

HIGHWAY WORK PROPOSAL

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

Proposal Number: **004**

<u>STATE ID</u>	<u>FEDERAL ID</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>	<u>COUNTY</u>
5790-02-72	N/A	Ferryville - Rolling Ground, STH 27 to USH 61	STH 171	Crawford

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

Proposal Guaranty Required: \$100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: August 12, 2025 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code <div style="text-align: center;">SAMPLE NOT FOR BIDDING PURPOSES</div>
Contract Completion Time August 26, 2026	
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 and Restoration.	For Department Use Only
	Notice of Award Dated _____ Date Guaranty Returned _____

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

BID PREPARATION

Preparing the Proposal Schedule of Items

A. General

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

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

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

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

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

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

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

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

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

B. Submitting Electronic Bids

B.1 On the Internet

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

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

- (1) Download the latest schedule of items from the Wisconsin pages of the Bid Express web site reflecting the latest addenda posted on the department's web site at:
<https://wisconsin.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 envelope 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)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

NOTARY FOR SURETY

(Date)

(Date)

State of Wisconsin)
) ss.
 _____ County)

State of Wisconsin)
) ss.
 _____ County)

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

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

(Signature, Notary Public, State of Wisconsin)

(Signature, Notary Public, State of Wisconsin)

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

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

(Date Commission Expires)

(Date Commission Expires)

Notary Seal

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)

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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STSP'S Revised January 8, 2025

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 5790-02-72, Ferryville – Rolling Ground, STH 27 to USH 61, STH 171, Crawford, 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 (20250108)

2. Scope of Work.

The work under this contract shall consist of a mill and overlay of the roadway pavement, adding curb and gutter where needed, beam guard replacement, curb ramp replacements, culvert/storm sewer repairs/replacements, intersection reconstruction at the STH 171 and STH 131 intersection, polymer overlay on structure B-12-137 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.

A start notice will not be issued until spring 2026.

Interim Completion and Liquidated Damages – STH 171 Culvert Work: 28 Calendar Days

Complete all culvert pipe, storm sewer pipe and storm sewer structure work requiring the STH 171 road closure and detour and have open to traffic within 28 calendar days.

If the contractor fails to complete the culvert pipe, storm sewer pipe and storm sewer structure work and have STH 171 open to traffic within 28 calendar days, the department will assess the contractor \$2,185 in interim liquidated damages for each calendar day that STH 171 is not open to traffic beyond 28 calendar days. An entire calendar day will be charged for any period of time with a calendar day that STH 171 is not open to traffic beyond 12:01AM.

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

Interim Completion and Liquidated Damages – Stage 2 STH 171/131 Intersection: 14 Calendar Days

In stage 2, complete all grading, storm sewer, breaker run, base aggregate, and HMA Pavement work requiring road closure of the south leg of STH 131, Station 288+27 – Station 290+00 and Station 391+23C – Station 393+14C, at the intersection of STH 171 and STH 131 and have traffic returned to a paved surface within 14 calendar days.

If the contractor fails to complete the grading, storm sewer, breaker run, base aggregate, and HMA Pavement work and have traffic on STH 131, Station 288+27 – Station 290+00 and Station 391+23C – Station 393+14C, returned to a paved surface within 14 calendar days, the department will assess the contractor \$2,185 in interim liquidated damages for each calendar day that traffic on STH 131 is not on a

paved surface beyond 14 calendar days. An entire calendar day will be charged for any period of time with a calendar day that traffic on STH 131 is not on a paved surface beyond 12:01 AM.

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

Culvert and Storm Sewer Pipes

Stage the culvert and storm sewer pipe work on STH 171 from Mt Sterling to Gays Mills and from Gays Mills to Rolling Ground so that no two culvert sites west of Gays Mills or east of Gays Mills will be closed to local traffic at one time. The pipe replacement locations shall be open to both lanes of traffic at the end of each day.

Do not leave open trenches over night during the culvert work.

Keep one passable lane open for emergency vehicles outside of working hours.

Mill and Relay, Curb and Gutter, and HMA Pavement Binder Course

At the end of each working day for the milling operation, both travel lanes termini shall be as adjacent or within a maximum of 500-feet of the adjacent travel lane of the milling layer. There shall be no drop offs greater than 2-inches between lanes during nighttime hours.

Curb and gutter (rural sections) shall be placed within 7 calendar days of the milling operation unless otherwise allowed in writing by the engineer. Excess material generated from mill and relay operations prior to placement of curb and gutter shall be placed behind the curb and gutter prior to topsoil placement.

The HMA pavement binder course lane adjacent to curb and gutter (rural sections) shall be placed within 7 calendar days of the initial placement of curb and gutter or as allowed in writing by the engineer.

Non-curbed areas shall be paved within 7 days.

Migratory Birds

No evidence of swallow or other migratory bird nests have been observed on or under the following structures(s) during the preconstruction inspection. However, if nesting is later observed prior to or during construction, the contractor shall implement avoidance/deterrent measures or obtain a depredation permit. 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.

- B-12-137

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.

4. Traffic

General

Submit to the engineer for approval a detailed traffic control plan for any changes to the proposed as shown in the plans. Submit the plan 14 days prior to the intended use. A request does not constitute approval.

Do not switch traffic to the next construction stage until all signing, pavement marking and traffic control devices for the stage are in place, conflicting markings and signs are covered or removed.

Place traffic control drums and other temporary traffic control devices on the outer edge of the shoulder when not in use.

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

- All construction vehicles and equipment entering or leaving the live traffic lanes shall yield to all through traffic.
- Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (yellow flashing signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1,000 feet. Activate the beam when merging into or exiting a live traffic lane.
- Do not deliver or store materials and equipment within open travel lanes during any stage of construction.
- Do not deliver or store materials on adjacent streets beyond the project limits without specific approval from the engineer.

Staging

The pavement replacement work for the intersection of STH 171 and STH 131 will be completed in 3 stages.

- Stage 1: Construct proposed storm sewer and temporary pavements
- Stage 2: Construct final pavement for southern portion of intersection, construct remaining storm sewer and temporary pavements
- Stage 3: Construct final pavement on westbound lanes and install permanent castings on inlets
- Stage 4: Remove remaining temporary pavements and construct final curb ramps, curb and gutter and asphaltic shoulders

The base patching work within the Village of Gays Mills will be done in 2 stages, one travel direction at a time.

The STH 171 roadway will remain open to traffic utilizing flagging operations for the following construction work; mill and relay, paving work, beam guard and curb & gutter work. The STH 171 roadway will be closed to through traffic utilizing a posted detour route for the following construction work: installation of cross culverts under STH 171. The STH 171 detour will route traffic on STH 27 to USH 14/61 to USH 61/STH 131. The STH 171 and STH 131 intersection will be closed for a maximum of 14 calendar days, utilizing a posted detour route.

A signed detour will be posted during the closure of STH 131 during Stage 2.

STH 171 and STH 131 may not be closed and detoured at the same time.

Access During Construction

Maintain emergency vehicle access at all times. Access to businesses and residences shall be maintained throughout the project. If an access is to be temporarily closed, notify those affected a minimum of three business days in advance of the closure.

Advance Notification

Notify Crawford County Sheriff's Department, the Village of Gays Mills Fire Department, Ocooch Mountain Rescue, North Crawford School district and the postal service 72 hours in advance of all changes to traffic configurations and closures. Notifications must be given by 4:00 PM on Wednesday for such work to be done on the following Monday.

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.

PCMS Prewarn

Place Portable Changeable Message Signs (PCMS) 7 days prior to construction. Place PCMS 7 days prior to roadway closures of STH 171 for culvert work. Place PCMS 7 days prior to roadway closures of STH 131 in Stage 2. See plans for department approved messages to be displayed on each PCMS.

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 171 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday and special event periods:

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

Alliant Energy – Electric has plans to relocate, adjust, or remove existing facilities prior to the start of construction operations under this project as follows:

- Station 269+06, 34-FT RT: remove anchor
- Station 282+45 LT to Station 284+63 LT: remove overhead street light cable
- Station 284+63, 25-FT LT: remove street light pole
- Station 287+59, 29-FT RT: install new anchor
- Station 287+62, 29-FT RT: remove existing anchor
- Station 287+66, 29-FT RT: install new street light pole
- Station 287+69, 29-FT RT: remove existing street light pole
- Station 289+10, 36-FT LT: remove existing anchor
- Station 289+14, 40-FT LT: install new anchor

Gays Mills Water & Sewer Utility – Sewer has underground sanitary sewer facilities throughout the Village limits. Adjust manhole covers to match the finished pavement elevation in accordance to the plans and in the bid items for this project under 'Adjusting Sanitary Manhole Covers, Item SPV.0060.02.'

Gays Mills Water & Sewer Utility – Water has underground water mains and laterals throughout the Village limits. Gays Mills Water & Sewer Utility has plans to complete a hydrant extension at Station 394+00'C', RT prior to the start of construction operations.

Adjust water valves to match the finished pavement elevation in accordance to the plans and in the bid items for this project under 'Adjust Water Valve Box, Item SPV.0060.03.'

Madison Gas and Electric – Gas has underground facilities from Station 2+24 to Station 298+00. Madison Gas and Electric will move and/or lower existing facilities out of conflict prior to construction at the following locations:

- Station 54+20, RT
- Station 90+91, RT
- Station 95+14, RT
- Station 98+40, RT
- Station 104+85, RT
- Station 121+50, RT
- Station 129+63, RT
- Station 157+67, RT
- Station 169+57, RT
- Station 179+78, RT
- Station 185+80, RT
- Station 191+96, RT
- Station 201+16, RT
- Station 224+77, RT
- Station 258+65, RT
- Station 261+05, RT
- Station 391+50'C' to Station 396+00'C'

Any location where gas main is relocated, the existing main will be discontinued in place.

Madison Gas and Electric will adjust the gas valve at Station 164+85, 18-FT RT to the new grade during construction. Madison Gas and Electric anticipates needing 0.5 days to complete the adjustment. Notify Madison Gas and Electric as described above.

