.	_____.
0246	650.5500 Construction Staking Curb Gutter and Curb & Gutter	1,270.000 LF	_____.	_____.
0248	650.6000 Construction Staking Pipe Culverts	1.000 EACH	_____.	_____.
0250	650.8000 Construction Staking Resurfacing Reference	61,297.000 LF	_____.	_____.
0252	650.9000 Construction Staking Curb Ramps	8.000 EACH	_____.	_____.
0254	650.9500 Construction Staking Sidewalk (project) .01 5110-06-70	1.000 EACH	_____.	_____.
0256	650.9911 Construction Staking Supplemental Control (project) .01 5110-06-70	1.000 EACH	_____.	_____.
0258	650.9920 Construction Staking Slope Stakes	22,793.000 LF	_____.	_____.
0260	690.0150 Sawing Asphalt	4,492.000 LF	_____.	_____.
0262	690.0250 Sawing Concrete	123.000 LF	_____.	_____.
0264	740.0440 Incentive IRI Ride	46,890.000 DOL	1.00000	46,890.00
0266	999.2000.S Installing and Maintaining Bird Deterrent System (station) .01 STA 262+50	1.000 EACH	_____.	_____.
0268	999.2000.S Installing and Maintaining Bird Deterrent System (station) .02 STA 412+00	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0270	SPV.0060 Special .01 Resetting Culvert Sections	1.000 EACH	_____.	_____.
0272	SPV.0060 Special .02 Adjusting Water Valve Boxes	3.000 EACH	_____.	_____.
0274	SPV.0090 Special .40 Reseal Joints	130.000 LF	_____.	_____.
0276	SPV.0165 Special .40 Fiber Wrap Reinforcing Non-Structural	32.000 SF	_____.	_____.
0278	SPV.0165 Special .41 Prestressed Girder Surface Repair	3.000 SF	_____.	_____.
0280	SPV.0180 Special .01 Removing Distressed Pavement Milling	451.000 SY	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH ADDENDA HERE