When contractor is completing proposed storm sewer work near gas main, please coordinate with Madison Gas and Electric contact Scott Gates, 608-778-4633, swgates@mge.com to have an observer on site.

Mediacom Wisconsin LLC – Communication has an overhead line on an existing utility pole located at Station 287+66, RT. This utility pole is owned by and carries Alliant Energy – Electric. Prior to construction, Alliant Energy anticipates removing the existing pole and installing a new pole at Station 287+69, RT. Mediacom will transfer their utility to the new pole prior to construction.

Mt Sterling Waterworks – Sewer has plans to adjust sanitary manholes in the Village of Mt Sterling during construction. This work will be performed by the Crawford County Highway Department. Notify Dave Jones at Crawford County Highway Department as described above.

Crawford County estimates 8 working days to complete all adjustments.

Mt Sterling Waterworks – Water has plans to adjust water shut off valves in the Village of Mt Sterling during construction. This work will be performed by the Crawford County Highway Department. Notify Dave Jones at Crawford County Highway Department as described above.

Crawford County estimates 8 working days to complete all adjustments.

Scenic Rivers Energy Cooperative – Electric has plans to relocate existing underground cable out of the construction area prior to the start of construction operations under this project at the following locations:

- Station 37+99, LT
- Station 503+00, LT
- Station 538+20, LT
- Station 556+57, LT

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

- **ATC Management Inc. – Electric Transmission (69 kV)**
- **Brightspeed of Western Wisconsin LLC – Communication**
- **CenturyLink (Lumen) – Communication**
- **Dairyland Power Cooperative – Electric**
- **Richland Grant Telephone Cooperative – Communication**
- **Valley Ridge Clean Water Commission – Sewer**

7. Work by Others.

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:

Project 5790-01-80

STH 171, Ferryville – Rolling Ground, Structure C-12-0063

WisDOT Contact: Brian Meyer; 608-789-5676, brian.meyer@dot.wi.gov

Detour routes shall be signed concurrently. Remove the detour segment on STH 27 from Mt Sterling to the STH 27/STH 82 intersection if both closures on STH 171 occur at the same time.

For all projects, coordinate activities, detours, work zone traffic control, roadway, erosion control and lane closures, and other work items as required with other contracts.

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

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

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

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

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

stp-107-054 (20230629)

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

The calculated land disturbance for the project site is 4.5 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 Jered Lex at 608-785-9956. 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 invested waters; and
4. Disinfect your boat, equipment and gear by either:
 - 4.1. Washing with ~212 F water (steam clean), or
 - 4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
 - 4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore, this disinfect should be used in conjunction with a hot water (>104° F) application.

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

stp-107-055 (20130615)

11. Environmental Protection.

The disturbed bank areas at Station 258+65, LT and Station 261+05, LT shall be adequately protected and restored as soon as feasible.

Removal of vegetative cover must be restricted, and exposure of area ground kept to the minimum amount necessary to complete construction. Restoration of disturbed soils shall take place as soon as conditions permit. Place all temporary stockpiles in an upland location and protected with erosion control measures. Do not stockpile materials in wetlands, waterways, or floodplains. Stabilize areas of final grading within 7 days of reaching final grade.

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:

- 460.5224 HMA Pavement 4 LT 58-28 S
- 460.62225 HMA Pavement 5 MT 58-28 S
- 460.4210.S HMA Pavement Interlayer

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. Removing Concrete Surface Partial Depth, Item 204.0109.S.

A Description

This special provision describes removing a portion of concrete surfaces as the plans show and conforming to standard spec 204.

B (Vacant)

C Construction

C.1 Equipment

Use a machine that provides a surface finish acceptable to the engineer. Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes.

Use a machine that is equipped with electronic devices that provide accurate depth, grade and slope control, and acceptable dust control system.

C.2 Methods

Remove existing concrete to the depths as shown on the plan by grinding, planing, chipping, sawing, milling, or by using other methods approved by the engineer.

Perform the removal operation in such a manner as to preclude damage to the remaining pavement and results in a reasonable uniform plane surface free of excessive large scarification marks and having a uniform transverse slope.

The sequence of removal operations shall be such that no exposed longitudinal joints 2 inches or more in depth remain during non-working hours. Windrowing or storing of the removed material on the roadway will only be permitted in conjunction with a continuous removal and pick-up operation. During non-working hours, clear the roadway of all materials and equipment.

Removed pavement becomes the property of the contractor. Properly dispose of it as specified in standard spec 204.3.1.3.

D Measurement

The department will measure Removing Concrete Surface Partial Depth in area by the square foot of surface area removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0109.S	Removing Concrete Surface Partial Depth	SF

Payment is in full compensation for removing the concrete; and for disposing of materials.

stp-204-041 (20080902)

14. Base Aggregate Dense ¾-Inch, Item 305.0110.

Add the following to standard spec 301.2.4.3:

Furnish only aggregate classified as crushed stone for Dense ¾-Inch when used in the top 3 inches of the unpaved portion of the shoulder or for unpaved driveways and field entrances.

Swr-305-001 (20170711)

15. 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://wisconsindot.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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16. 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 volumetric or density test strip) under the HMA Additional Test Strip administrative item.

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

PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY	
<i>PERCENT WITHIN LIMITS</i>	<i>PAYMENT FACTOR, PF</i>
<i>(PWL)</i>	<i>(percent of \$65/ton)</i>
≥ 90 to 100	PF = ((PWL – 90) * 0.4) + 100
≥ 50 to < 90	(PWL * 0.5) + 55
<50	50% ^[1]

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

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

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

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

*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
SPV.0055.03	Incentive Density PWL HMA Pavement	DOL
SPV.0055.02	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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17. HMA Pavement Interlayer, Item 460.4210.S.

A Description

Conform to standard spec 450 and 460 except as modified in this special provision.

Replace standard spec 460.1 with the following to describe Interlayer:

- (1) This section describes HMA mixture design for Interlayer applications, providing and maintaining a quality management program for HMA mixtures, and constructing Interlayers. Unless specifically indicated otherwise, references within 460 to HMA also apply to Interlayers.

B Materials

Replace standard spec 460.2.2.1(1) with the following to specify that all aggregates used in Interlayer mixes are from department-approved sources:

- (1) Provide all aggregates used in the Interlayer mix from a department-approved source as specified under standard spec 106.3.4.2. Obtain the engineer's approval of the aggregates before producing HMA mixtures.

Replace standard spec table 460-1 with the following to specify gradation master range and additional sieves for interlayer mixtures:

**TABLE 460-1
AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS**

Sieve	% PASSING DESIGNATED SIEVES
	NOMINAL SIZE
9.5-mm	100
4.75-mm	80 - 100
2.36-mm	60 - 85
1.18-mm	40 - 70
0.60-mm	25 - 55
0.30-mm	15 - 35
0.15-mm	8 - 20
0.075-mm	6 - 14
% MINIMUM VMA	16.0

Replace standard spec 460.2.3 with the following to specify asphalt binders to be used:

- (1) Furnish PG 58-34 asphalt binder with a designation of V (Very Heavy) or E (Extremely Heavy) as necessary to satisfy the Flexural Beam Fatigue Test (AASHTO T321) requirement of table 460-2 as modified herein. Do not change the PG binder grade without the engineer's written approval. The department will designate the grade of modified asphaltic binder in the contract.

Replace standard spec 460.2.5 with the following to describe Recycled Asphaltic Material use in Interlayers:

- (1) No recycled asphaltic materials (FRAP, RAP, and RAS) shall be permitted in Interlayer mixtures.

Replace standard spec 460.2.7 with the following to specify design limits and requirements for Interlayer mixtures.

- (1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to CMM 866 and conforming to the requirements of table 460-1 and table 460-2 as modified herein. The department will review mixture designs and report the results of that review to the designer according to CMM 866.
- (2) For each asphaltic mixture design, conduct Hamburg Wheel-Track testing according to WTM T324 and indirect tensile cracking test at intermediate temperature (CT-Index) according to WTM D8225. Submit test results to the department with mix design submittal.

**TABLE 460-2
MIXTURE REQUIREMENTS**

Mixture Type	Interlayer
LA Wear (WTM T96) 100 revolutions (max % loss) 500 revolutions (max % loss)	13 40
Soundness (WTM T104) (Sodium Sulfate, max % loss)	12
Freeze/Thaw (WTM T103) (specified counties, max % loss)	15
Fractured Faces (WTM D5821) (one face/2 face, % by count)	75 / 60
Flat & Elongated (WTM D4791) (max %, by weight)	5 (5:1 ratio)
Fine Aggregate Angularity (WTM T304 method A) (min)	45
Sand Equivalency (AASHTO T176) (min)	40
Clay Lumps and Friable Particle in Aggregate (AASHTO T112)	≤ 1%
Plasticity Index of Material Added to Mix Design as Mineral Filler (WTM T89 / AASHTO T90)	≤ 4
Gyrations for Ndes	50
Air Voids, %Va (%Gmm Ndes)	2.0 (98.0)
Dust to Binder Ratio (% Passing 0.075mm/Pbe)	0.8 - 1.6
Voids filled with Binder (VFB or VFA, %)	70 - 95
Flexural Beam Fatigue Test (AASHTO T321) ^{[1][2]} (Average Cycles)	> 100,000

^[1] The failure criterion for the Flexural Beam Fatigue Test (AASHTO T321) is 50% of the initial flexural stiffness measured at the 200th load cycle at 2,000 microstrain. Test two samples and average the two results for each mix design.

^[2] Age laboratory prepared mixtures according to WTM R30 section 7.1 (Mixture Conditioning for Volumetric Mixture Design).

Replace standard spec 460.2.8.2.1.5 with the following to update JMF and warning limits for Interlayers:

- (1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
4.75-mm	+/- 5.0	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
1.18-mm	+/- 4.0	+/- 3.0
0.60-mm	+/- 4.0	+/- 3.0
0.30 mm	+/- 4.0	+/- 3.0
0.15 mm	+/- 4.0	+/- 3.0
0.075-mm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+/- 1.0	+/- 0.8
VMA in percent ^[1]	- 0.5	- 0.2

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

- (2) Warning bands are defined as the area between the JMF limits and the warning limits.

C Construction

Replace standard spec 450.3.2.1.1 with the following to specify minimum paving temperature:

- (1) Only place Interlayer asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is at least 50° F and the forecast is for rising temperatures. Place HMA pavement for projects in the northern asphalt zone between May 1 and October 15 inclusive and for projects in the southern asphalt zone between April 15 and November 1 inclusive. CMM 453 figure 2 defines asphalt zones. Notify the engineer at least one business day before paving.
- (2) Unless the contract specifies otherwise, conform to the following:
 - Keep the road open to all traffic during construction.
 - Prepare the existing foundation for treatment as specified in 211.
 - Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.
- (3) Place asphaltic mixture only on an existing pavement free of loose and foreign material. Do not place over frozen pavement, or where the roadbed is unstable.
- (4) The surface shall be dry for at least 24 hours, and clean, prior to placement of the mixture. Work shall not begin when local conditions indicate rain is imminent.

Delete standard spec 450.3.2.1.2 to eliminate cold weather paving operations for Interlayer pavement.

Replace standard spec 455.3.2.1 with the following to specify Interlayer tack coat application requirements:

- (1) Apply tack coat only when the air temperature is 45° F or more unless the engineer approves otherwise in writing. Before applying tack coat ensure that the surface is reasonably free of loose dirt, dust, or other foreign matter. Do not apply to surfaces with standing water. Do not apply if weather or surface conditions are unfavorable or before impending rains.
- (2) Use tack material of the type and grade the contract specifies. The contractor may, with the engineer's approval, dilute tack material as allowed under 455.2.4. Provide calculations using the asphalt content as-received from the supplier and subsequent contractor dilutions to show that as-placed material has 50 percent or more residual asphalt content. Apply at 0.070 to 0.100 gallons per square yard, after dilution, unless the contract designates otherwise. The engineer may adjust the application rate based on surface conditions. Limit application each day to the area the contractor expects to pave during that day.

Replace standard spec 450.3.2.6.3 to specify compaction roller pattern determined by growth curve and subsequent coring for Interlayer mixes:

- (1) Compact Interlayer mix using the roller pattern established during construction of a control strip. Use 2 or more rollers per paver if placing more than approximately 165 tons of mixture per hour.

- (2) On the first day of production, construct a control strip under the direct observation of department personnel. After compacting the control strip with a minimum of 3 passes, mark the gauge outline and take a one-minute wet density measurement using a nuclear density gauge in back scatter mode at a single location. Take a density measurement at the same location after each subsequent pass. Continue compacting and testing until the increase in density is less than 1 pcf for 3 consecutive passes. Submit the final roller pattern to the engineer in writing. Once the roller pattern is established do not change the pattern or decrease the number, type, or weight of rollers without the engineer's written approval.
- (3) After establishing the roller pattern, and under the direct observation of the engineer, cut at least one 4- or 6-inch diameter core from the control strip density gauge outline according to WTM R67. Prepare cores and determine density according to WTM T166. Dry cores after testing. Fill core holes 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.
- (4) Collect 1 nonrandom three-part mix volumetric sample during construction of the control strip to be tested by the contractor with one split provided to the department. This contractor's test will be recorded on the control charts and the Gmm from this split sample will be used to determine the core density. If contractor test results for this split sample are not within the JMF limits presented in 460.2.8.2.1.5, as modified herein, take immediate corrective action.
- (5) A minimum of one core per 3,000 lane feet or one per day will be collected and tested for density by the contractor. Add one core for each additional 3,000 lane feet or portion thereof per day. Report core density results to the engineer and BTS daily. The density of each sample during production will be determined by dividing the bulk specific gravity of each core sample by the four-point running average maximum specific gravity (Gmm according to WTM T209) from the previous day's production.

Replace standard spec 460.2.8.2.1.7(7) to further define conforming material and pay reduction based on individual test results for Interlayer mixes:

- (7) If the air voids running average of 4 exceeds the JMF limits, the material is nonconforming. Remove and replace unacceptable material. The engineer will determine the quantity of material to replace based on the testing data using the methods in CMM 836 and an inspection of the completed pavement. If the engineer allows the mixture to remain in place, the department will pay for the mixture and asphaltic material as specified in standard spec 460.5.2.1, as modified herein. For Interlayer mix types, if one QC air voids test falls outside of the JMF limits, notify the department and consider corrective action. If two or more individual QC air voids tests within the four-point running average exceed the JMF limits, the material is nonconforming and subject to pay adjustment as specified in standard spec 460.5.2.1.

Replace standard spec 460.2.8.3.1.6 with the following to specify volumetric verification requirements:

- (1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:
 - Va is within a range of 1.0 to 3.0 percent.
 - VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.
 - Asphalt content is within minus 0.3 percent of the JMF.
- (2) If QV test results are outside the specified limits, the engineer will investigate immediately through dispute resolution procedures. The engineer may stop production while the investigation is in progress if the potential for a pavement failure is present.
- (3) If production continues for that mixture design, the engineer will provide additional retained sample testing at the frequency provided for in CMM 836. This supplemental testing will continue until the material meets allowable differences or as the engineer and contractor mutually agree.

Replace standard spec 460.3.1 with the following to remove standard bid item encoding:

- (1) Construct Interlayer pavement of the type the bid item indicates encoded as follows:

HMA Pavement Interlayer
- (2) Construct HMA pavement conforming to the general provisions of standard spec 450.3.

Replace standard spec 460.3.2 with the following to specify Interlayer plan thickness:

- (1) Provide the plan thickness for Interlayer mixtures at 1.0 inch.

Replace standard spec 460.3.3.1 and 460.3.3.2 with the following to specify density requirements for Interlayers:

- (1) Compact Interlayer mixture according to standard spec 450.3.2.6.3, as modified herein.

Delete standard spec 460.5.2.2 and 460.5.2.3 to remove density incentives and disincentives for Interlayer pavement.

D Measurement

Replace standard spec 460.4 with the following:

- (1) The department will measure the HMA Pavement Interlayer bid items acceptably completed by the ton, as specified in standard spec 450.4.

E Payment

Replace standard spec 460.5.1 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
460.4210.S	HMA Pavement Interlayer	TON

- (2) Payment for HMA Pavement Interlayer is full compensation for providing mixture designs; for performance testing, for volumetric and density testing and aggregate source testing; for establishing the compaction roller pattern; for asphalt binder modification or processes, and addition of fibers, fines, or filler.
- (3) Material placed in the lower layer of the reference section will be paid with the same bid item as the upper layer unless the surface mix is SMA. If the surface mix is SMA an alternative mix type with a No. 4 or No. 5 gradation will be used as the lower layer for the control strip.

Replace standard spec 460.5.2.1 with the following to modify mixture pay adjustments for Interlayer pavements:

- (1) The department will pay for the HMA Interlayer bid items at the contract unit price subject to one or more of the following adjustments:
 1. Reduced payment for nonconforming QMP HMA mixtures as specified in standard spec 460.2.8.2.1.7, as modified herein.
- (2) Payment for the HMA Pavement bid items is full compensation for providing HMA pavement including binder; for mixture design; and for QMP and aggregate source testing.
- (3) 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.
- (4) The department will administer pay reduction for nonconforming QMP mixture under the Nonconforming QMP HMA Mixture administrative item. The department will reduce pay based on the contract unit price for the HMA Pavement bid item.
- (5) The department will reduce pay for nonconforming QMP HMA mixtures as specified in standard spec 460.2.8.2.1.7, starting from the stop point to the point when the running average of 4 is back inside the warning limits. The engineer will determine the quantity of material subject to pay reduction based on the testing data and an inspection of the completed pavement. The department will reduce pay as follows:

PAYMENT FOR MIXTURE^{[1] [3] [4]}

ITEM	PRODUCED WITHIN	PRODUCED OUTSIDE
	WARNING BANDS	JMF LIMITS
Gradation	90%	75%
Asphalt Content ^[5]	—	—
Air Voids ^[2]	70%	50%
VMA	90%	75%

^[1] For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 836.

^[2] If Interlayer material is nonconforming for air voids as defined in standard spec 460.2.8.2.1.7(7) as modified herein, the department will pay 80% of the contract unit price for the material from the individual point(s) where a test is outside the JMF limit until another individual QV or QC test is within the JMF limits.

^[3] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. If the quantity of material subject to pay adjustment based on the running average of 4 is also subject to pay adjustment resulting from dispute resolution under standard spec 460.2.8.3.1.7, or is nonconforming for air voids as defined in standard spec 460.2.8.2.1.7(7) as modified herein, the department will apply the single pay adjustment resulting in the lowest percent pay.

^[4] In addition to any pay adjustment listed in the table above, the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

^[5] The department will not adjust pay based on a running average of 4 asphalt content tests; however, corrective action will be applied to nonconforming material according to standard spec 460.2.8.2.1.7.

(6) When using CMM 836 for QV dispute resolution of HMA Pavement Interlayer material apply the following:

- Interlayer 100% pay requires: $V_a = 1.0 - 3.0\%$, VMA below minimum $\leq 0.5\%$, and AC% below JMF $\leq 0.3\%$.

Interlayer Prorated Pay Factors (between 50 and 100% pay) are as follows:

Description	Criteria	Pay Factor
High Air Voids Pay Factor	$3.0\% < V_a \leq 3.5$	$= 100 * [1 - (V_a - 3.0)]$
Low Air Voids Pay Factor	$0.5\% \leq V_a < 1.0\%$	$= 100 * [1 - (1.0 - V_a)]$
Low VMA Pay Factor	$0.5\% < VMA \text{ below min} \leq 1.0\%$	$= 100 * [1 - (\text{percent below min.} - 0.5)]$
Low AC% Pay Factor	$0.3\% < AC \text{ below JMF} < 0.5\%$	$= 75$

If during a QV dispute resolution investigation, the department discovers unacceptable mixture defined by one or more of the following:

- V_a less than 0.5 or greater than 3.5 percent.
- VMA more than 1.0 percent below the minimum allowed in [table 460-1](#).
- AC% more than 0.5 % below the JMF target.

Remove and replace the material, or if the engineer allows the mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

(7) Restore the surface after cutting density samples as specified in standard spec 460.3.3.1(1) and standard spec 460.3.3.2(4) at no additional cost to the department.

stp-460-070 (20230629)

18. Removing Polymer Overlay B-12-137, Item 509.9015.S.

A Description

This special provision describes removing the polymer overlay. Perform work conforming to standard spec 204.

B (Vacant)

C Construction

Remove the overlay by scraping, grinding, milling, or other approved method without damaging the underlying concrete. Submit removal procedures to the engineer for approval before beginning. Do not remove more than 1/4" of the existing concrete surface. Leave a uniform textured finish over the entire concrete surface.

D Measurement

The department will measure Removing Polymer Overlay B-12-137 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
509.9015.S	Removing Polymer Overlay B-12-137	SY

Payment for is full compensation for removing the polymer; and for properly disposing of all materials.

stp-509-015 (20210113)

19. Polymer Overlay, Item 509.5100.S.

A Description

This special provision describes providing two layers of a two-component polymer overlay system to the bridge decks the plans show.

B Materials

B.1 General

Furnish materials specifically designed for use over concrete bridge decks. Furnish polymer liquid binders from the department's approved product list.

B.2 Polymer Resin

Furnish a polymer resin base and hardener composed of two-component, 100 percent solids, 100 percent reactive, thermosetting compound with the following properties:

Property	Requirements	Test Method
Gel Time ^[1]	15 - 45 minutes @ 73° to 75° F	ASTM C881
Viscosity ^[1]	7 - 70 poises	ASTM D2393, Brookfield RVT, Spindle No. 3, 20 rpm
Shore D Hardness ^[2]	60-75	ASTM D2240
Absorption ^[2]	1% maximum at 24 hr	ASTM D570
Tensile Elongation ^[2]	30% - 70% @ 7 days	ASTM D638
Tensile Strength ^[2]	2000 to 5000 psi @ 7 days	ASTM D638
Chloride Permeability ^[2]	<100 coulombs @ 28 days	AASHTO T277

^[1] Uncured, mixed polymer binder

^[2] Cured, mixed polymer binder

Ensure that the polymer resin when mixed with aggregate has the following properties:

Property	Requirement ^[1]	Test Method
Minimum Compressive Strength	1,000 psi @ 8 hrs 5,000 psi @ 24 hrs	ASTM C579 Method B, Modified ^[2]
Thermal Compatibility	No Delaminations	ASTM C884
Minimum Pull-off Strength	250 psi @ 24 hrs	ASTM C1583

^[1] Based on samples cured or aged and tested at 75°F

^[2] Plastic inserts that will provide 2-inch by 2-inch cubes shall be placed in the oversized brass molds.

B.3 Aggregates

Furnish natural or synthetic aggregate that is non-polishing; clean; free of surface moisture; fractured or angular in shape; free from silt, clay, asphalt, or other organic materials; and conform to the following:

Aggregate Properties

Property	Requirement	Test Method
Moisture Content ^[1]	1/2 of the measured aggregate absorption, %	ASTM C566
Hardness	≥6.5	Mohs Scale
Fractured Faces	100% with at least 1 fractured face & 80% with at least 2 fractured faces of material retained on No.16	ASTM D5821
Absorption	≤1%	ASTM C128

^[1] Sampled and tested by the department before placement.

Gradation

Sieve Size	% Passing by Weight
No. 4	100
No. 8	30 – 75
No. 16	0 – 5
No. 30	0 – 1

B.4 Approval of Bridge Deck Polymer Overlay System

A minimum of 20 working days before application, submit product data sheets and specifications from the manufacturer, and a certified report of test or analysis from an independent laboratory to the engineer for approval. The department will sample and test the aggregates for gradation and moisture content before placement. If requested, supply the department with samples of the polymer for the purpose of acceptance testing.

B.4.1 Product Data Sheets and Specifications

Product data sheets and specifications from the manufacture consists of literature from the manufacturer showing general instructions, application recommendations/methods, product properties, general instructions, or any other applicable information.

B.4.2 Certified Report of Test or Analysis

Conform to the following:

Polymer Binder: Submit a certified report of test or analysis from an independent laboratory dated less than 3 years before the date of the project letting showing the polymer binder meets the requirements of section B.2.

Aggregates: Submit a certified report of test or analysis from an independent laboratory dated less than 6 months before the date of the project letting showing the aggregates meet the requirements of section B.3.

C Construction

C.1 General

Ensure that the overlay system is 1/4 inch thick or thicker.

Conform to the following:

Field Review: Conduct a field review of the existing deck to identify any possible surface preparation and material compatibility issues.

Pre-Installation Meeting: Conduct a pre-installation meeting with the manufacturer's representative and the engineer before construction. Discuss the field review findings, verification testing of the surface preparation and establish procedures for maintaining optimum working conditions and coordination of work. Furnish the engineer a copy of the recommended procedures and apply the overlay system according to the manufacturer's instructions. Supply for the engineer's use for the duration of the project, a Concrete Surface Profile (CSP) chip set of 10 from the International Concrete Repair Institute (ICRI).

Manufacturer's Representative: An experienced manufacturer's representative familiar with the overlay system installation procedures shall be present at all times during surface preparation and overlay placement to provide quality assurance that the work is being performed properly. This requirement may be reduced at the engineer's discretion.

Material Storage: Store and handle materials according to the manufacturer's recommendations. Store resin materials in their original containers in a dry area. Store all aggregates in a dry environment and protect aggregates from contaminants on the job site.

C.2 Deck Preparation

C.2.1 Deck Repair

Remove all asphaltic patches and unsound or disintegrated areas of the concrete decks as the plans show, or as the engineer directs. Work performed to remove and repair the concrete deck will be paid for under other items.

Use deck patching products that are compatible with the overlay system. Patching materials with magnesium phosphate shall not be used. Place patches after surface is prepared via shot blasting and cleaning as described in Section C.2.2 of this specification. Portland cement concrete patches shall be used for joint repairs and full depth deck repairs with a plan area larger than 4 sf, unless approved otherwise by the Structures Design Section. If rapid-set concrete is used, place patches per the manufacturer's recommendation. If Portland cement concrete is used, place patches per standard spec 509.3.9.1.

Deck patching shall be filled and properly finished prior to overlay placement. Do not place overlay less than 1 hour, or per the manufacturer's recommendation, after placing rapid-set concrete patches in the repair areas. Do not place overlay less than 28 days after placing Portland cement concrete patches in the repair areas.

C.2.2 Surface Preparation

Determine an acceptable shotblasting machine operation (size of shot, flow of shot, forward speed, and/or number of passes) that provides a surface profile meeting CSP 5 (medium-heavy shotblast) according to the ICRI Technical Guideline No. 310.2. If the engineer requires additional verification of the surface preparation, test the tensile bond strength according to ASTM C1593. The surface preparation will be considered acceptable if the tensile bond strength is greater than or equal to 250 psi or the failure area at a depth of 1/4 inches or more is greater than 50 percent of the test area. Continue adjustment of the shotblasting machine and necessary testing until the surface is acceptable to the engineer or a passing test result is obtained.

Prepare the entire deck using the final accepted adjustments to the shotblasting machine as determined above. Thoroughly blast clean with hand-held equipment any areas inaccessible by the shotblasting equipment. Do not perform surface preparation more than 24 hours before the application of the overlay system.

Protect drains, expansion joints, access hatches, or other appurtenances on the deck from damage by the shot and sand blasting operations and from materials adhering and entering. Tape or form all construction joints to provide a clean straight edge.

Before shot blasting, remove pavement markings within the treatment area using an approved mechanical or blasting method.

Prepare the vertical concrete surfaces adjacent to the deck a minimum of 2" above the overlay according to SSPC-SP 13 (free of contaminants, dust, and loose concrete) by sand blasting, using wire wheels, or other approved method.

Just before overlay placement, clean all dust, debris, and concrete fines from the prepared surfaces including the vertical surfaces with compressed air. When using compressed air, the air stream must be free of oil. Any grease, oil, or other foreign matter that rests on or has absorbed into the concrete shall be removed completely. If prepared surfaces (including the first layer of the polymer overlay) are exposed to rain or dew, lightly sandblast (brush/breeze blast) the exposed surfaces.

The engineer may consider alternate surface preparation methods per the overlay system manufacturer's recommendations. The engineer will approve the final surface profile and deck cleanliness before the contractor placing the polymer overlay.

C.2.3 Transitional Area

If the plans show, create a transitional area approaching transverse expansion joints and ends of the deck using an approved mechanical or blasting method. Remove 1/4 inch to 5/16 inch of concrete adjacent to the joint or end of deck and taper a distance of 3 feet.

If the plans show, create a transitional area on the approach pavement. Prep and place the first lift 3 feet beyond the end of the deck the same width as the deck. Prep and place the second lift 6 feet beyond the end of the deck the same width as the deck.

C.3 Overlay Application

Perform the handling and mixing of the polymer resin and hardening agent in a safe manner to achieve the desired results according to the manufacturer's instructions. Do not apply the overlay system if any of the following exists:

1. Ambient air temperature is below 50 F or above 100 F.
2. Deck temperature is below 50 F.
3. Moisture content in the deck exceeds 4.5 percent when measured by an electronic moisture meter or shows visible moisture after 2 hours when measured in accordance with ASTM D4263.
4. Rain is forecasted during the minimum curing periods listed under C.5.
5. Materials component temperatures below 65 F or above 99 F.
6. Concrete deck age is less than 28 days.
7. The deck temperature exceeds 100 F.
8. If the gel time is 10 minutes or less at the predicted high air temperature for the day.

After the deck has been shotblasted or during the overlay curing period, only necessary surface preparation and overlay application equipment will be allowed on the deck. Provide appropriate protective measures to prevent contamination from equipment allowed on the deck during preparation and application operations. Begin overlay placement as soon as possible after surface preparation operations.

The polymer overlay shall consist of a two-course application of polymer and aggregate. Each of the two courses shall consist of a layer of polymer covered with a layer of aggregate in sufficient quantity to completely cover the polymer. Apply the polymer and aggregate according to the manufacturer's requirements. Apply the overlay using equipment designed for this purpose. The application machine shall feature positive displacement volumetric metering and be capable of storing and mixing the polymer resins at the proper mix ratio. Disperse the aggregate using a method that provides a uniform, consistent coverage of aggregate and minimizes aggregate rolling or bouncing into final position. First course applications that do not receive enough aggregate before the polymer gels shall be removed and replaced. A second course applied with insufficient aggregate may be left in place, but will require additional applications before opening to traffic.

After completion of each course, cure the overlay according to the manufacturer's instructions. Follow the minimum cure times listed under C.5 or as prescribed by the manufacturer. Remove the excess aggregate from the surface treatment by sweeping, blowing, or vacuuming without tearing or damaging the surface; the material may be re-used if approved by the engineer and manufacturer. Apply all courses of the overlay system before opening the area to traffic. Do not allow equipment or traffic on the treated area until directed by the engineer.

After the first layer of coating has cured to the point where the aggregate cannot be pulled out, apply the second layer. Before applying the second layer, broom and blow off the first layer with compressed air to remove all loose excess aggregate.

Before opening to traffic, clean expansion joints and joint seals of all debris and polymer. A minimum of 3 days following opening to traffic, remove loosened aggregates from the deck, expansion joints, and approach pavement.

C.4 Application Rates

Apply the polymer overlay in two separate courses in accordance with the manufacturer's instructions, but not less than the following rate of application.

Course	Minimum Polymer Rate ^[1] (GAL/100 SF)	Aggregate ^[2] (LBS/SY)
1	2.5	10+
2	5.0	14+

^[1] The minimum total applications rate is 7.5 GAL/100 SF.

^[2] Application of aggregate shall be of sufficient quantity to completely cover the polymer.

C.5 Minimum Curing Periods

As a minimum, cure the coating as follows:

Course	Average temperature of deck, polymer and aggregate components in degrees F							
	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-99
1	6 hrs.	5 hrs.	4 hrs.	3 hrs.	2.5 hrs	2 hrs	1.5 hrs.	1 hr.
2	8 hrs.	6.5 hrs.	6.5 hrs.	5 hrs.	4 hrs.	3 hrs.	3 hrs.	3 hrs.

If faster cure times are desired and achievable, submit to the engineer a certified test report from an independent laboratory showing the material is able to reach a compressive strength of 1000 psi as tested per ASTM C 579 Method B within the temperature ranges and cure times for which the product is proposed to be placed. Establish ambient air, material, and substrate temperatures from the manufacturer for field applications. Field applications will not be allowed below the documented temperatures.

C.6 Repair of Polymer Overlay

Repair all areas of unbonded, uncured, or damaged polymer overlay for no additional compensation. Submit repair procedures from the manufacturer to the engineer for approval. Absent a manufacturer's repair procedures and with the approval of the engineer, complete repairs according to the following: Saw cut the limits of the area to the top of the concrete; remove the overlay by scarifying, grinding, or other approved methods; shot blast or sand blast and air blast the concrete before placement of polymer overlay; and place the polymer overlay according to section C.3.

D Measurement

The department will measure Polymer Overlay 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
509.5100.S	Polymer Overlay	SY

Payment is full compensation for preparing the surface; for tensile bond testing; for creating the transitional area; for providing the overlay; for cleanup; and for sweeping/vacuuuming and disposing of excess materials.

The department will pay separately for deck repairs.

stp-509-030 (20200629)

20. Cover Plates Temporary, Item 611.8120.S.

A Description

This special provision describes providing and removing steel plates to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials

Provide a 0.25 inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement

The department will measure Cover Plates Temporary as 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
611.8120.S	Cover Plates Temporary	EACH

Payment is full compensation for furnishing, installing, and removing the cover plates.

The steel plates shall become the property of the contractor when no longer needed in the contract work.

stp-611-006 (20151210)

21. Insulation Board Polystyrene, 2-Inch, Item 612.0902.S.

A Description

This special provision describes furnishing and placing polystyrene insulation board as the plans show.

B Materials

Provide polystyrene insulation board that conforms to the requirements for Extruded Insulation Board, AASHTO Designation M230 as modified in this special provision.

Delete flammability requirement.

B.1 Certification

Before installation, obtain from the manufacturer a certification indicating compliance and furnish it to the project engineer.

C (Vacant)

D Measurement

The department will measure Insulation Board Polystyrene, 2-Inch by area in square yards of work, completed and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
612.0902.S	Insulation Board Polystyrene, 2-Inch	SY

Payment is full compensation for all excavation; and for furnishing and placing the insulation board.

stp-612-005 (20030820)

22. Locating No-Passing Zones, Item 648.0100.

For this project, the spotting sight distance in areas with a 55 mph posted speed limit is 0.21 miles (1108 feet).

stp-648-005 (20060512)

23. Construction Staking.

Conform to standard spec 650 and as modified in this special provision.

A Description

This special provision describes providing contractor-performed construction staking required to establish the horizontal and vertical position of the curb and gutter in mill and replay areas of the project utilizing the finished milled asphalt pavement surface in accordance with Section 650 of the standard specifications and as hereinafter provided.

B (Vacant)

C Construction

Add the following to standard spec 650.3.5:

- (2) Do not establish curb and gutter grades until after the existing asphalt has been milled and relayed.
- (3) Provide vertical reference in relation to the finished HMA pavement surface, after completion of the mill and re-laid asphalt pavement.
- (4) Reference staking from Station 2+24 to Station 617+79 shall be staked at intervals no longer than 100-ft within horizontal curves. Additionally, offsets for all reference staking offsets shall be taped from centerline prior to milling operations.

24. HMA Pavement Percent Within Limits (PWL) QMP, Core Only Project; Incentive Density PWL HMA Pavement, Item SPV.0055.01; Incentive Air Voids HMA Pavement, Item SPV.0055.02.

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 in accordance with HMA Pavement Percent Within Limits (PWL) QMP Test Strip Volumetrics article at no additional cost to the department. The HMA Pavement Percent Within Limits (PWL) QMP Test Strip Density article will not be added to the Core Only Projects. The contractor may correlate gauges by taking up to 10 additional cores (non-production) at any location during the project. The department will not correlate any gauges.

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 in accordance with 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 T164 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 in accordance with 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	

ITEM	ACTION LIMITS	ACCEPTANCE LIMITS
19.0-mm	+/- 7.5	
12.5-mm	+/- 7.5	
9.5-mm	+/- 7.5	
2.36-mm	+/- 7.0	
75- μ m	+/- 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 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 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 T164 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 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, 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 by Cores

⁽¹⁾ For mainline pavement, determine density with cores. Full width passing lanes, turn lanes, or auxiliary lanes must be 1,500 lane feet or greater to be eligible for PWL density. Shoulder and appurtenance density will be by cores 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.

⁽²⁾ 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.

⁽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. 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.

⁽⁴⁾ Under the direct observation of the engineer, cut 100 or 150 mm (4 or 6 inch) diameter cores from the pavement according to WTM R67 at one random location, determined by the engineer, per subplot. Each core will represent the entire length and width of the subplot. Cores will be cut by the next day, except if the next day is not a working day, then they shall be cut within 48 hours after placement. Fill core holes according to WTM R67 section 5.8 and obtain engineer approval before opening to traffic. Prepare cores

and determine density according to WTM T166. Dry cores after testing according WTM R79. The department will label cores, transport cores to testing facilities, witness testing, store dried cores, and provide subsequent verification testing.

(5) If a core is damaged at the time of coring, immediately take a replacement core 1 foot ahead of the existing testing location in the direction of traffic at the same offset as the damaged core. If a core is damaged during transport, record it as damaged and notify the engineer immediately.

(6) 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.

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) As random density locations are paved, the core data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. Each lot will contain core density data from a single HMA mixture type placed over a specific underlying material.

(2) The department reserves the right to verify the density of any core and the department's result may be used for PWL and pay adjustment calculations, at the discretion of the engineer.

(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) Upon the completion of each lot, core data will be used by the department for PWL and pay adjustment calculation.

(5) 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 is 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.

460.5.2.1 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 in accordance with the HMA PWL Production Spreadsheet:

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

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

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

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

(2) For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be in accordance with 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 the 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., traffic lanes excluding shoulder) as determined in accordance with 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
SPV.0055.01	Incentive Density PWL HMA Pavement	DOL
SPV.0055.02	Incentive Air Voids HMA Pavement	DOL

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

(8) 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 and Instructions tab* of the HMA PWL Production spreadsheet.

25. Appendix A, Core Only Project.

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 Test Method for HMA PWL QMP Density Measurements for Main Production
- Sampling for WisDOT HMA PWL QMP
- Calculation of PWL Mainline Tonnage Example

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

For mainline density determination, typical subplot lengths are 1,500 lane feet and lots typically consist of 5 sublots. Partial lots with less than three sublots remaining at the end of the project will be included in the previous lot, by the engineer. 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 STSP.

Determination by Cores

For mainline density determination by cores, collect one core per subplot. Each core location is determined by the engineer using random numbers and represents the entire length and width of the subplot. The contractor is responsible for all work related to coring and filling of the core holes according to WTM R67. Each core is tested for density according to WTM T166 by the contractor and witnessed by a department representative. The department must always maintain custody of the cores during collection, transportation, and testing. Figure 5 shows an example coring layout for a 12-foot-wide lane.

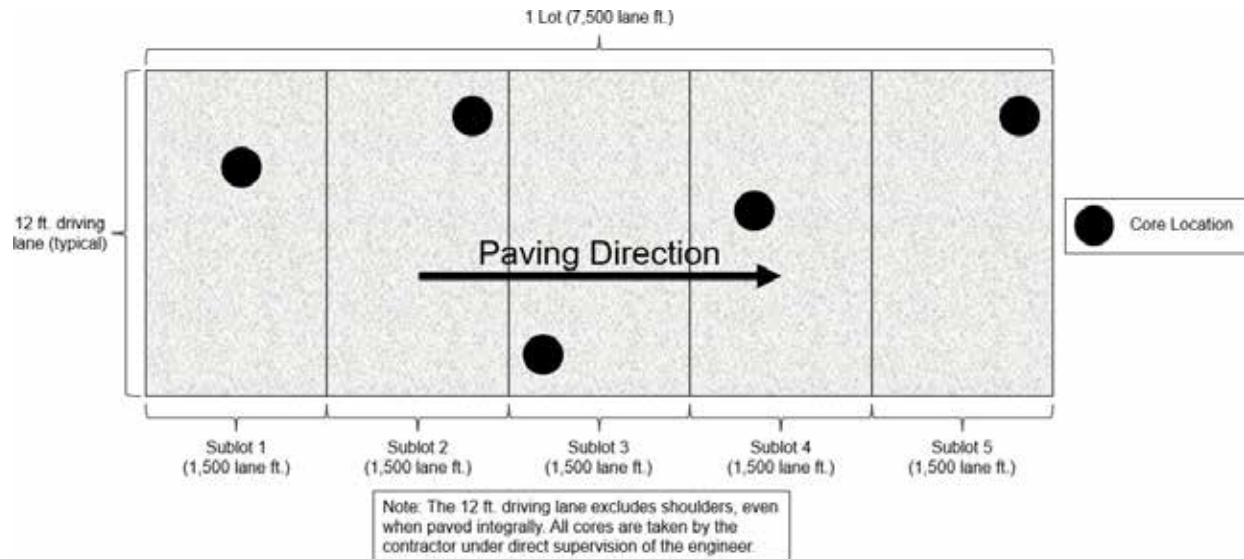


Figure 5: Example core density locations for traffic lanes

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 (subplot) for QC and Retained Samples and 1 per 3,750 tons (lot or 5 sublots) for QV as defined by the HMA PWL QMP STSP. A test sample is obtained randomly from each subplot. Collect each random sample 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 3,750 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's 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 in being constructed with a 12-foot traffic 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:

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

26. HMA Pavement Longitudinal Joint Density, Core Only Project; Incentive Density HMA Pavement Longitudinal Joints, Item SPV.0055.03.

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 1500 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 density locations for each applicable joint. Each companion location shares longitudinal stationing with the QV mainline density location within each subplot and is located transversely with the center of the core 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 density test results greater than 3.0% below specified minimums per Table B-1 herein, perform the following:

- Continued 50-foot incremental testing until test values indicate higher than or equal
- Continued 50-foot incremental testing until test values indicate higher than or equal to -3.0 percent from target joint density.
- 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.
- 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 recorded in the HMA PWL Production Spreadsheet.

(9) Placement and removal of excess material outside of the final joint edge, to increase joint density at the longitudinal joint 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 will be considered confined on both sides of the joint regardless of the selected joint design. Place the joint between echelon paved lanes 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

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 SUBLLOT 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 item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.03	Incentive Density HMA Pavement Longitudinal Joints	DOL

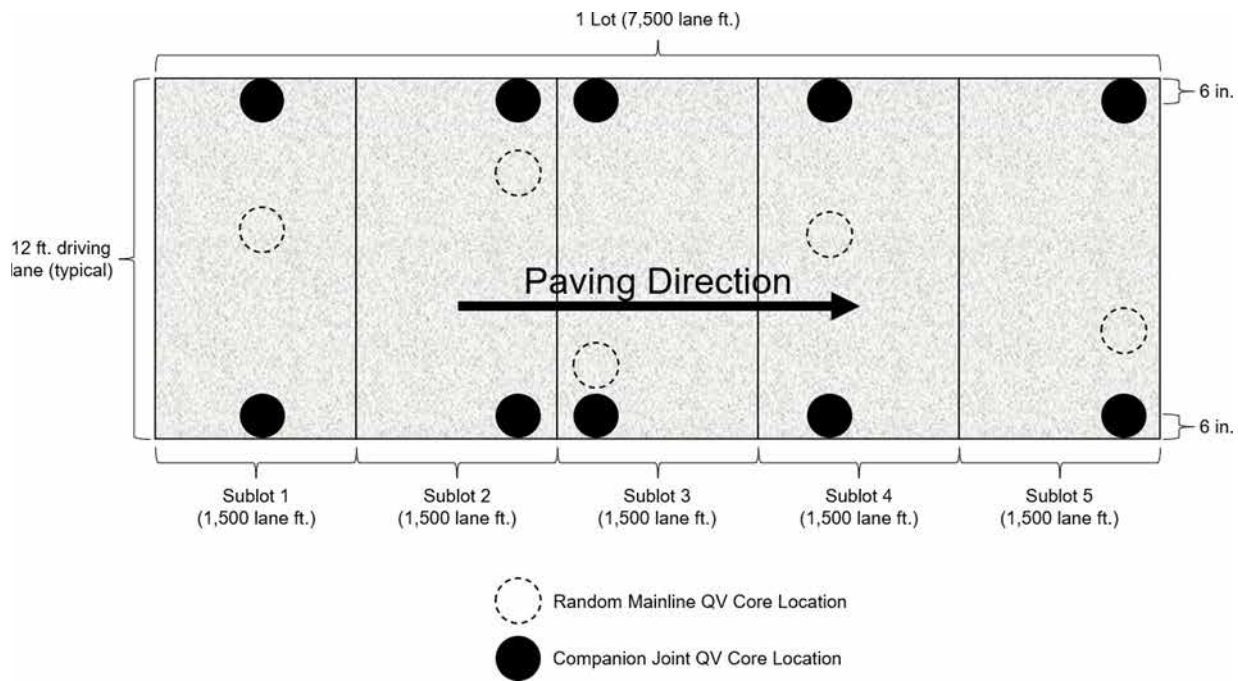
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Core Density Layout

Each mainline QV density location must have a companion longitudinal joint density location for applicable joints. This companion location shares the longitudinal stationing for each QV mainline density location and is located transversely with the center of the core 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

27. Inlet Covers Flat Temporary, Item SPV.0060.01.

A Description

This special provision describes furnishing, installing, adjusting and removing temporary inlet covers on storm sewer inlet structures at locations shown in the plans.

B Materials

Furnish inlet covers per the pertinent requirements of standard spec 611. Provide open grates for drainage, traversable by vehicle and bicycle traffic, and rated for traffic loading.

C Construction

Place the temporary inlet cover on the inlet structure with the necessary adjustments per standard spec 611. Adjust and set the grade of the inlet cover to meet the final surface of the temporary pavement for traffic lanes. Bolt inlet covers placed within lanes open to traffic to the inlet or inlet frame.

Remove the temporary inlet cover once no longer needed in the temporary traffic lanes.

D Measurement

The department will measure Inlet Covers Flat Temporary as each individual temporary flat inlet cover, 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	Inlet Covers Flat Temporary	EACH

Payment is full compensation for furnishing temporary inlet covers, including frames, grates or lids; for furnishing all necessary bolting; and for furnishing all other required materials and for installing, adjusting, and removing each cover. Upon removal, the temporary inlet cover becomes the property of the contractor.

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28. Adjusting Sanitary Manhole Covers, Item SPV.0060.02.

A Description

This special provision describes adjusting sanitary manhole covers.

B Materials

Furnish materials conforming to standard spec 611.2.

Salvage and reinstall frames, castings, and lids.

C Construction

Construct conforming to standard spec 611.3 and as follows:

- Adjustment rings shall be installed per manufacture's recommendations. The adjustment rings shall conform to pavement slope using wedge shapes 3/4 to 1-1/2 inch, and other thickness adjustment rings as required.
- Wedge rings shall be installed at the top of the ring stack under a maximum 1/4-inch thick solid adjustment shim ring.
- The maximum allowable total depth of grade riser rings needed to meet the required elevation is 9 inches. A minimum of one riser ring is required per structure.
- Where asphalt pavement is constructed, rings shall be adjusted so the manhole casting rim is no more than 5/8 inch below pavement grade and conforming to the pavement slope.
- Remove and reinstall frames, castings, lids, and chimney seals, if present.
- Notify Village of Mt Sterling and Village of Gays Mills of any damaged sanitary sewer manhole frames, castings, lids, and chimney seals prior to starting construction. The contractor shall exercise caution in working adjacent to sanitary manhole facilities in order to avoid damage to the

facility. Sanitary sewer manhole facilities damaged during construction shall be repaired or replaced at the contractor's expense.

D Measurement

The department will measure Adjusting Sanitary Manhole Covers as 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.0060.02	Adjusting Sanitary Manhole Covers	EACH

Payment is full compensation for providing all required materials, exclusive of frames, grates, or lids; for removing, reinstalling and adjusting the covers, including removing and reinstalling the existing chimney seal.

29. Adjust Water Valve Box, Item SPV.0060.03

A Description

This special provision describes adjusting, protecting, and maintaining accessibility for the duration of the project to all water valves located within the project limits.

B Materials

Reuse existing water valve box elements. If existing water valve boxes are damaged during construction replace them at no cost to the department.

C Construction

Adjust all water valve boxes within the project limits to proposed elevations.

Throughout the duration of the project, ensure that all water valves adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by Village forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility.

The proposed curb line shall be verified for any water valves located near the curb line. The curb and gutter shall be field adjusted as necessary to minimize any water valve conflicts.

Upon completion of the contract, the Village will inspect all water facilities to ensure water valve boxes are clean, properly aligned, and accessible. The contractor shall be responsible to make any identified repairs and adjustments.

D Measurement

The department will measure Adjust Water Valve Box as each individual unit, acceptably completed regardless of the number of adjustments made to the valve box.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Adjust Water Valve Box	EACH

Payment is full compensation for providing all required materials; for removing, reinstalling and adjusting the valve boxes. The contractor shall replace valve boxes rendered unusable by the contractor's operations at no expense to the department.

30. Grading, Shaping, and Finishing for Concrete Curb and Gutter, Item SPV.0090.01

A Description

This special provision describes the grading, shaping, and finishing of the earthen embankment at the curb and gutters the plans show.

Right: Station 3+65 to Station 4+50, Station 84+60 to Station 137+96, Station 144+49 to Station 207+15, Station 250+70 to Station 252+72, Station 258+62 to Station 263+26, Station 321+26 to Station 334+09, Station 349+40 to Station 352+90, Station 378+92 to Station 384+19, Station 395+86 to Station 400+10, Station 503+19 to Station 508+30

Left: Station 2+24 to Station 4+50, Station 334+04 to Station 349+59, Station 365+36 to Station 373+84, Station 405+02 to Station 408+12, Station 455+48 to Station 459+67, Station 464+85 to Station 470+24, Station 503+19 to Station 508+29, Station 591+84 to Station 600+32

B Materials

Furnish materials conforming to the following:

Common excavation and material disposal.....	205
Embankment.....	207
Borrow.....	208
Topsoil.....	625
Mulching.....	627
Erosion Mat.....	628
Fertilizer.....	629
Seeding and seed watering.....	630
Construction staking.....	650

C Construction

Construct as the plans show and the engineer directs.

D Measurement

The department will measure Grading, Shaping, and Finishing for Concrete Curb and Gutter by the LF 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.0090.01	Grading, Shaping, and Finishing for Concrete Curb and Gutter	LF

Payment is full compensation for the grading, shaping, and finishing of the earthen embankment.

31. Transverse Joint and Crack Plunge Milling and Patching, Item SPV.0090.02

A Description

This special provision describes plunge milling transverse joints and cracks, and partial depth patching of those joints with an asphaltic surface mixture in preparation for overlaying the pavement with an HMA interlayer.

B Materials

Furnish a No. 4 or No. 5 asphaltic surface patching mixture conforming to standard spec 465.2.

C Construction

Unless the contract provides otherwise, keep the road open to traffic during construction. If possible, restrict operations to one lane at a time. Perform work to cause the least possible inconvenience to traffic.

Repair transverse joints at locations the plans show, or the engineer directs in the field. Plunge mill transverse joints with loose concrete or concrete developing spalling 2 inches from the opposing joint face or wider to a minimum depth of 2 inches and a maximum depth of 1/3 the concrete thickness, unless otherwise directed by the engineer. Remove the pavement without injury to the remaining pavement. Dispose of remove material as specified in standard spec 204.3.1.3.

Before filling plunge milled areas with asphaltic base patch, clean the surface and apply tack coat according to standard spec 455.3.2. (4) Fill plunge milled areas with asphaltic base patch conforming to the materials section herein. Compact the mixture to produce a dense smooth surface using ordinary compaction as specified in 450.3.2.6. Roll the top layer until flush with the adjacent surface. Patching material that extends more than 1/4 inch above the milled surface shall be corrected before the leveling

layer or Interlayer is placed. Do not open patches to traffic until they are hard enough to prevent rutting or displacement.

D Measurement

The department will measure Transverse Joint and Crack Plunge Milling and Patching by the linear foot along transverse joints and cracks, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Transverse Joint and Crack Plunge Milling and Patching	LF

Payment is full compensation for plunge milling, disposal of millings, and for furnishing asphaltic material for filling the joints and cracks.

ADDITIONAL SPECIAL PROVISION 4

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

Payment to First-Tier Subcontractors

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

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

Payment to Lower-Tier Subcontractors

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

Acceptance and Final Payment

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

Additional Special Provision 6 (ASP-6)

Modifications to the standard specifications

Make the following revisions to the standard specifications.

107 Legal Relations and Responsibility to the Public

Add subsection 107.27 effective with the November 2024 letting.

107.27 Drones or Unmanned Aircraft Systems (UAS)

107.27.1 Licensing and Compliance

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

107.27.2 Flight Approval, Safety, and Incident Reporting

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

107.27.3 Insurance Requirements

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

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

646 Pavement Markings

646.3.2.4 Black Epoxy

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

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

ERRATA

204.3.1.3 Salvaging or Disposal of Materials

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

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

204.3.2.3 Removing Buildings

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

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

335.3.2 Rubblizing

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

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

335.3.3 Compacting

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

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

526.3.4 Construction, Backfilling, Inspection and Maintenance

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

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

602.3.6 Concrete Rumble Strips

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

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

604.2 Materials

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

- (1) Furnish materials conforming to the following:

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

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

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

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

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

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

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

- (1) Use the department's Civil Rights Compliance System (CRCS) for projects with a LET date on or before December 2024 and AASHTOWare Project Civil Rights and Labor (AWP CRL) for projects with a LET date on or after January 2025 to electronically submit Certified Payroll Reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's Highway Construction Contractor Information (HCCI) site on the Labor, Wages, and EEO Information page at:
<https://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).

BUY AMERICA PROVISION

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

1. Iron and Steel

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

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

2. Manufactured Product

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

3. Construction Material

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

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

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

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

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

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

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

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

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

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

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



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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	32.000 EACH	_____.	_____.
0004	204.0100 Removing Concrete Pavement	1,998.000 SY	_____.	_____.
0006	204.0109.S Removing Concrete Surface Partial Depth	89,846.000 SF	_____.	_____.
0008	204.0110 Removing Asphaltic Surface	261.000 SY	_____.	_____.
0010	204.0115 Removing Asphaltic Surface Butt Joints	690.000 SY	_____.	_____.
0012	204.0120 Removing Asphaltic Surface Milling	764.000 SY	_____.	_____.
0014	204.0150 Removing Curb & Gutter	1,375.000 LF	_____.	_____.
0016	204.0155 Removing Concrete Sidewalk	689.000 SY	_____.	_____.
0018	204.0165 Removing Guardrail	14,279.000 LF	_____.	_____.
0020	204.0190 Removing Surface Drains	1.000 EACH	_____.	_____.
0022	204.0220 Removing Inlets	11.000 EACH	_____.	_____.
0024	204.0270 Abandoning Culvert Pipes	1.000 EACH	_____.	_____.
0026	205.0100 Excavation Common	3,286.000 CY	_____.	_____.
0028	205.0200 Excavation Rock	354.000 CY	_____.	_____.
0030	208.0100 Borrow	1,310.000 CY	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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. 5790-02-72	1.000 EACH	_____.	_____.
0034	305.0110 Base Aggregate Dense 3/4-Inch	5,531.000 TON	_____.	_____.
0036	305.0120 Base Aggregate Dense 1 1/4-Inch	13,743.000 TON	_____.	_____.
0038	311.0110 Breaker Run	2,201.000 TON	_____.	_____.
0040	330.0100 Mill and Relay	170,564.000 SY	_____.	_____.
0042	374.1010.S QMP Mill and Relay Compaction	170,439.000 SY	_____.	_____.
0044	390.0100 Removing Pavement for Base Patching	199.000 CY	_____.	_____.
0046	390.0305 Base Patching Concrete HES	199.000 CY	_____.	_____.
0048	416.0610 Drilled Tie Bars	671.000 EACH	_____.	_____.
0050	416.0620 Drilled Dowel Bars	1,295.000 EACH	_____.	_____.
0052	455.0605 Tack Coat	10,022.000 GAL	_____.	_____.
0054	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	2.000 EACH	_____.	_____.
0056	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	2.000 EACH	_____.	_____.
0058	460.4210.S HMA Pavement Interlayer	571.000 TON	_____.	_____.
0060	460.5224 HMA Pavement 4 LT 58-28 S	32,843.000 TON	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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
0062	460.6225 HMA Pavement 5 MT 58-28 S	910.000 TON	_____.	_____.
0064	465.0105 Asphaltic Surface	254.000 TON	_____.	_____.
0066	465.0120 Asphaltic Surface Driveways and Field Entrances	217.000 TON	_____.	_____.
0068	465.0125 Asphaltic Surface Temporary	173.000 TON	_____.	_____.
0070	465.0560 Asphaltic Rumble Strips, Centerline	48,830.000 LF	_____.	_____.
0072	509.5100.S Polymer Overlay	858.000 SY	_____.	_____.
0074	509.9015.S Removing Polymer Overlay (structure) 01. B-12-137	858.000 SY	_____.	_____.
0076	520.8000 Concrete Collars for Pipe	4.000 EACH	_____.	_____.
0078	520.8700 Cleaning Culvert Pipes	3.000 EACH	_____.	_____.
0080	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	2.000 EACH	_____.	_____.
0082	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	1.000 EACH	_____.	_____.
0084	521.3118 Culvert Pipe Corrugated Steel 18-Inch	26.000 LF	_____.	_____.
0086	522.0418 Culvert Pipe Reinforced Concrete Class IV 18-Inch	20.000 LF	_____.	_____.
0088	522.0424 Culvert Pipe Reinforced Concrete Class IV 24-Inch	130.000 LF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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
0090	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.	_____.
0092	522.1015 Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	1.000 EACH	_____.	_____.
0094	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	7.000 EACH	_____.	_____.
0096	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	30.000 EACH	_____.	_____.
0098	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	3.000 EACH	_____.	_____.
0100	601.0409 Concrete Curb & Gutter 30-Inch Type A	656.000 LF	_____.	_____.
0102	601.0411 Concrete Curb & Gutter 30-Inch Type D	779.000 LF	_____.	_____.
0104	601.0555 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	25.000 LF	_____.	_____.
0106	601.0576 Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	20,786.000 LF	_____.	_____.
0108	601.0600 Concrete Curb Pedestrian	101.000 LF	_____.	_____.
0110	602.0405 Concrete Sidewalk 4-Inch	7,752.000 SF	_____.	_____.
0112	602.0415 Concrete Sidewalk 6-Inch	420.000 SF	_____.	_____.
0114	602.0515 Curb Ramp Detectable Warning Field Natural Patina	547.500 SF	_____.	_____.
0116	602.0810 Concrete Driveway 6-Inch	24.000 SY	_____.	_____.



Proposal Schedule of Items

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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
0118	602.3010 Concrete Surface Drains	24.000 CY	_____.	_____.
0120	606.0200 Riprap Medium	48.000 CY	_____.	_____.
0122	606.0300 Riprap Heavy	398.000 CY	_____.	_____.
0124	608.0005 Storm Sewer Rock Excavation	48.000 CY	_____.	_____.
0126	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	587.000 LF	_____.	_____.
0128	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	35.000 LF	_____.	_____.
0130	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	289.000 LF	_____.	_____.
0132	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	943.000 LF	_____.	_____.
0134	608.0430 Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	122.000 LF	_____.	_____.
0136	611.0612 Inlet Covers Type C	1.000 EACH	_____.	_____.
0138	611.0624 Inlet Covers Type H	4.000 EACH	_____.	_____.
0140	611.0630 Inlet Covers Type HM-GJ	5.000 EACH	_____.	_____.
0142	611.0633 Inlet Covers Type HM-GJ-S	2.000 EACH	_____.	_____.
0144	611.0639 Inlet Covers Type H-S	3.000 EACH	_____.	_____.
0146	611.0642 Inlet Covers Type MS	51.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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
0148	611.0645 Inlet Covers Type MS-A	2.000 EACH	_____.	_____.
0150	611.2005 Manholes 5-FT Diameter	1.000 EACH	_____.	_____.
0152	611.3004 Inlets 4-FT Diameter	1.000 EACH	_____.	_____.
0154	611.3230 Inlets 2x3-FT	13.000 EACH	_____.	_____.
0156	611.3901 Inlets Median 1 Grate	5.000 EACH	_____.	_____.
0158	611.3902 Inlets Median 2 Grate	24.000 EACH	_____.	_____.
0160	611.8120.S Cover Plates Temporary	11.000 EACH	_____.	_____.
0162	612.0902.S Insulation Board Polystyrene (inch) 01. 2-Inch	9.000 SY	_____.	_____.
0164	614.0397 Guardrail Mow Strip Emulsified Asphalt	1,627.000 SY	_____.	_____.
0166	614.2300 MGS Guardrail 3	9,974.500 LF	_____.	_____.
0168	614.2330 MGS Guardrail 3 K	3,712.500 LF	_____.	_____.
0170	614.2350 MGS Guardrail Short Radius	152.000 LF	_____.	_____.
0172	614.2500 MGS Thrie Beam Transition	79.000 LF	_____.	_____.
0174	614.2610 MGS Guardrail Terminal EAT	16.000 EACH	_____.	_____.
0176	618.0100 Maintenance and Repair of Haul Roads (project) 01. 5790-02-72	1.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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
0178	619.1000 Mobilization	1.000 EACH	_____.	_____.
0180	624.0100 Water	1,104.000 MGAL	_____.	_____.
0182	625.0500 Salvaged Topsoil	6,208.000 SY	_____.	_____.
0184	627.0200 Mulching	1,374.000 SY	_____.	_____.
0186	628.1504 Silt Fence	19,497.000 LF	_____.	_____.
0188	628.1520 Silt Fence Maintenance	38,993.000 LF	_____.	_____.
0190	628.1905 Mobilizations Erosion Control	3.000 EACH	_____.	_____.
0192	628.1910 Mobilizations Emergency Erosion Control	4.000 EACH	_____.	_____.
0194	628.2004 Erosion Mat Class I Type B	4,834.000 SY	_____.	_____.
0196	628.7005 Inlet Protection Type A	52.000 EACH	_____.	_____.
0198	628.7010 Inlet Protection Type B	4.000 EACH	_____.	_____.
0200	628.7015 Inlet Protection Type C	17.000 EACH	_____.	_____.
0202	628.7504 Temporary Ditch Checks	200.000 LF	_____.	_____.
0204	628.7555 Culvert Pipe Checks	24.000 EACH	_____.	_____.
0206	629.0210 Fertilizer Type B	4.000 CWT	_____.	_____.
0208	630.0120 Seeding Mixture No. 20	88.000 LB	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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
0210	630.0140 Seeding Mixture No. 40	27.000 LB	_____.	_____.
0212	630.0200 Seeding Temporary	170.000 LB	_____.	_____.
0214	630.0500 Seed Water	143.000 MGAL	_____.	_____.
0216	634.0612 Posts Wood 4x6-Inch X 12-FT	21.000 EACH	_____.	_____.
0218	634.0614 Posts Wood 4x6-Inch X 14-FT	23.000 EACH	_____.	_____.
0220	634.0616 Posts Wood 4x6-Inch X 16-FT	3.000 EACH	_____.	_____.
0222	634.0618 Posts Wood 4x6-Inch X 18-FT	14.000 EACH	_____.	_____.
0224	637.2230 Signs Type II Reflective F	77.250 SF	_____.	_____.
0226	638.2102 Moving Signs Type II	53.000 EACH	_____.	_____.
0228	638.3000 Removing Small Sign Supports	54.000 EACH	_____.	_____.
0230	642.5001 Field Office Type B	1.000 EACH	_____.	_____.
0232	643.0300 Traffic Control Drums	2,478.000 DAY	_____.	_____.
0234	643.0420 Traffic Control Barricades Type III	1,003.000 DAY	_____.	_____.
0236	643.0500 Traffic Control Flexible Tubular Marker Posts	30.000 EACH	_____.	_____.
0238	643.0600 Traffic Control Flexible Tubular Marker Bases	30.000 EACH	_____.	_____.



Proposal Schedule of Items

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SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0240	643.0705 Traffic Control Warning Lights Type A	1,564.000 DAY	_____.	_____.
0242	643.0715 Traffic Control Warning Lights Type C	222.000 DAY	_____.	_____.
0244	643.0900 Traffic Control Signs	17,853.000 DAY	_____.	_____.
0246	643.0920 Traffic Control Covering Signs Type II	34.000 EACH	_____.	_____.
0248	643.1050 Traffic Control Signs PCMS	56.000 DAY	_____.	_____.
0250	643.1070 Traffic Control Cones 42-Inch	1,270.000 DAY	_____.	_____.
0252	643.3165 Temporary Marking Line Paint 6-Inch	373,634.000 LF	_____.	_____.
0254	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0256	644.1410 Temporary Pedestrian Surface Asphalt	118.000 SF	_____.	_____.
0258	644.1430 Temporary Pedestrian Surface Plate	50.000 SF	_____.	_____.
0260	644.1601 Temporary Pedestrian Curb Ramp	8.000 DAY	_____.	_____.
0262	644.1810 Temporary Pedestrian Barricade	645.000 LF	_____.	_____.
0264	645.0130 Geotextile Type R	288.000 SY	_____.	_____.
0266	646.2020 Marking Line Epoxy 6-Inch	854.000 LF	_____.	_____.
0268	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	233,519.000 LF	_____.	_____.
0270	646.6120 Marking Stop Line Epoxy 18-Inch	38.000 LF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20250812004 Project(s): 5790-02-72

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SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0272	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	2,012.000 LF	_____.	_____.
0274	648.0100 Locating No-Passing Zones	11.660 MI	_____.	_____.
0276	650.4000 Construction Staking Storm Sewer	80.000 EACH	_____.	_____.
0278	650.4500 Construction Staking Subgrade	502.000 LF	_____.	_____.
0280	650.5000 Construction Staking Base	650.000 LF	_____.	_____.
0282	650.5500 Construction Staking Curb Gutter and Curb & Gutter	1,736.000 LF	_____.	_____.
0284	650.6000 Construction Staking Pipe Culverts	1.000 EACH	_____.	_____.
0286	650.8000 Construction Staking Resurfacing Reference	61,830.000 LF	_____.	_____.
0288	650.9000 Construction Staking Curb Ramps	52.000 EACH	_____.	_____.
0290	650.9500 Construction Staking Sidewalk (project) 01. 5790-02-72	1.000 EACH	_____.	_____.
0292	650.9911 Construction Staking Supplemental Control (project) 01. 5790-02-72	1.000 EACH	_____.	_____.
0294	690.0150 Sawing Asphalt	2,575.000 LF	_____.	_____.
0296	690.0250 Sawing Concrete	3,507.000 LF	_____.	_____.
0298	740.0440 Incentive IRI Ride	23,400.000 DOL	1.00000	23,400.00



Proposal Schedule of Items

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SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0300	SPV.0055 Special 01. HMA Pavement PWL QMP, Core Only Project; Incentive Density PWL HMA Pavement	33,540.000 DOL	1.00000	33,540.00
0302	SPV.0055 Special 02. Incentive Air Voids HMA Pavement	33,540.000 DOL	1.00000	33,540.00
0304	SPV.0055 Special 03. Incentive Density HMA Pavement Longitudinal Joints	24,930.000 DOL	1.00000	24,930.00
0306	SPV.0060 Special 01. Inlet Covers Flat Temporary	3.000 EACH	_____	_____
0308	SPV.0060 Special 02. Adjusting Sanitary Manhole Covers	11.000 EACH	_____	_____
0310	SPV.0060 Special 03. Adjust Water Valve Box	18.000 EACH	_____	_____
0312	SPV.0090 Special 01. Grading, Shaping, and Finishing for Concrete Curb and Gutter	19,309.000 LF	_____	_____
0314	SPV.0090 Special 02. Transverse Joint and Crack Plunge Milling and Patching	624.000 LF	_____	_____
Section: 0001			Total:	_____
			Total Bid:	_____

PLEASE ATTACH ADDENDA HERE